HEINONLINE

Citation: 4 Bernard D. Reams Jr. Law of E-SIGN A Legislative of the Electronic Signatures in Global and National Act Public Law No. 106-229 2000 i 2002

Content downloaded/printed from HeinOnline (http://heinonline.org) Sun Apr 21 21:23:37 2013

-- Your use of this HeinOnline PDF indicates your acceptance of HeinOnline's Terms and Conditions of the license agreement available at http://heinonline.org/HOL/License

-- The search text of this PDF is generated from uncorrected OCR text.

S. Hrg. 106–613

THE WASSENAAR ARRANGEMENT AND THE FUTURE OF MULTILATERAL EXPORT CONTROLS

HEARING

BEFORE THE

COMMITTEE ON GOVERNMENTAL AFFAIRS UNITED STATES SENATE

ONE HUNDRED SIXTH CONGRESS

SECOND SESSION

APRIL 12, 2000

Printed for the use of the Committee on Governmental Affairs

U.S. GOVERNMENT PRINTING OFFICE

64–899 cc WASHINGTON : 2000

For sale by the Superintendent of Documents, Congressional Sales Office
U.S. Government Printing Office, Washington, DC 20402

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) i 2002

COMMITTEE ON GOVERNMENTAL AFFAIRS

FRED THOMPSON, Tennessee, *Chairman*

WILLIAM V. ROTH, Jr., Delaware	JOSEPH I. LIEBERMAN, Connecticut
TED STEVENS, Alaska	CARL LEVIN, Michigan
SUSAN M. COLLINS, Maine	DANIEL K. AKAKA, Hawaii
GEORGE V. VOINOVICH, Ohio	RICHARD J. DURBIN, Illinois
PETE V. DOMENICI, New Mexico	ROBERT G. TORRICELLI, New Jersey
THAD COCHRAN, Mississippi	MAX CLELAND, Georgia
ARLEN SPECTER, Pennsylvania	JOHN EDWARDS, North Carolina
JUDD GREGG, New Hampshire	

HANNAH S. SISTARE, *Staff Director and Counsel*
CHRISTOPHER A. FORD, *Chief Investigative Counsel*
MARK T. ESPER, *Professional Staff Member*
JOYCE A. RECHTSCHAFFEN, *Minority Staff Director and Counsel*
LAURIE RUBENSTEIN, *Miniority Chief Counsel*
DARLA D. CASSELL, *Administrative Clerk*

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) ii 2002

CONTENTS

Opening statements:	Page
Senator Thompson	1
Senator Lieberman	3
Senator Akaka	18

WITNESSES

WEDNESDAY APRIL 12, 2000

Hon. John D. Holum, Senior Advisor for Arms Control and International Security, U.S. Department of State	5
Hon. William A. Reinsch, Under Secretary for Export Administration, U.S. Department of Commerce	7
Frank J. Gaffney, Jr., President, Center for Security Policy	27
Stephen J. Hadley, Former Assistant Secretary for International Security Policy, U.S. Department of Defense	29
Henry D. Sokolski, Executive Director, The Nonproliferation Policy Education Center	31

ALPHABETICAL LIST OF WITNESSES

Gaffney, Frank J. Jr.,	
Testimony	27
Prepared statement	61
Hadley, Stephen J.:	
Testimony	29
Prepared statement	67
Holum, Hon. John D.:	
Testimony	5
Prepared statement	49
Reinsch, Hon. William A.:	
Testimony	7
Prepared statement	55
Sokolski, Henry D.:	
Testimony	31
Prepared statement with attachments	79

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) iii 2002

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) iv 2002

THE WASSENAAR ARRANGEMENT AND THE FUTURE OF MULTILATERAL EXPORT CONTROLS

WEDNESDAY, APRIL 12, 2000

U.S. SENATE,
COMMITTEE ON GOVERNMENTAL AFFAIRS,
Washington, DC.

The Committee met, pursuant to notice, at 10:05 a.m., in room SD–342, Dirksen Senate Office Building, Hon. Fred Thompson, Chairman of the Committee, presiding.

Present: Senators Thompson, Lieberman, and Akaka.

OPENING STATEMENT OF SENATOR THOMPSON

Chairman THOMPSON. All right. Let us come to order, please. We appreciate very much our witnesses coming to be with us here today. We are considering a subject that a lot of people consider to be one of the most important subjects that we have to deal with. We spend an awful lot of time dealing with things that many of us think do not amount to much, but this is clearly an area that does. I remember shortly after I came to town, I was watching television, I flipped on a speech that Senator Nunn, former Senator Nunn, was giving in Houston. He was talking about the proliferation of weapons of mass destruction as the greatest threat that this country faced. A few days later I watched former Secretary of State Christopher on a Charlie Rose show and Charlie put the question to him what was the greatest danger to our national security? He gave the same answer. I know Secretary Cohen in the recent past has basically said the same thing.

I think there is a growing realization that we do not have the one big threat that we had back during the days of the Coordinating Committee on Export Controls (or COCOM), but we now have a different kind of threat. In many ways, it is more dangerous and more insidious. Of course, what we do not agree upon is exactly what we ought to be doing to deal with it. We have a major debate going on about this right now in terms of the Export Administration Act. I hear that it is going to be brought to the floor shortly. I think the current EAA bill is a mistake. I think we have not spent enough time on it. There are several committees, including this Committee, that have jurisdiction in these areas and we are just kind of going lickety-split. I know the Banking Committee has spent a lot of time on it, but we are just now getting our focus on the issue and we are going too fast because there is great pressure in terms of the issues of trade and commerce to get this done.

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 1 2002

But anyway, we will have that debate. Also, I think most of us do agree that we need to do what we can in terms of multilateral regimes, arrangements, treaties, and what not to cut down on the proliferation of weapons of mass destruction, ballistic missiles, and biological, chemical, or dual-use items.

We are dealing here today primarily with to one of those multilateral arrangements, the Wassenaar Arrangement, which I guess you might say deals with the other edges of our concern. We have more consensus in the area of missiles, nuclear, biological, and chemical weapons than we do with regard to the sort of dual-use items controlled by Wassenaar, for example. So we are not together with our allies on exactly what we should be doing.

Some of us are going to be talking to our allies over this next recess about those issues, and while we could spend an awful lot of time disagreeing—as I'm sure I do with our first two witnesses on some aspects of our export control policy and about what I believe to be an unjustified loosening in terms of many of these areas—clearly we now live in a different world. We do not live in a COCOM world anymore. There is more foreign availability of sensitive technologies than ever before, but we have dangers that are increasing—as we are told by the Rumsfeld Commission, as we see with the North Koreans launching their three-stage rockets and other things that come as a great surprise to us, as we read the Cox Report that the Chinese are using our high performance computers to enhance their own nuclear capabilities, as we see diversions in high performance computers to China and to Russia, as we see with the Loral problem, and now the Lockheed problem, and as we read the Inspector Generals' reports concerning what they believe to be a lack of training, lack of end-user verification, and other controls of that nature. I simply believe that instead of pushing forward with what I would call a further loosening across the board, especially in terms of high speed computers, encryption and things of that nature where the technological pace is picking up, instead of doing that, we ought to sit back and have a new assessment of some kind.

The more I get into this, the more I see that all points have certain validity. And what we really need is not for Congress to sit here and decide whether or not "x" item ought to be exported or not. What we need is to make sure we have a process where all of the relevant interests are presented, whether it be through a separate, independent agency or whatever. I think we need to reassess that. Perhaps our view in terms of what we ought to be controlling should be changed. Now I read where some people are saying we ought to control fewer items, build higher fences around fewer items.

Some are also saying that we need to concentrate more on catch-all provisions in terms of what countries we are sending things to—that is, not to control so many things, but to concentrate more on bad destinations. That sort of thing. I do not pretend to have the answers to all of these questions, but the more I get into it, the more I am convinced nobody else does either. Perhaps it is time that we really sit back and take a look at the fact that we are in a new world: One with more foreign availability and more opportunities for even our allies to undercut us if we do not trade, but also

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 2 2002

many new dangers from many other countries. Even countries whose people are starving to death apparently have the ability today to launch chemical and biological weapons onto this country, and perhaps shortly nuclear ones as well. I am referring to, of course, North Korea.

So, in that kind of world, what should we be doing? I believe we should be trying to exercise some leadership with regard to our allies, which gets us into the Wassenaar and these other multilateral arrangements, which is what we are dealing with here today. So after saying I did not want to get into all that, I got into all of that. But now, I really am going to try—and others can follow their own lead, but I really am going to try—to direct my attention toward what should we be doing in terms of these arrangements. Are they really helping? What are our successes, our failures? What are we trying to do as a nation in terms of exercising leadership with regard to these arrangements?

What are our criteria for success? How do we know how much good we are doing? Could things be done differently? How important is it? To what extent are we getting cooperation from our allies? How important is the fact that we have different views, clearly, on some things?

We all seem to agree that there is a certain list of items that ought to be of concern, and we pretty much agree what that list is. We all agree that there are a certain group of countries that ought to be of concern, but we certainly do not agree with our allies with regard to what to do about that. And we disagree not only about what to do about the so-called rogue nations, but with regard to China. So that is why we asked you to come here today: To get your views on the significance of these arrangements, and the significance particularly of the Wassenaar Arrangement because we saw with Iraq that this dual-use issue is very important and that controlling such items is very difficult.

Where are we and where should we be going? So, gentlemen, I appreciate your being here with us today to discuss these issues. Thank you. Senator Lieberman.

OPENING STATEMENT OF SENATOR LIEBERMAN

Senator LIEBERMAN. Thanks, Mr. Chairman. Thanks for a thoughtful statement and thanks for calling the hearing today because it does give us the opportunity to explore this important issue of export controls from a perspective that often does not get the attention it deserves and that is the multilateral perspective.

As you indicated, we are living in an age of remarkable globalization. It is a different world and a world of stunning technological innovation, both of which have brought extraordinary benefits to our country and to the world, but, as we have become increasingly aware, there are some downsides to our entrance into the otherwise happy post-Cold War global cyberage.

With the release of the Cox Committee Report last year and other more recent allegations of improper transfers of sensitive technology, we have all become aware that the proliferation of so-called dual-use technology, which is to say technology with both civilian and military applications, has important and potentially dangerous ramifications for our national security.

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 3 2002

Nowhere is addressing this concern more complicated than in the context of multilateral export controls. During the decades of the Cold War in our confrontation with the Soviet Union, we and our allies were pretty much able to keep our enemies from obtaining significant amounts of potentially harmful technology. We were able to do this because our allies broadly shared our concerns and our strategic views and because much of the technology that we wanted controlled was, in fact, capable of being controlled by our allies and us.

But with the end of the Cold War and our entrance into a period of extraordinary technological advancement, all of that has now changed. We live clearly in a multipolar rather than a bipolar world, and our allies no longer share our strategic views on some important issues. To cite the obvious example, some of our key perceptions regarding countries like China, Iraq and Iran different fundamentally from that of our allies.

Just as importantly, private industry today, not government supported military research, stands at the forefront of many new technological advances with security and military implications. So governments have to run hard to stay in place technologically and so they usually do not own or control new technologies in the same way we did at an earlier stage of history.

All of that means that the old system under which the United States through COCOM was able to essentially tell our allies not to transfer sensitive items or technology and usually have them abide by that decision and thereby keep dangerous technology out of the hands of our enemies—that system no longer does or in some measure can exist. Our allies no longer see a reason to give us a veto over their export decisions. And the proliferation of readily accessible technology makes it very difficult for us to exercise the control that we once did.

This all has very significant consequences for our national security in the traditional sense by which I mean that it clearly can expose us to threats that are serious from those who wish us ill. And if we and our allies cannot agree on who to sell to and who not to sell to, it also potentially harms our national security in another sense. If, for example, our allies decide to sell advanced technologies such as satellites or supercomputers to places that we will not allow our American companies to sell to, our action may not only fail to prevent a potential adversary from obtaining what they want to obtain, but it may also do damage to our ability to maintain the robust technology and defense industries that are critical to providing for our own defense.

These are not easy questions to balance. In some sense, as I believe the Chairman said earlier, there is a lot of right on all sides. But the bottom line is that we have to figure out how to protect our national security in this very different world. We must do what we can, but we also obviously have to work with our allies, understanding that they are not always going to see things the way we do.

This is a complicated problem that our witnesses today have thought long and hard about. I am grateful that they are here and I look forward to hearing their views on how best we can work in this new multilateral high technology context to achieve both our

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 4 2002

central national goal of protecting our national security and also in the process trying to keep the world as safe as we can. Thank you.

Chairman THOMPSON. Thank you very much.

Gentlemen, your statements will be made a part of the record. If you would summarize those for us, we would appreciate it. Mr. Holum.

TESTIMONY OF HON. JOHN D. HOLUM,[1] SENIOR ADVISOR FOR ARMS CONTROL AND INTERNATIONAL SECURITY, U.S. DEPARTMENT OF STATE

Mr. HOLUM. Thank you, Mr. Chairman, and thank you for having this hearing and for laying the basis, both you and Senator Lieberman, for I think a productive discussion. We appreciate presenting the Department of State the opportunity to discuss the Wassenaar Arrangement and the future of multilateral export controls. It is important to note at the outset, as both of you have noted, that Wassenaar is not and cannot be COCOM.

COCOM and other multilateral control mechanisms had a clearly defined, mutually agreed strategic threat, and addressed that threat by embargoing exports of arms and sensitive dual-use items to proscribed destinations. Along with our allies, we agreed on procedures for controlling exports to those destinations including allowing for any Nation to veto a specific export.

The end of the Cold War, the disintegration of the Soviet Union, moves toward democracy and market-based economies in the former Warsaw Pact, deep cuts in the strategic arsenals of both sides, and the goal of assuring or assisting economic and political reform in Eastern Europe, Russia and other newly independent States rather than retarding their economic development, all led our allies to the view that the COCOM arrangement had outlived its strategic rationale and could not be sustained.

The United States eventually joined this view when it became clear that our trading partners would no longer agree to follow the procedures outlined in the COCOM arrangement. In the waning days of COCOM, the United States sought to preserve the controls for as long as possible and push to establish a new world wide arrangement to cover conventional arms and related technologies. It was only through United States leadership that we were able to stem the flow of arms and sensitive technologies to places such as Iraq, Iran, North Korea and Libya, destinations largely ignored by the former COCOM.

The world has changed for the better. The targets of COCOM now are members of Wassenaar as well as trading partners, friends and in some cases treaty allies. And our former COCOM partners recognize that responsible national export controls and policies remain indispensable to promote international peace and security in the post Cold War environment even though they opposed and continue to oppose any COCOM-like control regime. COCOM members, eventually with participation by Russia, designed a new multilateral export control regime to address the new challenges posed by regional instability in States whose behavior threatened international security.

[1] The prepared statement of Mr. Holum appears in the Appendix on page 49.

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 5 2002

The new regime, Wassenaar, is the first global multilateral arrangement covering both conventional weapons and sensitive dual-use goods and technologies. It was negotiated and established in the mid-1990's at the same time that COCOM was disbanded. As you noted, Iraq's build up of arms before the Gulf War demonstrated the need for some form of global export regime and the Wassenaar Arrangement responded to this challenge by covering more than just dual-use items as had been COCOM's focus.

The Wassenaar Arrangement which began operation in September 1996 is designed to prevent destabilizing accumulations of arms and dual-use goods and technologies. The arrangement encourages transparency, responsibility, consultation, and where appropriate national policies of restraint. In doing so, it fosters accountability in transfers of arms and dual-use goods and technologies.

It also provides a venue in which governments can consider collectively the implications of various transfers on their international and regional security interests. It also seeks to enhance cooperation to prevent dangerous transfers. Wassenaar members maintain export controls on items covered by the munitions and dual-use lists, which are regularly reviewed by experts as needed.

However, the decision to transfer or deny any controlled items remains the responsibility of individual member states. There are no, as there were in COCOM, case-by-case prior reviews of proposed exports to proscribed destinations or vetoes on proscribed or proposed exports. But members do report on their decisions to transfer or deny to non-members certain classes of weapons and dual-use technologies.

Again, unlike COCOM, Wassenaar members are not constrained to honor each other's denials, but consultations are encouraged in such cases. Although no country is an explicit target of the Wassenaar Arrangement, members are committed to dealing firmly with states whose behavior is a cause for serious concern. There is broad agreement that these states presently are Iran, Iraq, Libya and North Korea. Wassenaar members deal with these countries of concern by preventing through shared national policies of restraint their acquisition of armaments and sensitive dual-use goods and technologies for military end-use.

So Wassenaar provides for the first time a global mechanism for controlling transfers of conventional armaments and a forum in which governments can examine and debate the implications of various transfers on their international and regional security interests.

I have in my statement a further elaboration of some of the achievements of Wassenaar which I hope we can get into in the questions and answers, but I see my time has expired. So I will conclude there.

Chairman THOMPSON. Thank you very much. Mr. Reinsch.

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 6 2002

TESTIMONY OF HON. WILLIAM A. REINSCH,[1] UNDER SECRETARY FOR EXPORT ADMINISTRATION, U.S. DEPARTMENT OF COMMERCE

Mr. REINSCH. Thank you, Mr. Chairman. In light of what you and Senator Lieberman said and also what Mr. Holum said, I think I can abbreviate my remarks, since I understand you will put the whole statement in the record anyway.

Chairman THOMPSON. All right.

Mr. REINSCH. Let me concentrate for a few moments on the relationship between Wassenaar and COCOM and then conclude with some suggestions as to what we might usefully do next, which I think is what you said you wanted to focus on.

As both you and Mr. Holum made clear and in contrast to COCOM, Wassenaar's membership has a much broader base. It is not limited to NATO members. One of what we think is the major successes of the Wassenaar Arrangement is that Russia, Ukraine and other former Warsaw Pact countries are members and have committed to develop effective export controls and to end destabilizing arms sales to Iran.

Wassenaar's members also include countries that have been outside of NATO during the Cold War such as Austria, Sweden and Switzerland and new industrial powers such as the Republic of Korea and Argentina. We think this broad membership needs to be considered as one the successes of Wassenaar.

Now, in retrospect, we are trying to, if you will, meld the legacy of COCOM with the new realities that both senators so eloquently described in their remarks. We inherited from COCOM a long list of goods to be controlled. The selection of those goods was based on preventing the Soviet Union from improving its weapons and its high tech industries. That list is out of date. It is out of date in terms of the objective. It is out of date in terms of the technologies. And we believe it needs a good deal of work.

In addition, we inherited some mistrust that had arisen as a result of debates in COCOM, and this was an obstacle to progress in building the new regime. Most importantly, COCOM permitted the United States and other COCOM members to share a common approach to export controls. As you noted, as we discovered via Iraq, this changed after the collapse of the Soviet Union.

Our export control policies and those of our allies differ widely in some respects. The Europeans have made clear, for example, that they have no intention of adopting our unilateral sanctions. The Wassenaar Arrangement, covering as it does both conventional arms and related dual-use equipment, also does not have the same degree of consensus we find in other regimes. This is because there is much legitimate trade in the items controlled by Wassenaar so the kind of blanket denial policies found in the MTCR or the nuclear suppliers group for weapons of mass destruction or the embargo approach found in COCOM will not work.

The United States is a major exporter of arms and military technologies and considers its ability to make such transfers a necessary tool of foreign policy. Many of the items controlled by

[1] The prepared statement of Mr. Reinsch appears in the Appendix on page 55.

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 7 2002

Wassenaar are also becoming widely available through the kind of globalization that we were discussing earlier.

One thing our Wassenaar partners have consistently made clear for the last 7 years is that they will never submit to the kind of consensus arrangement for export approval known as a veto that was found in COCOM. The military threat to European security that justified a veto no longer exists. In addition, as the Europeans have made clear in other contexts, they have no intention of adopting our unilateral sanctions such as those against Iran or Cuba or our sanctions against India or Pakistan. And they believe that if they accepted a veto, we would attempt to use it to enforce such sanctions.

No other export control regime has a veto rule for export decisions, and I believe we would be mistaken if we think we can persuade Wassenaar or the other regimes to adopt it. It is also worth noting that one aspect of the veto debate is that some transfers we make to our allies and security partners would likely trigger a veto from other Wassenaar members. Unlike the other members, the United States has global security commitments, and I am not sure that we would want Russia or others to sit in judgment on our exports to our security partners in certain states in Asia or in the Middle East.

And there is skepticism among our partners, frankly, as to how we would react to a veto if we believed that our national interests were at stake; in other words, if the tables were turned. Our Wassenaar partners have also consistently made clear that China is not a target of the regime. Many Wassenaar members wish to see China join the arrangement. For the most advanced industrial economies in Wassenaar, China is an important market, not a threat. And they have told us that it is a market that they will service.

The most salient examples are in machine tools and semi-conductor manufacturing equipment. We often hear criticism of sales of five access machine tools to China. The United States has approved only two in recent years, but in the same period our Wassenaar partners have approved more than 20. In fact, exports to China of the most advanced machine tools more than doubled in the last year, and they did not come from the United States.

For semi-conductor manufacturing equipment, we have been told by the other major producers, Japan, Netherlands and Germany, that they will sell to China even if we will not. A good example of that is China's Project 909, where Japan approved the joint venture using the most advanced chip making equipment before the United States had even finished debating whether to allow its companies to apply for a license.

Now let me make some suggestions in closing, Mr. Chairman, for the future. First, we need to recognize that much of the debate in the United States over export controls is out of sync with the rest of the industrialized world. This reflects in part larger differences over security policies, threat perceptions, or trans-Atlantic cooperation. But it forms a crucial backdrop to improving multilateral controls.

Second, we need to consult with our allies and with other regime members on the scope for cooperation and improving controls. For

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 8 2002

conventional arms and related dual-use equipment, it may be less than we would wish. Related to that, we should continue our efforts to promote adoption of catch-all controls by our regime partners in order to ensure that adequate authority exists for controlling a wide range of technology to specific end-users of concern.

Third, we need to refocus the list of those items that are controllable and critical to advance military capabilities. The globalization of technology poses new challenges in that regard, as Senator Lieberman pointed out.

Fourth, we need to give up the ghost of COCOM. COCOM was a valuable tool for NATO in the Cold War, but it is gone and cannot be resurrected.

Fifth, we need to continue efforts to get China to participate in multilateral regimes such as Wassenaar. To this, China will need to make progress in adhering to the international norms for nonproliferation and arms sales. There is no question that they are not there yet.

We must continue our efforts to encourage non-members to adhere to regime standards. The Commerce Department, working closely with State and Defense, Customs and others, has worked with the countries of the former Soviet Union and Warsaw Pact to develop comprehensive and effective export control systems.

We have often found that even in cases where these governments are willing to take the hard steps to keep items out of the hands of unreliable parties, they do not have the practical means or the legal basis to do so. We have had some success in encouraging them to take all the necessary steps including adopting the control lists of the multilateral regimes to allow them to adhere to the objectives of the regimes. But we need to do more in that area.

Finally, we need to continue to work towards national consensus or as close as we can get to consensus in our national discussions over export controls. The recent legislative debate, as you have noted, Mr. Chairman, reveals the differences among us are wide in some respects, and those differences do not provide a firm basis for U.S. leadership at this time. So I think it is particularly important that we try to get together and see if we can develop a common view. Thank you.

Chairman THOMPSON. Thank you very much.

