# **CRS** Report for Congress

Received through the CRS Web

# The Export Administration Act: Controversy and Prospects

Updated March 11, 2002

Ian F. Fergusson Analyst in International Trade and Finance Foreign Affairs, Defense, and Trade Division

# The Export Administration Act: Controversy and Prospects

#### **Summary**

In the 107<sup>th</sup> Congress, renewed efforts are underway to enact a permanent replacement for the Export Administration Act of 1979 (EAA). The Export Administration Act of 2001 (S. 149) was introduced on January 23, 2001. The Senate passed S. 149 on September 6, 2001 by a vote of 85-14. A companion version in the House, H.R. 2581, was introduced by Rep. Gilman on July 20, 2001. The House International Relations Committee reported the measure with 35 amendments on August 1. The House Armed Services Committee further amended H.R. 2581 and reported out the bill on March 6, 2002. The difficulty in passing a comprehensive rewrite of the EAA has resulted, in part, from the continuing tension between national security and commercial concerns. Industry groups, proponents of heightened export controls, the Administration, and Congress have all participated in the reauthorization debate.

Export control legislation gives rise to difficult questions that are integral to the working and efficacy of the export control system. The first question is the extent to which technology can be controlled. Industry groups contend that global information age high-technology is virtually uncontrollable. For this reason, industry supports mass market and foreign availability criteria in the EAA reauthorization legislation to restrict controls on widely available products. Others contend that these criteria would gut current export control laws. Industry officials also state that exports of high technology enhance national security by providing funds for R&D with military applications. Opponents of this position claim that if additional funds for military R&D are necessary, Congress should appropriate funds.

A second question concerns the target countries on which export controls are imposed. Foreign policy controls impose sanctions on countries for behavior the United States considers unacceptable. Debate over this provision echoes debate on the efficacy of economic sanctions. Discussion of multilateral controls reflects the belief that the current regime (the Wassenaar arrangement) is an ineffective tool to control dual-use exports. Policy differences over multilateral arrangements arise over whether the U.S. should impose unilateral controls as an example for other countries to follow or only impose controls in conjunction with other major exporting countries.

A third question is whether the current bifurcated export control system is the optimal administrative arrangement in the post Cold War world. Critics of the current process contend that national security interests are harmed by the current procedures. Industry spokesmen approve of the Commerce Department's role in dual-use exports, but want to further streamline the process. Other policy prescriptions have been aired such as merging all export control functions into one agency or to de-emphasize the licensing process. Congress has numerous options concerning export control. It can consider the current bills, continue to extend EAA79, legislate piecemeal revisions or policy prescriptions, work to erect stronger multilateral controls, or to engage in a more comprehensive review of export control laws, or some combination of the above.

# **Contents**

ntroduction	1
The Stakeholders	3
Industry	3
Heightened Control Advocates	3
The Administration	
Congress	
Vexing Questions	5
Controllability of Technology	
Computing Power	
Targets of Control	
Foreign Policy Controls	
Multilateralism	
Administrative Reforms	
Options for Congress	15

# The Export Administration Act: Controversy and Prospects

#### Introduction

The export of dual-use commodities, items that have both civilian and military applications, is regulated by the Export Administration Act (EAA) of 1979, most recently expiring on August 20, 2001. The Act authorizes the President to control exports for national security and foreign policy considerations, to negotiate multilateral control arrangements, and to issue regulations to prevent U.S. companies from adhering to foreign boycotts. The Act provides for classification and licensing of dual-use exports by the Commerce Department's Bureau of Export Administration (BXA). The EAA only controls dual-use items; munitions and non dual-use nuclear proliferation articles are controlled by the Department of State and Department of Energy, respectively.

The EAA is the statutory authority for the Export Administration Regulations (EAR). These regulations establish the framework for regulating exports of dual-use, potentially sensitive commodities, software, computers, and technology. Exports are restricted by item, country, and entity. Approximately 2400 items are on the Commerce Control List for which an export license may be required. During periods when EAA has lapsed (1994-2000, and currently), implementation of the EAR and provisions of the Act have been continued by a presidential declaration of a national emergency under the National Emergency Act<sup>3</sup> and by the authority of the International Emergency Economic Powers Act (IEEPA).<sup>4</sup>

The House of Representatives in the 104<sup>th</sup> Congress attempted to reauthorize the EAA. H.R. 361 was passed by the House, and hearings were held by the Senate Banking, Housing and Urban Affairs Committee, but no further action took place. During the 106<sup>th</sup> Congress, S. 1712 was crafted by the Senate Banking Committee. Hearing were held, and the legislation was reported out of the Senate Banking Committee unanimously on September 23, 1999. It was placed on the calendar, yet

<sup>&</sup>lt;sup>1</sup>P.L. 96-72, 93 Stat.503(1979), 50 U.S.C.2401, *et seq.*; Executive Order 13222, August 17, 2001. A measure to temporarily reauthorize and extend the Export Administration Act of 1979, H.R. 3189, passed the House of Representatives under suspension of the rules on November 27, 2001. The Senate did not act on the measure in the 2001 session.

<sup>&</sup>lt;sup>2</sup>The Export Administration Regulations are located in the *Code of Federal Regulations* at 15 *CFR* 730-774; the Commodity Control List is located at 15 *CFR* 774.

<sup>&</sup>lt;sup>3</sup>P.L. 94-412, 90 Stat. 1255(1976), 50 U.S.C.1601, et seq.

