Testimony of

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Dysfunctional Dual Use Technology Transfer Safeguards

Mr. Chairman, members of the committee, I am honored to appear before you today to discuss the transfer of so-called dual-use technologies to potential military adversaries and countries engaged in nuclear, chemical, biological, and missile proliferation. I would like to state for the record that I am appearing here today as a private citizen and not as a representative of the Department of Defense or the U.S. government.

For the past 12 years I have been a senior strategic trade advisor within DoD's Defense Technology Security Administration. I have served as international negotiator for export controls over machine tools, controllers, robots, industrial equipment, software, and navigation and guidance equipment. I was also the chairman and head of the U.S. delegation to the Paris-based eight-country study group on Advanced Materials for Weapons Systems and the study group on Defense Production Technology and Equipment. In addition, I have been a licensing officer overseeing exports to various proscribed countries including China, Libya, Iraq, former Warsaw Pact countries, Iran, and India. Currently, I am DoD's representative to the Subcommittee on Nuclear Export Controls (SNEC). My tenure has given me the opportunity to witness the birth, development, maturity, and premature death of DoD's credible role as the guardian of U.S. technology security.

Let me state up front that over the past six years the formal process to control exports of dual-use items has failed its stated mission -- to safeguard the national security of the United States. On several levels, what passes for an export control system has been hijacked by longtime ideological opponents of the very concept of export controls. Six years ago, opponents of export controls were granted direct responsibility for managing the Defense Department's role in this important process. DoD has suffered the greatest damage. Unfortunately, the wrecking ball is still swinging, and on October 1, 1998, it threatens to level the last vestiges of DoD's role in the process.

Through a tireless campaign, the opponents of export controls have managed to destroy the 16-nation Coordinating Committee on Export Controls (CoCom) and decontrol vast arrays of

critical military technology, rewire the U.S. domestic export control process so that it is structurally unsound and unable to safeguard our security, and erect a series of ineffectual domestic regulations and international working groups designed to project a false impression of security, deliberation, and cooperation. This Potemkin Village has been constructed to deceive both the Congress and the American people and lull us all into a false sense of security while short-sighted business interests line their pockets at the expense of future generations of American soldiers and citizens alike. The likelihood that PRC missile and Cyberwar capabilities have directly benefited from the U.S satellite launch cooperation is a case in point but represents just the tip of the iceberg resulting from the devaluation of **national security** as the basis for export controls over the past several years.

Mr. Chairman, the single point of greatest failure in maintaining a credible export control system was the neutering of the Defense Department's traditional role as the conservative anchor. First, DoD's key staff were effectively removed from the chain of command and the decision-making process within DoD. DoD abandoned its traditional role and instructed DoD employees to side with the Commerce Department and isolate the State Department and the Arms Control and Disarmament Agency (ACDA) on many issues.

The campaign to isolate DTSA began in earnest with the arrival of David Tarbell as the director of DTSA. DTSA personnel were cut off from most technology security-related activities in the Defense Department. Whereas DTSA was once the linchpin for these issues within the department it was quickly marginalized by its own leadership. To clamp down this quarantine, DTSA management instructed the Pentagon to, in effect, prohibit DTSA personnel from receiving the USDP Daily Report, a summary of a broad range of issues important to DoD staff (see Attachment 1). This cut-off was both malicious and damaging to the organization's mission. It should be noted that the Daily Report, an E-mail distributed document, is available to hundreds of other OSD personnel, including interns.

As if these steps were not enough, as part of the campaign to marginalize — but maintain the illusion of an effective organization— DTSA management placed staffers with little to no experience or technical aptitude in key positions representing DoD in interagency meetings. DTSA representation has become the joke of the interagency process due to its putting its weakest foot forward. In addition, the revolving door of compliant military personnel being hired into DTSA civilian vacancies has helped to undermine the morale and competence of the entire organization. It should be noted that these practices were among the dozens of findings in a devastating 1992 DoD/IG report.

Shorting Out the Licensing Process

To fully appreciate the curent situation I would like to describe the export licensing process, how it has changed over time, and the impact of these changes upon our national security. The three charts in Attachment 2 are designed to illustrate these issues.