Let us kind of summarize for a moment. See if I am right, and correct me if I mischaracterize anything, but under COCOM, basically each Nation had a veto over the other nations' export of any particular item. The world changed and we moved away from COCOM. Just a bit of history. I hear different things from different people about how the demise of COCOM came about. I have always read that the United States took the lead in doing away with COCOM and moving to another arrangement.

In fact, did not President Clinton campaigned on this point? I do not know specifically, but in terms of loosening controls I recall that he thought many were out of date and too onerous. He kept that commitment and took the lead in changing the COCOM arrangement, moving away from that. Now the administration suggests that the United States was kind of dragged away reluctantly from COCOM and tried to keep what remnants of it we could as we were being pulled away from it against our will.

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 9 2002

I do not know exactly whether you were in the middle of that, Mr. Holum, at the time that it came about, but could you give us a little history on this point in terms of your understanding?

Mr. HOLUM. I was not in the middle of it because at that time I was Director of the Arms Control and Disarmament Agency. We were involved but not centrally, but my understanding of that period is that the United States was anxious to maintain as rigorous an international control regime as we could. And when we consulted with our allies and our former COCOM partners who had long since begun agitating with the fall of the Soviet Union for a liberalized regime, we found that there was very limited stomach for that kind of an arrangement, and particularly, even during the COCOM regime, some members had chaff against the veto arrangement.

So at the end of the Cold War, it was our leadership which led to a successor regime. I think there were some, certainly not all, who would have been content to let the COCOM process disappear and let things revert to national decision-making. And we pressed very hard for a continued multilateral arrangement recognizing that it could not have the same rules and procedures as COCOM. But it did keep alive the export control lists and the basic arrangements for consultation.

Chairman THOMPSON. So we went into the Wassenaar Arrangement, which basically did away with the veto, as we were talking about. It is an arrangement that has no large staff or anything like that, but they have annual meetings. There is an agreed upon list that countries agree to pay attention to. There's an agreed upon list of bad countries that the members agree to pay attention to, but they do not commit to do any particular policy with regard to dual-use items.

They will make their own decisions. Each country makes its own decisions as to what it should do. There is no agreement to notify before a transaction is made. There is no agreement not to undercut. In other words, if one Nation turns down a sale or a transfer, there is no agreement that somebody else will not come along and take that opportunity instead.

There are discussions concerning problem areas and problem items. But basically, some might consider it generally only a discussion society whereby the United States, and others, have an opportunity to persuade people to generally move in the right direction. And then you have Russia, who is a member of Wassenaar, whose general interest and attitudes and behavior some might say are quite different than those of most of our allies, not only in terms of their proliferation activities but in terms of some of the issues that they have taken on in the foreign policy and export control arena.

My understanding is that Russia has been most reluctant or one of the more reluctant to do anything with regard to issues such as prior notification or undercutting or anything of that nature.

I want to focus in one aspect of all this, and it has to do with what Mr. Reinsch mentioned, the catch-all provision—which basically to me means that you look to the country the item is going, and take that into consideration, and give additional weight and consideration to where it is going, and not concentrate so much on

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 10 2002

having a strict control of the item or prohibiting it from being moved per se.

The allies agree that there is a problem country list, but they do not agree specifically as to what to do. What I would like is your assessment of exactly where we are with regard to our allies on that issue. They agree somehow to pay special attention to those countries but do not agree to do anything specifically one way or another.

Is it not true in practice that many of our allies require that there be some very direct evidence of danger before they will stop an export of a dual-use item that we might consider very sensitive? That before they will stop such an export, for them there needs to be shown a direct relationship between that export and the production of weapons of mass destruction or their delivery systems?

In other words, it is easy to give lip service to export controls—to say, yes, we agree. To say, "These rogue countries are problems and we are going to give them special attention," but when it comes right down to brass tacks, many of our allies have different criteria than we do. And I am talking about our European allies now. Do they not as to what they ought to do with regard to exports to those countries? Is that a fair assessment, and could you elaborate on that a little bit?

Mr. HOLUM. Well, I think it is a fair assessment that we have far more consensus in regimes other than Wassenaar on sensitive technologies. In the Missile Technology Control Regime and the Australia Group, the Nuclear Suppliers Group, the Zanger Committee, all the other multilateral informal arrangements that are nonetheless focused on weapons of mass destruction have a far easier time reaching consensus on what should be controlled and to where.

And the rules are much stricter. You have to look at Wassenaar in the context of that, and as you said earlier, we are on the edges of the technologies that contribute to arms programs. And the United States in general is more active, more anxious and interested in controlling dual-use technologies with other weapons applications than some of our Wassenaar partners are.

That said, they all do have dual-use control lists that go beyond the WMD regimes and delivery system regimes. And it is more than a matter of persuasion. I think the existence of the Wassenaar Arrangement and the continuous discussion in that context has helped to bolster countries' national export control policies on both dual-use and munitions. But I would agree or I would argue that absent Wassenaar, those regimes would be or those national controls would be less rigorous.

Chairman THOMPSON. Well, that is an argument that can be made. I am more interested right now, I guess, in understanding exactly what their position is—if we can generalize with regard to our allies—about how that works in the real world. There are supposed to be notification requirements after sales are made periodically twice a year—notification requirements for certain things, certain sales that are made so everybody can kind of keep up with what everybody else is doing. The notification is not item specific, as I understand it. It is in categories. But it is still, I suppose, somewhat helpful.

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 11 2002

Can you give us a feel—I do not know to what extent you deal with Wassenaar, to tell you the truth—but can you give us a feel for the extent to which our European allies are, in fact, exporting dual-use items to problem countries that cause us concern? Can you explain the extent to which there is discussion between our country and our European allies about those matters? Have there been any instances where they have refrained from such exports because of perhaps intelligence that we had that we imparted to them and that changed their mind? How much give and take is going on? How much impact are we having? Lastly, can we say that things are better than if we did not have Wassenaar or that it is successful?

What criteria are we using? Is there any indication that there is in the works a system whereby problem items can be kept from winding up in these problem nations? In terms of government management, we are getting into a performance-based system around here in trying to get the Results Act implemented. So it is not enough anymore for agencies to say "we process this many pages of paper" or "we approved this many applications" and "we had this many discussions." We want to know: Is it really working? Is there any indication that we are keeping bad stuff out of bad hands that otherwise would go there?

Mr. HOLUM. Yes, I think there is. Some of it I cannot go into any open session for reasons you understand. Generally, for example, there is a decline in arms shipments to the four countries, to terrorist list countries, under Wassenaar. I am not saying that Wassenaar is the only reason for that. Part of the reason obviously is that after the Iraq war Russia was not giving as much away and was not able to sell as much.

In the dual-use area, my assessment is that the greatest accomplishments are bilateral rather than multilateral. But the multilateral regime creates the framework and the overall political commitment to control sensitive technologies. But we have four committees in the United States that the State Department chairs that examine transfers or potential transfers. We sift intelligence. We see what is likely to happen and go to our Wassenaar partners or to others and demarche them in case we see a bad shipment to a dangerous destination.

And we have success in that process. I think Wassenaar contributes to our ability to have success. But I think the bilateral component of it is also indispensable. The Wassenaar environment also is a regime in which countries agree more generally on what are the problem destinations. I have mentioned the four, but they have also focused on areas in conflict. They focused on the Sudan. They focused on Afghanistan and other regions where shipments are less likely to take place. So there is a collective judgment rendered.

It is very difficult to do these things multilaterally for all the reasons you know including the membership of Russia in Wassenaar. Russia does take a different view on many of the issues. Given that Russia has many of the technologies that we want to control, I think it is better to have them in than to have them out, but it makes consensus harder to achieve.

Chairman THOMPSON. It seems to me that you could almost make the argument, on the other hand, that the Wassenaar Ar-

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 12 2002

rangement might hinder these bilateral activities. After all, you have got the umbrella of approval with regard to certain things out there that countries might not be as willing to take a chance on if they did not know that others were doing it. You are going to have to be reporting this periodically anyway. Everybody is going to see that if you go ahead and do it, regardless of the United States' objection, there will be no problem. So the next country might be tempted to do the same thing.

I do not know. I have just one other follow-up. My time is over, but I have a follow-up on something you said. How easy or difficult is it for us to share our intelligence even with our allies concerning these things? Is that flow going the way that it should?

Mr. HOLUM. It is always very difficult. It varies obviously with the country, but there is a constant struggle to be able to share as much intelligence information as we have and to tell as much as we know to the country we are trying to influence because of sources and methods problems and that is a legitimate concern of the intelligence community. I will not dispute that it exists. I do not want us to not have information, but it is a problem when you have information and cannot act fully on it because you cannot release it.

Chairman THOMPSON. If you will indulge me, Senator, just one more question. We clearly in this country do have a different view of how to deal with the rogue nations. But why is this? And I wonder if it relates to the intelligence part? Do our allies not perceive the same kinds of threats that we do, especially with regard to Iran? There seems to be a disconnect there. Why is it that our allies do not see some of these nations being as much of a potential threat as we do? Does it have to do with the nations, or does it have to do with the kinds of items, dual-use items, that are often at issue and that are going to these nations?

Mr. HOLUM. I think it has to do to some extent with both. I think there is a perception among some of our allies that the best way to deal with Iran, for example, is engagement, that we will change their approach by being willing, for example, to transfer peaceful nuclear technologies.

At the same time, I think it is important to note that our allies generally have agreed with us on the conclusion that Iran is seeking a nuclear weapons capability. So none of our European allies engage in even peaceful nuclear cooperation with Iran. Russia obviously is a different story so they have a different perception of Iran overall and think engagement can lead to positive results.

But I think at the same time, they have accepted our premise, at least on the nuclear front and on the missile front, that these are dangers. But again when you get into the level of dual-use items where Wassenaar is applicable, it is more difficult to reach a consensus.

Chairman THOMPSON. Senator Lieberman.

Mr. REINSCH. May I add something to that, Mr. Chairman? I think the other perspective is some of these countries have a different, a different history, a different commercial relationship with these countries where the breaking of ties and the whole hostage episode which they did not experience has created a different attitude.

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 13 2002

Chairman THOMPSON. France and Libya, for example.

Mr. REINSCH. Pardon me?

Chairman THOMPSON. France and Libya, for example?

Mr. REINSCH. Well, Italy and Libya in particular, yes.

Chairman THOMPSON. Italy and Libya.

Mr. REINSCH. I mean those are good examples. We also have global commitments and a global perspective and despite what some of our allies may say from time to time, they do not necessarily. They do not look at Iran from the standpoint of a global perspective. They look at it from a narrower perspective which makes it easier to look at it commercially.

Chairman THOMPSON. Thank you. Senator Lieberman.

Senator LIEBERMAN. Thanks, Mr. Chairman. Very briefly, first, I am interested if either of you know from a historical perspective whether there was an attempt as the Wassenaar Agreement was coming together to have veto authority within it. Was it discussed at any point and rejected, or was it just assumed that we were in a new world and it was——

Mr. HOLUM. Yes, I would have to get back to you on the specifics, but my understanding is that we concluded after consultations that it was hopeless to try to include it so it was not actively proposed.

Mr. REINSCH. My understanding is the same, Senator. We had to, we had to do something because COCOM was aimed at the Soviet Union and we were concerned about Iran, Iraq, Libya and North Korea.

Senator LIEBERMAN. Right.

Mr. REINSCH. The pariah states necessitated a change. My understanding is our allies made it very clear from the beginning that a veto wasn't one of the options that they were prepared to consider.

Senator LIEBERMAN. And as a result, we have not at any point since initiated discussions about putting veto authority into Wassenaar just because we thought it was a non-starter?

Mr. HOLUM. That is right, although we have made a very active effort including in the 1999 assessment. I was the head of the delegation. Under Secretary Reinsch was also a participant in December in trying to strengthen the regime, in particular to provide for notifications of all dual-use denials. One of our major objectives in this context is to achieve a no undercut process.

It is not the same as a veto. You cannot force somebody not to sell, but if we deny a license to somebody, we would like to report that and have other members know than if they undercut, they are going to be under a lot of pressure. Now that is available in a limited way for very sensitive items on the dual-use list. But it is not available for all items, and that is what we would like to accomplish.

Mr. REINSCH. I am advised, Senator, that we did repeatedly propose a veto in various forms in the 1993–94 period, but we haven't proposed it recently.

Senator LIEBERMAN. And those efforts were rejected?

Mr. REINSCH. That is correct.

Senator LIEBERMAN. Help me understand. When a nation, when a member Nation of Wassenaar violates the agreement by export-

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 14 2002

ing an item on the agreed upon list, what are the sanctions that are possible?

Mr. HOLUM. Well, there are no sanctions because ultimately the decision making belongs to the countries. It is consultative arrangement rather than a sanctions arrangement. Now individual countries can make their own determinations. If we decide as a matter of national policy that we want to sanction somebody for an export that goes beyond Wassenaar, we tend to do that in other areas, but there is not a formal group sanction.

Senator LIEBERMAN. So this leads to me to the question I wanted to ask, which is that some have suggested that we should consider creating our own stronger hammer outside of Wassenaar, such as trade sanctions against countries that are involved in the transfer of dual-use technology, and I wanted to ask you what you think about that idea?

Mr. HOLUM. I think as a general matter, we certainly need to consider unilateral controls, and we do apply unilateral controls and restraints, limits, for rare circumstances. But I think the entire process of proceeding unilaterally in this area is a loser over the long term, that the technology has spread so widely around the world and is available from a lot of different places that pursuing unilateral controls and sanctions will not achieve the objective, that you really have to choose the best basis for getting multilateral consensus among the suppliers.

Mr. REINSCH. I would agree with that, Senator. The only thing I would add is that the Congress has, as I understand your question, done that with respect to various pieces of legislation on Iran, Iraq and Cuba.

Senator LIEBERMAN. Right.

Mr. REINSCH. I think I would leave to you to judge whether those have been more effective than what we're describing.

Senator LIEBERMAN. Well, as the sponsor of a few of those, I hope it has.

Mr. HOLUM. Well, one of the things they do is, and can have a tactical advantage in persuading other countries that were serious and as part of the efforts to bolster diplomacy, but I think they are always more effective in the threat or the potential for doing them than they are if you actually have to carry them out.

Senator LIEBERMAN. Let me come at this a different way, going back to something I said in my opening statement, which is the extent to which our ability, U.S. ability, to maintain military dominance depends on technological developments and to some extent a vibrant technology industry here may depend on that industry exporting.

So I wanted to ask you to what extent would you say that those kinds of concerns, which we certainly hear from the industries involved, express themselves or play a part in our approach to Wassenaar and the whole question of controlling dual-use technologies? How do we balance the relative, the various national interests we have here?

Mr. HOLUM. Well, we clearly do with the decline in defense budgets and with the growth in reliance of defense industry and our security agencies on technologies developed in the private sector outside of the defense sector. It is unquestionably true that our ability

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 15 2002

to maintain a cutting edge in both military and dual-use technologies depends on exports and depends on a healthy industrial base.

We take a slightly different view, and Under Secretary Reinsch will want to comment on the dual-use side of this, slightly different approach on munitions than we do on dual-use items.

Senator LIEBERMAN. Right.

Mr. HOLUM. If there is a security reason not to export a munitions item, it will not be done whether or not there is an economic consideration in favor of it. We do consider the industrial base as part of our conventional arms transfer policy. But if the Department of Defense, which has the primary security oar, says this sale should not be made, the State Department will not issue the license.

In dual-use, there is more of a balancing between the risks and the costs, but——

Mr. REINSCH. Yes. If I could add, Senator, I think that is a very interesting question and one that deserves, I think, more thought than we can put into it right now. The main impact of what you are talking about occurs as each nation makes its own national decisions about whether to approve a license or not.

Senator LIEBERMAN. Right.

Mr. REINSCH. Particularly on the dual-use side. One of the arguments that we have made frequently with respect to a number of sectors is that the real security issue is those sectors' health and their ability to supply the Defense Department and that, in turn, depends on their ability to export and plow their profits back into R&D and so on, has been said.

As far as the international or the multilateral process is concerned, at one level that is a little bit of a destabilizing factor rather than an easy factor because we are making that analysis with respect to our own industry. Presumably the European nations are making that analysis with respect to their own industries which are competing with us.

Our interest is, for example, to take a current one, the health of our computer industry and the health of our satellite and telecommunications industry because we think they are essential to our security. The Europeans have the same concern about their computer industry and their satellite industry. It does not necessarily lead them to the same licensing decisions.

It is not a secret, and I know it will not be a surprise to you that for years in COCOM—I have heard this less in Wassenaar, but I am sure it is true—that all parties have occasionally accused other parties of either making decisions or pressing positions on what should be listed and what should not that had more to do with local commercial interests than the larger good of nonproliferation. All countries routinely deny that accusation when it is made, but there is some history there.

Senator LIEBERMAN. Thanks. Let me ask a last question in a different area which is, as we all know, the Export Administration Act, which is our major domestic export control, lapsed several years ago and we have not yet reauthorized it, but we have continued the controls through executive orders. Has the absence of the reauthorization, had any effect on our participation in the Was-

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 16 2002

senaar Agreement? Or have the executive orders basically had the same force and not diminished our position there?

Mr. HOLUM. Well, what I miss most about the Export Administration Act is the level of penalties that are available because they are outdated. Bill, you might add to it?

Mr. REINSCH. I think in the spirit of detente with the Chairman, I was not going to get into the Export Administration Act, but you have asked an important question.

Senator LIEBERMAN. It was much too peaceful here.

Chairman THOMPSON. I am going to violate it again, go ahead. [Laughter.]

Mr. REINSCH. Well, you have asked an appropriate and important question. The biggest problem, I think, is absence of penalties, but there are also police power problems from our standpoint. We have to go be deputized marshals. It makes enforcement more difficult, the penalties are the cost of doing a business. It also has caused us some legal difficulties. The law contained a confidentiality provision that precluded us from making public proprietary industrial information, for example.

We are now in the midst of two court battles where via FOIA requests that kind of information has been sought, and the argument of the plaintiff is that we have no authority to keep it confidential because the act has expired. We are concerned about the litigation risk here.

On the anti-boycott side, which is part of the statute it is the same thing. Any lawyer worth his salt in an anti-boycott claim would argue that under IEEPA the government has no authority to pursue the anti-boycott law because it has expired.

In the multilateral context, the biggest problem I have seen is as we go out to countries of the former Soviet Union particularly, where we have a quite extensive program that I alluded to in our testimony—I know Secretary Holum could talk about—to try to help those countries develop export control systems of their own. We have helped them draft laws. We have helped them draft regulations. We have helped train their Customs and border officials. We have helped them adopt control lists and done a wide variety of things including providing hardware and software so they can keep track of their exports, and we have done it on the theory that while we do have policy differences with some of those governments, we also have policy congruities. There are areas where they would like to stop that technology from leaking outside their borders, and they do not have the means to do it.

We can help them do that. In that context, our absence of a law has been a problem because we go to them and say you need a law and you need a regulation and you need all this stuff, and they say you do not have one. And it really, I think, has damaged our credibility with countries whose performance we are trying to beef up. I think with the UK and our NATO allies, it has been less of an issue.

Senator LIEBERMAN. Did you want to add anything, Mr. Holum?

Mr. HOLUM. No, I agree with the basic conclusion that we should have a new law as soon as we can.

Senator LIEBERMAN. Yeah.

Mr. HOLUM. But we want it to be a good law.

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 17 2002

Senator LIEBERMAN. Right. Well, absolutely. I did not want to destroy the detente too much by saying though there are some negatives associated with no reauthorization, obviously that does not mean we should adopt any law.

Chairman THOMPSON. We all agree we need a law. We have a small problem with what goes into the law.

Senator LIEBERMAN. That is right.

Mr. REINSCH. If you will just do exactly what we want, Mr. Chairman, then everything will be fine.

Senator LIEBERMAN. That is all it takes.

Chairman THOMPSON. That was what the Executive Orders did.

Senator LIEBERMAN. Thank you, both. Thanks, Mr. Chairman.

Chairman THOMPSON. Senator Akaka.

OPENING STATEMENT OF SENATOR AKAKA

Senator AKAKA. Thank you very much, Mr. Chairman. Glad we are having this hearing and hope maybe that we can come back and reexamine this as was indicated. The end of the Cold War has not meant an end to our concern about the diversion of technology to the wrong parties for the wrong things. But it has meant a loosening of export controls. Mr. Chairman, I ask that my opening statement be made a part of the record.

Chairman THOMPSON. Without objection.

[The prepared statement of Senator Akaka follows:]

PREPARED STATEMENT OF SENATOR AKAKA

Mr. Chairman and Senator Lieberman I commend you for calling today's hearing.

The end of the Cold War has not meant an end to our concern over the diversion of technology to the wrong parties for the wrong things.

But it has meant a loosening of export controls.

Unfortunately, the loosening of controls has come at the same time that the information to develop weapons of mass destruction—chemical, biological or nuclear—has become more widely available and the technology to manufacture these weapons more easily obtained.

A building the size of this hearing room—perhaps smaller—would be sufficient—I am told—to house a biological weapons plant. This makes it easy for a country to hide its weapons program. I am also told that the technology to develop biological and chemical weapons is widely available, making it easy for a state to develop such weapons.

While the technology has become easier to obtain, the end of the Cold War has also made it harder for the United States to convince other countries to share our concern about states, such as Iran, whom we believe are secretly developing weapons of mass destruction.

When we voice our fears, our allies charge us with trying to hinder their economic growth, preventing competition in order to preserve American dominance of world markets.

It has become sometimes harder to work with our friends and allies to ensure security in the world.

It has been made even more difficult by globalization. Corporations span international boundaries. Investments involve a multitude of businesses and nationalities. This is especially true in high technology areas—aerospace, for example.

How to make progress without providing the seeds for our own destruction is the central challenge of this century.

I welcome the witnesses to today's hearing. It promises to be a lively debate and I hope not the only time this Committee examines this problem.

Senator AKAKA. And I would like to ask a few questions of Mr. Holum. You state that countries in 1999 agreed only to a modest increase in arms transparency. What were our proposals concerning transparency?

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 18 2002

Mr. HOLUM. Essentially what we did accomplish, first, is members are now going to report reconnaissance troop command and electronic warfare equipment in the armored combat vehicle category. There are several changes along that line that expand the reporting requirements in certain Wassenaar categories of arms. We proposed a number of additional categories which were not accepted. But we did make some modest headway.

The main thing we wanted to accomplish is to require reporting on denials of dual-use exports or export licenses, which would lead to then a no undercut possibility, the possibility of consulting if another country moves to export something that you have already denied. We think that is a fundamentally important reform of Wassenaar to make it stronger. We also wanted to pursue in the Wassenaar context a common approach to the export of MANPADS, man-portable surface to air missiles, which have a very grave threat or pose a very grave threat in the context of terrorist use, for example.

The subject was remanded to the general working group. They agreed we should continue to work on it, but we did not get as far as we wanted in that area. So those are the kinds of priorities we will continue to pursue.

Senator AKAKA. Just to get your comments of a witness that will appear on the next panel. Henry Sokolski raises concerns that the United States shows a—and I quote from him—"willingness to subsidize known proliferating entities." And he cites several examples such as the U.S. Export-Import Bank guaranteeing exports to the Nanjing Chemical Company, which was proliferating chemical weapons equipment to Iran. Do you agree with Mr. Sokolski that we should not subsidize exports to foreign companies which proliferate and could you give me your reasons one way or the other?

