
Patrick J. Monahan

I. INTRODUCTION

Concern in government circles over U.S. controls on technology exports is mounting. The Reagan Administration is particularly concerned about the increasing loss of technology to the Soviet Union and other unfriendly countries through legal and illegal channels. Deficiencies in current export regulation are partly responsible for a growing national problem — the increasing occurrence of the illegal sale of skills and secrets to foreign nations by former military and intelligence officials for their personal benefit. The Reagan Administration asserts that technology leaks, by whatever means, have contributed significantly to the strategic needs of unfriendly nations. These events have prompted the


2. In response to criticisms of current U.S. policy from American industry, Assistant Commerce Secretary Lawrence Brady said, "the control system is plagued by ad hocism and is neither clear nor predictable. . . . Export controls will be used for contingencies as a foreign policy tool but not to the disadvantage of U.S. industry." U.S. Export Weekly (BNA), No. 359, C-2 (May 26, 1981).

In the same month, Government Accounting Office (GAO) International Division Director, Frank C. Conahan told a Senate Subcommittee that the government's criteria for including technology under controls are "too broad — far fewer items are actually being controlled; much of the system is simply a paper process which overly burdens U.S. exporters and reduces the time available to review important applications." Conahan also reported that review of critical cases needs to be improved, and that "serious constraints exist to deterring unauthorized exports." U.S. Export Weekly (BNA), No. 356, A-3 (May 5, 1981).

2. See Washington Post, Jan. 9, 1982, at A5, col. 1. See also N.Y. Times, Jan. 20, 1982, at A8, col. 1. See generally, Keeping High-Tech Secrets, Newsweek, Jan. 25, 1982, at 34. Some valuable American technology is lost to the Soviets due to illegal activities such as theft and espionage. See Washington Post, Jan. 9, 1982, at A5, col. 1. However, much of the loss of American technology to the Soviets occurs through legal channels such as legitimate academic exchanges. See id.; see also Keeping High-Tech Secrets, Newsweek, Jan. 25, 1982, at 34.


4. For example, during the summer of 1981, a fisherman off the coast of North Carolina came across a Soviet Sonar buoy. Upon examination by Pentagon officials, the buoy was found to contain a sophisticated electronic package that could transmit information on water temperature, current speed and salinity — such information being of great value to Soviet submarines at sea. Most disturbing to
Administration to attempt to restrict the flow of valuable technology from the United States to unfriendly countries. In light of the recent discoveries of illegal technological exports and the Reagan Administration's efforts to crack down on the flow of technology out of the United States, an examination of U.S. controls on technology transfers is particularly timely.

This Comment examines U.S. unilateral technological export controls. Specifically, this Comment focuses on the Arms Export Control Act of 1976 (AECA), and the Export Administration Act of 1979 (EAA), the two most important pieces of U.S. legislation affecting technological exports. The Comment dis-

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5. Boston Globe, Feb. 24, 1982, at 4, col. 1. Among the methods sought to be advanced by the Reagan Administration are: (1) a tightening-up on existing legislation which restricts the flow of American technology, see N.Y. Times, Jan. 20, 1982, at A8, col. 1; (2) voluntary censorship by American scientists, see Washington Post, Jan. 9, 1982, at A5, col. 1; and (3) increased cooperation between the U.S. government and major research centers and universities, see Keeping High-Tech Secrets, NewswEEK, Jan. 25, 1982, at 34.


7. This Comment focuses on unilateral export controls. However, the United States is also engaged in multilateral export controls through the Coordinating Committee on Export Controls [hereinafter cited as COCOM]. COCOM is an informal, cooperative system of national security export controls. The United States and its NATO allies, except Iceland and Japan, established COCOM along with the North Atlantic Treaty Organization in 1949. The purpose of COCOM is to harmonize national policies regarding the export of goods and technology which provide military potential to the Communist bloc. The controls apply to Bulgaria, Czechoslovakia, East Germany, Hungary, Poland, Rumania, the Soviet Union, and the Asian communist countries, except China. For a more detailed discussion of COCOM, see Soviet Intervention, supra note 6, at 562; see also NATO INFORMATION SERVICE, NATO HANDBOOK 5 (1972).

cusses the historical background of both Acts and the factors that led to their enactment. The author examines the definition of “technical data” in order to explain exactly what types of technology are subject to government control. The discussion of the definition of technical data includes an examination of the limited case law in this area and an analysis of its effect on American business and individual freedom. The licensing procedures are then explored in order to determine the criteria by which the U.S. government denies or grants export licenses.