As shown in Chart 1, Pre-1992, a typical export license application followed a relatively straightforward path. The process began when an application was submitted to the Commerce Department. If Commerce deemed it appropriate the case was staffed to State, Defense, Energy,

ACDA, or the NRC for review. Each agency provided its recommendation to approve, deny, or refer to one of the specialized interagency subcommittees on nuclear, missile, or chemical-biological warfare (CBW) issues. If agencies could not arrive at a consensus-based position, then the case would be escalated to the Operating Committee. If the WMD-focused subcommittees failed to agree, then the case would be escalated directly to the Advisory Committee on Export Controls (ACEP).

Chart 2 depicts the erection of the first of the firewalls that have come to dominate the process. This invisible barrier represents the unwillingness of DoD officials to escalate disputed cases beyond the ACEP. Unfortunately, in this process, failure to escalate and fight on behalf of a minority view means you lose. Commerce was quick to sense DoD's lack of resolve. Then the predictable took place. Commerce began pushing the envelope on virtually all issues and boldly overruled a weak and ineffectual DoD. It wasn't long before DTSA staff began receiving stunning instructions from their director to support DoC on a variety of issues. DoE and ACDA increasingly distanced themselves from DoD positions because of DoD's failure to protect its own mission areas. It should be noted that national security-minded staff in DoE were being similarly undermined.

Chart 3 shows the process calcifying with the promulgation in December 1995 of Executive Order 12981. This highly deceptive document purported to broaden DoD's role in export licensing by increasing the number of cases DoD would be permitted to review. But what the right hand giveth, the left hand taketh away. The Executive Order divorced the weapons of mass destruction (WMD) focused committees from the ACEP and elevated the Commerce-chaired Operating Committee to new heights of power and influence by breaking the peer relationship with its sister committees and making it the only committee to report to the ACEP. The Missile Technology Export Committee (MTEC), the Subcommittee on Nuclear Export Controls (SNEC), and the Shield (Chem/Bio issues) committee were all relegated to insignificant positions as they lost the ability to vote a case directly to the ACEP. Thus a second firewall was erected and serves as a barrier to prevent the most knowledgeable participants in the interagency process from being able to directly inform policymakers on the most profound technology transfer issues of the day.

As if these changes weren't enough, the Executive Order also shortened the time available for the USG to screen license applications. Combined with a further draconian shortening of the time allowed by DTSA management to review cases within DoD, the system is designed for failure. For example, when a case comes to DoD for review DTSA's internal engineering staff have approximately four hours to undertake a technical review of perhaps 20 to 30 cases each day. As many as 70 percent of the cases are approved outright based upon the meager information contained in the license. The technical reviewer generally does not get a second look at the case. Agencies have only 10 days to ask questions. After that no questions are allowed.

As the charts in Attachment 3 reveal, at the same time that the December 1995 Executive Order was handed down, DTSA's role in the process was further diminished. DTSA in turn slashed the role played by the armed services, the Defense Intelligence Agency, and the National Security Agency by limiting the number of licenses referred for their review. These organizations, of course, possess the most credible and critical decision support information. DTSA's shutting them out cripples efforts to discern the national security implications of licensing decisions. In

addition, DTSA management began arbitrarily dismissing valid intelligence information because "it was over one year old." Thus when faced with evidence that would have traditionally been termed "a smoking gun" the chain of command now capriciously rejects intelligence data and technical analysis when it suits them.

Matters are even worse in the case of supercomputer licensing.

A DoD That Won't Say No

The Defense Department was the leader in successful efforts to decontrol exports of supercomputers capable of processing vast quantities of complex information and supplied funding and other forms of assistance to contractors hired to justify preconceived policy initiatives in this regard. In a strategic context, such computer systems typically figure in weapons development laboratories, nuclear weapon simulation and modeling facilities, ICBM warhead design activities, and a host of other critical military applications. DoD's leadership harked right back to the role played by the new DoD chain of command in decades-long efforts to reform [read scrap] the export control system centered at the National Academy of Sciences (NAS).

In fact, the final 1991 report of the NAS Panel on the *Future Design and Implementation of U.S. National Security Export Controls* highlighted the flawed 1990 crash effort by the Bush administration to shrink the CoCom list by one-third as a starting point for what would turn out to be the export control policy of the Clinton administration.