Mr. HOLUM. As a matter of principle, I would like to look at the specific cases to see if my perception of the facts is the same as Mr. Sokolski's, but as a general proposition, no, I do not think we should subsidize proliferators.

Senator AKAKA. Mr. Reinsch, what do you think of the recommendation by Henry Sokolski, again, that the United States should take steps to limit or prohibit the licensing of American exports to companies our intelligence agencies have clearly identified as proliferators? Do we do this already?

Mr. REINSCH. Yes, we do. And I think it is an appropriate way to go. The key word there is the word you emphasized, Senator Akaka, which is the word "clearly." One of the problems of intelligence, particularly the kind of intelligence we are talking about here, is that it often is not clear. You are putting together two plus two plus two, and you are assuming it is six, but you do not really know because there are pieces missing.

The intelligence community often gives us as clear a picture as they can and they tell us what they know and they tell us what they do not know. I think the process works in the way that Henry is recommending. That is, when we have that information, we act on it, and when the intelligence community presents a clear picture of a bad end-user, if you will, the licensing process has pretty consistently denied those exports. When the intelligence community

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 19 2002

presents a mixed picture, then sometimes we have more of a debate.

Senator AKAKA. Steve Hadley, who will appear, in his testimony quotes a Defense Science Board report to support his proposal that export controls should be targeted on what is unique, military, critical and controllable. Do you think this approach is workable or has a distinction between what is of critical military use and what is of civilian use been blurred by today's technologies?

Mr. REINSCH. Well, it has been blurred. There is no question about that. I attended most of the sessions of that review board task force, and I recommend it to all of you. It is a very thoughtful piece that was produced primarily by ex-military officers and ex-Defense Department officials from the last two administrations primarily. So it is a very, I think, objective piece that is most useful in its discussion of how the world has changed, which is something that Mr. Hadley's testimony also comments on.

The recommendation that you are making, which is a variation of what the Chairman alluded to, higher fences, smaller items—I mean the reality is that we all give that speech. I have heard Senator Thompson give a variation of that speech. Senator Gramm has given that speech. I give that speech all the time. The difficulty is translating the speech into the specifics of saying what is going to be on that list.

And once you get beyond fissile material and stealth technology, and a couple other things, agreement over what those really critical items are becomes a lot more difficult to reach, and people simply do not always agree. One of the reasons they do not always agree is the point that you made—because these things have both military and civilian application.

Night vision equipment is a classic case. This is absolutely essential to the Army and its ability to outmaneuver its adversaries in twilight or darkness. At the same time, you can buy them in an L.L. Bean catalog. Night fisherman and boatmen use virtually the same stuff. It is classic dual-use. There is not any question what this is, but making decisions about a technology that we very much do not want to fall into other people's hands creates dilemmas. Is that critical or is it not? And the DSB report for all of its strengths conveniently does not provide a suggested list. It suggested that we create a list and, as I think you have discovered in the EAA debate, that is a difficult task, and people of goodwill and good intentions have honest disagreements over what should be on it and what should be off it.

Mr. HOLUM. There is another caution I would add, and that is that if we are talking about munitions, we have always treated, and I think should continue to treat, exports of arms as a foreign policy decision, whatever the level of technology. In Africa, in the last decade, the AK–47 has been a weapon of mass destruction. And I do not think the United States wants to be competing for all those markets. I think the decision to export even low-tech munitions must remain a matter of national determination.

We consider in the munitions realm where equipment that goes to allies is likely to end up. We attach re-export control limitations, for example. So this is an area that we need to focus on as well. It is not only a question of technologies, and I agree that we can

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 20 2002

and should explore liberalizing transfers of technologies to close allies and we are very much engaged in that kind of an effort. But we have to treat munitions differently from dual-use technologies because these are direct instruments of conflict.

Mr. REINSCH. And the Commerce Department agrees completely with that. The issue that you are raising, which is the key issue, is what is a weapon and what is not? And there I think the fact is if it is an F–15, it is clear. If it is a computer, I think it is also clear. But the reality is there are some things that are more in the middle of that spectrum, and that is what some of these debates that we have been involved in have been about.

Senator AKAKA. Mr. Chairman, let me conclude by mentioning to both of our witnesses if, as Mr. Holum has said, that unilateral controls do not work and if we have difficulty getting unilateral agreement—multilateral agreement—where are we left at the end of the day? Do we give up or do we keep pushing at the proverbial open door while these dangerous goods get exposed to dangerous countries? Can the situation become, as Senator Thompson has indicated, any more frustrating?

Mr. HOLUM. I think it could become much more frustrating, but it seems to me that we have no choice but to work to build the strongest multilateral regimes we can. And I am not as pessimistic as some about that. I think it is very important to decide what the critical technologies are, what the proscribed destination should be, and continue our efforts to work with other suppliers, principally through multilateral regimes. Where countries are not party to a regime, we should try to broaden it to have them—such as China—to have China live up to the standards that would allow it to become a member, for example, of the Missile Technology Control Regime, the Wassenaar Arrangement. They are certainly not qualified now, but I think it would serve our interests for them to be subject to the same constraints as other members.

Mr. REINSCH. The thing to keep in mind, Senator, from my perspective is these regimes are works in progress. None of them started with a whole loaf, if you will. And you do not get the whole loaf in negotiation. It simply is not that easy. Brick by brick we build them and make them better. As Secretary Holum pointed out, we did not get everything we wanted in Wassenaar in 1999. We will be back at the plenary in 2000 trying again. And the people that come after us will be back the following year and eventually we will get what we want.

But these things do not happen overnight and one of the main characteristics that I think you have to demonstrate in Mr. Holum's business in particular as a negotiator is patience.

Senator AKAKA. Thank you very much, Mr. Chairman.

Chairman THOMPSON. Thank you very much. One or two more questions. What are we trying to get? What is on the table? What was discussed in your December 1999 meeting? We have talked about catch-all provisions, undercutting, and all those things. Are these things that we are actively trying to get some movement on? What are the most important things that realistically we could expect some movement on perhaps in the future?

Mr. HOLUM. I think the most important single step we can take is notification of dual-use denials that would lead to the possibility,

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 21 2002

to something akin to a veto, at least an opportunity to persuade with knowledge that somebody is undercutting a dual-use transfer. That is the highest priority, I think, because of the threat it poses. Getting some action on MANPADS is also crucial. We at the last session, and I—in fact, Under Secretary Reinsch and I both made a number of trips to engage in bilateral consultations leading up to the December session. We wanted to expand the list. We found a way to expand the list by not changing the number but adding more reporting requirements in the various categories, and I can supply you a list that would probably be useful for you to have before you leave on your trip of the kinds of things that we think would strengthen the regime.

Chairman THOMPSON. There are some notifications for dual-use denials, are there not?

Mr. HOLUM. For very sensitive items on the list.

Chairman THOMPSON. You are talking about broadening that?

Mr. HOLUM. That is the objective.

Chairman THOMPSON. On the catch-all that you referred to, Mr. Reinsch, I take it that this is not realistic in the short term? I mean, this issue has to do with their viewing end-user countries, if you want to put it that way, the same way we do or with concentrating more on them than they are willing to right now. Is that a correct assessment?

Mr. REINSCH. No, not exactly, Mr. Chairman. We have made a good bit of progress getting our allies to adopt the catch-all, but we have to keep in mind, I think, what the catch-all was designed to do. It was invented in the last administration when we discovered a circumstance in which we had identified a bad end-user but were going to send something that was not at that moment under control, yet we wanted to stop it because of its significance to that end-user and our high level of confidence as to how it would be used.

Chairman THOMPSON. We have learned there are some things that are not on anybody's control list necessarily but that are problems when they are going to the wrong place.

Mr. REINSCH. Well, exactly, and that is what catch-all is about. It is designed to provide in our case a regulatory basis for stopping things that would not normally require a license because we know the nature of the end-use and because we have a high level of confidence it is going to be used for proliferation purposes. This is even more important for some of our allies whose legal authority to control exports is rooted in the multilateral list.

In other words, they do not have a unilateral list of their own that goes beyond whatever is on the Wassenaar and the other lists they belong to. So on occasion, we have gone to them and said this bad thing is about to go there and they will say, well, we agree with you, it is a bad thing; we have no legal authority to do anything about it. A catch-all provision, if we can persuade them to adopt it, gives them a legal basis to respond to the kinds of dialogue Secretary Holum wants to have with them when we discover these things.

In fact, we have had a lot of success with the Japanese and with I think—I cannot give you a number—I think the State Department can—most of our allies in getting them to put this into place. Now, the next step, of course, is to watch it, observe it, and take

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 22 2002

advantage of it when we see something going notwithstanding the catch-all, to go back and remind them that they have one and they can take these steps.

Chairman THOMPSON. I see what you are talking about. On the undercutting provision—I take it we are trying to get some movement on that also——

Mr. HOLUM. Yes, sir.

Chairman THOMPSON. Could that turn around and bite us on any occasion, such as an outright veto might? You point out the downside of the veto. I am wondering about whether or not there would likely be instances where one of our allies would come forth and say, they approached us first and we denied them these sales and therefore, you, the United States, cannot sell these things to your allies.

Mr. HOLUM. That raises the same point why a number of people think a veto is not in our national interests. We are a country that leads in technology.

Chairman THOMPSON. But this is not an outright veto, of course.

Mr. HOLUM. This is not an outright veto.

Chairman THOMPSON. It is a no-undercutting arrangement.

Mr. HOLUM. We would have to be able to stand up and defend our decision if we had made a decision to undercut. I think the reason something like this would serve our interests is the United States is unquestionably the most aggressive country in the world in terms of controlling exports of arms and dual-use items. The likelihood of our being caught in that kind of a bind and being unwilling to defend our self is limited compared to others.

Chairman THOMPSON. Finally, Mr. Reinsch, I cannot resist the temptation, since you kind of opened the door here a few minutes ago in terms of credibility.

Mr. REINSCH. I am going to pay for that.

Chairman THOMPSON. What does it say about our credibility when we have our intelligence experts, our CIA analysts come before this Committee and tell us that China is still one of the world's greatest proliferators? The same countries that they are selling to we are told by the Rumsfeld Commission and others are posing an ever-increasing threat. And yet we are engaging more and more in dual-use trade with China, expanding the MTOP performance level export license threshold for supercomputers, what have you. I wonder what our allies think when they look at what we are doing with regard to China. Senator Akaka referred to one of the other witnesses' statements about the fact that when they use our capital markets, they raise billions of dollars for state-owned companies. Some think the money goes back to enhance their military. We do not know where it goes because there is no transparency.

Even leaving all the other human rights issues and so forth aside, they seem to be thumbing their nose at us in every respect, reminding us that they can lob a missile on to our cities, and threatening Taiwan. From the front page of the *Washington Post* today it looks like the Great Leap Forward guys in Beijing are having their say now, brooking no dissent and all that. What does it say to our allies when we so aggressively pursue trade with China when the PRC is so clearly proliferating to nations that our own

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 23 2002

people tell us are increasing threats to us? I mean does that not——

Mr. REINSCH. We are dividing the answer, Mr. Chairman, and Mr. Holum is going to go first.

Chairman THOMPSON. All right.

Mr. HOLUM. I think putting it in a broader context, we are certainly dissatisfied with China's performance on non-proliferation standards, but we also have to proceed on the basis of two other realities. One is that we are not going to solve the non-proliferation problem if we do not have China assisting, if we do not have them actively participating in control regimes and agreeing to contain their transfers of technologies and especially WMD and delivery system items. That is one reality.

Another reality is we have had some considerable success in pursuing those efforts through a combination of steps that include sanctions, that include positive inducements, that include the full range of diplomatic engagement at every level up to and including the President.

In 1994, as part of a process to lift sanctions related to missile transfers to Pakistan, China agreed not to transfer MTCR class missiles to anyone. That goes beyond the MTCR commitment. And they have lived up to it. They have as near as we can tell not since that time transferred such missiles anywhere. They have agreed, and President Zhang said they would not transfer CA801 or 802 missiles to Iran.

Chairman THOMPSON. When they get caught on a particular thing, they make only very specific agreements not to do very specific things.

Mr. HOLUM. I agree, but it is a step in the right direction to have them agree to that. I would like to have them in the MTCR. If they can meet the standards of that regime, I would like to have them in that regime so that they would be constrained like other members are. But their nuclear——

Chairman THOMPSON. But there is really no—I mean that is not even on the distant horizon. They do not have adequate export controls. They do not adhere to existing nonproliferation regimes. They do not have responsible policies towards the so-called rogue nations. All of those are requirements for becoming a part——

Mr. HOLUM. That is right.

Chairman THOMPSON [continuing]. Of the Wassenaar Agreement. And they do not, they will not be a part of any regime that requires full IAEA controls. I mean, what in the world gives us reason to even hope that they might change their policies enough that they might qualify even for the Wassenaar Arrangement?

Mr. HOLUM. If they will not, they will not be members. But what I am saying is I want to continue the effort to make them part of the solution because if they are part of the problem, we are not going to solve the problem. And we have made some headway. In the nuclear area after the 1996 ring magnets case, they agreed to not transfer nuclear technology to countries without full scope safeguards. They have continued, lived up to that obligation. They are not cooperating except for a couple of winding down projects with Iran's nuclear program, unlike Russia.

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 24 2002

All I am trying to say is we are not happy with their performance, but this is a mixed picture, and we need to keep working it. If we give up, we are not going to solve the proliferation problem.

Chairman THOMPSON. That is good enough for me unless you just want to add something?

Mr. REINSCH. Well, I was going to say also, first, Mr. Chairman, on the export control side, we have had a series of encounters with our counterpart in China, which is MOFTEC, not the Ministry of Foreign Affairs, which actually administers Chinese export controls, and have had two sessions last year which were essentially training and information sharing sessions in which they sent I think virtually all their people here a week at a time to learn about how to maintain a competent export control system.

We are planning to go back now in the fall. This was arranged last week. We are planning to go back in the fall to Shanghai and meet with their businesses. This is a slow process. We are doing the same thing in Russia. We are doing the same thing in Ukraine. I mean Mr. Holum is right. It is a mixed picture. It is coming along.

On the industry side, I would just say that I urge you not to let the computer issue obscure all the other issues. One of the comments I made earlier was that in the last couple of years, we sold them two machine tools, five axis machine tools, while our European friends sold them 20.

We actually maintained quite tight controls over manufacturing technology and production technology going to China, and if you want to have a panel of the machine tool people and semi-conductor manufacturing equipment people here, they will tell you their long litany of complaints about this administration's repeated denials of things that they want to send, and we will tell you our repeated efforts to demarche our European friends not to sell either, which have not been very successful.

Computers are a different story. It is a different technology. They make them themselves. They make high performance computers themselves. The reality, the commercial reality in China right now is Legend, which is a Chinese company, is now fourth in computer marketing in the Asia-Pacific region. It is the largest producer in China. At the PC level, they are eating American companies' lunch.

Chairman THOMPSON. They do not need ours anymore. That is good news.

Mr. REINSCH. Well, that is what is happening. If you think about it from the standpoint of economic development history, this is going to be like everything else. They are moving up the value-added chain and they are going to start making the bigger PCs. They are going to start making the servers. They are going to start making work stations, and they are going to displace us in the marketplace there. The thing that people forget about regarding the proliferation issue, if you are the PLA and you want to use a high performance computer for something, keeping in mind that most of the things you would want to use a computer for, you can use an ordinary PC for in the weapons area, which is what we did for our designs—all the weapons in our arsenal were designed with computers of a thousand MTOPS or below—there are many ways to acquire them.

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 26 2002

I mean the technology is way out of the box. But if they want an HPC, they make them. They do not make enough of them to compete with us. They are not as good as ours, they are not as cheap as ours, but, if you are the PLA, what do you need? Ten, 20? They can do that in a few months. So what we have tried to do about that technology, not all technologies, but that technology, is take a realistic view of what is going on in the world an get a sense of what is most in the interest of our security, which we think is a healthy industry, but I would not extrapolate that history or that case to cover all technologies or our entire policy.

Mr. HOLUM. Mr. Chairman, I am sorry I need to correct something. I was playing my last answer through in my head, and I think I said that China agreed not to transfer nuclear technology to countries without full scope safeguards. That is not correct. They agreed not to assist unsafeguarded nuclear facilities.

Chairman THOMPSON. Because Pakistan would not fit that criterion.

Mr. HOLUM. That is right. That is an important distinction. I think I misspoke.

Chairman THOMPSON. All right. Thank you.

Senator AKAKA. Mr. Chairman, may I follow up with a quick question?

Chairman THOMPSON. Yes, go ahead, Senator Akaka.

Senator AKAKA [continuing]. On China. Mr. Holum, you said that you hoped to broaden membership in the Wassenaar and suggested including China in it. And the Missile Technology Control Regime. Has not China said that it would adhere to the MTCR?

Mr. HOLUM. China has said it would consider membership in the MTCR and they gave us a long list of questions that were serious questions that they wanted answered, but they would have to live up to the obligations of the MTCR and so this would be a decision-making process on our part as well as the other members. But at this stage, they are not prepared.

Senator AKAKA. Thank you, Mr. Chairman.

Chairman THOMPSON. OK. Well, we can continue our discussion on these other items at a later date. It will be ongoing. I would refer anyone who is interested in this to make part of their reading the Cox Report, but I appreciate your being here with us today. We have another panel that is patiently waiting, so we will move on to that. Thank you, gentlemen.

Senator LIEBERMAN. Thank you.

Chairman THOMPSON. I would like to ask our second panel to come forward. Our first witness will be Frank Gaffney, Director of the Center for Security Policy. He will be followed by Henry Sokolski, Executive Director of the Nonproliferation Policy Education Center, and the Hon. Stephen Hadley, former Assistant Secretary for International Security Policy at the Department of Defense.

Thank you for being with us today. It just occurred to me I do not think I ever introduced our last two gentlemen. But I think Mr. Reinsch and Mr. Holum are so well known I suppose they did not need any introduction. Mr. Gaffney, do you have an opening comment or two?

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 25 2002

TESTIMONY OF FRANK J. GAFFNEY, JR.,[1] PRESIDENT, CENTER FOR SECURITY POLICY

Mr. GAFFNEY. I have about 20 minutes of opening comments, Mr. Chairman, to be honest. And I will try to reduce it to the time that light will give me. I appreciate very much the chance to appear and ask you to submit for the record my entire tome and will try to summarize three main points.

Chairman THOMPSON. Your statements will be made a part of the record.

Mr. GAFFNEY. Thank you, sir. Three main points. The first is really in the nature of an acknowledgement and a thank you to you personally, Mr. Chairman, and many other members of this Committee and the Senate, for taking this issue up. I have had the privilege of working on it off and on for about 20 years, starting back when I worked for a member of this Committee, Scoop Jackson. And I believe we are in serious danger when there is not aggressive oversight by the Congress in this area. And so I commend you both for what you are doing to look at the multilateral side of this and, of course, the activities that look like they are going to resurface today on the floor in terms of the domestic EAA and I wish you well in that regard.

I will turn second and quickly to how we got here and you have heard a little bit of what I would consider to be revisionist history of the demise of COCOM and the construction of the Wassenaar accord. I have indicated in my testimony several themes that I think actually contributed materially to the decision to end COCOM. And there is no getting around it, the allies wanted it ended, but I remember one of my first tasks working for Senator Jackson, as a matter of fact, was supporting an effort he made in 1977 to prepare for then the new president Jimmy Carter a strategic arms control proposal that would involve the kind of radical reductions that ultimately characterized President Reagan's initiatives.

And that proposal was taken to Moscow and presented by Cyrus Vance and a negotiating team including Paul Warnke who wanted no part of that agreement any more than the Soviets did. And I would suggest to you that you had precisely the same kind of phenomenon at work here. This administration, I regret to say, populated senior positions in several departments, but most notably in the Defense Department, with responsibility for export controls with people who had a very clear record of hostility to export controls in general and specifically to COCOM.

When you had such people going to our allies and saying we need to keep that veto, if they did indeed do that, it was not credible, and the fate of a very valuable, very important institution, not only during the Cold War but I believe arguably even more so today, was a foregone conclusion.

I will not belabor some of these other points except to say that I think the principle that we can trust people who regard as clients countries we regard as rogue states, to be full and reliable allies and partners in these kinds of multilateral arrangements is foolish in the extreme.

---

[1] The prepared statement of Mr. Gaffney appears in the Appendix on page 61.

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 27 2002

It is not an accident, in other words, that quite apart from many of our allies, who frankly are not terribly reliable in these areas either, some of our long-time adversaries have proven to be part of the problem. To hear Secretary Holum talking about getting them into these multilateral arrangements and thus making them part of the solution I think, in fact, preordains that there will be no solution at least through this approach.

Quickly, I would like to just cover a couple of the points that I think you need to think about concerning what do we do now? I know you do not want to talk about it and I will not except to say: First, do no harm. And the EAA bill before the Senate today will do more harm, I believe. We need to reestablish an appropriate balance. We all agree there are subjective judgments and a lot of nuances here, but we need to reestablish balance between commercial interests and national security interests, a balance that I think has been egregiously lacking in this administration.

To start with, you need to have a focus. And as you said, Mr. Chairman, and I think Senator Lieberman and others, it is obvious that the old Soviet focus is no longer relevant. But I am afraid as your colloquy just now indicates a focus on China and for that matter a focus on Russia ought to be part and parcel of what we understand to be a continuing contributing force in the problem export controls are designed to address.

We need to reestablish in the Pentagon a real voice for a national security-minded approach to export control. This involves personnel questions. It involves organizational questions. It demands really your attention, if I may be so bold as to suggest, particularly this Committee, because others have not given it the attention that it requires.

I would like to leave you with one further thought. It is now pretty clear that because of the complications that have been introduced with the destruction of COCOM, because of the proliferation of a lot of technologies that contribute to proliferation, that it is going to be very hard to get the genie back in the bottle. I think therefore it is incumbent upon us, before we do more damage, to be insisting upon some kind of rigorous exercise. I have come up with the term of a "qualitative edge impact statement." Because let us be clear. To the extent that we are contributing to the arming of potential adversaries, we are having a negative effect on the qualitative edge that our military has relied upon and I will believe will continue to require to assure its ability to prevail on the battlefield, minimize casualties and so on.

This has a corollary. We not only need to understand what we are doing to harm our qualitative edge, we need to be introducing new energy into the need to restore it. This means a really concerted effort in the research and development area. And I would suggest—and maybe this is heretical, but I would suggest that the very companies that are so keen to contribute, not intentionally, of course, but practically to deteriorating the qualitative edge of our military ought to be assigned the task of helping to restore it, to build it up, using some of perhaps the same technologies and capabilities and certainly know-how that would go into their exports.

Finally, Mr. Chairman, I would just suggest that there is a question of leverage. You have asked—I think both of you have asked—

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 28 2002

what do you do now that we have destroyed COCOM. We have gotten rid of a veto, a veto which I believe on balance, if you do not have the Russians exercising it, is still in our interest to have exercised. I think you have leverage in a couple of areas.

Secretary Hadley will speak to the question of access to U.S. technology. I would like to just address, though, access to our markets. To the extent that companies or for that matter their countries are bound and determined to sell harmful technologies over our objections to potential adversaries, we ought to let them know that there is a cost to doing so. And that cost could—in my judgment, should—be that they will not be able to sell their products to our market. And I think in that calculus most people would prefer to sell to the American economy than to Iran's or North Korea's.