Following this discussion, the author analyzes the implications of current regulations under both Acts on American business and Congressional attempts

Carlson, Hulfbrauer and Carlson have identified six legal mechanisms including legislation such as the AECA and the EAA, which affect the rate of technology transfer between the United States and foreign nations. Those mechanisms are:

1. export licensing controls on technology which are usually imposed for national security or foreign policy reasons. See discussion at notes 130-35 infra, and at notes 152-60 infra. The restricted technology may have specific military application. See text accompanying notes 53-63 infra. Technology destined for the Soviet bloc and other hostile nations is subject to strict scrutiny. See text accompanying notes 182-83 infra.

2. patent law; Statutory patent conditions provide incentives for foreign inventors to patent their inventions in the United States. Patent law also contains mechanisms to protect United States inventors against the use of pirated U.S. technology for the manufacture of goods abroad and their subsequent exportation to the United States market;

3. tax policy; Although international tax rules are not designed to encourage or discourage technology transfers, deviations from tax neutrality between technology income earned abroad and technology income earned in the United States may be important enough to significantly influence the rate of technology transfer;

4. financial policy; Various U.S. programs designed to provide official credits and guarantees for sales and investment abroad act to encourage the export of technology;

5. import policy; Tariffs, quotas, and administered protection may act to burden the production and export of high technology goods; and

6. U.S. antitrust law; Burdensome antitrust laws may lead American firms to decide between producing through controlled foreign corporations or not producing outside the United States at all.

11. The case law in this area is minimal because court challenges to export licensing decisions, for several reasons, are rare. First, the Export Administration Act of 1979 does not provide exporters with a right of action to challenge export licensing decisions. Instead, the EAA limits exporters to a cause of action to force compliance with the procedural guidelines of the Act. However, the Act requires the exporter to petition the Secretary of Commerce before initiating the court action. 50 U.S.C.A. app. § 2409(j). If the Secretary of Commerce notifies the applicant that the license request requires additional time because of its “exceptional importance and complexity,” 50 U.S.C. app. § 2409(f)(4), the Secretary can prevent the exporter from exercising his right to action. 50 U.S.C.A. app. § 2409(j)(2). Second, constitutional challenges to export licensing decisions raised in defense to criminal charges under the Arms Export Control Act of 1976 face similar impediments. The 1976 Act does not contain a provision for specific judicial review. Furthermore, through the invocation of the political question, void-for-vagueness and delegation doctrines, courts have been reluctant to delve into the national security and foreign policy bases of licensing decisions. See Right to Export, supra note 6, at 280. See generally United States v. Curtiss-Wright Corp., 299 U.S. 304 (1936); Zemel v. Rusk, 381 U.S. 1 (1965); United States v. Brumage, 377 F. Supp. 144 (E.D.N.Y. 1974).
to alleviate the burdens of export controls. Finally, the author concludes that because of the political nature of technology transfer decisions and the ever-changing status of U.S. foreign policy interests, Congress wisely provides the executive branch with broad powers to control technology exports under the AECA of 1976 and the EAA of 1979.

II. The Arms Export Control Act of 1976

A. Background

For a period of nearly twenty years, the Neutrality Acts of 1935 and 1939 authorized the President to control the export of arms, ammunition or implements of war to any hostile country during a war between two or more foreign states. A subsequent amendment to the 1935 Act granted the President the power to restrict the "shipment of certain articles or materials in addition to arms, ammunition and implements of war" where such restrictions were "necessary to promote the security or preserve the peace of the United States or to protect the lives of citizens of the United States." The 1939 Act maintained these presidential powers and granted the President the additional power to restrict the export of any articles or materials to any country involved in a declared state of war. However, the Neutrality Act of 1939 did not mention technology or technical data in any of its provisions regarding export controls. In addition, neither term was mentioned in the list of the arms, ammunitions and implements of war subject to export control pursuant to the Neutrality Act.