> The President was able to present a coherent decontrol plan to CoCom only by short-circuiting the existing process. Continued White House pressure on the participating agencies was necessary to bring about significant loosening of restrictions. . .
>
> Because the White House policy aim— wide-ranging decontrol— was made clear and constantly reiterated, the types of interagency disputes that have often blocked the process were minimized. . .
>
> Although the core list process has produced relatively substantial results, it is doubtful that the institutionalized CoCom and U.S. list review process could work effectively in less exigent circumstances.

Such was the mindset of the key panel participants who were soon to be appointed by President Clinton to Pentagon policy positions with direct responsibility for DoD's role in the export control process. Was it any wonder that DoD officials were unhappy when the Congress mandated, in Section 1211 (a) of the National Defense Authorization Act for Fiscal Year 1998, that Commerce was required to forward to the Defense Department all computer license applications for systems exceeding a certain level of performance? This new authority was an unwanted gift to some in DoD who led the charge to decontrol the very computers Congress addressed in the law. The White House immediately sought to neutralize this congressionally mandated requirement by requiring the signature of an under secretary in order to object to such

an export (see Attachment 4). The Commerce Department narrowed the window even more by refusing to recognize the right of DoD officials to delegate authority internally.

Decontrol Actions

As we meet today, the administration appears poised to announce yet another round of unilateral supercomputer decontrols. This time many fear that administration excesses will extend well above the current unjustifiable 7,000 MTOPS level. In 1995, "President Clinton [unilaterally] decontrolled computers up to 2,000 MTOPS [from the previous CoCom ceiling of 260 MTOPS] for all users and up to 7,000 MTOPS for civilian use in countries such as Russia" and China. This will enhance proliferators ability to pursue design, modeling, prototyping, and development work across the entire spectrum of weapons of mass destruction. The weapons design establishments of Russia and the People's Republic of China stand to reap the greatest benefit from further decontrol.

There is growing speculation that the Clinton administration's furious push to decontrol supercomputers, widely seen as a payoff for generous campaign support and contributions, was also intended to underwrite Comprehensive Test Ban Treaty (CTBT) signatures by providing an avenue for weapons testing, stockpile stewardship, and ongoing weapons development without the need for the physical initiation of a nuclear chain reaction.

On February 24, 1997, Russia's Ministry of Atomic Energy announced:

> Nuclear arsenal security maintenance is impossible without simulation of physical processes and mathematical algorithms on high-performance parallel computers, which are currently produced in the United States and Japan. In the interests of signing the CTBT in the shortest possible time, the U.S. and Russian experts mutually agreed on the necessity of selling modern high-performance computers to Russia.

Going Virtual -- What Does It Mean?

Virtual testing, modeling, and simulation are essential to clandestinely maintain or advance nuclear and biological weapons technology. As the planet shows no sign of nearing the point where such weapons are banned, it is reasonable to assume that current or aspiring weapons states will vigorously attempt to acquire high-performance computers to advance their programs with a degree of covertness hitherto impossible to achieve.

Verification Technologies Made Irrelevant

On a prima facie level most would instinctively argue that eliminating nuclear chain-reaction explosions from the planet is highly desirable and would help make the world a safer place. However, the reverse may actually be the case; that is, the elimination of physical tests and their migration to cyberspace may make the world a more dangerous place. Can such a counterintuitive proposition be true? Consider the trillions of dollars' worth of detection,

monitoring, and early-warning infrastructure designed to identify and measure foreign nuclear weapons programs that would be rendered useless by virtual testing. These include:

SPACED-BASED OPTICS AND SENSORS

RADAR

LISTENING POSTS.

RADIONUCLIDE MONITORING NETWORK

SEISMIC DETECTORS

Aiding and Abetting Proliferation

One of the lessons learned from the destruction of Saddam Hussein's biological and nuclear weapons programs was that a proliferant may be quite willing to settle for laboratory testing of its prototype nuclear weapons as an uneasy certification for including them into its arsenal.

Given the limited access to fissile materials facing most potential proliferants and the threat of a preemptive strike by a wary neighbor, as we saw in 1981 when Israel destroyed the Iraqi Osirak reactor, proliferants cannot readily engage in physical testing along the lines of the superpower model. U.S. actions to promote the availability of high-performance supercomputers will likely contribute to the proliferation problem by facilitating access to modeling and simulation, which will give clandestine bomb makers greater confidence in the functionality of their designs. This increased level of confidence may be all that a belligerent may require to make the decision to deploy a weapon. Sophisticated modeling and simulation will enable clandestine programs to advance closer to the design and development of true thermonuclear weapons.