Last, I wanted also just again to commend you, Mr. Chairman. You have personally taken an interest in an issue that I know Henry Sokolski is going to speak to, too, and that is a new front that is being opened up in the proliferation fight. That is the front of companies and their governments coming to our capital markets to finance their proliferation and technology acquisition and espionage and other hostile activities. The most recent of these, of course, was the very controversial IPO issued last week by Petro China, a company with close ties both to the Chinese government and the largest oil giant in China. The parent company is doing business with Sudan, helping Sudan's government engage in weapons of mass destruction and proliferation—Bill Safire has written about possible missile construction there—but also genocide and slave trading.

So this is an area that I commend to your further attention and urge you to focus on as well as these other very complex but very important questions. Thank you, sir.

Chairman THOMPSON. Thank you very much. Mr. Hadley.

TESTIMONY OF STEPHEN J. HADLEY,[1] FORMER ASSISTANT SECRETARY FOR INTERNATIONAL SECURITY POLICY, U.S. DEPARTMENT OF DEFENSE

Mr. HADLEY. Mr. Chairman, if my statement could be submitted for the record.

Chairman THOMPSON. It will be part of the record.

Mr. HADLEY. It is a real privilege to have the opportunity to be with you today. I would like to focus on the broader question of multilateral export controls and how to improve them. Much of my statement in the beginning talks about how the world has changed, and the opening statements that you made and Senator Lieberman made are clear that you understand this fact and I will not go over it.

My basic point is that we need, in light of all the changes that we have seen, a fundamental relook at the whole export control issue. What truly is in our national security interest? What do we want to protect? How best to protect it? I think only if we conduct this kind of intensive review are we going to be in position to go to our allies effectively and to get them to do more from a multilateral export control standpoint.

[1] The prepared statement of Mr. Hadley appears in the Appendix on page 67.

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 29 2002

Just about three or four points on that theme, if I might. The Defense Science Board Report, which was referred to earlier, is interesting because it really suggests that military advantage is going to come in a different way in the future than it has in the past.

Rather than developing capabilities in the military establishment and fielding them, the prize is going to go to the country that can take what is available, primarily commercially, and incorporate it quickly into military hardware put in the hands of well trained and well led military forces. I am not competent to say whether that analysis is right. It is interesting that it comes from a group of people that have had long experience in a number of administrations with the defense establishment.

And for me it underscores the need for a new look, particularly at this issue of what do we want to be controlling through export controls. So far as I know the last major look was 1991 and 1992 when the United States began to move out of the Cold War. The military led that effort and the most difficult issue was to identify the criteria to use to try to identify the technologies and capabilities to protect.

We, at that time, came up with what we called gap closing technologies. Was it a technology or capability that could really allow, in that case the Soviet Union, to close a gap with our own military forces? I do not know if that is the right criteria for the new context in which we find ourselves in but I am convinced that it is this kind of analysis that we need to give content to some of the things Frank Gaffney has talked about. When we say preserving our technological edge, we need to know what that means and in concrete terms what that means we need to protect.

I talk, in the statement, about some of the questions that I think this review ought to undertake, some of the implications the answers may have for our approach to export control. I also think that once we have completed that review, we need to have a different approach with respect to our allies. I think our tendency is to go over and want to talk to them about export controls and the details of the Wassenaar Agreement. I think that is the wrong approach. I think we have to go back much further in the analysis and talk to them about our assessment of the serious risks of proliferation of various kinds, what are the countries of concern, why we are worried about countries like Iran. I think we really see Iran very differently in strategic terms and I do not think we are going to make progress on export controls until we have an intensive dialogue that tries to get our allies to understand how we see Iran and why.

We then need to start talking about strategies that will be focused on the states of concern and that will use all the various tools that are available—of which export controls is one but only one. And I think only if we have this kind of active engagement with our allies are we going to be able at the end of the day to get a strengthened approach to multilateral export controls. Thank you very much.

Chairman THOMPSON. Thank you very much. Mr. Sokolski.

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 30 2002

TESTIMONY OF HENRY D. SOKOLSKI,[1] EXECUTIVE DIRECTOR, THE NONPROLIFERATION POLICY EDUCATION CENTER

Mr. SOKOLSKI. Thank you very much. Having worked up here, I am reminded of a story. I used to work for a little known senator from Indiana, Dan Quayle. And I would come in and complain about things. One day he turned on me and he said, Henry, what is it with you? It is always doom and gloom. What is the good news? What I told him then is what I will tell you now.

The good news, Senator, is that you still have not fired me, and you will ask the questions necessary to get to the bottom of what I am complaining about. I think in essence what you are doing with these hearings will only be useful if you keep it up. I urge you to keep asking the very questions both of you asked at the beginning because those are the right questions. It is going to take a long time to get the answers, but if you keep asking, you will get to where you want to go.

In that regard, let me try to speak to some things which have not been raised. I ask that the balance of my remarks be placed in the record.

Chairman THOMPSON. Without objection.

Mr. SOKOLSKI. Thank you very much. Look, as you have all now established, post-Cold War trends have made controlling strategic weapons goods much more difficult. I think this highlights the need for three new kinds of restraint.

First, we need to prevent not just listed strategic commodities, but unlisted strategic goods from going to foreign weapons projects. We focus on lists because the analytical work has to be done to know what it is we should worry about. But there will never be a list that will be perfect. And in that regard, we need to get other nations to adopt the kind of catch-all controls the United States and the European Union are using and apply them with existing multilateral export controls regimes, not just Wassenaar. I know this Committee is focused on Wassenaar, but it turns out other control regimes have no undercut provisions. And we can use them. And the coverage of items these regimes control is pretty good. It is not as expansive as Wassenaar and what they look at, but it is pretty good.

Second, as these charts will demonstrate, getting a more accurate inventory on the status and amounts of nuclear weapons usable materials worldwide and especially with Russia is imperative. I know the Committee wants to talk about dual- use controls, but if we want to talk about multilateral proliferation controls, we need to understand that there is a limited budget of political capital and you have to pick what you want to emphasize. I would say the trends here are really disturbing and have major implications for national security.

Finally, and a point that I think both of you have raised, we have got to strengthen our authority as a nation to negotiate on any of this. The two recommendations I have are ending U.S. subsidies to known proliferators and upholding U.S. nonproliferation laws particularly with regard to U.S. trade and nonproliferation cooperation

[1] The prepared statement of Mr. Sokolski with attachments appears in the Appendix on page 79.

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 31 2002

with, and I emphasize the word, *known,* proliferators in Russia, China and North Korea.

Let me make a few comments beyond what I have made to amplify these three points. On the first point, I think encouraging the multilateral use of catch-all controls is our best bet for preventing risky exports to bad end-users. This approach avoids the fruitless multilateral debates over what items should be controlled to what destination and instead gives control regime members an incentive to exchange threat assessments. In essence, if you want to get engagement, you have got to have something operational and concrete to bring to your ally or friend and say, look, this left-handed franostat, whether it is on a list or not, if it goes to Country X, is going to do this kind of harm.

When you present it that way, and you do a denial and you ask for no undercut, you get the dialogue that you need. I think we can go much further than we have in producing that dialogue, however. We, in fact, drag our feet. How? We listen to the exporting community demand that we develop a list again of what those things that should be controlled and because we cannot get a list, we do not do the no undercut and catch-all controls the way we could by simply taking actions instead of focusing on endless debates about the list.

Now, I am going to move very quickly because my time is running out. These charts I believe are self-explanatory and they are in the testimony. At the height of the Cold War, almost all the fissile that could be made into bombs was in bombs. If you take a look at the middle chart, you will notice, and just as a peg, United States now only deploys about 6,000 nuclear weapons. The civil material that is not only in Russia but Japan and Europe can make many, many times more than that number of bombs now. That overhang did not used to exist during the Cold War.

In addition, we have only the vaguest idea of the various categories of nuclear materials Russia has. Now the United States is an open country. People know what all the categories are and the numbers are for the United States and its nuclear holdings. We need to get others to step up to the plate and start showing some nuclear candor as well. If we cannot, that has enormous implications. You will notice that the only categories of materials that can be most quickly deployed as bombs are those highlighted on the chart. We do not pay, our policies do not pay any attention to the other categories. Those other things are very dangerous as well.

That then brings me to the last point and that is to get a better fix on all of these things and to do better, we have got to stop being part of the problem and I am afraid we are. The earlier admission by one of the administration witnesses that we export controlled items to proliferators I thought was chilling. Look, the intelligence community does know who the proliferators are. It is the other agencies that do not want to listen to the facts. I know, I was in the Pentagon. I did nonproliferation for the Pentagon for 4 years. The problem is not a lack of intelligence. It is a lack of will to use what intelligence we have got.

I think with that, I will conclude except to put one ad for one piece of legislation. I would not be useful if I did not plug something. You cannot possibly not want to demand that the worst

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 32 2002

proliferator not receive U.S. nuclear cooperation until it has lived up to the nonproliferation obligations it has admitted and others have admitted it has violated. I am talking about North Korea. There is a piece of legislation that was introduced yesterday by Congressmen Gilman and Markey, that passed last fall overwhelmingly by 300 votes, it included a lot of Democrats. I sure hope somebody picks that up over here. That concludes my remarks.

Chairman THOMPSON. Thank you very much. Senator Lieberman, do you want to start?

Senator LIEBERMAN. Thanks. I have to go. I thank you for your testimony. I will just take advantage of your courtesy to ask one question which is the extent to which we can do a better job engaging our allies in this effort and underneath that is the question which I gather was being suggested by the first panel, that we are at a point in the multipolar, post-Cold War world where, yes, of course, we have overlap of interest with our allies, but they are limited now when it comes to both vision of some of these rogue nations that we are very worried about and commercial interests.

So I guess my question is—because I think you are right that we do need to more directly engage our allies on this—do you feel that we have not adequately done it? In other words, is there a gap here that is overcomeable, if there is such a word?

Mr. GAFFNEY. Well, I might just kick it off by saying I think that there is no getting around the fact that for many of our allies, the syndrome that I tried to address in my testimony concerning our own government is even more rampant. That is the idea that really there is not any security problem, period. And therefore there is no further impediment to doing whatever feels good or whatever would be lucrative in terms of either the company's quarterly bottom line or the country's GDP.

I believe, Senator, that there are in most of the governments that run our allies' nations these days still people who appreciate that that is probably not true. I think they are undercut, however, within their own councils when they witness how our government conducts itself. Giving Secretary Holum the benefit of the doubt about our government-to-government representations, bilateral or multilateral, the allies see that as sort of going through the motions in which we say, we really don't think you should do that. Yet, they are watching what is actually the policy of our government. And this is why, whether we want to talk about it or not, what you are going to be debating today and the next couple of days is so important.

They are looking at what kind of laws will be enacted in this government that will, in fact, make it harder still for us to exercise export controls and to inject national security into our decisionmaking about exports.

So I think that we must look to our own sins first and why I am so proud really of what you all are trying to do here to have some accountability in this area and to do some second-guessing of judgments that are being made. I think that will almost certainly help, at least at the point where we have a U.S. Government that is willing forcefully to go in and not just issue what my friend, Richard Perle, used to call "demarshmellows" but really raise hell with al-

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 33 2002

lies that what they are doing is contrary not only to our security but to theirs as well.

Senator LIEBERMAN. Richard Perle never issued a "demarshmellow."

Mr. GAFFNEY. Not willingly.

Senator LIEBERMAN. Mr. Sokolski, do you want to add anything to that?

Mr. SOKOLSKI. Yeah. You come at these questions that are big usually at high and low levels. Let us start low because that is easier.

Senator LIEBERMAN. OK.

Mr. SOKOLSKI. It would be useful for someone on this staff to get the poor assignment—I notice everyone is looking back there—how backed up are our denial notices and other's denial notices, how are these things working, please? Because the no undercut plus catch-all, in theory, can work. In practice, of course, it does not. But it is up to you to find out how bad is it. And if you do not ask, they will say it is working pretty well. So that is point one.

Point two, I know that there is a book—this is ears-only intelligence—that lists every piece of code word information on every proliferation action that has taken place since I was in office. I know because I created the book. That was back in 1990. It is there somewhere in the government. Go find it. Because when you do, you will see mismatch between what we know and what we do. And by the way, it is a bipartisan equal opportunity critic machine. This is not going after this administration. It is going after the system. You want to take a look at that if you can find it.

Finally, Export-Import Bank and who we are exporting to? A useful thing to look into. A nice bipartisan thing. Now that is the low road.

High road. I served on a commission that had a name that went on forever and ever. It was going to tell you how to organize our government. It was pretty funny. The acronym was so long, we did not use it. It was the Commission to Assess the Organization of the Federal Government to Combat the Proliferation of Weapons of Mass Destruction. OK. Big acronym.

One of the things that we did stumble into despite all of our efforts not to look at it was that this country does not have a long-term set of objectives, time phased goals, and never mind strategy—let us leave that alone—with regard to key countries that are troublemakers for us. When we asked the State Department, and Mr. Holum, by the way, he was very candid about this—I think he is a great man—when he came to the commission, he admitted there was a problem. When we asked what are our time-phased objectives regarding North Korea, he said, well, we have got them written down, but they are not very good.

And then he sent us a performance report produced because of the laws coming out of this Committee that went 12 months into the future. That was it. And you know what it was—implementation of the Agreed Framework. That was all. If you do not have more than that going with regard to North Korea and can explain it publicly and privately, you are not going to get any allies to do anything on the low road with you. But if you do, it is amazing what you can get. But if you do not, there is no hope.

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 34 2002

You should be asking what our time phased objectives are with regard any two countries—I do not care which ones they are—that you think are important, get people up here in closed and open hearings and see whether or not we've got a plan.

Senator LIEBERMAN. Thank you. You have given our staff and us some things to do. Thanks, Mr. Chairman.

Chairman THOMPSON. Thank you very much. Those performance reports are supposed to be in March 31. I have not seen them yet, but I am looking forward to it. Because for most agencies, we found out that the goals they set out is how much paper they are supposed to shuffle next year or how many phone calls they are to answer—and not whether lives are being saved or whether there are fewer proliferators than there were before, and so forth. That is going to be another one of those long processes, getting the Results Act to work.

Mr. SOKOLSKI. Right.

Chairman THOMPSON. This is an area where it really could go do some good because it will focus people on the fact, if nothing else, that they have no real goals.

Mr. SOKOLSKI. Absolutely. Our commission interviewed people in the Department of Energy, who when talking about Nunn-Lugar, said we have scientist-to-scientist programs and we asked how many scientists do we need to reach by when? And they looked at us like you must be crazy. Well, they said, a million. I said, well how have you engaged? Well, they said, we have got 6,000 that we have touched. You got to do better than that. And whether you are for that program or not, that is not a program with serious time-phased goals. You cannot measure success or failure.

Chairman THOMPSON. While we are on that subject, what do you think about the Cooperative Threat Reduction programs and Nunn-Lugar and all that? You have pointed out something here that is extremely important. Of course, as far as I know, nobody has ever developed so far a nuclear capability solely based on what they have stolen—except perhaps the Soviets. Unfortunately, they have developed it on what they have been able to buy on the open market plus a little help from their friends. But you pointed out the tremendous potential out there, and that it is another one of those good case/bad case scenarios.

The good case is that we are getting the START agreements. The bad case is that the more we do there, the more we have got stuff arriving from off the books and nobody knows how much and where it is, or how rapidly it could be taken and put back in to weapons. And we are spending hundreds of millions of dollars trying to get some security and some fences around some places and placating some scientists and things like that.

I think you are right. I am not sure that we have any feel for how much good it is doing yet, but everybody agrees that we've got to do something. So this is what we are doing. What do you think about those programs?

Mr. SOKOLSKI. Look at the charts. You see the highlighted categories. Arms control as we know it, START, reduces the number of deployed nuclear weapons. It takes the warheads and puts them on a shelf and maybe it cuts up the missile or the bomber. Nunn-Lugar takes whatever is declared by us and the Russians as mili-

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 35 2002

tary surplus and tries—it has not done it yet—tries to push this material to the last category which makes it locked up in spent fuel or spent fuel equivalent, either by irradiating it in mox or by literally taking it and mixing it up with spent fuel and making it into logs.

You will notice our policies in toto, never mind cooperative threat reduction, ignores all the other categories. It does not do anything with regard to them. The civil plutonium holdings, which I use very conservative figures, is something I know you worked with. The numbers keep rising. We have got conservatively five times the number of nuclear weapons that could be made out of civil fuel, and we do not even have the exact figure. And it hanging around and literally floating around as it is being shipped between the Europe and Japan. Talk about terrorism problems.

When you get to the United States and Russia, we can tell you essentially what the U.S. surplus military fissile holdings are. You can go Natural Resource Defense Council. They have pretty good figures. Maybe we can make them a little bit better, but even Tom Cochran, who I talk with a lot, says they are pretty good. What we do not know is within—what is it—23,000 advance weapons—what Russia's surplus holding are. An advanced nuclear weapon is where you have two warheads mated together to make one. So the real figure if you want crude weapons is like—I don't know—50,000 weapons. I mean the mind boggles. We have no idea of whether they have that breakout capability.

Now it seems to me, whether you are a hawk or you are a dove, whether you like nuclear weapons, whether you want to test or you do not, whether you like missile defenses or you do not, you want to reduce that certainty budget. You want to at least fail at trying. We have not tried. We have not even talked about this seriously or put it at the head of the list. It is interesting. Apparently someone read an editorial of mine—I think it was Paul Wolfowitz, and got Candidate Bush to put that in his speech.

Now I am not so sure that Gore would not agree on that one. Maybe if we succeeded, we do not have to spend so much money. You know what we spend a year on nuclear weapons hedge? It is a lot. I think it is like several billion dollars. What is it? Eight billion? That could go to missile defense or something else.

Mr. GAFFNEY. Senator, could I just add a point. This Committee is especially well suited for what I think is desperately needed in this area. I have worked with Senator Nunn and Senator Lugar, as you have, for a long time, and I think in no small measure out of a sense of respect for them, as much as out of a sense of what else are you going to do, this program has gotten precious little rigorous oversight. There are a slew of General Accounting Office reports that document what would under any other program I think be considered to be at least abuse, if not fraud, and perhaps most certainly waste.

We are in many cases I think building as you said yourself higher fences, better padlocks, better surveillance systems, and the like for some of the repositories of this stuff. Unfortunately, this takes into no account at all, as best I can tell, the underlying problem. And that is the guy who has got the key to those better padlocks may be part of the problem.

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 36 2002

Maybe what we are doing by enhancing the security of these facilities is just maximizing his monopoly over the sale of what is in them. But this is an area that I entreat you to take a hard look at.

Chairman THOMPSON. Freeing up some of his resources to put in another place.

Mr. GAFFNEY. Absolutely, fungibility.

Mr. SOKOLSKI. Well, actually, fundamentally, we gave $12 billion over the next 20 years to Minatom for highly enriched uranium. We have no idea where that money is going. If we are lucky, it is going into dachas as just corruption. If we are not, it is going into weapons or financing weapons sales to Iran. We need to find out where the money is going.

Mr. HADLEY. I think the issue here is not priority. I think this ought to be—the Nunn-Lugar ought to be a priority. I think the issue is effectiveness in the things that Henry and Frank have raised. And in some sense, it is very important for this Committee or others to look into the issue of effectiveness because the program is too important not to be effective—not to be doing as much as it can be doing as effectively as it can do it. So I think the issue is not priority or importance. It's effectiveness.

Chairman THOMPSON. OK. Mr. Hadley, you talked about taking kind of a new look at this whole thing. We are about to start the discussion on the Export Administration Act apparently. It is kind of mind-boggling really when you think about it. I guess people have been around here a lot longer than I have who have spent a lot of time on this. I do not know. You have got a committee called the Banking Committee that produces this and the rest of us are kind of scrambling to read various iterations of changes and so forth as it is going to the floor. And we're all haggling over national security matters and staffs are arguing with each other over stuff.

I wonder who if anybody has read it? You talk about the high road and the low road. That is the real low road. On the other hand, we have got all these grandiose multilaterals agreements that we are trying to do. And people seem to think that the more people we can get into them, the better, regardless of fact that some countries spend all their time trying to undercut us once they are in.

I am amazed, coming in from the outside, to find that nobody has got a handle on all this stuff. I mean nobody really knows. You know I started out thinking probably the more controls the better—a pretty simplistic view, I suppose. But I can see now that nobody really knows what the right answers is. I mean we ought to have a plan. The government ought to have a plan as to where we are trying to go in this world that we live in while we all talk about catch-alls and so forth. But it doesn't make sense to say that you cannot do any good in restricting exports unilaterally—and that we should no longer try—and then to complain that our own allies will not cooperate with us multilaterally because they don't trust us not to take unilateral trading advantage. How does that work?

Mr. Sokolski, with regard to the catch-all matter, how would that work in practice? You would have some kind of a deal that says when we do "x", the catch-all provision will kick in. Clearly what is going on is a bilateral deal. I guess we are doing that, and we

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 37 2002

will always be able to do that. It could be coupled with a no undercut, I suppose. But how would that actually work?

Mr. SOKOLSKI. I can tell you how it has worked in the few instances where I have worked it. First, before you go anywhere, you do not simply go to some general forum, even as general as NATO, you go bilaterally, MOD to MOD first, because it's the ministries of defense that will either save or break this. It is not the Commerce Departments. They will break it but they will not make it. They will always say, no, it is a bad idea to control.

And the state departments of the foreign ministries, they are torn frequently. They are sort of in between. But if the ministries of defense do not care about something, you can count on the other two saying yes to some export. So you have got to establish relations between ministries of defense. Now we did that in the Bush administration. I set up threat bilaterals with the only two countries that have ever bled with us and projected force. That is France and Great Britain. And, boy, were they interesting. They were telling us stuff we did not know, telling us to pay more attention to this, this, and this.

When it got to circumstance with regard to Brazil, it was, where some French Viking liquid fueled engines were going to go to Brazil. I went with my assistant secretary. I was just a deputy dog. And we went and had a discussion with our French counter parts. You know they never explicitly blocked the export, but it never went. They said they had no authority to block it, but the rocket engine never went.

So I see it working the same way. I have talked with some of my former employees who are still in the bowels of the Pentagon. They actually are telling me that we need to do more. For example, recently there is a steel that is made for SCUDS, apparently if you take one ingredient out, it is still pretty good but it is not controlled. And guess what? Someone was trying to sell it to the wrong person. That is stuff that was not on the list.

Now in this case, the country in question was informed but they chose not to act because they did not have catch-all authority. Change that.

Mr. HADLEY. Mr. Chairman, I think that is really the answer.

Chairman THOMPSON. Give them legal cover to do what they might want to do anyway.

Mr. SOKOLSKI. Encourage it. Really pursue it.

Mr. HADLEY. Right. And it is something, it is a marker you can put down on your upcoming trip. The answer to Senator Lieberman's question is to pick up Frank's point; there are people in these governments that care about these issues. We need to reach out to them and establish a dialogue with them to in some sense empower them within their own bureaucracies. It has got to be our intelligence communities having a dialogue with their intelligence communities, our defense department having a dialogue with their defense officials. It has got to be at that level. Have a strategic dialogue about why we are concerned about Iran. The kind of specific examples that Henry Sokolski was talking about you can put in the hands of people in the ministries of defense and intelligence communities there.

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 38 2002

Chairman THOMPSON. But how would it actually work? What would the language be for a situation that is not on anybody's control list but is a problem—and one ally goes to the other? I mean what kind of language do you use to cover situations like that?