In 1954, Congress repealed the munitions control section of the Neutrality Act for several reasons. First, the Neutrality Act had become antiquated — its provisions did not enable the executive branch to respond quickly to changing technical, military and political situations. For this reason, the State Depart-
ment claimed that the Neutrality Act did not provide for an effective program of arms control. Second, arms exporters were dissatisfied with the Neutrality Act due to the excessive paperwork required. The Neutrality Act did not permit the issuance of general licenses and, therefore, required exporters of items of low military potential to go through the same extensive application process as exporters of articles of obvious military potential. Finally, the burdensome administrative aspects of the Neutrality Act necessitated a change in law.

After Congress repealed Section 12 of the Neutrality Act, it placed the export of munitions and related technical data under presidential control by enacting Section 414 of the Mutual Security Act of 1954. Although Congress subjected "technical data" to export control, it did not define "technical data." Instead, Congress delegated the responsibility of defining technical data to the executive branch. Courts interpreting the Act and its accompanying regulations allowed the State Department considerable latitude in restricting exports of technology when munitions were involved.

executive branch was unable to respond quickly to changing conditions because § 12 of the Neutrality Act contained cumbersome administrative requirements. For example, § 12 established a National Munitions Control Board that soon became unnecessary. Section 12 also called for semiannual reports to Congress that proved to be unusually burdensome. Id.


24. A "general license" is a license of general applicability that permits the export of commodities which are peaceful in nature. 15 C.F.R. § 371.1 (1980). See text and accompanying notes 175-80 infra.


26. See 1954 U.S. CODE CONG. & AD. NEWS 3175, 3245. Subsection (h) of § 12 of the Neutrality Act required the National Munitions Control Board to submit semiannual reports to Congress. These reports were to include the name of the purchaser and the terms of the sale involved in each export license no matter how insignificant the shipment might be. These reports constituted an unnecessary administrative and financial burden of little interest to recipients of the report. Id.

27. See H.R. Rep. No. 2637, § 414, 83d Cong., 2d Sess. 44 (1954). House and Senate conference delegates acknowledged the apparent difficulties in regulating technical data, but emphasized the importance of such regulation to national security. Id.


29. Specifically, the courts considered the scope of technical data regulations in United States v. Edler Industries, Inc., 579 F.2d 516 (9th Cir. 1978), and in United States v. Van Hee, 531 F.2d 532 (6th Cir. 1976). See text accompanying notes 80-112 and 65-79 infra.

B. Provisions

The Arms Export Control Act of 1976 replaced the Mutual Security Act of 1954. The AECA sets forth the current provisions governing exports of munitions and related technology. Again, Congress has not defined "technology" under the AECA. Instead, Congress has delegated the responsibility of defining "technical data" to the executive branch by authorizing the President to designate those items which shall be subject to export controls.

The Arms Export Control Act of 1976 advances three broadly-worded policy objectives: (1) to encourage regional arms control and disarmament agreements and to discourage arms races; (2) to facilitate the common defense by entering into international arrangements with friendly countries; and (3) to encourage the world community to reduce international trade in weapons. Pursuant to these policy objectives, Congress, within the AECA itself, urged the President to initiate multilateral discussions with foreign nations and restrict the total dollar value of foreign military and commercial sales so that such value would not exceed current levels. Under the AECA and its accompanying regulations, technology can be transferred from the United States as part of a foreign military sale or as a commercial sale pursuant to a commercial export license. Therefore, any effort by the executive branch to carry out the Congressional objective to limit the dollar value of foreign military and commercial sales is likely to reduce the flow of technology transfers from the United States.

Foreign military sales and commercial sales are distinct types of exports. First, technology may leave the country as part of a "foreign military sale" (FMS). This