<sup>&</sup>lt;sup>4</sup>P.L. 95-223, 91 Stat. 1626 (1977), 50 U.S.C.1701, et seq.

holds were placed on the legislation pending resolution of concerns expressed by four committee chairmen. In the final days of the second session, Congress passed and President Clinton signed into law the Export Administration Modification and Clarification Act of 2000 which reauthorized the lapsed EAA79 until August 20, 2001.

On January 23, 2001, Senator Michael P. Enzi introduced the Export Administration Act of 2001 (S. 149). Hearings were held on this legislation by the Senate Banking Housing and Urban Affairs Committee in February 2001, and the measure was reported favorably for consideration by the Senate by a vote of 19-1 on March 22, 2001. The Senate debated the legislation on September 4-6, 2001 and passed it with three amendments by a vote of 85-14. This bill is similar though not identical to the Export Administration Act of 1999 (S. 1712), introduced by Senator Enzi in the 106<sup>th</sup> Congress. <sup>5</sup> On May 23, June 12, and July 11, the House International Relations Committee held hearings on EAA and export controls. The House version of the Export Administration Act, H.R. 2581, was introduced on July 20, 2001 by Rep. Benjamin Gilman. As introduced, it was identical to S. 149, except for the additions of provisions related to oversight of nuclear transfers to North Korea. At the markup session on August 1, the House International Relation Committee passed the legislation with 35 amendments. The House Armed Services Committee (HASC) and the House Permanent Select Committee on Intelligence(HPSCI) received H.R. 2581 through sequential referral. On March 6, 2002, HASC further amended H.R. 2581 and reported out the legislation by a vote of 44-6. HPSCI held hearings on the legislation but did not alter it.

The difficulty in passing the reauthorization of the EAA has, in part, resulted from the continuing tension between national security and commercial concerns. In addition, the 1979 Act (itself descended from the Export Control Act of 1949) reflects the strategic priorities of the Cold War: the desire to restrict exports of sensitive goods and technology to the Soviet Bloc. The Act is widely perceived to need revision to account for changing economic and international security concerns. The manner in which the Export Administration Act is revised may have far-reaching consequences for America's security. The resulting controls may also affect domestic high-tech and defense industries and employment.

The Administration, non-governmental organizations (NGO) promoting non-proliferation, national security experts and industry lobbyists all look to Congress to adopt an export control strategy through reauthorization of the EAA. This paper is designed to identify the various stakeholders in this debate and to contrast their principal thematic arguments and claims. It also discusses alternatives and options for Congress.

<sup>&</sup>lt;sup>5</sup> For details on this legislative activity and specific provisions of S. 149 and key differences with H.R. 2581, see Ian Fergusson, Craig Elwell, Jeanne Grimmett and Robert Shuey, *Export Administration Act Reauthorization*, CRS Report RL30169.

#### The Stakeholders

There are four principal participants in the export control debate: industries whose products are subject to control, certain national security and non-proliferation experts, various federal agencies assigned an export control function, committees of Congress with jurisdiction over export controls and other committees with oversight of national security agencies. Agricultural and union interests have taken an interest in previous EAA reauthorization attempts. These groups, however, have not been active in the deliberations over the current legislation.

#### **Industry**

EAA reauthorization legislation in the 106<sup>th</sup> Congress was of major interest to six high technology and export-intensive industries most affected by current export controls. The computer, software, telecommunications, satellite, machine tools, and aerospace industries, individually and through such associations as the Computer Coalition for Responsible Exports, the Satellite Industry Association and the Association for Manufacturing Technology, have testified and lobbied Congress on the need for new export control legislation. They claim to represent some of the most dynamic and competitive sectors of American industry, and they petition Congress for more venues to compete with what they consider cutting-edge products.

The value of license applications filed with BXA in 2001 to controlled destinations totaled approximately \$2.2 billion (1677 application). In 2001, 990 applications were filed with the Department of Commerce for licenses to export controlled dual-use items to China. These applications represented potential sales of \$226.7 million.<sup>6</sup> While the overall value of U.S. exports to controlled countries remains low, these exports may become increasingly important to certain economic sectors. Capital goods, including machinery and transportation equipment, represented over 50% of the value of licenses approved.<sup>7</sup> Industries such as computers and aerospace report that they export large percentages of their production, but their exposure to controlled markets remains unclear.

### **Heightened Control Advocates**

This group is primarily comprised of certain national security experts who advocate strict controls on technologies and dual-use items that can aid potential adversaries to construct nuclear, biological or chemical weapons and missiles. They also advocate the restriction of exports to countries that support international terrorists. They would like these materials kept away from the 'countries of concern': Cuba, Iran, Iraq, Libya, North Korea and Sudan. They are especially concerned with the potential uses of this technology in China, as well as for the possibility of diversion from China to other nations. These advocates range from those who the view the restraint of trade as a means to voice dissatisfaction with another country's

<sup>&</sup>lt;sup>6</sup>BXA Annual Report-2001, Appendix C.

<sup>&</sup>lt;sup>7</sup>BXA Annual Report-2001, p. D2.

policies to those who could support export control legislation with added consultation or safeguards.

#### The Administration

The Department of Commerce (DOC) is responsible for regulating dual-use exports under provisions of EAA79. DOC consults with other members of the national security community on license applications and commodity classifications. The Defense Threat Reduction Agency in the Department of Defense conducts national security reviews for license applications referred from Commerce and State. The Department of Energy also reviews dual-use license applications referred by Commerce for nuclear uses and nuclear end-users, and it and the Nuclear Regulatory Commission license exportation of nuclear materials. In addition, the Office of Defense Trade Controls at the State Department administers the International Traffic in Arms Regulations. Through the Munitions List, this agency regulates the traffic in weapons.