If the Russian claim that the United States reneged on a promise of supercomputer technology in exchange for accession to the CTBT is accurate, then the very value of this treaty must be questioned. If, as a price for Russia's signature, the Clinton administration was willing to provide the means of circumventing both its spirit and explicit goals, then the treaty should be regarded as little more than a sham to be rejected by the U.S. Senate.

Few were happy when the United States helped the United Kingdom become a nuclear power. Even fewer were pleased when the United States helped the French develop an independent nuclear capability. Assisting the Russians and in maintaining and further developing their nuclear arsenal is outrageous. Unfortunately, U.S. nuclear proliferation activities do not end there. If the persistent rumors are true that the United States is even considering providing aid to China to sustain its nuclear weapons modernization program in a CTBT environment, then alarm bells should be sounding on Capitol Hill on the unintended consequences of reckless disarmament.

Will the synergistic effect of the CTBT and the decontrol of supercomputers make the world a safer place or a more dangerous place? Our uncertainty anticipating the nuclear intentions of

potential adversaries will increase as the result of an increasingly opaque window into their programs. As to whether this will translate into a quantifiable increase in the risk of nuclear war or terrorism intuitively the answer appears to be yes, but how much is uncertain.

U.S. willingness to trade supercomputer technology for treaty signatories and its own rush toward virtual testing make a farce of pretensions to high moral ground in criticizing others for rejecting the CTBT. "Pakistan or India . . . could be forgiven for suspecting that the five major nuclear powers, which asserted for years that testing was critical to maintaining deterrence, have now advanced beyond the need for nuclear tests. All the more reason, perhaps, for them to oppose the treaty."

The critical mass issue is one of the greatest unknowns in predicting future events. One thing is certain however the continuing hemorrhage of U.S. and western "dual-use" technology will manifest itself in Chinese military capabilities. Where the "red-line" exists in the PRC's strategic calculus between capabilities, confidence, and mission requirements can only be inferred at this point. But what is certain is that the unique Chinese world outlook, practicality, military doctrine, national requirements, and geopolitical/military position will result in strategic surprise for the U.S. both in terms of where they will apply military force and the unique manner in which it will be applied.

Recent head-to-head competition between Russia and China to supply Iran with a nuclear reactor complex demonstrates the increasing willingness to collaborate with potential customers rather than cooperate with the West on proliferation issues. The current portrayal of the Chinese as being forthcoming on proliferation matters is a political fiction. Their backing away from Iranian nuclear cooperation was the result of losing out to the Russians on the reactor complex deal. Any appearance of a more judicious approach by the PRC is just that "appearance." It the Russians fail to deliver under their new contract then the PRC will certainly be first in line to offer the Iranians whatever they want.

Selling C-17's to China?

To compound these problems in a most spectacular fashion is the pending administration decision to perpetrate another technological fiction known as the MD-17. Basically the MD-17 is the brand-new C-17 painted blue and white and incorporating some other minor cosmetic changes so that it may soon be termed a "civil" aircraft by the administration. This action appears to be motivated purely around attempts to lower the unit cost of this $170 million strategic airlifter so the U.S. military can afford to buy more of them. The game is to free this aircraft from the control of the ITAR (International Traffic in Arms Regulations) administered by the State Department and place it under the jurisdiction of the extraordinarily weak CCL (Commodity Control List) run by the Commerce Department. If the MD-17 is termed a civil airliner it will no longer be subject to sanctions such as those imposed upon the PRC after the Tiananman Square massacres. It will be free to be sold to China so long as a Department of Commerce export license is obtained. Unfortunately as the Commerce Department controls are extraordinarily non-specific when it comes to "non-military" transport craft, you can expect to see the PLAAF flying MD-17's in future military adventures.

Claims that the military significance of MD-17's operating as commercial aircraft point to the existence of the Russian AN-124 Condor as claimed competition. The versatility, reliability, short-field performance and pressurized cargo compartment set the MD-17 far above the Russian plane. For instance, in South America alone the MD-17 can operate into 601 airfields compared to only 116 for the AN-124.