36. The United States is involved in "regional" arms control through its participation as a member of the Coordinating Committee on Export Controls (COCOM). See note 7 supra.
37. See note 7 supra.
39. Id.
40. 22 C.F.R. § 125.
41. 22 U.S.C. § 2751 authorizes the sale of data and research to friendly countries as part of cooperative programs of mutual concern. Sections 2752-2778 refer only to the sales of defense articles and defense services by the United States Government, but the provisions are unavoidably applicable to the technology associated with such articles and services. See 22 C.F.R. § 125.01 and notes 49-63 and accompanying text infra. See generally Hulfbrauer & Carlson, supra note 10, at 347.
43. 22 U.S.C. § 2762 (1976 & Supp. 1980). The controversial sale in 1981 of five highly sophisticated Airborne Warning and Control System (AWACS) aircraft to Saudi Arabia is a prime example of a foreign military sale (FMS). The Boeing Corporation developed and constructed the jets; Westinghouse Corporation developed the early warning radar system housed in the jets. The AWACS were part of a
is a government-to-government sale. In such a sale, the U.S. government purchases military hardware and related technology from private business and, in turn, sells them to a foreign nation.\textsuperscript{44} Second, technology may leave the country under the AECA via a “commercial sale.”\textsuperscript{45} The two types of sales are different in that commercial sales are made directly between a private contractor and a foreign country; thus, the sale does not go through the government-to-government channels. The FMS rules\textsuperscript{46} do not apply to commercial sales; a separate set of provisions governs commercial sales.\textsuperscript{47} Although not a party to the transaction, the U.S. government is a significant participant in the commercial sale since a U.S. contractor must obtain an export license before concluding a commercial sale.\textsuperscript{48} An examination of FMS sales is beyond the scope of this Comment since this author’s purpose is to examine the export licensing procedure, the definition of “technical data” for licensing purposes, and the effects of export licensing decisions on American business and individuals.\textsuperscript{49}

C. Definition of Technical Data Under the Arms Export Control Act of 1976

The Arms Export Control Act of 1976\textsuperscript{50} authorizes the President to control the commercial export of defense articles and defense services.\textsuperscript{51} The President exercises this control through the Office of Munitions Control of the U.S. State Department.\textsuperscript{52} The Department of State designates those items which it considers to be defense articles and defense services, and therefore subject to export control, in the International Traffic in Arms Regulations (ITAR).\textsuperscript{53} The items
designated as defense articles and services in the ITAR comprise the U.S. Munitions List.\(^{54}\)

Included on the Munitions List is "technical data" relating to: (1) any article containing information which is classified as requiring protection in the interests of national defense; and (2) the articles designated on the Munitions List as arms, ammunition and implements of war.\(^{55}\) For the purpose of the Arms Export Control Act, the ITAR defines "technical data" relating to:

1. Any article containing information which is classified as requiring protection in the interests of national defense;
2. The articles designated on the Munitions List as arms, ammunition, and implements of war.\(^{55}\)

The regulations under the AECA allow the President to control the export\(^{62}\) of any accompanying note 54 infra; (2) procedures for obtaining export licenses; (3) procedures for enforcing provisions of the Arms Export Control Act or the ITAR; and (4) disclosure rules on agents' fees and political contributions. 22 C.F.R. § 121-28, 130.

54. 22 C.F.R. § 121.01. The Munitions List can also be found at 15 C.F.R. § 370 (1980). The Department of State sometimes consults with the Departments of Defense and Commerce to determine whether a particular item should be placed on the Munitions List or the Commodities Control List which is governed by the Department of Commerce. See text accompanying notes 182-84 infra.

55. 22 C.F.R. § 121.01 (Categories XVII and XVIII).

56. "Unclassified information" is any information that is not classified. For definition of "classified information," see note 61 infra.

57. 22 C.F.R. § 125.01.

58. The regulations do not define the term "state-of-the-art."

59. The term "significant military applicability" is not defined in the regulations. The fact that the State Department does not define such term may create uncertainty for exporters. Exporters may be unsure of what the "state-of-the-art" is, and in doubt as to what areas constitute "areas of significant military applicability." The regulations provide that the initial burden of determining whether or not the technology in question advances the state-of-the-art or establishes a new art is upon the license applicant. 22 C.F.R. § 125.01 n.1.

60. 22 C.F.R. § 125.01.

61. 22 C.F.R. § 125.02. The term "classified information" refers to either equipment or information which the State Department has assigned a U.S. security classification because such equipment or information requires protection in the interest of national security. Critics of export controls more readily accept the validity of controls on the latter two types of "technical data," i.e., technology advancing the state-of-the-art and classified information. See Van Hee Case Comment, supra note 6, at 105 n.67.

62. The regulations define "export" as "the sending or taking out of the United States in any manner, any article, equipment, or technical data on the U.S. Munitions List except as may be otherwise expressly provided in a particular context." 22 C.F.R. § 121.19. Thus, with regard to technical data, exporting occurs whenever an exporter transfers information by oral, visual or documentary means. An export occurs, for instance, whenever a person mails or ships technical data outside the United States, discloses technical data through visits abroad by American citizens and discloses technical data to foreign nationals in the United States. 22 C.F.R. § 125.03.
unclassified or classified information relating to articles\textsuperscript{63} on the Munitions List.