Mr. SOKOLSKI. Sure. Literally what happens is this. And we had it occur during the Consare case, which was a furnace, an induction furnace, which frankly was going to be used for missile purposes, not nuclear, and we had to use a nuclear catch-all law to get it. And essentially there was a German firm that could make it as well. What we did after we did our denial is we went to that country and said don't you dare send yours to the same spot.

Now, with these regimes, Missile Technology Control Regime, Australia Group, Nuclear Suppliers Group, they all have dual-use items on their lists. In fact, if you put them all together, what you have is not much different than Wassenaar. But unlike Wassenaar, they have no undercut provisions. Work it.

Mr. HADLEY. Could you give him language that you would have the Senate adopt that would give them the authority?

Mr. SOKOLSKI. I do not think you have to give them language. It is working now with like-minded countries. I will tell you where the difference comes. When the French came to us in 1990 and said you need to worry about Iran and they gave us a better intelligence brief than we could give them, we were able to work on a couple of things.

What you need and I think what both Steve and Frank have raised is enough studies, enough public diplomacy, enough analysis about what are the kinds of problems with China, for example, and Russia so that you do not necessarily condemn the whole country, but you get down to specific concerns such that you then got the public diplomacy to do the no undercut and the catch-all with like-minded countries.

There is a limit to what you can do. You cannot convince people that do not agree with you, but we are not even trying to convince people of what the problems are.

Mr. GAFFNEY. But on that point, Mr. Chairman, could I just put in a word for unilateral steps, too. I do not think it is correct to say we should rule them out. Even John Holum was saying there are some places where you—we have a case right now where Germany is reported to be providing phosgene manufacturing capabilities to Iran, shades of the earlier effort to provide, as it happens, a deeply buried manufacturing facility we believe for poison gas in Libya.

Now, I do not think that foreign availability, taken to its logical extreme, suggests we ought to be competing to do that. The fact that we are not going to do it and the fact that we could raise hell about them doing it on the basis of us saying that is not in any of our interests gives us the kind of leverage, moral suasion, behind the scenes, public diplomacy, whatever you want to call it—that I think can help produce results.

But I am afraid it is now increasingly pushed off the table, witness what you are going to be debating this afternoon. The very fact that foreign availability or mass market availability is asserted is going to suddenly make it fair game for anybody who wants to do anything in those areas. That is just not right.

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 39 2002

Chairman THOMPSON. And we are acting as if there is no threat at a time when we are trying to convince our allies that we need a national missile defense system, for example. We are behaving in every respect as if we really perceive no problem with regard to the threat from rogue nations and as if we do not believe the Rumsfeld Commission or the Deutch Commission results or any of these reports with regard to our failure to impose sanctions on known proliferators.

Mr. GAFFNEY. To the contrary, we are actually rewarding, in the case of North Korea most especially, we are now, as you probably know, the largest purveyor of foreign aid to North Korea in the world.

Mr. SOKOLSKI. Yes.

Mr. GAFFNEY. Why is that? I suggest it is because they now have a ballistic missile with which to threaten us, which we assess—CBS, by the way, the other night, in "Failsafe" said North Korea now has the bomb. If they do not, they shortly will.

This is evidence, I am afraid, not only that we are not taking the threat seriously. Steve Hadley and you are among those who have been working on missile defense for a long time. We feel frustrated that we are not doing something on that front, but we are certainly signaling to our allies—look at South Korea, Japan, Italy, European Union—that we want these guys to engage with North Korea just as fully as they can. What does that mean? Trade. What does that mean? More access to precisely this kind of technology.

Chairman THOMPSON. And it tells our allies that we are in less position to protect them. It tells other rogue nations that all you need to be able to do is blackmail the United States. Mr. Hadley, you talked about doing more to explain our security risk to our allies. I have talked a long time to people over in the State Department about this. I keep asking why do not our allies understand what we understand? Don't our allies read the public reports that we get in here, the CIA assessments, the Rumsfeld Commission Report, and what have you?

The impression I get is that they think our allies fully appreciate it, but they just don't care. And that our allies just place trade above everything else. And that while they appreciate the danger of what some of these countries are doing, unless the particular export directly relates to the production of weapons of mass destruction or their means of delivery, our allies say it does not count.

Now obviously they would care if they thought that they were delivering something that in the next few weeks would be fashioned into a weapon to hit even us—maybe not them, but even us, they would care about that. But where is the disconnect there in your opinion? From your statement, you seem to think that—and this was my first suspicion, and I guess it still is—we are certainly not doing enough to convince our allies of the nature of the threat or not doing enough to share intelligence where we can share it. And there's also the fact that our own behavior is sending the message that we do not really think there is much of a threat.

Mr. HADLEY. Right.

Chairman THOMPSON. What do you think?

Mr. HADLEY. I think we have a disconnect in some sense between our rhetoric of concern about proliferation and our actual oper-

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 40 2002

ational steps. I will give an example. If you have an opportunity to meet with the commander-in-chief of our forces for CENTCOM, one of the questions you might like to ask him is does he have someone on his staff who everyday gets up in the morning and asks themselves, "What am I doing today to set back Iran's efforts to get a nuclear weapon? Be it finding out where Iran is are trying to acquire equipment or technology and trying to intervene to stop it, whether it is disinformation, whatever. I think we are not operationally serious enough about the problem.

I think if we could establish these links between intelligence communities, DOD people, uniformed military, with our allies, we would start giving them the ammunition they need to be able to make their governments more serious about it. The allies, particularly Europeans, have a lot on their plate. They are very regionally focused. They seem to think that proliferation is a global problem and that it is our problem; we have to handle it. But specifically——

Chairman THOMPSON. Or under more economic stress than we are.

Mr. HADLEY. Right. So that is the hurdle we have to, that is the sort of barrier we have to break through. But, if you just think about how we would have had to run the Gulf War if Saddam Hussein had, for example, a long-range ballistic missile that could have come down even with a conventional warhead on one of their capitals, there could have been a different vote in the Senate and would have been a different issue in terms of the activities of our allies. And I think it is those kinds of pointed discussions—plus the kind of particular intelligence cases that Henry was talking about—that we need to use in the discussion with our allies at every level and engaging all of the relevant agencies. It is hard work. It is a full-time job.

But if we really believe, as everyone seems to say, that proliferation—particularly of weapons of mass destruction—is our No. 1 problem, then it seems to me that it is worth the effort. That is the best answer I can give you.

Mr. GAFFNEY. Senator, the other part of this disconnect, and I think Steve is exactly right, is one that is very much within your purview. The president has said—he did not know that he was saying it in a public forum, but he said it, that when it comes to implementing pieces of legislation, famously the Gore-McCain Act, but others as well, that require certification when something is being done like transfer of cruise missile technology to bad guys——

Chairman THOMPSON. He has to fudge the facts.

Mr. GAFFNEY. He has to fudge the facts. Now what signal does that send to people who are at least as willing to ignore—the phenomenon the psychologists call cognitive dissonance, you are not seeing what you do not want to see. I believe that they are very much keying off what they judge to be a very cynical and commercially as well as politically expedient policy on the part of the U.S. Government. They are not going to be more righteous about this, by and large.

There are exceptions. I think the Japanese on the supercomputer example, for instance, were more righteous than we were and were undercut by our cynicism.

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 41 2002

Mr. SOKOLSKI. Actions that are successful speak louder than words that fail. And in this regard, when you bend your law, you waive your law concerning nonproliferation, that is troublesome. One of the things I have actually publicly come out in favor of, just to radicalize and zero—base the debate, is to sunset all the sanctions. I will settle for you just not subsidizing nonproliferators and freeing up those assets in the intelligence community to pick two or three countries, get that darn time-phased set of objectives and go hit the role and operationalize.

By the way, a lot of people will probably vote for that formula including the intelligence agencies. But then you better have some time-phased goals so you can judge whether or not you are getting your money's worth because otherwise you will get baffle gabble. I do not care who is in office. They will tell you everything is fine. I think finally that brings everything back. If nonproliferation is just export control, you are in a world of hurt, not simply because you cannot control everything. It is because export control is not taken seriously. Foreign policy is. And so if nonproliferation is not at the tip of the iceberg of foreign policy, you are not going to get very far. And that is, in essence, the problem. We have so succeeded because of our victory in the Cold War, we do not really want to talk about how we might have foreign policy failures again and as a result, no one takes it seriously when we do raise problems about the prospects of bad things happening in the future.

Chairman THOMPSON. Do we need to take a whole new look at our export control policies? What do you gentlemen think about this EAA debate? You know we are down to the fine print again and sometimes I wonder if we're just totally missing the point. The whole thing needs to be shaken up. You know, some of our allies at least have one agency controlling all this, a separate agency.

Mr. SOKOLSKI. Yes.

Chairman THOMPSON. You talk about Defense. Everybody has got their own constituency.

Mr. SOKOLSKI. Yes.

Chairman THOMPSON. Commerce obviously has got theirs. State wants to keep peace among their allies. But even the Pentagon, they want low cost weapons——

Mr. SOKOLSKI. Right.

Chairman THOMPSON [continuing]. And things. Everybody has got an interest except those components that have national security solely in mind, I guess you might say. But we are consolidating those components within others now in this administration, so that they have less effect. And we're putting the DTSA people out in Dulles and all of that. What about our export policy in general, and as this EAA thing comes up again?

Mr. SOKOLSKI. I am sorry. Go ahead.

Mr. HADLEY. I do not know. The answer to your question is yes, we need a fundamental look. It is hard to stop the train and stop the world while we do it, but it seems to me part of any EAA ought to be a commitment and legislation that calls for exactly the kind of look that would address the issues that you have raised today and have a schedule for doing that. It seems to me that is a minimum of something that ought to come out of this EAA debate.

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 42 2002

Mr. GAFFNEY. But would you not think you would start doing it before you start legislating? I have got to reinforce the point you made, Mr. Chairman, because it underscores the thing I said at the outset. With all due respect to the Banking Committee, it does not have the ability to take into account all of the equities that are at stake here. The failure frankly of other committees—I think rather less so yours, in part thanks to your leadership—but other committees that have jurisdiction and have responsibility in this area to ensure that precisely this kind of oversight has driven a review and has formed answers to the kinds of questions we are all wrestling with here before you start legislating is maddening.

Chairman THOMPSON. Mr. Sokolski.

Mr. SOKOLSKI. Having lived through so many extensions of the EAA, I do not want to trivialize the difficulties raised by Mr. Holum, but if you do not do your homework and you act simply on those sets of concerns, even he admitted not a good idea. I think, however, you cannot bureaucratically solve the problem of what is the problem on this commission.

The first meeting, Mr. Deutch said, well, we have seven solutions that are possible and he listed them, make the national security adviser, have one agency, and other. I said that is great. What is the problem? They had spent a year and a half discussing solutions. What probably needs to be done in doing a reevaluation is get those what we call green line/red line studies. I mean who are your problems? It is probably China. It is probably North Korea.

Mr. GAFFNEY. It is Russia.

Mr. SOKOLSKI. It is Russia. Well, certainly parts of Russia for darn sure. And so you then have to say, OK, what is it that we have to worry? Now I do not think you want to have a list and say, ah, this is all we have to control, but it gives you some idea if you have a list of what you have to worry about. And I think you need to have that work done.

Now one of the nice things that Congress can do and has been doing and it has been doing really great work is that it asks for certain certifications and sometimes some useful reports. The difficulty is sometimes the staff reads the reports and that is it. You, Senator, have a bully pulpit. If you use it, do not underestimate what you can do.

Chairman THOMPSON. Mr. Hadley, I think you too in your statement indicated that we might ought to concentrate on less and do more. How does that translate? It is kind of what you are talking about, I think, Mr. Sokolski. How does that translate into a policy? What do we concentrate on with regard to areas of concern and countries of concern? What do we do with regard to that?

Let us say, on the other side of the ledger, you can take some things off the dual-use control list and say they are not controllable anymore. We are going to free up some people, maybe free up some assets, some time. But in terms of concentration, concentrating on the problem areas, it gets back to a major political question. I mean it does not matter what your rules and regulations say if you have an administration who will not impose sanctions under any conditions and who will certify that proliferators are not profilerating. But even with regard to the rogue nations, if we

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 43 2002

adopted a policy more in that direction, what would that mean in practical terms?

Mr. HADLEY. You would have to have, I think, military people, technologists, sitting down and asking what are the kinds of capabilities that we need to have and that we do not want our enemies to have, and list them. And this is what we did in 1991 and 1992 and it was a shrunken list but an important list. And then you say—let us assume it is stealth technology. All right. What are the components that go into giving another country having stealth technology?

What are those components? Who has got them? How hard are they to get? And what are the really critical ones? And you may find, as you do that analysis, that there is a variety of dual-use items that are elements of stealth technology, but they are too proliferated, you cannot control them. And what you hope is that you can do a strategic analysis of stealth technology and find the three, four, five things that are critical to the capability that we have a shot at controlling. And you focus on those.

And if you focus on those to give a focus for our own export control approach, it gives you an agenda when you go to your allies. But it is hard to give more than an example because it is very nitty-gritty and you really need to get technologists and military people who know this stuff in a room sorting it out. That is the process I think we need.

Chairman THOMPSON. What do you think?

Mr. SOKOLSKI. I would be most interested in the list of capabilities. I would be very leery about how a quote-unquote "critical list" might be used and let me explain why. There were numerous cases on my watch where folks just wanted to control I think it was the State Department proposal. Well, we really only have to worry about reentry vehicles they said, not the rest of the missile. Now that is an extreme cartoon of how these critical lists can go.

But clearly you are most concerned about controlling against the capabilities and frequently that will mean going outside of the current or latest list. I would say that the listmaking is to be expansive, not focused so much, but expansive so that you are flexible enough to go after things maybe that are not on lists.

Chairman THOMPSON. If you had a catch-all approach, you would not need to worry about that so much, would you?

Mr. SOKOLSKI. Well, but the analysis that Mr. Hadley is talking about needs to be done so that you are alert to that kind of metal that one less ingredient from which still works would be something you would want to control. But I would not want to not have to have it on the list to control it. I would want the list as the template for what to control, as some way to keep bureaucrats alert to what they need to be paying attention to.

Chairman THOMPSON. Did you want to comment on it?

Mr. HADLEY. Yes, just on your effectiveness point. The reason I think you want to take the kind of strategic approach I described is, that if you have too many things on the list, people show that they have a tough export control regime by how many things they are controlling and how many licenses they issue. But the question is are we preventing somebody from getting critical capabilities? And I am concerned that if you do not really try and focus on what

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 44 2002

is important and critical, you will lose effectiveness. That is the concern I would have. It is a tradeoff.

Mr. GAFFNEY. Mr. Chairman, we have been talking for a long time frankly about smaller numbers of things and higher walls. At some point I think we actually crossed over into having a lot of things that are important outside of the walls. And while I take the point that you got to have a rigorous process and you have got to have people focused and so on, we are doing exactly the opposite of that right now and your point about DTSA is a perfect example.

Right now we have emasculated the one agency of the government that at least during the Reagan years and I think during the Bush years you could count on to be doing the kind of focused serious national serious-minded analysis on export contracts. It was not always perfect by any means, and in some places it was downright uneven, but at least it was not subject to the same kinds of pressures that as you say yourself are so much in evidence elsewhere. That is just not the case today.

So where is the check in the check and balance? Where is the focus, the wall on a variety of things, some of which are now going through without any kind of controls at all?

Chairman THOMPSON. Good. One final area. This DSB Report. When I hear about these reports, the first thing I always want to know is who are the guys that wrote it and who do they work for? I do not want to cast any aspersions on anyone, but there are a lot of people out there who have a lot of interest in maybe doing things differently.

And I look at what I understand it to be saying—and what you say that it is saying—and that is that the name of the game in the future should not be trying to develop new technology and holding onto it, and keeping anybody else from getting it. The name of the game in the future is to be able to integrate that technology more rapidly into a military system in good hands.

I can understand the second part, but why not have both? Why not be able to rapidly integrate but also take steps to maintain an advantage in those areas, weapons areas, in which we have such advantages in so many ways? I mean, why not do both?

Mr. HADLEY. I think you should.

Chairman THOMPSON. I am asking you about the Report.

Mr. HADLEY. Yes. I would do both, but again it is this issue of what is strategic, what matters, and what can we really realistically control? But I would try and do both. On your question, that is one of the things I thought was interesting about the study. I mean, we all have our lists, but when I got it I went first to the list of who prepared it and there were some names on that list that gave me some confidence that it was a serious effort.

And thirdly, one of the reasons I think it is a good time for a review of this issue is that two people who I read on this subject are Bill Schneider and Richard Perle, and they have both talked about—Bill Schneider, for example, was one of the principal authors of parts of that Defense Science Board Report. He has given some——

Chairman THOMPSON. That makes me feel better. I have a great deal of respect for both of those gentlemen.

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 45 2002

Mr. HADLEY. I do as well. And Richard Perle has been talking about the need, as he says, to focus more on the bad actors and beefing up our ability to focus on the efforts by bad actors to acquire things we do not want them to have. And focusing on that end of the spectrum with better intelligence, law enforcement and a whole host of other steps with a constant program of interdiction and disruption. And that is the question that I would have you put to CENTCOM, does he have that kind of program, because I think that it is also a high leverage opportunity for an updated approach to this whole problem which we sort of say export controls, but it really is the proliferation issue. It is a very hard issue. We have got about ten things we have got to do of which export control is one of them, an important one, but only one of them, and we need to bring our allies along because we need their help on a lot of them.

Mr. SOKOLSKI. What makes nuclear weapons, missiles and to some extent chemical and biological weapons and perhaps a handful of other things that we can argue about different is that staying ahead is not a real sure thing. In the immortal words of one of the scientists in the Manhattan Project, a better nuclear weapon in many instances does not neutralize a worse one.

Now that is the nature of this beast, unlike the competition of the Cold War. What you really want to do is slow the other fellow down to have time to do something and I would suggest if you want to think big, it is regime change in some cases. That is what we are talking about. It is a Russia that is orderly, that is not just democratic but orderly. It is a China that is not communist, but finally not that at all; it is liberal and democratic. It is a lot of things that are big foreign policy.

So, first of all, you have got to have some time lines with some big objectives. Iran may become a decent regime at the rate it is going. Who knows? Iraq may not be under this maniac. You have got to have those kinds of objectives. Figure out what the time lines are. And one other thing. You got to start acting now as if you might fail.

A lot of the things that you need to do if Iran gets a nuclear bomb are the things you should be doing that make sure it does not get one. It is getting closer to Turkey so it does not decide to get a bomb. It is getting closer to Saudi Arabia so it does not make a deal with Iran. It is making sure Egypt does not get some crazy idea that it should get nuclear weapons to take care of business.

Now it turns out doing these things now may actually help you do nonproliferation, too. But I think we need to start thinking what happens if there is failure and particularly act where it is not at cross-purposes with nonproliferation and then be ready for the event.

Finally, let us be optimistic. We won the Cold War. At least the Soviets lost it. And the problem sets that we have now frankly look trivial in comparison. We ought to be able to get through to that better future. So let us not despair too much, but let us get to work.

Chairman THOMPSON. We have got a window of opportunity here now.

Mr. SOKOLSKI. I think so.

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 46 2002

Mr. GAFFNEY. Just the other thing that ought to be on his list, and I know it is, is missile defense.

Mr. SOKOLSKI. Well, clearly.

Chairman THOMPSON. I was thinking about that.

Mr. GAFFNEY. This is something that I consider to be a tremendous export control technique in terms of curbing the impact of these exports that are getting away from us.

Mr. SOKOLSKI. Clearly.

Chairman THOMPSON. Gentlemen, thank you very much. This has been extremely beneficial and helpful, and I hope that it lays the groundwork for some future cooperation among ourselves. We would certainly like to be able to call on you as we go forward here. Thank you very, very much for your contribution.

[Whereupon at 12:45 p.m., the Committee was adjourned.]

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 47 2002

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 48 2002

APPENDIX

Statement

of

John W. Holum

Senior Adviser for Arms Control and

International Security

Department of State

Before the

Senate Governmental Affairs Committee

Wassenaar Arrangement and the Future of Multilateral Export Controls

The Department of State appreciates this opportunity to discuss the Wassenaar Arrangement and the future of multilateral export controls. I am encouraged by Congressional interest in this important subject, and look forward to working closely with the Committee on this and other multilateral export control issues. I would like to begin my testimony by describing the Wassenaar Arrangement, then discussing Wassenaar's strengths and weaknesses.

It is important to note at the outset that Wassenaar is not, and cannot be, COCOM. COCOM, and other multilateral control mechanisms faced a clearly defined, mutually agreed strategic threat, and addressed that threat by embargoing exports of arms and sensitive dual use items to proscribed destinations. Along with our allies, we agreed upon procedures for controlling exports to these destinations, including allowing for any nation to veto a specific export.

The end of the Cold War, the disintegration of the Soviet Union, moves toward democracy and market-based economies in the former Warsaw Pact, deep cuts in the strategic arsenals of both sides, and the goal of assisting economic and political reform in East Europe, Russia and the other newly independent states -- rather than retarding their economic development -- all led our allies to the view that the COCOM arrangement had outlived its strategic rationale and could not be sustained. The U.S. eventually joined this view when it became clear that our trading partners would no longer agree to follow the procedures outlined in the COCOM arrangement. In the waning days of COCOM, the U.S. sought to preserve the controls for as long as possible, and pushed to establish a new worldwide arrangement to cover conventional arms and related technologies. It was only through

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 49 2002

U.S. leadership that we were able to stem the flow of arms and sensitive technologies to places such as Iran, Iraq, North Korea and Libya, destinations largely ignored by the former COCOM.

The world has changed for the better. Many of the targets of COCOM now are members of Wassenaar, as well as trading partners, friends, and in some cases treaty allies.

Our former COCOM partners recognized that responsible national export controls and policies remained indispensable to promote international peace and security in the post-Cold War environment, even though they opposed, and continue to oppose, any COCOM-like control regime. Despite this broad agreement, it was only through persistent and strong U.S. leadership that COCOM members, evertually with participation by Russia, designed a new multilateral export control regime to address the new challenges posed by regional instability and states whose behavior threatened international security.

That new regime is the Wassenaar Arrangement (WA) -- the first global, multilateral arrangement covering both conventional weapons and sensitive dual-use goods and technologies. It was negotiated and established in the mid-1990s at the same time that COCOM was disbanded, when it became apparent that the Cold War's East-West export controls no longer were appropriate. However, Iraq's buildup of arms before the Gulf War demonstrated the need for some form of global export regime, and the Wassenaar Arrangement responded to this challenge by covering more than just dual-use items, as had been COCOM's focus. The Wassenaar Arrangement received final approval by 33 co-founding countries in July 1996, and began operations in September 1996.

The WA is designed to prevent destabilizing accumulations of arms and dual-use goods and technologies. The Arrangement encourages transparency, responsibility, consultation and, where appropriate, national policies of restraint. In doing so, the WA fosters accountability in transfers of arms and dual use goods and technologies. The Arrangement also provides a venue in which governments can consider collectively the implications of various transfers on their international and regional security interests. It also seeks to enhance cooperation to prevent dangerous transfers.