The MD-17 will provide the PRC with the long-range military logistics support it currently lacks. This capability to deliver military supplies in any weather, over great distances, to even the most remote and austere ground locations will provide the missing link to PRC power projection needs. The lack of strategic and tactical airlift has been one of the principal factors limiting PRC expansionist ambitions. Once such aircraft are made available and incorporated into their military doctrine the critical mass may be reached for PRC decisionmakers for the military supported pursuit of historic territorial claims and the securing of vulnerable oil resources to their East, South, and West.

If experience is any guide we should also anticipate with a considerable degree of confidence that this "civil" aircraft will quickly become the target of PRC manufacturing ambitions as well. Considering the fact that the infamous Columbus, Ohio "Plant 85" where critical parts for the C-17 were manufactured was sold to the PRC the Chinese should be well positioned to begin manufacturing this aircraft locally. That transfer, and the subsequent diversion of some key equipment to a Chinese missile factory, is reportedly the subject of a federal grand jury investigation.

Oscilloscopes

Just last year, DoD officials went along with a proposal from a minor DoE office director to decontrol oscilloscopes -- an item controlled for nuclear nonproliferation concerns. Remarkably, rather than opposing this reckless initiative, which was not coordinated with higher-level authorities, DoD counter-proliferation and DTSA officials supported it. DTSA officials even went so far as to bar its employees from addressing the vital nuclear weapons applications for oscilloscopes and limited position papers to the non-nuclear military uses of these instruments -- a weak argument at best, as they were controlled for nuclear non-proliferation reasons only.

A quick peek inside the instrumentation trailers and shacks set up around the Indian and Pakistani nuclear test sites would likely reveal scores, if not hundreds, of advanced oscilloscopes, reflectometers, computers, transducers, spectrometers, and other data-capture instruments whose export decontrol was championed by the administration. The United States developed and pushed decontrol both domestically and in the already ineffectual international regimes known as the Nuclear Suppliers Group and the Wassenaar dual-use technology regime. The oscilloscope decontrol took effect in 1997, just in time for India and Pakistan to freely procure as many oscilloscopes as they needed to install at their test sites. The Department of Defense became the incongruous champion of the wholesale decontrol of advanced computers while the Department of Energy promoted the decontrol of oscilloscopes despite the fact that they were originally invented to support DoE's nuclear test program. The main beneficiaries of these decontrols were intended to be the U.S. oscilloscope manufacturers and their Swiss affiliates which lobbied the

Clinton administration in an effort to freely export their nuclear-proliferation sensitive products to India and China.

Nothing can more graphically illustrate how deeply embedded is the refusal to say no in DoD's current psyche than the DTSA internal routing sheet in attachment 5. This sheet is used to solicit and coordinate positions and recommendations on important issues including Memoranda of Understanding (MoU's), international agreements, data and exchange meetings, exemptions to Foreign Military Sales (FMS) policies, waivers and exemptions to established policies -- including satellite launch policies. As you will notice, there are only two possible options given for DTSA analysts to return: Approval or Approval. The analyst who seeks to deny an export has no avenue to express an objection.

Waging a Scorched-Earth Campaign

On October 1, 1998, the final death knell will sound for DoD's role in the export control process. The pending merger of DTSA into the new Defense Threat Reduction Agency (DTRA) is a national security disaster in the making. This reorganization will result in the removal of DTSA from OSD Policy and place it within the Acquisition part of DoD.

First, historically, DTSA and Acquisition have been bitter adversaries over sanctions and export controls. Acquisition's primary interest naturally lies in lowering the unit cost of goods they procure for the military and in maintaining a healthy defense industrial base. Exports are seen as important profit centers, and overseas markets have long been viewed as a primary means of achieving economies of scale and lower unit costs. Export controls, sanctions, and embargoes appear, through Acquisition's lens, as running contrary to their mission.

Second, the merger will create a basic conflict of interest. DTSA is often asked to express an opinion/judgment on export license requests that Acquisition is sponsoring. This is true for both dual-use and ITAR items and involves several organizations. Placing DTSA under the command of parties that are net exporters raises the serious specter of conflicts.