The courts have interpreted munitions control regulations broadly.\textsuperscript{64} The Sixth Circuit, in \textit{United States v. Van Hee},\textsuperscript{65} was the first appellate court to interpret the scope of "technical data" as defined in State Department regulations.\textsuperscript{66} The United States prosecuted the defendants in \textit{Van Hee} for conspiring to export from the United States to Portugal certain technical data relating to the Commando V-100, a military armored amphibious vehicle, without obtaining an export license\textsuperscript{67} from the State Department. Because the U.S. Munitions List includes amphibious military vehicles, such vehicles cannot be exported without a license.\textsuperscript{68} Van Hee, a defendant in the case, originally obtained the required export license. However, after the Portuguese government refused to certify that the vehicles would not be reexported,\textsuperscript{69} the Director of Munitions Control\textsuperscript{70} revoked the license.\textsuperscript{71}

\begin{itemize}
\item \textsuperscript{63} "Article," under the regulations, means "any of the arms, ammunition, and implements of war and technical data relating thereto enumerated on the Munitions List." 22 C.F.R. § 121.01.
\item \textsuperscript{64} United States v. Edler Industries, Inc., 579 F.2d 516 (9th Cir. 1978); United States v. Van Hee, 531 F.2d 352 (6th Cir. 1976).
\item \textsuperscript{65} 531 F.2d 352 (6th Cir. 1976).
\item \textsuperscript{66} At the time of U.S. v. Van Hee, the provisions of 22 C.F.R. § 125.01 (1966) were in effect. Those regulations were equivalent in substance to those regulations in effect today. Also, at the time of U.S. v. Van Hee, The Mutual Security Act of 1954 — the predecessor of the Arms Export Control Act of 1976 — was in effect. The 1954 Act provided in pertinent part:
\begin{itemize}
\item (a) the President is authorized to control in furtherance of world peace and the security and foreign policy of the United States, the export . . . of arms, ammunition, and implements of war, including technical data relating thereto . . . . The President is authorized to designate those articles which shall be considered as arms, ammunition and implements of war, including technical data relating thereto, for the purposes of this section.
\end{itemize}
\item \textsuperscript{67} For a detailed discussion of the licensing procedure under the Arms Export Control Act of 1976, see text accompanying notes 113-133 infra.
\item \textsuperscript{68} 22 C.F.R. § 121.01. The term "amphibious vehicles" means "automotive vehicles or chassis embodying all-wheel drive and equipped to meet special military requirements, with adaptation features for deep water fording and sealed electrical systems." 22 C.F.R. § 121.08. Examples of other vehicles which cannot be exported without a license are armed and armoured vehicles, railway trains, tanks, gun carriers, self-propelled guns and trailers. 22 C.F.R. § 121.01 (Category VII).
\item \textsuperscript{69} The Department requires such certification in order to assure that exports will remain in the country designated on the export license. The State Department designed the certification requirement to prevent exporters and foreign countries from undermining the export control process; the State Department does not allow other countries to reexport United States munitions to a destination that would not receive State Department approval in an original license request. Further, a designated country may not divert exported equipment beyond its boundaries even though the equipment might have been incorporated through an intermediate process into other end items. 22 C.F.R. § 123.10. The State Department does not require an end-use certificate for every export of a munitions article. \textit{Id.} The Department required a certificate in the Van Hee transaction because the State Department feared that Portugal would reexport the Commando V-100s and use them in one of its African Colonies. \textit{See Van Hee Case Comment, supra note 6, at 92 citing Brief for Appellant at 14; United States v. Van Hee, 531 F.2d 352 (6th Cir. 1976).}
\item \textsuperscript{70} The Director of Munitions Control is the State Department official who heads the Office of Munitions Control, which has primary responsibility for regulating arms export. See text accompanying notes 113-14 infra.
\item \textsuperscript{71} \textit{Van Hee}, 531 F.2d at 354; Regarding the Director's authority to revoke an export license, see text accompanying notes 120-25 infra.
After the license revocation, Van Hee took a group of technicians familiar with the development of the Commando V-100 to Portugal with the intent to construct a vehicle similar to the Commando V-100. Besides possessing their own expertise, the group had in its possession photocopies of blueprints of the essential components of the Commando V-100. In Portugal, defendant Van Hee and his group of technicians began to construct a model of the vehicle. They abandoned this project, however, when a prototype of the amphibious vehicle arrived from West Germany. The prototype’s arrival was the result of an arrangement by Van Hee for the sale of a demonstration vehicle by West Germany to a Spanish intermediary, who then resold it to Portugal. By removing and studying parts of the prototype, and using the Commando V-100 blueprints to procure components, the group began constructing a vehicle similar to the American V-100.