The Bureau of Export Administration (BXA) is charged with administering the export control regulations within the Department of Commerce. In FY2001, 10,884 license applications were submitted to BXA. BXA acted on 10,771 applications in FY00; approved 8,806 (82%), denied 225 (2%), and returned 1,740 (16%) licenses. The average processing time for license applications that are referred was 44 days, a length of time that has gradually increased since FY1996 when the average duration was 26 days.<sup>8</sup>

The Bush administration suggested several changes to S. 149, and it indicated that with such changes it would support the legislation. These changes were incorporated in a manager's amendment approved during the Committee's markup session on March 22, 2001. After the mark-up of H.R. 2581 on August 1, 2001, the administration reaffirmed its support of S. 149. The administration subsequently has indicated that it strongly opposes both the International Relations and Armed Services Committee amendments to H.R. 2581.

### Congress

Under the Senate Rules, the Banking, Housing and Urban Affairs Committee has jurisdiction over export control. <sup>10</sup> In the House of Representatives, the International Relations Committee has jurisdiction over export controls, but the committee did not consider legislation in the 106<sup>th</sup> Congress. <sup>11</sup> Several other Senate committees have also expressed an interest in export controls. The Armed Services, Commerce, Foreign Relations, Governmental Affairs and Intelligence Committees have all held

<sup>&</sup>lt;sup>8</sup>BXA Annual Report - 2001, pp. vi-vii., Applications are often returned without action if no license is required.

<sup>&</sup>lt;sup>9</sup> "Administration, Business Blast House Bill to Strengthen DOD Hand on Export Controls," *Daily Report for Executives*, March 8, 2002.

<sup>&</sup>lt;sup>10</sup>Standing Rules of the Senate, 25.1d(6).

<sup>&</sup>lt;sup>11</sup>Rules of the House of Representatives, Rule X, clause (1)(j)(4).

hearings, or conducted oversight over executive departments that are considered stakeholders in the legislation. During the 106<sup>th</sup> Congress, the Chairmen of the Armed Services, Foreign Relations, Governmental Affairs and Intelligence Committees placed holds on S. 1712, preventing its consideration on the Senate floor.<sup>12</sup>

## **Vexing Questions**

The debate over the reauthorization of EAA has raised difficult questions that underlie important aspects of export control policy. Some questions that merit consideration in context of the debate include whether technology can be meaningfully controlled, to which nations should controls apply, and whether the current diffuse export control licensing system is optimal for the 21<sup>st</sup> century.

## **Controllability of Technology**

Underlying the debate concerning the reauthorization of the EAA concerns the controllability of technology. Both EAA79 and current legislation attempt to qualify the circumstances in which items can be controlled for national security purposes. Items controlled for national security purposes are placed on the Commodity Control List (CCL) [the National Security Control List (NSCL) in S. 149/H.R. 2581]. The Foreign Availability provision in both EAA and S. 149/H.R. 2581 and the Mass Market provision in current legislation attempt to balance the sensitivity of an item to U.S. national security interests with the ability to obtain these items from other sources.

The EAA defines an item as having foreign availability if that item or a substantially identical article can be purchased outside the United States by a controlled country in sufficient quantity or quality such that it would render controls on the item ineffective. The current bills incorporates those criteria and adds price competitiveness as an additional standard to determine foreign availability.<sup>13</sup> Determinations of foreign availability are made by Technical Advisory Committees consisting of officials from the Commerce, Defense and State Departments as well as industry representatives. S. 149/H.R. 2581 establishes an Office of Technology Evaluation to make foreign availability and mass market determinations.<sup>14</sup>

In addition to foreign availability, S. 149/H.R.2581 provides that items may be decontrolled for mass market characteristics. It defines an item as having mass market characteristics if the good is sold in extensive volume to multiple buyers, if it has a wide distribution network, if it can be shipped by normal means, or if it can be utilized for its intended purpose with little alteration. Articles that are found to have mass market characteristics would not be placed on the NSCL.

<sup>&</sup>lt;sup>12</sup>"Export Controls: Sen. Enzi Says Fellow Republicans Seeking To Shut Down High-Tech Exports," 17 *International Trade Reporter* 663, April 27, 2000.

<sup>&</sup>lt;sup>13</sup>P.L. 96-72, 93 *Stat.*503, 509; S. 149, Sec. 211 (d)(1)(A)-(C).

<sup>&</sup>lt;sup>14</sup>P.L. 96-72, 93 Stat.503, 510, S. 149, Sec. 214.

<sup>&</sup>lt;sup>15</sup>S. 149, Sec. 211 (d)(2)(A)- (D).

Industry groups that have taken an active position on legislation to replace EAA79 consider the adoption of these provisions as the key benefit of S. 149. The mass market and foreign availability concepts are integral to their contention that the flow of technology cannot be effectively controlled, and that our dominance of cutting-edge technology can no longer be assumed. According to their arguments, unilateral controls will not stop other countries from obtaining advanced technology. Advocates of this viewpoint claim that "countries of concern" will simply obtain this technology from other nations. Adherents to this view regard current multilateral controls on dual-use articles (the Wassenaar Arrangement)<sup>16</sup> as ineffectual. From this perspective, only American business suffers from the unilateral nature of U.S. export controls. In the process, foreign business wins new markets or gains an incentive to enter new markets.<sup>17</sup>

According to the industry position, unilateral export controls are also becoming increasingly unworkable as the economy undergoes globalization. The current export control system is predicated on goods being manufactured or assembled in one country. In many industries, however, component parts are manufactured worldwide and are considered commodities. If these parts are not available from one source on a timely basis, they can be obtained elsewhere.<sup>18</sup> Purchasing managers at Daimler Chrysler Aerospace, for example, reportedly have been instructed to reduce dependence on American components for defense and space technology products because of delays associated with American licensing procedures.<sup>19</sup>