WA members maintain export controls on items covered by the Wassenaar Munitions and Dual Use lists. These lists regularly are reviewed by experts of the Participating States and revised as needed. However, the decision to transfer or deny any controlled item remains the responsibility of individual member states. There are not, as there were in CCCOM, case-by-case prior reviews of proposed exports to proscribed destinations, or vetoes on

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 50 2002

proposed exports. To facilitate meeting the WA's principal objective of preventing destabilizing accumulations, members report on their decisions to transfer or deny to non-members certain classes of weapons and dual-use technologies. Again unlike COCOM, Wassenaar members are not constrained to honor each other's denials, but consultations are encouraged in such cases.

In order to enhance transparency in arms transfers, Wassenaar members report semiannually on their deliveries to non-members of seven weapons categories derived from the UN Register of Conventional Arms. These categories are Battle Tanks, Armored Combat Vehicles, Large Calibre Artillery Systems, Combat Aircraft, Attack Helicopters, Warships, and Missiles and Missile Launchers.

In order to promote transparency and like-mindedness, Wassenaar members also report on their transfers to non-members of dual use goods. The Wassenaar List of Dual Use Goods and Technologies consists of a Basic List of controlled items, on which members semiannually report aggregated license denials. The Basic List is subdivided into a Sensitive List of technologies on which members report individual denials of licenses within 30-60 days. In addition to these individual denials, members also report semiannually aggregated numbers of licenses issued or transfers made. Finally, the Sensitive List is further subdivided into a Very Sensitive List, consisting of technology subject to extreme vigilance in national licensing decisions.

Although no country is an explicit target of the WA, members are committed to dealing firmly with states whose behavior is a cause for serious concern. There is broad agreement that these states presently are Iran, Iraq, Libya and North Korea. Wassenaar members deal with these "countries of concern" by preventing, through shared national policies of restraint, their acquisition of armaments and sensitive dual use goods and technologies for military end-use.

Wassenaar provides for the first time a global mechanism for controlling transfers of conventional armaments, and a forum in which governments can examine and debate the implications of various transfers on their international and regional security interests. It also calls attention to potentially destabilizing accumulations of weapons, and to situations that may call for concerted actions.

The United States works actively within this unique forum to advance our national interests. Wassenaar has addressed such topics as the conflict in Sudan, North Korea's weapons production programs, Iran's conventional arms procurement objectives, arms flows to areas of conflict in Africa, and the situation in Kosovo. At the December 1996 Plenary meeting, members issued a public

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 51 2002

statement confirming that they do not transfer arms or ammunition to Afghanistan. In 1997, members reiterated the need to exercise maximum restraint when considering licenses for the export of sensitive items to destinations where the risks are judged greatest. This statement was refined in 1998 to include regions in conflict. In 1999 members discussed Small Arms/Light Weapons and the possibility of developing common export guidelines for man-portable Surface-to-Air missiles (MANPADS). They agreed to a modest increase in arms transparency, and reaffirmed their policies of "maximum restraint" regarding arms exports to areas of conflict.

Wassenaar is more than just a forum for discussion. The United States has helped establish and maintain Wassenaar's control lists, has benefited from sharing data on arms and technology transfers, and has gained insight into the policies and positions of other members. It has also served to promote and reinforce strong norms of responsible export behavior, which over time has encouraged restraint.

As head of the U.S. delegation to the 1999 Wassenaar Plenary meeting, I am well aware that the Arrangement falls short of U.S. goals in some important areas. We would like to see more transparency in both arms and dual use transfers, more targeted information sharing, more discussion of common problems and possible solutions, as well as some form of a no-undercut provision for dual use denials. We would like to get agreement on guidelines for MANPADS transfers, controls on brokering, and possibly an arms transfer code of conduct.

These are ambitious, but attainable, goals. I observed at the Plenary that national views increasingly are converging around the ideas of responsibility, transparency and accountability. This is a noteworthy achievement after just four years. Nonetheless, significant national differences remain, both in substance and procedure, that will require patient persuasion and diplomacy to resolve.

We are well aware of the strong advantages to a veto-type arrangement, but it is critical to recognize that we will never be able to impose one unilaterally. Our allies simply would not agree to it. Additionally, a veto-style arrangement could actually harm U.S. exporters by increasing dramatically license processing times by requiring coordination with as many as 33 countries, ceding to those outside the regimes the ability to respond in a more timely manner. It is also important to recognize that in many fields, the U.S. is the leader technologically; we do not believe that it would be advantageous to delegate to other countries whose industries are not as

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 52 2002

advanced as the U.S. the right to determine which sales can and cannot be made.

The Future of Wassenaar

As you prepare for your upcoming travel to Europe, I would recommend looking to the future, rather than the past. Wassenaar is a product of the post-Cold War period, and faces a dramatically different security environment than institutions developed during that period.

In the new global economy we must lead by example. I believe we have made solid steps in this direction, and that a consensus is emerging among Wassenaar partners that reflects their commitment to responsible transfers. This commitment already is implemented in the national policies of Wassenaar partners, and ultimately is what unites us. The most effective way to achieve U.S objectives is to continue to act collectively to assess the risks, and to coordinate policies.

The Wassenaar Arrangement provides a unique venue for the evaluation, coordination and cooperation that can yield a safer, more peaceful international environment. We will continue to make a concerted effort in this forum to foster greater like-mindedness as we examine sensitive transfers, assess the risks, and determine appropriate responses at the national level.

The Future of Multilateral Export Controls

While arms and sensitive dual-use technology transfers to State sponsors of terrorism have droppped dramatically since the beginning of the decade, we must continue our work to constrain the ability of these countries to develop weapons of mass destruction and advanced conventional weapons. Recognizing that the spread of weapons of mass destruction and sophisticated conventional arms is the most important security threat in the post-Cold War world, the role of the multilateral nonproliferation regimes has now shifted to focus on the behavior of programs of proliferation concern and the entities that supply and procure for them, rather than targeting particular recipient countries.

Our export control system for the post-Cold War world responds to these new security threats. We have emphasized broadening international adherence to our non-proliferation and export control goals. Especially since 1991, significant strides have been made in strengthening the contributions of export controls to nuclear nonproliferation. Moreover, memberships in both the Zangger Committee and the Nuclear Suppliers Group together now include all of the significant nuclear supplier states and almost all relevant suppliers are members of the other regimes. Increasingly, countries that had been contributing to

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 53 2002

the proliferation problem -- such as Argentina, Brazil and South Africa -- are becoming part of the solution.

With the backing of Congress, we have been able to assist former Warsaw Pact countries with weak border controls and weaker legislation to bolster their resources and to resist commercial incentives to trade in sensitive dual-use items, arms, and components of WMD. Our overall approach has been to:

- Reduce the demand for dangerous weapons and technologies through support for international non-proliferation norms and through strategies to reduce regional instability;

- Pursue a multilateral approach to achieving our nonproliferation goals through the Missile Technology Control Regime (MTCR), the Australia Group (AG), and the Nuclear Suppliers Group (NSG);

- Implement and further strengthen the Wassenaar Arrangement (WA), and use the WA to promote responsible transfers of arms, sensitive dual-use goods, and related technology, and require transparency in such transfers;

- Work with key suppliers, transshipment centers, and intermediaries that are not members of the nonproliferation regimes to adopt export policies and practices compatible with international standards, thereby increasing the number of countries, as described in the draft EAA, "whose policies and activities are consistent with the objectives" of the regimes; and

- Retain the ability to impose unilateral controls in those limited and extreme circumstances that may require them.

We also continue the effort to reduce demand for dangerous weapons through regional diplomacy -- as in the North Korea, the Middle East, and South Asia -- to respond to the underlying sources of stability and insecurity.

I would like to thank the Committee for the opportunity to address this timely topic. Any form of export control requires difficult and delicate compromises. Multilateral export controls multiply these difficulties, but also multiply the rewards. The fact that so many countries participate in these regimes, and try to improve them, says that the rewards outweigh the difficulties. I look forward to working further with you on this important subject.

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 54 2002

The Wassenaar Arrangement
Testimony of Under Secretary William A. Reinsch
Before the
Senate Government Affairs
12 April 2000

Thank you for this opportunity to testify on the Wassenaar Arrangement, its strengths and weaknesses, and actions that can be taken to improve multilateral export controls. The Committee has identified a topic that is both timely and central to our efforts to reform our national export control system. Understanding the Wassenaar Arrangement and its problems lies at the heart of understanding what contribution export controls can make to our national security now that the Cold War is behind us.

The Wassenaar Arrangement is the basis for multilateral controls on the items that have dominated the export control debate for the past several years -- computers, machine tools, satellites, encryption. For this reason alone it is worthy of our attention, and it is a fitting place to begin any effort to improve export controls.

The Wassenaar Arrangement has enhanced the security of the United States. Still, there is a sense shared by all of us that it could do more. The task of strengthening multilateral export controls will be difficult; and much will depend on our ability in this country to reach agreement on what needs to be done and how to do it. I will have some specific comments later on this matter.

How Did We Get Here

The efforts that led to Wassenaar date from the first days of the Clinton Administration. The context for developing the Arrangement was the end of the Cold War and the increased prominence of new threats to regional stability around the globe. The U.S. no longer confronted a single, massive military threat to its national security but instead faced a range of threats to its regional interests. Looming over this was our then-recent experience in the Persian Gulf. Although U.S. and allied forces had performed effectively in defeating the Iraqi military, the ability of Iraq to assemble powerful forces and develop extensive programs for weapons of mass destruction posed a serious challenge for multilateral arms control and nonproliferation regimes.

Iraq built its forces with purchases of arms, chiefly from Russia and France, and with purchases of industrial equipment from around the world. One of our realizations was that the COCOM regime, which targeted the Soviet Union, did not control exports of either arms or industrial equipment to Iraq. It controlled exports only to the Warsaw Pact and other communist countries and did not address the new dangers to regional stability.

At the same time, our closest allies questioned the need to continue COCOM and its controls. The Cold War was over, and the threat COCOM addressed no longer existed. The challenge for the U.S. was to find a way to preserve multilateral controls on exports of industrial equipment, to

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 55 2002

expand the application of those controls from the Warsaw Pact to a global basis, and obtain multilateral cooperation in preventing future Iraqs from acquiring destabilizing accumulations of conventional arms. In these areas, the Wassenaar Arrangement has proven to be a success.

What Do We Have

After two and a half years of difficult negotiations, during which time the United States managed to ensure that our allies continued to control the items on the COCOM control lists, 33 countries agreed to establish a new, global regime for multilateral export controls. In contrast to COCOM, where membership was based on NATO, Wassenaar's membership has a much broader base. One of the major successes of the Arrangement is that Russia, Ukraine, and other former Warsaw Pact countries are members and have committed to develop effective export controls and to end destabilizing arms sales to Iran. Wassenaar's members also include countries that had been outside of NATO during the Cold War, such as Austria, Sweden and Switzerland, and new industrial powers such as the Republic of Korea and Argentina. This broad membership must also be considered one of the successes of Wassenaar.

Wassenaar has two control lists - the Munitions List and the Basic List (for industrial equipment) and a set of Initial Elements which lay out the obligations of the members. Chief among these elements -- and a significant expansion in scope over COCOM -- is a commitment to prevent "destabilizing accumulations of conventional arms" in any country or region around the world. Each member country chooses how it will achieve this goal through its national policies, but Wassenaar provides the vehicle for coordination and information exchange. There is also an understanding in Wassenaar, although it is increasingly under pressure, not to sell dual use equipment to military end users in Iran, Iraq, Libya and North Korea.

1999 was the first opportunity to review and strengthen these Initial Elements. Although there was strong support from most countries, a few blocked significant progress. We will press again this year for various measures to strengthen the regime.

Wassenaar members have also committed to promote transparency in exports of arms and related dual use items. In practice, this takes the form of reporting on arms transfers and dual-use exports. Dual use reporting, which is more extensive than the reporting on arms, provides information on exports and denials of certain sensitive items. One area in which we hope to make progress is expanding transparency by increasing reporting on arms and dual-use exports.

Wassenaar operates on the basis of consensus, meaning that all 33 members must agree to any change. While this is cumbersome and at times frustrating, it is the standard practice for many multilateral organizations. The other nonproliferation and export controls regimes -- the Missile Technology Control Regime, the Nuclear Suppliers Group and the Australia Group -- operate on the same basis of consensus. It is important to bear this consensus principle in mind when considering how to move ahead with strengthening multilateral export controls.

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 56 2002

The Legacy of COCOM

In retrospect, some COCOM-era legacies are apparent. First, we inherited from COCOM a long list of goods to be controlled whose selection had been based on preventing the Soviet Union from improving its weapons and its high-tech industries. This list is out of date and needs much work. In addition, we inherited some mistrust that had arisen as a result of debates in COCOM, and this was an obstacle to progress in building a new regime. Most importantly, COCOM permitted the U.S. and the other COCOM members to share a common approach to export controls. As we found in Iraq, this changed after the collapse of the Soviet Union. Our export control policies and those of our allies differ widely in some respects. The Europeans have made clear, for example, that they have no intention of adopting our unilateral sanctions.

The Wassenaar Arrangement, covering as it does conventional arms and related dual-use equipment, also does not have the same degree of consensus we find in the other regimes. This is because there is much legitimate trade in the items controlled by Wassenaar, so the kind of blanket denial policies found in MTCR or NSG for weapons of mass destruction or the "embargo" approach found in COCOM will not work. The U.S. itself is a major exporter of arms and military technology and considers its ability to make such transfers a necessary tool of foreign policy. Many of the items controlled by Wassenaar are also becoming widely available as we see the continuing globalization of technology and production. One of the challenges for Wassenaar is developing a consensus, and the U.S. could play an important role in the process of building common understandings of what should be controlled and where exports should be denied.

The Veto - Gone but Not Forgotten

One thing our Wassenaar partners have consistently made clear for the last seven years is that they will never submit to the kind of consensus arrangement for export approval -- known as the "veto" -- that was found in COCOM. The military threat to European security that justified a veto no longer exists. In addition, as the Europeans have made clear in other contexts, they have no intention of adopting our unilateral sanctions, such as those against Iran or Cuba, or our sanctions against India and Pakistan, and they believe that if they accepted a veto we would attempt to use it to enforce such sanctions. No other export control regime has a veto rule for export decisions, and we would be sadly mistaken if we think we can get Wassenaar or any other export control regime to adopt such a constraint.

It is also worth noting that one forgotten aspect of the veto debate is that some transfers we make to our allies and security partners would likely trigger a veto from other Wassenaar members. Unlike any other Wassenaar Arrangement member, the U.S. has global security commitments, and I am not sure we would want Russia or others to sit in judgement of our exports to our security partners in Asia or the Middle East, and there is skepticism among our partners as to how we would react to a veto when we believed our national interests were at stake.

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 57 2002

China

Our Wassenaar partners have consistently made clear that China is not a target of the regime. Many Wassenaar members wish to see China join the Arrangement. For the most advanced industrial economies in Wassenaar, China is a an important market, not a threat, and they have told us that it is a market they will service.

The most salient examples are in machine tools and semiconductor manufacturing equipment. We often hear criticism of sales of five-axis machine tools to China. The U.S. has approved only two in recent years, but in the same period, our Wassenaar partners have approved more than twenty. In fact, exports to China of the most advanced machine tools more than doubled in the last year. For semiconductor manufacturing equipment, another technology the U.S. has sought to deny to China, we have been told by the other major producers -- Japan, Netherlands and Germany -- that they will sell to China even if we will not. A good example of that is China's Project 909, where Japan approved a joint venture using the most advanced chip making equipment before the U.S. had even finished debating whether to allow its companies to apply for a license.

The European Union

One issue that has at times complicated work in Wassenaar but which offers opportunity for progress in the future is the role of the European Union. All EU members are also members of Wassenaar. On occasion, we have seen the coordination of positions among EU members, providing a bloc of votes. Since the establishment of Wassenaar, the EU has also developed as a multilateral vehicle for coordination of dual use and arms exports, and this offers both challenges and opportunities for the Wassenaar Arrangement and for the U.S. The European Union has been given responsibility for dual-use export controls. The Commission publishes a common control list, based on Wassenaar and other regimes, and members work to develop common standards for dual-use transfers, although decisions to authorize an export are made by the individual member state. In addition, the European Union has also adopted a code of conduct for arms exports, including some information exchange on denials of licenses.

These are positive steps, reflecting efforts to develop a common security and foreign policy among EU members. We would like to see similar progress in Wassenaar, especially in the field of arms exports. That said, in the larger context of preserving cooperative transatlantic defense trade and the strengthening of multilateral export controls, there is some risk that if Wassenaar falters or if our own policies move in directions the international community will not support, the competitive tensions that sometimes mark U.S.-EU trade issues would arise in export controls. We have already seen such tensions emerge in the areas of arms cooperation and the satellite industry, and managing the growing divergence between U.S. export control policies and those pursued by our allies in a way that reinforces our national security will be a major challenge for this Administration and the next.

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 58 2002

Where Do We Go Next

The Wassenaar Arrangement has a strong record of success in bringing new parties to observe the international norms of export controls and nonproliferation and in reducing sales of arms to dangerous places. Wassenaar provides the structure that could let us address the export control issues that have proved the most troubling over the past several years. I would like to conclude by listing a few issues and actions which the U.S. could consider as we move ahead in this difficult area.

First, we need to recognize that much of the debate in the United States over export controls is out of sync with the rest of the industrialized world. This reflects in part larger differences over security policies, threat perceptions or transatlantic cooperation, but it forms a crucial backdrop to improving multilateral controls. but I hope we all agree that unless controls are multilateral they will have, except in a very few cases, questionable benefit for national security while putting our economic strength at risk.

Second, we need to continue to consult with our allies and with other regime members on the scope for cooperation in improving controls. For conventional arms and related dual-use equipment, it may be less than we would wish. In particular, we must bear in mind that others will not adopt our sanctions policies. Related to that, we should continue our efforts to promote adoption of "catch-all" controls by our regime partners in order to ensure that adequate authority exists for controlling a wide range of technology to specific end users of concern.

Third, in the context of Wassenaar, we need to refocus the list of dual-use controlled items on those that are controllable and critical to advanced military capabilities. The globalization of technology poses new challenges for U.S. security and limits the utility of export controls. Both the Wassenaar Arrangement and our own national export controls need to be adjusted in light of this, and this adjustment would put us in a better position to seek foreign cooperation with our national licensing decisions. We need to do a better job reconciling our domestic and multilateral controls.

Fourth, we need to give up the myth of COCOM. COCOM was a valuable tool for NATO in the Cold War, but it is gone and cannot be resurrected.

Fifth, we need to continue efforts to get China to participate in multilateral regimes such as Wassenaar. To do this, China will need to make progress in adhering to the international norms for nonproliferation and arms sales.

We must continue our efforts to encourage non-members to adhere to regime standards. The Department of Commerce, working closely with the State Department, has worked with the countries of the former Soviet Union and Warsaw Pact to develop comprehensive and effective export control systems. We have often found that even in cases where these governments are willing to take hard steps to keep items out of the hands of unreliable parties, they do not have

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 59 2002

the practical means or legal basis to do so. We have had some success encouraging them to take all the necessary steps, including adopting the control lists of the multilateral regimes, to allow them to adhere to the objectives of the regimes, but more needs to be done.

Finally, we need to continue to work towards a national consensus, or as close as we can get to consensus, in our own national discussions over export controls. The recent legislative debate revealed the differences among us are wide, and these differences do not provide a firm basis for U.S. leadership at this time.

The Wassenaar Arrangement is good place to start this effort and a good place to test our chances for success. If we can make the Wassenaar Arrangement work better, we will enhance both national and international security.

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 60 2002

Submitted Testimony of

FRANK J. GAFFNEY, JR.
President of the Center for Security Policy

'NO WAY TO RUN AN EXPORT CONTROL POLICY: ADDRESSING THE WASSENAAR ARRANGEMENT AND OTHER DEBACLES'

SENATE COMMITTEE ON GOVERNMENTAL AFFAIRS
Washington, D.C.
12 April 2000

Mr. Chairman, I want first of all to commend you and Sen. Cochran for the considerable personal attention and political capital you have invested in the export control issue in recent years. I believe that it is no exaggeration to say the Senate has not seen the kind of robust scrutiny that you have applied to this strategically important subject since my former boss, the late Senator Henry M. "Scoop" Jackson, made it a priority when he served with distinction as the Chairman of this Committee's Permanent Subcommittee on Investigations.

Permit me also to take this opportunity to thank you, on behalf of all of us who are concerned about our Nation's security, for your leadership -- together with Senators Kyl, Helms, Inhofe, Warner and Shelby, among others -- in resisting efforts to push through the Senate a reauthorization of the Export Administration Act (EAA) that would, in my judgment, *compound* the mistakes made by the Clinton-Gore Administration in this area.

In a moment, I will discuss what I consider to be some of the more serious defects that this new EAA (S.1712) proposes to codify. Suffice it to say at this juncture that I very much agree that the Senate's on-going deliberations on S.1712 add urgency to this Committee's efforts to ensure the right lessons are learned, and applied from past, often costly experience. Specifically, we must take stock of the damage done by the Administration's deliberate "take-down" of COCOM (the Coordinating Committee on Export Controls) -- and the belated introduction in its place of a Potemkin arrangement known as the Wassenaar Agreement.

A Case Study of Policy Malfeasance

I regard this two-step action as an appalling, yet highly revealing, microcosm of the Clinton-Gore Administration's dismal stewardship of the larger security policy portfolio. Consider the following themes underpinning the decisions that destroyed COCOM and the birth of the mechanism established at Wassenaar to contribute, in the words of its charter, "to regional and international security and stability, by promoting transparency and a greater responsibility in transfers of conventional arms and dual-use goods and technologies":

- **"The Cold War is over" and "It's the economy stupid"**: These cliches have been the leitmotifs of what might loosely be described as the Clinton-Gore Administration's guiding philosophy. By the first, the President and his subordinates sought to justify their disdain for and disregard of virtually every traditional instrument and practice of U.S. security. With the fervor

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 61 2002

of the counterculture activists many of them were at formative stages of their lives, these officials have inflicted grievous harm on the armed forces, the intelligence community, law enforcement, even the rule of law itself.

Arguably none of these instruments was wielded with greater effect during the Cold War -- nor suffered more at the hands of the Clinton team -- than the multilateral, voluntary organization called COCOM and the U.S. government mechanisms that supported national security-minded export controls. People entrusted with top policy-making responsibilities in this area were appointed by President Clinton despite, *if not because of*, their records of hostility to such controls and the institutions that promoted and policed them. Not surprisingly, the wrecking operation was most evident at the Defense Department where the senior leadership and Defense Technology Security Administration once represented formidable impediments to ill-advised technology transfers.

The application of the principle that there is no longer any appreciable threat to American security -- and its corollary that economic interests should supercede all others -- has greatly exacerbated the government's mistakes. Effectively encouraged to "see-no-evil" in a world in which it still abounds, corporate leaders have responded by focusing narrowly and parochially on shareholder concerns about the quarterly bottom line. The business community has become a powerful advocate for the further evisceration of what few export controls have survived the Clinton liberalization campaign. I need not tell members of this Committee of the efforts being launched right now to back up industry's desires in this regard with campaign contributions. In short, in this instance as in so many others, the Clinton-Gore Administration has managed to "do well" by "doing bad."

● **Sacrificing U.S. sovereignty and its ability, where necessary, to exercise influence through unilateral action.** The Clinton-Gore Administration has seemed to share the hostility others around the world have felt towards American power. Instruments of that power -- like COCOM, which once enabled this country effectively to block its allies' ability to export dual-use technologies -- were especially resented. In the absence of leadership in Washington determined to adapt but *preserve* this vital mechanism, its fate was sealed.