Third, calling for the physical relocation of DTSA from its traditional Crystal City location and dropping it out at Dulles airport will be the coup degrace. DTSA personnel have been key players in interagency meetings and activities including SNEC, OC, MTEC, Shield, NEVWIG, missile launch arrangements, Wassanaar, etc. Personnel will no longer attend a great many meetings, planning sessions or crisis teams, which are essential if DoD is going to regain its former status as a credible player in the interagency process.

Fourth, the new director of DTRA is a Lawrence Livermore National Laboratory staffer who will occupy the position for a few years as an IPA fellow. This creates yet another conflict of interest as DoD staff often deny cases bound for DoE-financed programs within the former Soviet Union. Most of these programs are administered by DoE labs including Livermore. These denials have generated considerable anger throughout DoE in spite of the fact that DoE refuses to turn over evidence, repeatedly requested by DoD of a technology security plan for U.S. financed technology transfer programs. These programs alone are deserving of a major round of congressional oversight hearings.

Technology Security vs. Balance of Trade

For the Defense Department, both uniform and career civilian personnel, the philosophy of containment and technical superiority endures as an echoing mantra. The philosophy of the Department of Commerce, however, is one of economic engagement. This philosophy is generally agreed with, if not vigorously endorsed, by high level political appointees in all departments and agencies -- including DoD.

These philosophies are, of course, diametrically opposed. Technology sold to a potential adversary that can be used to close the technical gap between its military systems and ours diminishes our national security. Any short-term gain in our economy would, with this result, represent at best a Pyrrhic victory. The flip side to the argument is that by engagement our economy is improved. This provides incentives for increased R&D to maintain the technical gap. The biggest beneficiary in such a cycle would be the defense industry, which would be called upon to save us from our own trade policy.

The National Science and Technology Council Committee for National Security listed three conclusions in its Phase 1 Progress report briefing (28 April 1997):

> 1. Government controls over controlled technology are effective within legal and regulatory guidelines, but license decisions are generally made based on narrow evaluation factors and so do not include analysis of multidimensional and long-term effects.
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> 2. The government does not have a comprehensive understanding of the effects on U.S. national security interests of the international flow of both controlled and uncontrolled technology.
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> 3. Collecting and analyzing sufficient data to develop a comprehensive understanding of the international flow of both controlled and uncontrolled technology and its effects on U.S. national interests to determine if adjustments to policy are called for would be a major undertaking.

Controlled technology is being redefined as uncontrolled technology at an unprecedented rate and is being exported despite the fact that the government does not have a comprehensive understanding of the effects on national interests. While claims of "regulatory effectiveness" are made relative to controlled technology (again, which is being nearly defined out of existence), the government has no clue concerning multidimensional and long-term effects. Why? -- it would be a major undertaking and would almost certainly expose the recklessness of current export control policy.

The export control system works only when there is a strong degree of creative tension between agencies. This natural adversarial approach ensures full and open debate. In addition, it is vital that higher echelons be regular participants in the process, and this is only achieved through escalation of issues to their level. Pre-emptive surrender because one does not want to involve higher authorities or because one is afraid that escalation may be misinterpreted as a personal

failure to resolve issues does a great disservice to the agency's mission, the process, and this nation's physical security. DoD's consistent pattern of weak or no opposition, capitulation, and failure to escalate issues is the single greatest factor in the loss of tension from the system and its consequent failure to execute its mission.

Who's Next?

Tragically, nowhere in this government are analyses being performed to assess the overall strategic and military impact of the technology decontrols I have described in my testimony before the Joint Economic Committee on June 17, 1997 and April 28, 1998. Nor are any analyses being performed on the impact of the day-to-day technology releases being made by the dysfunctional export licensing process. Yet it is precisely at the "big picture" level where the overall degradation of our national security will be revealed. Without such assessments the government will continue to blunder along endangering the lives of our citizens unnecessarily. For instance, I believe that the two most devastating technology decontrols cover machine tools and high-speed computers — machine tools from two perspectives -- first, their ubiquitous presence in the manufacture of **all** advanced military systems, particularly where high precision or complex geometry is required. Second is their criticality to U.S. industrial competitiveness.