Other participants in the export control debate are concerned about the mass market and foreign availability arguments advanced by industry proponents. Critics charge that the mass market standard would effectively nullify the whole U.S. control regime by decontrolling any item that met the criteria under the law. They assert that virtually any product, including dual-use items used for proliferation purposes, would qualify for mass market status. Similarly, as one non-proliferation advocate testified regarding S. 1712, the foreign availability criterion would allow the sale of "anything a controlled country can purchase from a rogue buyer." Proponents of current legislation point to the ability of the President to set-aside foreign availability or mass

<sup>&</sup>lt;sup>16</sup> For more on multilateral dual-use controls, see Grimmett, Richard F., *Military Technology and Conventional Weapons Export Controls: The Wassenaar Arrangement*, CRS Report RS20517, March 27, 2000.

<sup>&</sup>lt;sup>17</sup>For examples of this argument see, Prepared Statement of Dan Hoydosh, co-chairman of Computer Coalition for Responsible Exports, in Senate Banking Committee, *Reauthorization of the Export Administration Act*, S.Hrg. 106-461, March 16, 1999(*Reauthorization*); and Hans Luemers, Sun Microsystems, "Position Papers: Export Controls."

<sup>&</sup>lt;sup>18</sup> Hamre, John, Testimony before the Armed Services Committee, February 28, 2000, transcript, p. 31-33.

<sup>&</sup>lt;sup>19</sup>Douglass, John W., prepared testimony before the Armed Services Committee, February 28, 2000, p.3.

<sup>&</sup>lt;sup>20</sup>Milhollin, Gary, prepared testimony before the Senate Governmental Affairs Committee, May 26, 2000, p. 6.

market determinations to control any item through enhanced controls for national security purposes.<sup>21</sup>

The mass market provisions proved to be one of the most intractable obstacles in negotiations to bring S. 1712 to the Senate floor in the 106<sup>th</sup> Congress. One method floated to resolve this issue was a "carve-out," an exemption to the mass market and foreign availability criteria for certain articles. Assistant Secretary of Defense, John Hamre, "insisted" on the inclusion of such a carve-out provision before the Senate Armed Services Committee during hearings in 2000.<sup>22</sup> Senator Warner reportedly sought carve-outs for jet engine hot section technology, encryption, and future technologies.<sup>23</sup> Proponents of S. 149 point to the 'enhanced control,' and foreign availability and mass market set-aside provisions as methods to control such sensitive items.

A related argument made by industry associated with mass market and foreign availability criteria is that national security is enhanced by robust export industries. This argument is predicated on the changing nature of defense procurement, research and development. During the Cold War, the formative period of the current export control regime, the military drove much technical research and provided funds for research and development. Now that situation is largely reversed. Shrinking defense budgets have reduced funds available for R&D. The military now purchases many items 'off-the-shelf' and relies to a greater extent on commercial applications. Industry argues that it is in the national security to sell current technology to generate funds to develop future technology. If American firms are competitively hindered because of export controls, the argument goes, foreign firms will gain market share, increase profits, invest more in R&D, shrink and possibly surpass our technological lead. Thus, industry argues it needs a streamlined export process, one that will not needlessly impede exports.

Critics of industry's national security position reject this argument. They maintain that the United States does not promote its national security by selling advanced technology to potentially hostile states. This technology, if sold to a regime of dubious stability, could be used against the United States or allies in the future. Proponents of this argument point to the case of Iraq, which received U.S. weaponry in the 1980's when Saddam Hussein was considered a useful counterweight to Iran. Subsequently, this technology was used against Kuwait and allied forces in the Persian Gulf War. Reliance on the civilian sector for R&D, they claim, is a policy decision brought about by declining defense budgets. Some further argue that R&D that advances defense capabilities should be funded within the Defense Department if it is necessary to control technology to certain nations.

<sup>&</sup>lt;sup>21</sup>S. 149, Sec. 201(d), Sec.212, 213.

<sup>&</sup>lt;sup>22</sup> Hamre, transcript, p.37.

<sup>&</sup>lt;sup>23</sup> 17 International Trade Reporter 340, March 2, 2000.

**Computing Power.**<sup>24</sup> Industry uses the rapid rise in computing power as an illustration both of the uncontrollable nature of technology and the inability of the export control law to account for such innovation. Due to rapid technological innovation, the level of computing power (measured in millions of technical operations per second or MTOPS) that requires licensing under the commodity control list (CCL) repeatedly has been increased by Presidential determination. Computers with microprocessors such as the Apple G4 or the Intel Pentium III, widely available for home-use today, brushed against these limits before MTOPS thresholds were increased in 1999.

The regulatory framework of using MTOPS limits to determine computer power is a related concern of the high-tech industry because it fears such limits will impede the ability of the industry to export commodity level computers. The computer industry has supported the elimination of the MTOPS standard.<sup>25</sup> Both S. 149 and H.R. 2581, contain provisions to repeal sections of the 1998 National Defense Authorization Act (NDAA98) that established notification and post-shipment verification requirements using MTOPS performance levels.<sup>26</sup> Under NDAA98, the President, in consultation with these agencies, can raise theoretical performance levels to account for advances in technology, but only 180 days after he has submitted a report to Congress justifying the new levels.<sup>27</sup> In 2000, the review period for MTOPS adjustment was reduced from 6 months to 60 days.<sup>28</sup> The extent to which MTOPS thresholds were recently raised, and the national security criteria used in determining threshold increases during the Clinton administration were recently questioned by GAO officials in recent Congressional testimony.<sup>29</sup>

Some observers outside industry have also concluded that technology, especially computer technology, has become largely uncontrollable. One national security analyst, Richard Perle, former Assistant Secretary of Defense for Security Policy in the Reagan Administration, states that attempting to control computing power is not

<sup>&</sup>lt;sup>24</sup>See also, CRS Report RL31175, *High Performance Computers and Export Control Policy: Issues for Congress*, by Glenn J. McLoughlin and Ian F. Fergusson.