Two years after COCOM was formally interred in 1994, the Clinton-Gore Administration finally cobbled together a very different sort of "arrangement." Under Wassenaar, "the decision to transfer or deny transfer of any item will be the *sole responsibility* of each Participating State." Now, if we are lucky, we may be forewarned that a "participating state" is going to effect technology transfers we considered to be unwise. But we have lost, for the moment at least, the ability to interpose definitive objections.

● **"The Russians are our strategic partners."** The same is often said of China as well, by those who fail to appreciate that neither the Kremlin of Vladimir Putin nor the Forbidden City of Jiang Zemin can be counted upon to see their interests as coincident with ours. To the contrary, the available evidence suggests that they perceive a shared interest in acting as *each others'* strategic partners, at the expense of this country.

In keeping with the Clinton-Gore Administration's potentially fatal conceit about the nature of today's world, the Wassenaar Arrangement includes Russia and two other, smaller-

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 62 2002

scale but problematic nations, Ukraine and the Slovak Republic. Having as members countries that regard as *clients* those we call "rogue states" assures that this "Arrangement" will be as ineffectual in the future as it has been to date in slowing the hemorrhage of strategic technologies to the cabal of bad actors former Under Secretary of State William Schneider has dubbed "Club Mad."

● **Potemkin security mechanisms are better than none.** In the area of export controls, as elsewhere, the Clinton-Gore Administration has tried to obscure a dangerous policy failure with a multilateral fig leaf. Unfortunately, as in the case of Wassenaar and various unverifiable arms control agreements it has promoted to "prohibit" chemical and biological and nuclear weapons tests, these Potemkin exercises can induce a false sense of security. The soporific effect of such an illusion will surely be to compound the damage done when a relatively effective multinational endeavor like COCOM is replaced with a regimen that was *designed to fail.*

What Do We Do Now?

I believe that the purposeful evisceration of the domestic multilateral export control regimes will be among the most lasting and expensive of the Clinton-Gore team's legacies. As a practical matter, like Humpty-Dumpty, the destruction of COCOM ensures that there will be no putting something like it back together anytime soon. There are, nonetheless, a number of steps that would, I believe, help to mitigate some (if by no means *all*) the dangers associated with an "anything goes" approach to technology transfers:

● **First, do no harm.** It would be a grave mistake to adopt legislation like S.1712 that would confirm in law the Clinton-Gore practice of precluding executive branch agencies responsible for national security from exercising real influence over the export control process. This bill would grant the Commerce Department, for all intents and purposes, sole authority over which technologies are subjected to tech transfer restrictions. The bill would also confer on the Banking Committee exclusive jurisdiction for areas clearly within the purview of other Senate committees charged with oversight of the defense, foreign policy and intelligence portfolios.

The bill unduly restricts the circumstances under which export controls can be imposed. This is done to such an extent that the next President may be hamstrung should he believe, unlike the incumbent, that the transfer of certain dual-use U.S. technology should be blocked from going to undesirable end-users.

It would, for example, be illegal to do so if would-be exporters claim that foreign competitors can offer a comparable product. Another loophole would be created if the product is not available overseas but is widely available domestically. No data base exists, nor is any provided for by S.1712, to support such evaluations. If the new EAA were in force, the President would be prohibited from blocking the export unless he could establish both that U.S. security would be harmed and that foreign availability can eliminated via multilateral controls in under 18 months -- neither of which are likely to be demonstrable in advance.

In its latest iteration, S.1712 would create a new National Security Control List (NSCL). Every item currently found on the Commerce Control List (CCL) of restricted dual-use items would have to be approved by the Commerce Department before it could appear on the NSCL.

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 63 2002

In other words, Commerce could, at its sole discretion, veto any proposal to control existing, let alone new technologies.

Two other sections of S.1712 create worrisome loopholes: 1) Section 204 allows the re-export of any product if the controlled U.S. content amounts to 25% or less of the *value* (not the strategic significance) of the product. Even worse from a non-proliferation point of view, is Section 301(c) which prohibits the control of U.S. parts or components if the item is assembled overseas. And 2) S.1712 does not take into account the U.S. practice of recognizing that Israel is an adherent to the Missile Technology Control Regime (MTCR), even if Israel is not an MTCR member.

● **Restore appropriate balance between commercial and national security interests in the U.S. export control process.** For this to occur, several changes will have to be made to reestablish the authority, expertise and effective involvement of the Defense and State Departments and the intelligence community. These would include the following:

** **Restoring a focus for the export control effort.** Russia and China must be understood to be *part of the problem*, not -- for the time being, at least – part of the solution. Equipping them with militarily relevant technologies is a strategic mistake in its own right. Thinking that either Moscow or Beijing, to say nothing of *both*, will help us prevent such technologies from reaching rogue states is recklessly irresponsible.

** **Reconstituting the Pentagon's ability to play its proper role:** It is not enough to give the Defense Department a voice in export control matters. The Department must be staffed and represented in interagency forums in such a way that that voice constitutes a real national security-minded check on the rest of the process. During the Clinton years, this has not been the case as political appointees and their career subordinates at DoD have become among the most forward-leaning of any agency when it comes to approving the transfer of strategic technologies. The Joint Chiefs of Staff organization has all but ceased to perform needed analyses of the military impact of licensing decisions.

Matters have been made vastly worse by an internal reorganization of the Department that has resulted in subordinating the Defense Technology Security Agency (DTSA) to additional layers of bureaucracy, the vesting of relevant responsibilities in the Pentagon's exporter-friendly Acquisition organization and the physical relocation of DTSA to the functional equivalent of Siberia.

I would recommend that the Congress look hard at ways of reversing these undesirable developments. All appointees for senior Defense Department positions office bearing responsibility for export controls should be subject to confirmation and vetted for their commitment to err on the side of caution when it comes to decision-making on licensing decisions.

** To aid in that effort, **legislation should be considered that would require a "Qualitative Edge Impact Statement"** be completed before decisions on releasing sensitive technologies are reached. Such a QEIS would evaluate the likely impact on the vital technological advantage upon which the U.S. military has traditionally depended to ensure its

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 64 2002

success on the battlefield despite inferior numbers and with minimal casualties.

** At a minimum, a QEIS would be helpful in identifying areas where **an intensified research and development effort will be required to restore and/or to enhance our qualitative edge.** We stand to suffer even more grievous harm to the extent that our military is subjected to the combined effect of continued, sharp decline in Pentagon investment in R&D and further sharp increases in potential adversaries' offensive capabilities thanks to access to Western dual-use technology.

** One other idea worth exploring would be to ensure that **companies interested in exporting technologies that will adversely affect our military's qualitative edge work with the Department of Defense** to find ways to mitigate the damage that will otherwise be done to U.S. security.

- Other efforts clearly will be needed to address the loss of export controls and/or the United States' inability effectively to enforce them. This includes enhancing U.S. intelligence collection and analytical activities with a view to gaining early warning about sensitive technology transfers and the uses to which they might be put.

We must, in particular, resist the temptation to rely upon ineffectual arms control agreements to prevent such transfers. In the future, the United States will have to increase its ability -- whether overt or covert -- to intervene so as to prevent particularly sensitive dual-use technologies from reaching their intended destinations.

- A new, more effective multilateral effort needs to be mounted since unilateral export controls will, in most cases, be of limited value. (It needs to be said, however, that there are some areas in which the United States should not compete, even if other countries' companies are prepared to make sales. The willingness of Germany's chemical industry, for example, to sell Libya and Iran plants that could be used to mass produce nerve gas is a case in point.)

Such a new organization needs to differentiate -- as COCOM did, but as Wassenaar does not -- between "good guys" and "bad guys." Russia, China should therefore be outside of the decision-making body, enabling it to pursue policies that might necessarily impinge upon trade with them, as well as their clients. This organization might be modeled after the Australia Group, which was created by the Western powers and their allies in the 1980s to slow the proliferation of chemical weapons-relevant technology.

While America's leverage is much diminished from what it once was, I believe that the United States can still catalyze cooperation in this regard by offering recalcitrant companies a choice: They can sell sensitive technologies to countries we believe will misapply them, or sell them to third parties who will surely do so. Or they can sell to the *American market.* The issue of extraterritoriality is moot; we are simply exercising our right to protect our security against those who would, intentionally or otherwise, do us harm.

- The United States must also recognize that access to technology is not the only impetus to proliferation. Chances that strategic technologies will be purchased and diverted to undesirable purposes increase markedly if would-be proliferators have ready access to hard currency.

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 65 2002

In this connection, Mr. Chairman, I would like once again to salute you for the concern you have expressed about a worrisome trend: Global bad actors are increasingly seeking to penetrate the U.S. capital markets in search of millions, if not actually *billions*, of dollars in undisciplined funds -- at least some of which may wind up underwriting proliferation, terrorism, genocide, etc.

The Initial Public Offering issued on the New York Stock Exchange last week by PetroChina, a subsidiary of the PRC's largest oil company, China National Petroleum Company (CNPC), is an object example. CNPC owns a 40% share in the government of Sudan's oil consortium; proceeds from this consortium's development and exploitation activities in southern Sudan are being used by the radical Islamic regime in Khartoum to underwrite its genocidal civil war and slave-trading in that region, as well as its support for terrorism and the proliferation of weapons of mass destruction.

With respect to the last of these, *New York Times* columnist William Safire recently reported that the U.S. intelligence suspected Iraq was bankrolling a joint venture between Sudan and North Korea to produce long-range missiles in a factory now under construction near Khartoum. Unfortunately, another possibility is that American investors' funds may, unbeknownst to them, wind up making this dangerous endeavor possible via the purchase of PetroChina shares that translate into part of the up to $5 billion CNPC reportedly plans to invest in Sudan's oil consortium and, in turn, into ready cash for the ruthless Sudanese regime.

I urge members of this Committee, and the Congress more generally, to join the broad-based coalition spearheaded by my colleague, Roger W. Robinson, Jr., the chairman of our Center's William J. Casey Institute, that has so usefully raised an alarm about the PetroChina IPO -- and the *hundreds more* that other global bad actors have waiting in the wings. The effect of their efforts have been palpable: Conservatively, some $15 billion to have been raised by Chinese state-owned enterprises between now and the end of June have been averted, for the time being at least, from falling into the hands of these worrisome Chinese companies (i.e. PetroChina, Sinopec and Baoshan Iron and Steel). We are confident that, with the requisite involvement by the executive and legislative branches, preventing such penetration of our debt and equity markets in the future can be done without capital controls by affording U.S. investors the fullest possible transparency concerning the true nature and actual end-uses of foreign offerings.

Conclusion

In summary, I want to thank you, Mr. Chairman, and all of your colleagues who appreciate just how much is at stake with respect to the control of dual-use technologies. With a few exceptions -- notably, the Cox Committee report, studies performed by the House Armed Services Committee and your Committee's excellent *Proliferation Primer* -- the direct relationship between greatly increased access to advanced dual-use technology and diminished national security has gone unaddressed by the Congress. I hope that my remarks today contribute to your efforts to take corrective action.

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 66 2002

Statement of
Stephen J. Hadley
before the
Committee on Governmental Affairs
United States Senate
April 12, 2000

It is a great privilege to have the opportunity to appear before you today to discuss the Wassenaar Arrangement and the Future of Multilateral Export Controls.

Other witnesses are more expert than I on the details of the Wassenaar Arrangement and its strengths and weaknesses. I would like, therefore, to focus on the broader question of multilateral export controls and how to improve them.

Although currently engaged in private law practice here in Washington, D.C., I had considerable experience with export control issues while serving as an Assistant Secretary of Defense from 1989 to 1993 during the Bush Administration Since leaving government, I have had further exposure to export control issues in connection with my law practice. My comments today draw on both of these experiences but reflect only my own personal views and opinions

In brief, I believe that the strategic context in which export controls operate has changed radically since the end of the Cold War some ten years ago, but that the U.S. approach to export controls has not. If the United States is to engage effectively its friends and allies to improve the multilateral export control system, then it needs to take a hard look at its own approach to export controls in light of the new strategic situation The United States needs to make sure that its own approach to export controls is most effectively serving U.S. national interests. Once that is done, then the United States needs to take a much different approach to engaging its friends and allies in improving the multilateral export control system.

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 67 2002

The New Strategic Context for Export Controls

In the 1980s, the multilateral system of export controls was centered on the Coordinating Committee on Multilateral Export Controls (or "COCOM"), which was a critical element of a successful strategy to confront and diminish Soviet military power. Support for this multilateral export control system was fairly strong among both U.S. European and Asian allies because Soviet military power represented a direct threat to the peoples and territories of these nations. While the Soviet military was armed with weapons of mass destruction (including biological, chemical, and nuclear weapons), the core of the Soviet military threat was its overwhelming conventional military forces – tanks, artillery, missiles, ships, and planes.

It was true for both the Soviet and U.S. militaries that the technology that produced their military hardware and capabilities was largely developed and resident in the defense industrial establishments of the two countries and their respective allies. For the Western countries, concentration in the defense industrial sector meant that the relevant technologies could be effectively protected from falling into the hands of common adversaries by a system of export controls So export controls became critical to maintaining Western military advantage

The 1990s presented a very different situation. The Soviet Union had disappeared as a discrete political entity as had its ideologically-driven boast to "bury" the West. First Soviet and then Russian military power declined to the point that it is no longer viewed as representing an offensive military threat to the existence of the United States and its friends and allies despite Russia's continued possession of thousands of nuclear weapons.

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 68 2002

The place at the center of U.S. national security concerns once occupied by the Soviet Union has now been taken not by a single country but largely by a single problem – the proliferation of weapons of mass destruction ("WMD") and the means to deliver them. The focus is on perhaps six to twelve potentially hostile states (such as Iran, Iraq, and North Korea) intent on using these weapons to impose their will on their neighbors, as well as subnational groups or terrorist organizations pursuing ideologically-driven agendas against real or imagined enemies.

At the same time, the ability of these potentially hostile states, groups, and organizations to gain access to the basic technology of these weapons and delivery systems has only increased over the past decade. The relevant technology, no-how, and trained personnel, as well as key hardware and components, are increasingly available through the Internet, through a highly mobile technical work force, and through a globalized commercial marketplace.

This is only part of a broader trend that has undermined the technological basis for traditional military capability and has changed the future source of military advantage. This phenomenon is the subject of a recent report issued in December, 1999, by a Defense Science Board Task Force on Globalization and Security (the "DSB Report")

The DSB Report notes that the defense sector is no longer the predominant source of cutting-edge technology, developed first for military purposes and then "trickling down" to the commercial sector. Rather, technological innovation increasingly has its source in the commercial sector, particularly in the areas of information technology, telecommunications, microelectronics, and critical materials. Several of these technologies are of great interest to

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 69 2002

those defense analysts who say that the world stands on the brink of a "Revolution in Military Affairs." They are also at the heart of the new military capabilities on which "battlefield dominance" is likely to depend in the future. Yet because of "globalization," these commercially-based technologies have spread throughout the world.

The Significance for U.S. National Security

The views expressed in the DSB Report have not been universally accepted. But to the extent that the report's analysis is correct, it has real implications for U.S. national security policy. Let me offer a few quotations from the DSB Report.

> "The strategic significance of the ongoing leveling of the global-technological playing field cannot be overstated. It presents a direct challenge to *the* fundamental assumption underlying the modern concept of U.S. global military leadership: that the United States enjoys disproportionately greater access to advanced technology than its potential adversaries. This assumption underpins the increasingly strained logic holding that technology controls are the *sine qua non* of U.S. military dominance.
>
> "However, such a parochial assumption is simply not consistent with the emerging reality of all nations' militaries sharing essentially the same global commercial-defense industrial base." (DSB Report at 29.)

The DSB Report argues that, in the future, military advantage will come not from developing military-specific technology and denying it to adversaries, but from being able rapidly to integrate commercial technology into military capability that can be promptly delivered to and exploited by a well-trained and well-led military force. The United States will need to rely heavily on this "run faster" strategy.

> "Future U.S. military dominance will derive less from the protection of individual defense-related technologies and more from proactive measures taken by DoD to retain and/or acquire essential military capabilities (defined as those capabilities DoD must have to defend U.S. global interests at acceptable costs).

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 70 2002

Accordingly, DoD's strategy for maintaining military dominance should center on the concept of creating and preserving essential capabilities rather than protecting their constituent technologies. To achieve this objective amidst global technological leveling, DoD will need to rely on, and maintain a robust level of investment in, the United States' strengths." (DSB Report at 32)

Implications for Export Controls

This analysis suggests that an effort to control or limit the commercially-available technologies from which military capabilities can be derived is the wrong focus for export controls since an effort to control what is globally available will simply fail. A better focus for export controls would be the military capabilities that result from these underlying technologies. Even then, the DSB Report suggests that export controls should be targeted on what is unique, militarily critical, and controllable.

"*Strategies for preserving essential capabilities will not rely heavily on restricting the export of U.S. military goods and services, or the protection of large amounts of military information.* Rather, the Task Force's strategies identified a few, very specific matters that were both worth protecting and actually protectable (i.e., they or their functional equivalent were neither available outside the U.S. nor easily replicable)." (DSB Report at 33)

"DoD should attempt to protect for purposes of maintaining military advantage *only* those military and dual-use capabilities and technologies of which the United States is the sole possessor (and for which there are no functionally equivalent foreign counterparts), or which are effectively controlled by like-minded states." (DSB Report at 35.)

"In limited cases, DoD may need to protect aggressively U S -unique, cutting-edge knowledge and/or individual military technologies in order to preserve an essential U.S. military capability. In short, DoD should put much higher walls around a much smaller group of essential capabilities and technologies." (DSB Report at 36.)

William Schneider, former Under Secretary of State for Security Assistance, Science and Technology in the Reagan Administration, has suggested that the transition described in the DSB

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 71 2002

Report is already under way He cites as evidence the fact that, while dual-use export licenses issued by the Department of Commerce have declined by more than an "order of magnitude" in the last ten years, munitions licenses for military items, issued by the Department of State, have declined by only 20%.

What Is To Be Done?

The seriousness of the potential threat from weapons of mass destruction and the means to deliver them is not in dispute. It is a common assessment shared by people on both sides of the political spectrum that these weapons represent the number one potential national security risk to the United States. Yet there appears to be little consensus on how to deal with this risk – as has recently been in evidence in the debates regarding the Comprehensive Test Ban Treaty ("CTBT"), national missile defense, and export controls.

I am not qualified to say whether the DSB Report is right in all of its analyses and conclusions, but the Task Force was made up of persons with broad experience in the defense field. It seems to represent solid evidence that a lot has changed in the strategic context for export controls and that the United States needs a good hard look at its approach. To the best of my knowledge, this was last done in any comprehensive way in the 1990-1991 time frame, and a lot has changed since then.

The 1990-1991 review was conducted primarily by the military staff of the Joint Chiefs of Staff. The military needs to be involved in any new comprehensive review. But precisely because of the changes identified in the DSB Report, representatives from key defense and commercial sectors need to be involved, as well as key members of Congress. The need is for

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 72 2002

both a highly professional review and broad participation, so as to build a political consensus behind the result.

This comprehensive review needs to address a number of questions, including the following:

- Is it true that Cold War export controls were based on the premise that the objects of control should be technologies rather than military capabilities or equipment? Is that approach still correct? Or is a new paradigm required focusing, as the DSB Report suggests, more on unique military capabilities than the underlying technologies increasingly found in the commercial marketplace? (Its interesting that this suggestion comes from sources as diverse as Ashton Carter, former Assistant Secretary of Defense in the Clinton Administration, and William Schneider, former Undersecretary of State in the Reagan Administration.)

- What military capabilities will be most critical in the first and second decades of the 21st century? What does the United State need to protect from a national security perspective? What does the United States most want to keep out of the hands of potential adversaries?

- What is the best way to protect critical military capabilities? Are there critical elements or unique "choke points" on the way to acquiring these military capabilities that should properly be the focus of U.S. export control efforts?

- Does the Cold War paradigm of focusing on suppliers from which potential adversaries could obtain critical technologies or capabilities still make sense now that the sources of this technology or capability have proliferated across virtually the entire globe? Would it be better to concentrate more on the handful of states or groups of concern that are seeking these capabilities and less on the proliferating sources of supply (as Richard Perle, former Assistant Secretary of Defense in the Reagan Administration, has suggested)?

- What contribution could an improved export control system make to preventing critical military capabilities from falling into the hands of potential adversaries? Is a better approach an aggressive program of interdiction and disruption of the acquisition efforts of potential adversaries, based on better intelligence, vigorous law enforcement, and military action if necessary?

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 73 2002

The result of the comprehensive review envisioned here could be a very different approach to export controls than that of the current system My own guess is that such an approach might be characterized by the following:

- A modest list of protected military capabilities – not the underlying commercial technologies – that are critical to the ability of the United States to defend its interests at acceptable costs.

- These would be military capabilities that can be effectively controlled by the United States, in conjunction with those countries joining with the United States in supporting the effort against proliferation, and for which there is no ready substitute in the world market.

- Adoption of a more "strategic"approach to controlling these capabilities by identifying those critical elements of each capability, or those unique "choke points" through which any potential adversary must pass on the road to acquiring these capabilities, that are most amenable to control.

- A strengthened multilateral supplier export control regime targeted at those capabilities for which it still makes sense to have supplier-oriented controls.

- Greater focus on those "bad actors" to whom critical military capabilities should be denied by coordinating improved intelligence-gathering, law enforcement, and military resources in a constant, proactive program of disruption and interdiction of the efforts of these "bad actors" to acquire these critical capabilities.

- Greater government effort to identify suspect end users and "front companies" through intelligence and other sources and an improved system for promptly notifying U.S. supplier companies so they can readily terminate transfers to these entities.

- Greater emphasis on the importance of improving the effectiveness of company export control systems through such things as requiring auditors to review and certify the adequacy and effectiveness of a company's system.

- A more efficient governmental licensing process with more personnel, better training, greater computerization and networking between agencies, and streamlined procedures so that the U.S. can have what Richard Perle has described as a "reliable, expeditious, and non-capricious" system of export controls.

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 74 2002

Reflecting the emphasis of the DSB Report, this reinvigorated approach to more effective control of military capabilities needs to be complemented by a program to enhance the U.S ability to incorporate technology more quickly and effectively into military equipment for its men and women in uniform. It is critical from a national security perspective for the United States to maintain global leadership in those cutting-edge technologies from which future military capabilities will come. Too often, however, the U.S. defense procurement process is very slow to incorporate these technologies into military hardware. The U.S. Department of Defense and other agencies need to learn from industry and acquire its ability rapidly to bring technology into products and to get those products to the user – in this case, the U.S armed forces.

Improving Multilateral Export Controls

The United States will in some circumstances undoubtedly need to continue to pursue unilateral export controls, both because of the intrinsic importance of an individual case, and because of the need to lead by example But where the United States is not the exclusive source of a key military capability or technology, any effort to deny the capability or technology to the nation's adversaries is likely to fail if the United States is unable to get cooperation from other potential sources of supply, especially close U.S. friends and allies.

Obtaining this cooperation will be much more difficult in the post-Cold War world While the Soviet Union posed a direct and overwhelming military threat to the territory of many U.S. friends and allies, the risks presented by weapons of mass destruction seem to many to be remote and to present a problem primarily for the United States, as a nation with global interests and global responsibilities. European and Asian friends and allies are often too focused on

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 75 2002

domestic issues or on narrow regional concerns. It is hard, therefore, to get these nations to take seriously the need for effective multilateral export controls, to give them a high priority, and to join with the U.S. in a concerted effort against proliferation.