The regulations in effect at the time of Van Hee’s activities in Portugal defined “technical data” as any information “which would enable the recipient to use, produce, and/or operate” an article on the Munitions List. The court interpreted this definition to include as “technical data” not only the Commando V-100 blueprints, but also the group members’ general knowledge, technical expertise and know-how used in the process of constructing the vehicle in Portugal. Consequently, the court of appeals affirmed Van Hee’s conviction.

The Sixth Circuit’s holding, namely that “technical data” encompasses an individual’s general knowledge and expertise, was narrowed to some extent, although not significantly, by the Ninth Circuit in United States v. Edler. The United States charged Edler Industries with exporting, without a license, technical data relating to articles on the U.S. Munitions List. Edler Industries, a U.S. aerospace company, had developed expertise in producing special tape-wrappings and materials called “carbon/carbon” composites. The materials

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72. Van Hee, 531 F.2d at 354.
73. Id.
74. Id.
75. Id.
76. See Van Hee Case Comment, supra note 6, at 93 n.8.
77. Van Hee, 531 F.2d at 354.
78. 22 C.F.R. § 125.01 (1966). The definition of “technical data” in 22 C.F.R. § 125.01 (1966) is substantially similar to the definition of “technical data” in the ITAR. Because no significant difference exists between the two definitions, the State Department views the judicial interpretations of “technical data” under the Mutual Security Act of 1954 as applying with equal force to the definition of “technical data” under the AECA. Telephone interview with State Department officials, Office of Munitions Control, United States Department of State (October 1981 and February 1982). The author has relied on information acquired by telephone interview because the State Department fails to publish much information about its export control decisions. The officials who provided the information discussed in this Comment asked not to be identified.
79. Van Hee, 531 F.2d at 357.
80. United States v. Edler Indus., Inc., 579 F.2d 516 (9th Cir. 1978). For a thorough discussion of Edler, see Recent Developments, supra note 6.
81. Edler, 579 F.2d at 518.
82. Id.
were suitable for use in several missile projects for the U.S. government. How­ever, the U.S. government did not consider the techniques Edler used to pro­duce these materials as classified information, and the technology had various civilian applications.83

French missile companies contacted Edler in 1968 and 1974 requesting an agreement with Edler whereby the American company would provide the French companies with technical assistance and data related to a tape-wrapping program.84 Edler applied for an export license from the U.S. State Department.85 The State Department denied the license request on the basis that "the exportation of this particular technical knowledge contravened United States policy,"86 such policy being that the export of Edler's expertise would be detrimental to U.S. national security interests. Despite the license denial, Edler provided the French missile companies with the technology they desired.87 As a result of this technical assistance, the U.S. government brought criminal charges against Edler for exporting technical data without a license,88 and Edler was convicted.89

On appeal from the district court decision, Edler based its challenge on the first amendment.90 Edler claimed that the Mutual Security Act of 195491 was unconstitutional because it restricted Edler's first amendment right to engage freely in international communication.92 Edler argued that the burden of obtaining governmental approval prior to any export of technical data operates as a prior restraint on the exercise of first amendment rights.93 In addition, Edler argued that the statute's operation as a prior restraint would unduly restrict the development of international research and development.94

The court responded to Edler's challenges by examining first amendment rights in the commercial context.95 The court noted that the boundaries of the commercial speech doctrine remained unclearly defined96 despite recent Su-