<sup>&</sup>lt;sup>25</sup>See testimony of Dan Hoydysh, Hearing on Establishing an Effective Modern Framework for Export Controls, Senate Banking Committee, February 7, 2001. (http://www.senate.gov/~banking/]

<sup>&</sup>lt;sup>26</sup>The Act mandated license thresholds for MTOPS (millions of technical operations per second) levels above 2,000 for military and 7,000 for civilian use. President Clinton's last determination raised the MTOPS level threshold to 85,000 for tier III countries.

<sup>&</sup>lt;sup>27</sup>50 U.S.C. app. 2404 note. The EAR divide countries into tiers for the purpose of assessing the risk of computer exports. Countries affected by this Act are called Tier III countries. They include states that are former or potential adversaries, or are located in world troublespots: Russia, China, Israel, India, Pakistan, South Korea, etc.

<sup>&</sup>lt;sup>28</sup> 1999 National Defense Authorization Act, H.Rep 106-945, Sec.1234, October 6, 2000.

<sup>&</sup>lt;sup>29</sup>See Statement of Susan S. Westin, General Accounting Office, in Hearings on High Performance Computer Exports, Senate Governmental Affairs Committee, March 15, 2001, (http://www.senate.gov/~gov\_affairs/031501\_witness.htm).

"feasible or effective." He maintains that the restraint of computer trade is self-defeating because it cedes markets and profits that could be used for R&D.<sup>30</sup>

Increasing computing speeds combined with networking advances have blurred the distinction between super-computers and commodity computers. Microprocessors that individually comply with export regulations can be linked together to create servers with MTOPS capabilities that breach export thresholds. If enough processors are linked together, they can create a parallel processing system with capabilities that approach those of a super-computer. The Defense Science Board notes in its final report on Globalization and Security that the ability to cluster commodity computers in order to multiply computing power erodes the ability to restrict access to high-performance computing, even if high-performance stand-alone machines can be controlled.<sup>31</sup> In addition, recent studies conducted by the the General Accounting Office, and the Center for Strategic and International Studies have concluded that the MTOPS standard is ineffective, but these studies came to no consensus on a control metric to replace it.<sup>32</sup>

There is other evidence that loosely coupled, parallel processing systems can be easily and cheaply constructed from parts available world-wide. These systems excel in research applications that rely on computation rather than input/output (the ability to support many users simultaneously) functions. Reportedly, the computers that are most adept at such militarily significant applications as cryptography and simulation, prime targets of current export controls, could be the easiest to obtain.<sup>33</sup>

Other observers believe the United States can restrict access to the highest computer technology by limiting exports. They maintain that American-made computers are perceived as superior, and thus carry greater cachet than products from other nations. They note that the purchase of an American-made computer product also buys superior networking and service, often at a better price. Control advocates maintain that these distinctions are significant, that qualitative differences are important.<sup>34</sup>

In addition, networking a parallel processing system, as those without access to advanced computing technology must do to increase computing capability, presents

<sup>&</sup>lt;sup>30</sup>Richard Perle, speaking at the Forum for Technology and Innovation, March 23, 1999, [http://www.tech-forum.org/upcoming/transcripts/CompExportsTrans.htm]

<sup>&</sup>lt;sup>31</sup>Defense Science Board, *Final Report of Task Force on Globalization and Security*, Washington: Office of the Under Secretary of Defense for Acquisition and Technology, December 1999, p. 27.

<sup>&</sup>lt;sup>32</sup>See General Accounting Office, *Export Controls: System for Controlling Exports of High-Performance Computers is Ineffective*, GAO-01-10, (Washington D.C., GAO, 2001); and Center for Strategic and International Studies, *Computer Exports and National Security in a Global Era*, Washington: CSIS, 2001).

<sup>&</sup>lt;sup>33</sup>Gartner Group, *High Performance Computer Systems Summary*, February 5, 1999, p. 17-18.

<sup>&</sup>lt;sup>34</sup>Milhollin, Gary, prepared testimony before the Senate Governmental Affairs Committee, May 26, 2000, p. 6.

additional challenges distinct from those faced by engineers of commodity computers. Andrew Grove, CEO of Intel, related how configuring together 9,000 microprocessors into a large scale parallel processing system "took a large group of people and two and one-half years to build." He concluded, "the physical technology, the hardware technology implicit in building these large parallel machines is not the same as the physical technology used in building commodity machines." This account seems to lend credence to the belief that higher power computing is controllable to some degree.

#### **Targets of Control**

Another overarching policy question bears on which countries should be subject to export controls. This question encompasses both the use of export controls as a means of sanction as well as the multilateral aspects of export controls. Two parts of the EAA concern specific countries.

Foreign Policy Controls. Unlike national security controls, foreign policy controls are targeted against nations based on their behavior. The EAA directs the President to impose unilateral export controls to punish conduct seen as promoting terrorism or violating human rights and sets criteria for the imposition of controls. The EAA requires that the President consult with foreign allies, Congress and industry before imposing a sanction. S. 149 adds a public notice and comment period that can be waived in an emergency. S. 149 increases the time limitation on foreign policy controls to two years from one year under EAA. S. 149 also changes the current authority to impose export controls on items related to the proliferation of weapons of mass destruction, chemical and biological weapons, and their delivery mechanisms. These items would be regulated under national security controls, and would be subject to the foreign availability and mass market conditions explained above. Critics of this provision assert that the criteria for imposing these sanctions are thereby tightened, and they claim that it will make it harder for the President to impose unilateral controls.