In many instances the fault lies with these countries and their failure adequately to appreciate the new security context and to step up to their responsibilities. They have in many instances failed to take their own national security seriously.

But the United States also shares some of the blame for this situation. In too many instances, the United States has not invested the time required to convince even its closest friends and allies of the risks associated with the proliferation of weapons of mass destruction and the means to deliver them -- and what is required to discourage or prevent this proliferation, including effective multilateral export controls. In my judgment, the difficulty that the United States has traditionally had with its European allies over Iran, for example, results in large part from a difference in view as to the security risks posed by an Iran armed with weapons of mass destruction. This gap can only be remedied by working quietly, intensively, and systematically with the relevant intelligence and policy communities of these countries in order to:

- come to a common assessment of the seriousness of the risks posed by proliferation of weapons of mass destruction and the means to deliver them;
- reach a consensus on the countries and groups of concern;
- develop a common strategy for dealing with each of these countries and groups in a tailored, coordinated way, using all available instruments -- political, economic, diplomatic, and military;

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 76 2002

- strength cooperation in the areas of intelligence gathering, law enforcement, and potential military activity; and
- develop a common conception of how to revitalize multilateral export controls as one aspect of the overall effort.

Export controls had such a prominent role in the Cold War era that many U.S. friends and allies see them as a relic of that era and the apotheosis of "old think." The United States has in some measure contributed to this view by not having done the kind of major comprehensive review of the role of export controls in the new strategic context that is required. Once the United States has completed such a review, it will be much more credible in seeking support from friends and allies for a new, more effective approach to multilateral export controls and other measures to deal with proliferation.

It would be useful for U.S. friends and allies to conduct similar comprehensive reviews themselves. Members of the United States Congress in meetings with U.S. friends and allies could encourage their governmental officials to undertake such a review and their parliamentarians to demand it. It might even be appropriate and useful to try to involve representatives of some of the United States' closest friends and allies directly in the U.S. comprehensive review.

The Dual Role of U S. Friends and Allies

The United States needs to recognize that many of its closest friends and allies are not only necessary partners in any multilateral approach to export controls but are also the objects of U.S. export control restrictions. In this context, U.S. export controls present a barrier to the

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 77 2002

sharing of technology and cooperation with these countries to develop common military capabilities and interoperable military equipment. To the extent export control restrictions stand in the way of such cooperation, they exact a real national security cost in terms of U.S. and allied military forces unable to operate together in wartime. They also impair the ability of European and Asian allies to assume a greater share of the burden of the common defense.

This consideration adds to the urgency of getting agreement with friends and allies on the most effective multilateral export control system to prevent, discourage, or delay the transfer of key military capabilities to potentially hostile countries, subnational groups, and terrorist organizations Such a system will allow the United States to ease export control restrictions on its friends and allies with confidence that such loosening will not contribute to the proliferation of significant military capability to countries or groups of concern. The prospect of such U.S. action could be an important incentive for U S. friends and allies to cooperate with the United States in achieving a more effective multilateral export control system. In the interim, there are a variety of measures that the United States government could and should adopt to ease export control barriers to U S. and allied defense industrial cooperation, including: up-front licensing of full-product export (rather than licensing each component); advance approval of re-export of a product to certain pre-approved friends and allies; and authorization to develop and market "blended" products with inputs from both U.S. and allied companies.

At the same time, the United States needs to recognize that to craft an effective strategy against proliferation of weapons of mass destruction and the means to deliver them is an enormously demanding challenge that will require bringing to bear in a coordinated way the full range of political, economic, diplomatic, and military tools available. A more effective system of multilateral export controls can be one of these tools but only one. The United States needs the effective cooperation of its friends and allies in wielding the other tools as well.

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 78 2002

What Post-Cold War Proliferation Controls Require

By

Henry Sokolski
Executive Director
The Nonproliferation Policy Education Center
1718 M Street, NW, Suite 244, Washington, D.C. 20036
phone 202.466.4406 fax 202.652.5409
E-mail: npec@erols.com website: www.wizard.net/~npec

**Testimony Before a Hearing of the Senate Governmental Affairs Committee,
"The Wassenaar Arrangement and the Future of Multilateral Export Controls"
SD 342
12 April 2000
Washington, DC**

Since the end of the Cold War, sustaining or expanding multilateral controls over strategic technology and materials has become a much more difficult task for a number of reasons. First, with the fall of the Berlin Wall came the collapse of East-West trade controls. Western aid and trade (including in high technology) flowed freely into former Warsaw Pact nations. Investment in China increased dramatically. Even U.S. relations toward North Korea eased.

Second, whatever international consensus there might have been for targeting nonproliferation controls against a specific list of countries became far less powerful once the Cold War ended. During the Cold War, Western policy planners worried that any regional war that went ballistic or nuclear might draw in the superpowers and risk a global conflagration. Keeping strategic weapons capabilities out of trouble spots, therefore, made as much sense as East-West export controls. After the Cold War ended, though, key proliferators – e.g., China, India, Pakistan, Iran, Iraq, and North Korea – became targets for trade or aid not only from Russia and European Union nations, but from the U.S. In fact, in the early 1990s, the U.S. and other like-minded nations felt compelled to ease trade restrictions toward export control regime members in order to maintain and expand these regimes' membership.

Third, the early successes that nonproliferation regimes enjoyed preventing the transfer of listed items have been recently undermined by proliferators' acquisition and sale of unlisted goods that can be used to produce strategic weapons.

Finally, since the end of the Cold War, the availability and uncertainties regarding the amounts and status of the most threatening of strategic commodities – nuclear weapons usable materials – has grown dramatically. Indeed, during most of the Cold War almost all of these materials were contained in U.S and Soviet deployed forces. With the reduced military deployments that followed START I, however, the number of nondeployed warheads in each force now well exceeds the number of deployed warheads. Moreover, the possible amount of surplus weapons usable materials (highly enriched uranium and separated plutonium) in Russia is now both uncertain and potentially vast – possibly three to four times the amount contained in Moscow's deployed strategic force.

This is just the beginning. In addition to surplus military fissile, the amount of surplus civilian separated plutonium world-wide has more than tripled since 1990. This civilian material today could be fashioned into more than 30,000 crude bombs – i.e. more than five times the number of weapons the U.S. currently deploys. Finally, the uncertainties surrounding China's and India's growing nuclear production capabilities and stockpiles are no less profound.

Together these Post Cold War trends have made controlling strategic weapons goods much more difficult and highlight the need for three new forms of restraint:

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 79 2002

1. Preventing not just listed commodities, but unlisted strategic goods from going to weapons projects by using new and existing export control authority. In specific, getting other nations to adopt the kind of catch-all controls the U.S. and the European Union have and using existing multilateral export control regimes to assure members' denials are not undercut by other members.

2. Getting more accurate inventories of the status and amounts of nuclear weapons usable materials world-wide, starting with Russia.

3. Strengthening U.S. authority to negotiate both of the above by ending U.S. subsidies to known proliferators and by upholding existing U.S. nonproliferation laws, particularly with regard to U.S. cooperation with known proliferators, such as Russia, China, and North Korea.

Catching Bad Exports to Bad Destinations

With the precipitous decline in the number of licensed exports both here and abroad[1] there has been increased interest in focusing the controls that remain on "end users of concern." As the Deutch-Specter Commission to Assess the Organization of the Federal Government to Combat the Proliferation of Weapons of Mass Destruction noted in its final report (recommendation 4.1):

> For export controls to keep proliferation-sensitive materials, equipment and technology out of the wrong hands, assessments of the likely end user should be critical to decisions of whether to approve or deny any export license. This is increasingly true, as shown by our experience in Iraq. Proliferators will revert to using "low" technology when they are denied access to high technology and their WMD aspirations require only a "low-tech" solution.

This new proliferation challenge, however, cannot simply be addressed with good intelligence In addition, nations must have legal authority to control not only "high" technology, but relevant "low" technology not on any current control list. The question is how. During the Cold War two approaches were taken. Multilateral consensus was reached either to add items to legal control lists or to limit exports to specific destinations. Sometimes consensus was reached on both.

Today, however, it is much more difficult to reach such consensus. On the one hand, key exporting nations disagree about what countries or projects might be dangerous. On the other hand, the range of technologies that might be used to make strategic arms is too broad and expanding to permit a description in any static legal listing. As such, trying to force agreement over such matters, as we tried in creating the Wassenaar Arrangement, is a surefire way to fail.

There is, however, an alternative. Instead of trying to force agreement over end destinations and control entries, the U.S. could continue to use existing export control regimes but encourage members to use and adopt catch-all restraints. Such restraints were first developed in the 1970s to capture U.S. dual-use exports not on any U.S. or multilateral control lists that might nonetheless help make nuclear weapons. After Desert Storm, the U.S. expanded its use of such catch-all authority to cover unlisted dual use exports that might help other nations make long-range missiles or chemical and biological weapons. Shortly after it promulgated export regulations, the European Union (EU) adopted such catch-all controls as well.

Under such restraints, if an exporter knows or is informed by his government that one of his exports might be used to develop a foreign strategic weapon, his government can require that an export license be secured for the export and deny its approval. The genius of this approach is that it encourages least common denominator results – i.e., maximum restraint – instead of lowering controls to a common

---

1. At the height of the Cold War, the U.S. licensed over 150,000 dual-use items annually. Currently, the U.S. licenses approximately 8,000.

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 80 2002

denominator that all parties to export control efforts might be able to agree to. Instead of debating endlessly among multilateral export control members about what items should be controlled to what destinations, then, this approach encourages members to exchange substantive threat assessments and leaves each to determine what it should control where.

This is quite flexible. On the other hand, the approach is firm where it needs to be. The reason why has to do with the no undercut provision already present in the charters of the Australia Group, Nuclear Suppliers Group and the Missile Technology Control Regime. As is clearly provided in these regimes' rules, once a member denies an export and so notifies the control regime, no member can undercut the denial by shipping the same item to the same destination without first gaining the agreement of the other members. In a number of cases, the EU and the U.S. have mated existing no undercut requirements with their own catch all controls and successfully blocked critical goods that were not any control list from being exported to bad destinations.

This trend should be encouraged. Unfortunately, not all members of existing export control regimes have catch-all control authority in place. In addition, those promoting exports both here and abroad generally oppose the use of such authority. If we are serious about catching bad exports to bad destinations, though, we need to encourage the adoption and use of such controls and back their use much more vigorously with appropriate intelligence sharing.

Reducing Uncertainties Over the Greatest Proliferation Threat

If all one had to worry about was improving multilateral controls over strategic technology and materials, tightening such controls would be our sole nonproliferation objective. Unfortunately, there is a far greater proliferation threat, which has grown dramatically since the end of the Cold War. That threat is the burgeoning world-wide surplus of nuclear weapons usable materials and the increasing number of nondeployed U.S. and Russian nuclear warheads.

At the height of the Cold War, most nuclear weapons usable materials were contained in the 50,000 or more warheads the U.S. and Soviet Union had deployed. Since START I, though, the U.S. and Russia have reduced their combined strategic nuclear weapons deployments to approximately 12,000. Although the U.S. has been fairly open about the number of tactical weapons, ready and inactive reserve warheads and weapons pits it has along with how many tons of military fissile it is holding, the Russians have not.

Indeed, there are significant uncertainties. Experts believe Moscow has an additional 14,000 tactical and ready and inactive reserve warheads although these experts have only the vaguest idea of what the breakout is for each category (see chart I). Even more disturbing are the uncertainties surrounding how much surplus weapons materials – highly enriched uranium (HEU) and separated plutonium (Pu) – Russia might have. Conservative estimates of Russia's surplus HEU holdings range between 700 and 1,200 metric tons. As for its surplus weapons-grade plutonium holdings, these estimates range from 135 to 150 metric tons. By any measure, these numbers and the uncertainties are large. Indeed, the difference between current high and low estimates of Russia's military nuclear surplus – 515 metric tons of fissile – is enough to fabricate approximately 23,000 advanced thermonuclear devices – i.e., between 3 and 4 times the number of weapons that the U.S. currently deploys. It also should be noted that in the Russian case, the U.S. has been working to reduce these uncertainties for at least 10 years. In the case of China, we have even less information.

This, then, brings us to yet another worrisome uncertainty -- what the future status and size might be of the world's civilian holdings of separated weapons usable plutonium. During the height of the Cold War, there was relatively little of this material. Today, however, over 30,000 crude weapons could be fabricated from civilian separated plutonium now on hand. Although this is a median estimate, this

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 81 2002

figure is likely to remain this high and might even rise during the next ten years. Again these figures are estimates; the exact numbers are unknown (see chart II).

That said, such uncertainties about size and weapons status of both the world's civil and military fissile holdings confront us with a new set of security challenges. On the one hand, these uncertainties are making it increasingly difficult to know how many weapons nations like Russia, China, India and Japan might be able to fabricate how quickly (see chart III). On the other hand, they are increasing the chances that nuclear diversions could go undetected to smaller hostile states (or subnational groups).

None of this makes sound defense planning or effective arms control any easier. Indeed, whether one is for or against missile defenses or for deploying or reducing more nuclear weapons, the large size of these uncertainties make one's life far more difficult. Certainly, more accurate inventories of these materials and their status would allow defense planners to do a much better job of bounding and hedging against potential breakout scenarios. In fact, with the current high level of uncertainties, most defense planners will simply want to hold on to as many nuclear warheads at the highest level of readiness as they can. Similarly, the level of missile defense deemed sufficient must be much higher, if the number of weapons other nations might quickly deploy remains so large and uncertain. With a more accurate inventory that reduces such uncertainties followed by multilateral efforts to make nuclear weapons usable materials less accessible, high-end nuclear or missile defense hedging would be less necessary.

At the same time, getting such an inventory is critical to the future of arms control. Certainly, arms controllers can no longer argue that they are significantly reducing the nuclear threat if all they can constrain are the relatively small numbers of deployed strategic weapons. The uncertainties and risks posed by surplus nuclear holdings, after all, could easily result in the deployment of many times the number of currently fielded weapons.

Given these realities, not only liberal organizations, such as the Natural Resources Defense Council, but conservatives, including presidential candidate George W. Bush, have made getting a more accurate inventory of these nuclear holdings a top priority. In this, both realism and optimism are at play. Certainly, if we are unable to secure more accurate nuclear inventory data from our friends and others, it recommends far more investment in national security. If, on the other hand, other nations are willing to match our level of nuclear openness, we may be able to take additional steps to reduce the size and accessibility of the world's stockpiles of nuclear weapons usable materials. In such a world, the nuclear threat might lessen and spending on nonnuclear defenses to fend off the risks that remained would make sense

Maintaining Our Moral Authority

Tackling the challenges posed by dual-use exports and the growing surpluses of nuclear weapons useable materials will be stressful enough. What will make addressing these problems even more difficult, though, is continued U.S. inattentiveness to its own proliferation behavior. I am speaking here not about lax enforcement of U.S. nonproliferation sanctions laws, which in many cases are too distasteful to our commercial and diplomatic instincts to command strict adherence. Instead, I am talking about our government's continued willingness to subsidize known proliferating entities. The U.S. government still licenses and frequently guarantees and finances strategic technology exports to known proliferating entities. These entities, meanwhile, are free to raise funds in U.S. bond and equity markets without disclosing how such funds might be used.

In the past, such subsidies included $21 million in U.S. Export-Import Bank guaranteed exports of precursors and controlled chemical production equipment to Nanjing Chemical. The U.S. knew this firms was proliferating to Iran but only sanctioned it after the Senate ratified the Chemical Weapons Convention. China National Nuclear Corporation, meanwhile, received approximately a billion dollars in Export-Import Bank subsidized steam turbines, nuclear engineering, and U.S. Department of Energy

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 82 2002

nuclear assistance even while it was helping Iran with its nuclear program. Even now, hundreds of millions in U.S. satellite exports continue to be transferred to the very Chinese firms selling missile and related technology to Iran, Pakistan, and the Middle East. These are the same Chinese firms who are making the M-11 missiles now being targeted against Taiwan. In addition, the U.S. has allowed Chinese financial institutions with clear ties to the Peoples Liberation Army to raise billions of dollars in untied loans through the U.S. bond market.

Matters are hardly much different with Russia. Here the U.S. is giving Minatom – a Russian entity building nuclear reactors in Iran and nuclear weapons in Russia – billions for enriched uranium and other forms of nuclear cooperation. And yet, in most cases, U.S. officials have only the vaguest idea of how Minatom is spending this money. Also, the Specter-Deutch Commission received several briefings on how Russian firms trying to develop Iran's oil industry were seeking billions of dollars in Wall Street's bond market.[2] Finally, until recently, NASA was paying the Russian Space Agency (RSA) hundreds of millions of dollars for cooperative work on the International Space Agency even though the RSA was helping Iran develop long-range rockets.

Then, there is North Korea, a Stalinist state for which the U.S. plans to build two modern reactors capable of producing at least 50 bombs worth of plutonium a year at a cost of over $4 billion. What's astounding about this is that Pyongyang is still in violation of its Nuclear Nonproliferation Treaty and its International Atomic Energy Agency safeguards obligations. In fact, President Clinton recently notified Congress that there was evidence that Pyongyang is pursuing a covert nuclear weapons program.

At best, this is bad business. Not only is engaging in such trade and aid a risky way to make money (or lose it), it directly undermines our ability to work effectively with others against proliferation. After all, we can hardly ask our friends to make sacrifices for nonproliferation if we ourselves are lending known proliferators such direct support.

Congress understands this. Indeed, it recently made this clear with its unanimous passage of the Iran Nonproliferation Act, which suspends further NASA progress payments to the Russian Space Agency (RSA) until the White House can certify that the RSA has stopped proliferating missile technology to Iran. For the first time, Congress has said no to subsidizing bad actors. More, however, needs to be done. At a minimum, Congress must make sure implementation of the Agreed Framework and other nonproliferation agreements do not violate or bend existing U.S. nonproliferation requirements and that all parties live up to their nonproliferation pledges. In the case of the Agreed Framework, Bipartisan House legislation passed overwhelmingly last fall that would have assured this had the Senate had time to act. This legislation was recently reintroduced by Congressmen Gilman and Markey and will soon be marked up in committee.

Beyond this, Congress needs to consider what steps could be taken to limit or prohibit the licensing of U.S. exports to entities our intelligence agencies have clearly identified as proliferators. Proposed legislation, the "Proliferation Desubsidization Act" introduced by Congressman Weldon and others attempts this. It too deserves review. Finally, to keep proliferators from funding their projects with U.S. private funds, Congress should make sure that U.S. investors at least know what they are investing in. A proposal to legislate such transparency, was recently offered in the "U.S. Market Security Act" by Congressman Bauchus. I understand that this committee is interested in such legislation as well.

In short, there's plenty of good work yet to be done. What work there is to do, however, will require more than simply extending controls created before the fall of the Berlin Wall. I trust this committee and our government in concert with others will not shy from taking this work on. This concludes my testimony.

---

2. See page 78, recommendation 5.25 of the *Report of the Commission to Assess the Organization of the Federal Government to Combat the Proliferation of Weapons of Mass Destruction.*

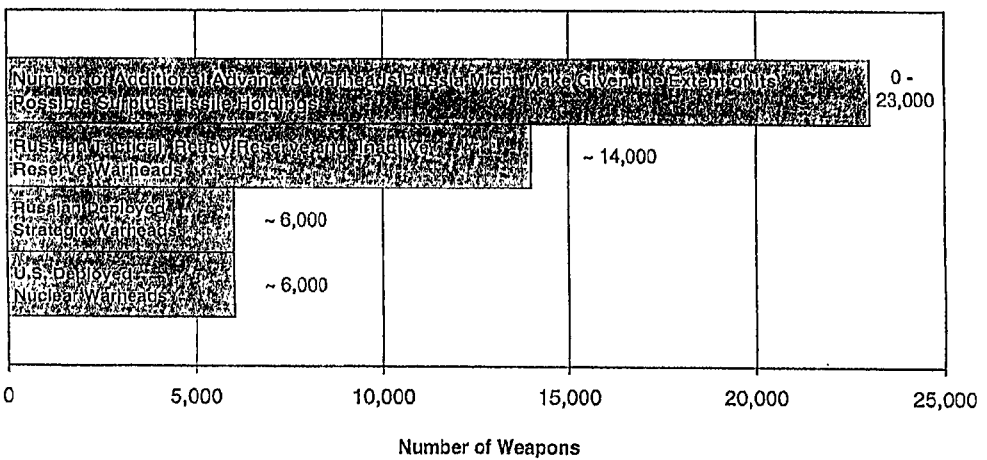
HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 83 2002

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 84 2002

Chart I

Russia's Nuclear Inventory: Surplus Fissile Uncertainties

Towards the High End of What its Surplus Fissile Holdings May Be, Russia Could Field a Force Four Times the Size of its Current Deployed Strategic Arsenal



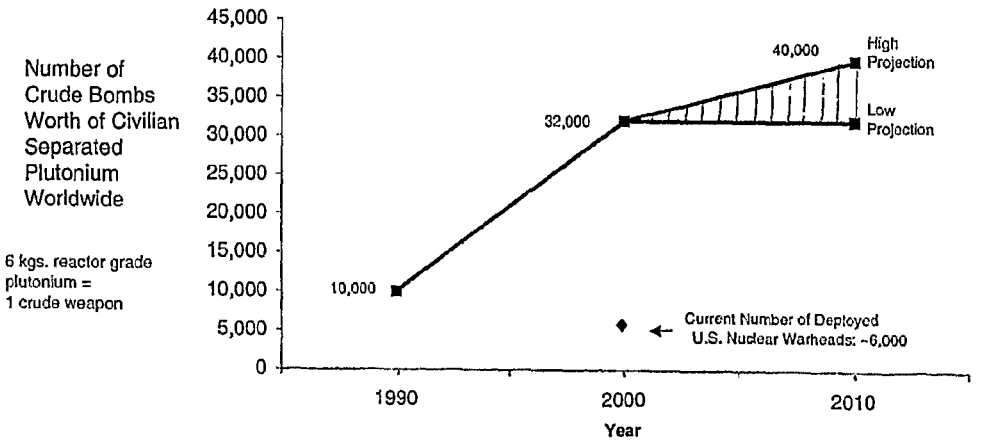
The Nonproliferation Policy Education Center

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 85 2002

Chart II

A Growing Weapons Worry

Estimated Worldwide Civilian Separated Plutonium Holdings Could Fuel More than Five Times the Number of Currently Deployed U.S. Warheads



The Nonproliferation Policy Education Center

Chart III

Additional Breakout Uncertainties

We Only Have Good Information on Two Categories of Nuclear Holdings

- Number of Deployed Nuclear Weapons
  - Number of Ready Reserve Warheads
  - Number of Inactive Reserve Warheads
  - Number of Weapons Pits
- Amount of Declared Military Surplus Fissile Material Holdings
  - Amount of Military Surplus Fissile Material Holdings
  - Amount of Civil Surplus Fissile Material Holdings
  - Amount of Fissile Locked in Spent Fuel

The Nonproliferation Policy Education Center

○

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) 86 2002

Document No. 49

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) [i] 2002

HeinOnline -- 4 Bernard D. Reams, Jr., Law of E-SIGN: A Legislative History of the Electronic Signatures in Global and National Commerce Act, Public Law No. 106-229 (2000) [ii] 2002