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83. Id. For example, "carbon/carbon" technology is used in manufacturing golf club shafts. Id.
84. Id.
85. Id.
86. Id.
87. Id. at 519.
88. Id. at 518.
90. Edler also raised a fifth amendment procedural due process claim. The court rejected the claim summarily in a footnote to the opinion. Edler, 579 F.2d at 522 n.2. The court found that the denial of Edler's license application was not arbitrary since it was founded on a policy of keeping missile technology in the United States. Moreover, the court found that Edler had failed to exhaust its administrative remedies as provided for in the regulations. See id.
92. Edler, 579 F.2d at 519.
93. Id.
94. Id. For a thorough discussion of the first amendment issues, see id.
95. Edler, 579 F.2d at 519-20.
96. Edler, 579 F.2d at 520.
The court stated that Edler had raised a plausible claim that "the First Amendment furnishes a degree of protection for its dissemination of technological information," but the court did not define the scope of that protection. Rather, the court used a balancing test in which it weighed the infringements of first amendment rights against the legitimacy of the government objectives involved. In this particular case, the court found that the governmental objective involved related to government efforts at controlling the international arms race. The court stated that the U.S. government "undeniably possesses the power to regulate the international arms traffic." The court acknowledged that, in order to effectively regulate international arms traffic, the government has to regulate some technical data relating to military hardware. Without such regulation, arms control would be of "negligible" practical value.

In an attempt to adhere to the purpose of the Act while avoiding serious interference with the international interchange of scientific and technological information, the court established a two-part test that must be satisfied before the State Department can restrict technical data under the Arms Export Control Act. First, technical data must be significantly related to an item on the Munitions List. The court did not define what establishes a "significant relationship" between technical data and an article on the Munitions List. However, the court stated that any technical data which assists in the foreign manufacture of articles that, if manufactured in the United States, would be on the Munitions List, meets the significant relationship test. The second part of the Edler test


98. Id., 579 F.2d at 520.

99. Id. the court said in part: "Recognition that Edler may have constitutionally protected expression does not by itself define the extent of that protection. By regulating conduct, the Government may pursue its legitimate objectives even though incidental limitations upon expression may result." Id.; see generally Konigsburg v. State Bar, 366 U.S. 36, 50-51 (1961).

100. Edler, 579 F.2d at 520.

101. Id.

102. Id.

103. Id.

104. Id. Although the court referred to 22 U.S.C. § 1934 at the time of its decision, its two-pronged test is equally applicable to 22 U.S.C. § 2778 (1980) due to the substantial similarity between the two statutes. The State Department adheres to the Edler two-pronged test. Telephone interview with Assistant Director of Office of Munitions Control, United States Department of State (Oct. 1981).

105. Edler, 579 F.2d at 521. The court did not define what it would require to establish a "significant relationship." In practice, this determination is made on a case-by-case basis by the Office of Munitions Control. See text accompanying notes 112-14 infra.

106. Edler, 579 F.2d at 521.
requires that the relationship of the technical data to an article on the Munitions List be so clear that the exporter could be said to have adequate notice that the foreign recipient of the information intends to use it to produce or operate articles on the Munitions List.107 The court concluded that the fact that technology has a non-military use may have some bearing on whether a defendant exporter had adequate notice.108 In particular, the fact that technology has a nonmilitary use supports an exporter's claim that he did not have notice of the recipient's intent to put the information to military use. Because the district court had not allowed Edler to develop the defense of lack of notice of military applicability of the "carbon/carbon" composites, the court of appeals reversed the conviction and remanded the case to the trial court for a new trial.109

By not defining what constitutes a "significant relationship," the Edler court allowed the executive branch broad discretion in the area of technological export controls.110 In practice, the determination of what constitutes a significant relationship is made on a case-by-case basis by the Office of Munitions Control of the U.S. State Department.111 The State Department has construed the "significant relationship" test to require only a reasonable connection between a given technology and an item of military hardware. If the State Department finds such a connection, it may subject the technology to licensing controls.112

D. Licensing Procedures Under the Arms Export Control Act of 1976

The U.S. State Department has promulgated specific licensing procedures in an attempt to effectively control the exports of munitions and related technology.113 Any person engaged in the business of manufacturing or exporting items on the Munitions List must register with the Office of Munitions Control of the State Department.114 In addition to registering, a person must submit an applica-