Proponents of heightened controls have made the argument that trade is a privilege based on certain minimal levels of conduct: non-proliferation, respect for human rights, and cooperation in efforts against terrorism, to name a few. Trading with countries that violate these minimum standards of international behavior weakens the moral authority of the U.S. and sends the signal that there is no penalty for such activity. This position was articulated by Senator Kyl during the floor debate on S. 149. "Nations which threaten our security interests should not be armed by the United States. The fight against proliferation and rogue regimes must include some degree of self-discipline." 36

Industry officials who have favored tightening the restrictions placed on unilateral controls by S. 149 cite the seeming inability of unilateral economic sanctions

<sup>&</sup>lt;sup>35</sup>Andrew Grove, speaking at the Forum for Technology and Innovation, March 23, 1999, [http://www.tech-forum.org/upcoming/transcripts/CompExportsTrans.htm]

<sup>&</sup>lt;sup>36</sup>Remarks of Senator Jon Kyl, *Congressional Record*, S9098, September 4, 2001.

to achieve results. Some industry representatives argue that economic sanctions only should be applied for true national emergencies, and then only for a limited period of time. If controls are imposed, these advocates contend, they should be imposed multilaterally and with specific time-limits.<sup>37</sup> Both the Act and the bill call for international consultation subsequent to the imposition of unilateral controls with the hope of extending their scope.

**Multilateralism.** The multilateral determination of export control policy by countries sharing U.S. values is seen as a preferable solution by both industry spokesmen and proponents of heightened export restrictions. Many observers contend that the current multilateral system of control of dual-use articles, the Wassenaar Arrangement, is ineffective because it relies on consensus of member states which allows for only the level of control acceptable to all. Its minimal reporting requirements mandate notification only that an item has been sold, thus preventing effective pre-export consultation among member states.

Industry stresses the necessity of effective multilateral controls. They argue that export controls are effective only if they are adhered to by all states capable of exporting a given technology. The machine tool industry has been at the forefront in criticizing the unilateral nature of our export policies, especially concerning exports to China. It notes that there is no consensus among Wassenaar Arrangement countries on the proper limits of technology transfer to China. (Indeed, no country is explicitly targeted by Wassenaar.) Stringent domestic controls combined with minimal multilateral constraints only damage American companies, according to industry spokesmen. They fault the U.S. for having an overly rigorous licensing policy towards China, without noticeably pursuing a strategy to convince our allies to follow our lead.<sup>38</sup>

Proponents of tighter export restrictions note that America traditionally has taken the lead in export controls and non-proliferation efforts. These efforts included the original EAA, adopted in 1949, and the establishment of CoCom, the multilateral Coordinating Committee of western powers that restricted technology exports to the Soviet bloc during the Cold War. They argue that efforts to strengthen CoCom's successor regime, the Wassenaar arrangement, cannot succeed if Washington itself is loosening export restrictions. Thus, the United States must take the lead in order to convince other nations to follow the U.S. example. Adherents of this viewpoint argue that the successful negotiating strategy in these multilateral fora is to adopt controls first and then persuade other countries to follow suit. Hence in their view, an export control strategy pegged solely on the policies of other nations, negotiated by consensus, is ineffectual and harmful to national security.<sup>39</sup>

<sup>&</sup>lt;sup>37</sup>For example, see Douglass, John W., Prepared Statement, Aerospace Industry Association, *Reauthorization*, p.113, 115.

<sup>&</sup>lt;sup>38</sup>See Freedenberg, Paul Testimony before the Senate Banking Committee, February 7, 2001, [http://www.senate.gov/~banking/].

<sup>&</sup>lt;sup>39</sup>Milhollin, prepared, p. 7.

Proponents of stricter technology transfer policies claim that multilateral control efforts are beginning to show results. They cite a 1999 CIA Report which noted that "increasingly rigorous and effective export controls and cooperation among supplier countries have led foreign weapons of mass destruction (WMD) programs to look elsewhere for many controlled dual-use goods." Meanwhile, according to some experts, the U.S. has lost credibility with other nations regarding the American commitment to export control. A senior staffer on the Senate Foreign Relations Committee reportedly opined, "We've applied stringent [export controls] while exhorting other nations to do likewise, and when these countries are finally committed to follow suit, some within the Department of Defense [and the Commerce Department] want to reverse [that position] by pursuing massive liberalization. It makes no sense."

Both industry spokesmen and advocates of heightened export controls agree that the multilateral controls need to be strengthened. Yet, to do this requires consensus on which goods and which countries represent a threat. There does seem to be agreement among western nations to restrict dual-use items to a limited number of 'countries of concern,' yet consensus breaks down with regard to other states, notably China. The export control dilemma in this context becomes clear. Without consensus on a particular target country, the question becomes whether the United States should impose controls unilaterally. One then needs to determine either: which non-proliferation or other foreign policy goals are sufficiently important to offset possibly damaging American business, and possibly costing American jobs; or how large an economic benefit would justify risking important national security goals.