Laser Weapons

Underlying the administration's refusal to protect U.S. technology and our defense industrial base is the identity fallacy: the notion that small events must have small consequences. These assumptions are often erroneous and contrary to the principle of nonlinearity, which relates seemingly small events as essential catalysts to a degree of change well in excess of what may be expected by casual observers. Attachment 6 demonstrates the staggering consequences and costs that may result from the transfer of key enabling technologies. This notional study shows how the transfer of laser technology can be used against us and may force the redefinition of the nature of air combat, power projection, and even sensor technology.

Decontrol by Metaphor

The unremitting drumbeat for decontrol is not without its creative side. Perhaps its greatest example was the clever use of simple terminology such as "hot sections" to mask radical decontrol measures which have swept away most restraints on the export of advanced propulsion technology. As displayed in Attachment 7, using terms that have no intrinsic meaning has been an effective vehicle with which to decontrol the underlying materials, techniques, and equipment for the manufacture of even the most advanced military engine technology.

Political Optics, the Laugh Test, Fig Leaves, and the Washington Post Test

I think it is important to mention these phrases because they are direct quotes of DTSA managers, used repeatedly over the last few years, when discussing what position DoD should take on various export licenses, international agreements, or unilateral U.S. export control decisions. They are always used in the context of hiding or attempting to explain away decisions which would appear to clearly contradict DoD's mission -- to safeguard U.S. national security.

During my 22 years in government I have never encountered career civil servants who use such political terminology and methods in their day-to-day activities. I believe that it is precisely this level of politicization of the export control process that encouraged the excesses resulting in today's oversight hearings.

We've Heard This Song Before

While it is impossible to "child-proof" the world, strategic export controls have been, and can continue to be, an effective restraint on a potential adversary's ability to inflict grave military damage on the United States and its allies.

Mr. Chairman, the massive technology decontrols and the sell-off of U.S. defense assets throughout the mid-1990's [particularly to China] and the failure to recognize growing threats to our national security are chillingly reminiscent of the disastrous French armaments policies on the eve of World War Two. According to William Manchester in his excellent biography of Winston Churchill *The Last Lion*, in 1940, the French high command decided to sell its tanks abroad. The R-35 was a better tank than any German model. Of the last 500 produced before May l0, 1940, nearly half — 235 — were sold to Turkey, Yugoslavia, and Rumania, with the result that when the Germans struck only 90 were on the French front. Moreover, while Nazi troops, Stukas, and armored divisions were massing in the Rhineland for their great lunge westward, the generals charged with the defense of French soil auctioned off 500 artillery pieces, complete with ammunition, and 830 antitank guns — at a time when the French army was desperately short of both weapons.

Perhaps even more to the point was the British cabinet decision in 1934 to sell 118 Rolls-Royce Merlin engines to Germany. You may recall that the Merlin engine became the principal powerplant in the Spitfire airplane that literally saved England from Hitler's advances and destroyed his plan to invade England just a few years later.

Manchester also documented how "Chamberlain had insisted upon approval of the sale as a matter of high principle and he stated 'trade, like religion, should recognize no frontiers.' The engines, he insisted, had been designed for civilian use, and he chose to ignore the fact that they could also be used in small fighter planes. When Churchill was informed of this export to Germany, he refused to believe it; until the actual bill of lading arrived in a plain envelope. Immediately he proposed a total ban on aircraft deliveries abroad. The Royal Air Force needed every plane it could get, he said, and none should be sold to any other country—certainly not to Nazi Germany. Chamberlain, speaking for the cabinet, rejected his proposal because the trade policy of His Majesty's government required that 'deficiencies in the Defense Forces should be made up with the least possible interference with the export trade.'"

Chamberlain's obstinate refusal to face up to the reality of growing military threats to national security and the placement of the balance of trade and the short-term profits of private companies ahead of military preparedness is one of the hallmarks of current U.S. policy. The similarity in tone, manner, philosophy, and outcome between the two can be seen most clearly in the U.S. approach to China.

I am afraid that we are witnessing history repeat itself. Chamberlain called Churchill a warmonger for his warnings of the dangers posed by the German monster looming in the East. Chamberlain even came out and said, in 1934, that he could only base his decisions upon his predictions for the next two years. Looking beyond that limited horizon could not be done. Unfortunately, the United States is conducting its foreign and military policies in much the same myopic fashion. Preparing for future threats is given credence and funding only when it does not interfere with moneyed interests or large adversaries.