#### **Administrative Reforms**

The optimal export control system is another key issue for consideration. Under the current system, the Department of Commerce receives applications for licenses of dual-use goods. The Department then refers license applications to other agencies, as it considers appropriate, for review within a specified time period, but these agencies cannot veto a license application. A disputed application is referred to an interagency committee (the operating committee), the chair of which is selected by the Secretary of Commerce. A dissenting member may seek to appeal a decision through a policy official of his or her own department.<sup>44</sup> This procedure has been adopted in

<sup>&</sup>lt;sup>40</sup>Director of Central Intelligence, "Unclassified Report to Congress on the Acquisition of Technology Relating Weapons of Mass Destruction and Advanced Conventional Munitions, 1 January through 30 June 1999," p. 10.

<sup>&</sup>lt;sup>41</sup> Marshall Billingslea, quoted in Gary G. Yerkley, "Republican Efforts to Work Out Deal on Senate EAA Bill Appear to have Failed," 17 *International Trade Reporter* 698, May 4, 2000.

<sup>&</sup>lt;sup>42</sup>Cuba, Iran, Iraq, Libya, North Korea, and Sudan.

<sup>&</sup>lt;sup>43</sup>Grimmett, p. 4-6.

<sup>&</sup>lt;sup>44</sup>Executive Order, 12981, "Administration of Export Controls," December 6, 1995.

S. 149. 45 However, H.R. 2581, as amended by the House Armed Services Committee, provides for an agency veto by requiring unanimity in licensing decisions.

Industry testimony emphasizes the delays and inefficiency associated with this application and review process and the competitive pressure it places on them. The satellite industry has complained that delays in the licensing procedures at the Department of State not only may have lost the satellite industry nearly half its business, 46 but imperils national security by threatening the ability to provide future service to the U.S. military. 47 Joe Tasker, government affairs vice-president of Compaq Computer, spoke about delays in licensing computer equipment: "It slows us down. It's a time-to-market issue. Days matter in this business." 48 Resistance to licensing five axis lathes by the Commerce Department, according to the machine tool industry, has ceded this market to the Europeans and Japanese. 49 These anecdotes are used by industry representatives to bolster their demands for streamlined procedures and faster licensing decisions.

Other critics of the current system contend that the interagency dispute procedures regarding commodity classification and license applications do not adequately address national security concerns. They have argued that if the license review process is done for national security purposes, then the national security agencies should command greater respect in those deliberations. Senator Thompson has described the review process as one "designed basically for Commerce to get its way and ... a process designed basically to discourage appeal." Some proponents of tighter export controls claim that the process continues to be slanted towards Commerce because its representatives chair the operating committees, and because the Department, in their view, has shown an institutional bias in promoting exports over national security considerations.

The placement of items on the Commerce Control List has also proved controversial. Under the current system, classification decisions are referred by Commerce to the DOD and other relevant agencies if questions arise about an item's

<sup>&</sup>lt;sup>45</sup>See S. 149, Sec. 402 (b).

<sup>&</sup>lt;sup>46</sup>Aerospace Industries Association, Press Release, July 5, 2000. In response to revelations of improper transfer of space and satellite technology to the Chinese, Congress moved the authority to issue licenses for satellite exports from the Department of Commerce back to the State Department, 1999 National Defense Authorization Act, P.L. 105-261, 22 U.S.C. 2778, note.

<sup>&</sup>lt;sup>47</sup>"Supporters Cite National Security in Export Legislation," by Jeremy Singer, *Defense News*, May 29, 2000.

<sup>&</sup>lt;sup>48</sup>Quoted in Hachman, Mark, "EIA backs export-controls overhaul," *Electronic Buyer's News*, April 16, 1999, [http://www.ebnews.com/story/OEG19990416S0027].

<sup>&</sup>lt;sup>49</sup>Freedenberg, op cit.

<sup>&</sup>lt;sup>50</sup>Milhollin, p. 8.

<sup>&</sup>lt;sup>51</sup>Opening Statement, "The Inspector General's Report on Export Control Processes for Dual-Use and Munitions List Items," Senate Governmental Affairs Committee, June 23, 1999, p. 3.

use. The Secretary of Defense does not have the ability to place items on this list, nor to block items from removal by the Secretary of Commerce.

Critics of the classification procedures claim that under the current system the Defense Department has not been adequately consulted. They point to a Defense Inspector General's report which found that in a three-year period only 12 cases had been referred to DOD for input out of thousands processed. The Acting Inspector General testified, "Commerce referred far too few commodity classification reports to the Department of Defense and has made decisions...without having any review discussion with the department." Defense has expressed the concern that if Commerce assesses an item not to be subject to classification, the Defense Department will never know of its consideration. 53

Some national security experts consider it essential that DOD be consulted on the licensing and classification of items as a way to keep informed about potential threats of technology transfer. The export control process takes on a greater significance in providing this information as the military originates less technological innovation. Without this window on the destination and types of exports, these experts contend, it becomes increasingly difficult to conduct accurate threat assessments.<sup>54</sup> In this context, the creation of a database to monitor trends and destinations of dual-use materials has been suggested as a tool to aid in the detection of troublesome proliferation activity.

S. 149, with some exceptions, substantially adopt the current export control framework. It does not disturb the parallel classification system that places munitions and military equipment under the separate control of the State Department. As noted above, many observers have questioned the central role played by the Commerce Department in reviewing the national security implications of exports. However, the division between commercial and military competencies is defended as "appropriate" by industry spokespersons<sup>55</sup> who fear a repeat of the bottlenecks and delays associated with the transfer of satellites licensing from Commerce to State. Commerce officials in the Clinton administration opposed any further transfer of sensitive dual-use items (such as carve-out items) to the State Department's Munitions List. "It is not practicable or desirable to treat commercial export sales as munitions transfers... You

<sup>&</sup>lt;sup>52</sup>Mancuso, Donald, Acting Inspector General, DOD, testimony before the Senate Armed Services Committee, March 23, 2000, transcript p. 32.

<sup>&</sup>lt;sup>53</sup> Bodner, James, Deputy Undersecretary of Defense for Policy, testimony before the Senate Armed Services Committee, February 28, 2000, transcript p. 46.

<sup>&</sup>lt;sup>54</sup>Conversation with Bill Greenwalt, August 17, 2000; See also Marshall Billingslea, quoted in Kutner, Joshua, "State Department Defends Stance on Export Policy," *National Defense*, June 2000.

<sup>&</sup>lt;sup>55</sup>For example, see McCurdy, Dave, Prepared Testimony in *Hearings on a New Act for a New World Order: Reassessing the Export Administration Act*, House International Relations Committee, Subcommittee on International Trade and Finance, March 3, 1999, p. 85.

cannot successfully 'tweak' a system that was designed for a fundamentally different purpose."<sup>56</sup>

Some observers advocate the consolidation of dual-use and weapons export control functions into a single existing agency or in a newly established agency; this view is prevalent among industry officials concerned with the expeditious review of licenses<sup>57</sup> or those suspicious of Commerce's commitment to national security review. The placement of the export control portfolio in any of the existing agencies likely would prompt fierce opposition from rival agencies, as well as from stakeholders who perceive a loss of influence from the change.

The creation of a new agency devoted to export control and non-proliferation might avoid some of the rivalries associated with the current situation. Supporters of this idea claim that it would allow for greater integration of export control policies with other foreign policy objectives. A single agency could remove the perception that different agencies have different export control 'agendas'. Yet, such single mindedness would likely be seen as a drawback for adherents to whichever policy 'agenda' is not followed. Diffuse competencies provide venues to air different perspectives. An issue neglected or ignored under a unitary framework may find a champion under the current system.<sup>58</sup>

Another administrative reform proposal is to replace the current emphasis on licensing with intelligence and interdiction efforts. Former Assistant Secretary of Defense John Hamre has stated that if 99.8% of licenses are approved, then there are too many items of a non-critical nature requiring licenses.<sup>59</sup> Richard Perle has suggested diverting resources from what he considers an ineffective licensing scheme to spending those funds on intelligence and interdiction efforts to prevent proliferating states from obtaining sensitive technology.<sup>60</sup> Yet, to the Defense Department, licensing serves an important monitoring function, and for that reason, it is seeking guarantees of consultation in the present debate.

#### **Options for Congress**

Congress can address the issue of export controls in several ways. They range from modifying the current structure to a wholesale rewrite of our export control laws. These options are not mutually exclusive.

<sup>&</sup>lt;sup>56</sup>William Reinsch, former Assistant Secretary for Export Administration, quoted in "Commerce Department's Reinsch on Export-Control Issues Ahead," *USIS Washington File*, July 10, 2000, [http://www.usinfo.state.gov/].

<sup>&</sup>lt;sup>57</sup> Douglass, prepared, p. 6-7.

<sup>&</sup>lt;sup>58</sup>See Theodore Galdi, *Proliferation Export Control Regimes: Options for Coordination or Consolidation*, CRS Report 93-429, April 20, 1993, p. 5.

<sup>&</sup>lt;sup>59</sup>Kutner, *op cit*. This figure refers to the percentage of applications approved with conditions out of the 75% of applications approved in 1998.

<sup>&</sup>lt;sup>60</sup> Forum on Technology and Innovation, op cit.

Retain the Status Quo. Congress can maintain EAA79 through continual temporary extensions. This solution addresses the problems associated with enforcing export controls through IEEPA, but it continues a system designed for different strategic circumstances than those faced today. The expiration of EAA79 on August 20, 2001 presents another option: a return to the process evolved during the last expiration period of EAA (1994-2000). The President can declare an economic emergency under IEEPA every six months, and the EAR can continue. Under this option, the Administration retains greater latitude in the implementation and enforcement of export controls. Yet, IEEPA's relatively weaker penalties and enforcement provisions would return in force. A recent court's declaration that DOC cannot enforce the confidentiality provision of the expired EAA may prove a harbinger of future difficulties in continuing to apply the act in this manner.

**Rewrite and Modernize EAA79.** Congress can consider legislation such as S. 149 or H.R. 2581 whose aim is to modernize the current export control framework to reflect the end of the Cold War and the changed dynamics of technology. Congress may also embark on a more sweeping revision of export controls that may lead to a different organizational structure, to different approaches regarding control or to a new consensus on the role of technology in national security policy.

The Minimalist Approach. Congress can pass legislation to delegate export control authority with certain policy guidelines. The President would create the bureaucratic and enforcement mechanisms deemed necessary. Congress could conduct rigorous oversight to assure compliance with the policies contained in the law.

**Piecemeal Revision.** Congress can address specific shortcomings of the current framework by amending IEEPA language to increase penalties or to provide greater enforcement powers in the event that EAA79 is not reauthorized. Congress can also legislate export control policy to certain destinations or on certain commodities. It can restrict items of concern, such as the carve-out items, to countries of concern, such as China or the 'rogue' states. This approach, however, would not provide a broad-based or predictable export control structure.

**Stronger Multilateral Controls.** All stakeholders agree on the need for tougher international arrangements. They believe Wassenaar needs to be strengthened into a consultative body, rather than what many participants now consider simply a notification arrangement. It has been claimed that the western allies have tightened restrictions in recent years to the 'countries of concern.' However, there is no consensus on tightening exports to China. A stronger multilateral regime internationally could be consistent with other export legislation Congress may consider.