107. Id. A problem posed by this "adequate notice" requirement is the fact that some technology which is exported solely for civilian purposes can easily be adopted for military use at a future date. The court of appeals did not state whether knowledge of potential future military application would constitute notice to the exporter. See Recent Developments, supra note 6, at 205.
108. Edler, 579 F.2d at 522.
109. Id. The court of appeals specifically stated that the district court should have allowed Edler to admit evidence that the information furnished by Edler had a number of non-military uses. The court stated that "evidence concerning nonmilitary applications is relevant to the question of scienter, i.e. whether a defendant knew or should have known that the recipient of the exported information would use the information to produce or operate Munitions List articles." Edler, 579 F.2d at 522.
110. Telephone interview with State Department official, Office of Munitions Control, United States Department of State (February 1982); see also Recent Developments, International Trade: Export Restrictions—United States v. Edler Indus., Inc., 579 F.2d 516 (9th Cir. 1979), 20 Harv. Int'l L.J. 201, 205 (1979).
111. Telephone interview with State Department official, Office of Munitions Control, United States Department of State (February 1982).
112. Id.
113. 22 C.F.R. § 121. See note 53 supra for discussion of State Department's authority to promulgate regulations. For a detailed description of licensing procedures under the ITAR, see Sherzer, supra note 45, at 581.
114. 22 C.F.R. § 122.01(a).
tion to the Office of Munitions Control to receive export authorization whenever that person intends to commercially export an article on the Munitions List or technical data related to such an article. 115 An exporter must apply for export authorization even if exporting the article or technical data temporarily. 116 The ITAR also requires export authorization whenever an exporter intends to receive a munitions article or related technical data which is in transit to a third country. 117 Similarly, an exporter must apply for authorization whenever intending to use technical data to describe a Munitions List article to a foreign person. 118 Finally, the ITAR requires an exporter to apply for authorization before exporting technical data related to a manufacturing license (i.e., an agreement whereby an American person grants a foreign person a legal right or license to manufacture abroad) or a technical assistance agreement (i.e., an agreement whereby an American person performs functions or conveys information involving the disclosure of technical data). 119

Upon receipt of an application or upon review of licenses already granted, the State Department may deny, revoke, suspend or amend the export license without prior notice whenever the department believes such action would further "world peace," the "security of the United States" or the "foreign policy of the United States." 120 Additionally, the State Department may take such action whenever it believes that the applicant has violated the Arms Export Control Act or its accompanying regulations, 121 or whenever the department has debarred 122 or suspended 123 the applicant. These provisions of the ITAR govern applications and licenses for the export of technical data as well as for the export of articles on the Munitions List. 124

In making its determination of whether a license should be granted, denied, suspended or revoked, the Office of Munitions Control (OMC) considers many factors. Initially, the OMC examines whether the article proposed for export is on the Munitions List. 125 If the proposed export is technical data, the OMC determines whether the data is related to an item on the Munitions List. 126

115. 22 C.F.R. §§ 123, 125.
116. 22 C.F.R. § 123.
117. Id.
118. 22 C.F.R. § 125.
119. 22 C.F.R. § 124.
120. 22 C.F.R. § 123.05.
121. Id.
122. 22 C.F.R. § 127.07 lists the reasons for which a person may be debarred (prohibited) from receiving an export license. The reasons include: conviction of a criminal offense; the violation of 22 U.S.C. § 2778 or any of its accompanying rules and regulations; and decisions by the Office of Export Administration to deny, suspend or revoke export privileges of the applicant. 22 C.F.R. § 127.07.
123. 22 C.F.R. § 123.05.
124. 22 C.F.R. § 123.05 n.2.
125. MUNITIONS CONTROL, supra note 52.
126. Id. See text accompanying note 113 supra.
OMC then determines whether the applicant has met all ITAR requirements. Once the applicant has met all ITAR requirements, the OMC examines whether the application should be reviewed by other offices in the State Department.

The OMC makes many licensing decisions within hours of receipt of the application. Other requests, depending on destination, quantities and the significance of the Munitions List articles involved, may take longer. The OMC may conduct a more extensive review of particular applications in concert with other offices and agencies in order to assure that the granting of a license would in fact further "world peace and the security and foreign policy of the United States." In matters of national security or in matters requiring technical expertise, the OMC may solicit the views of various bureaus within the State Department or from other executive departments. If unable to reconcile conflicting views on a given license application, the OMC refers the matter to the highest authority in the executive branch necessary to make the decision.

The OMC does not rely on any single factor for the issuance or denial of a commercial export license. Rather, OMC bases its decisions on a number of criteria, including: the Arms Export Control Act; the ITAR; U.S. government policies originating with the President; U.S. foreign, political and economic

127. *Id.* The requirements referred to in the text are primarily related to ITAR registration and licensing procedures.

128. *Id.* But *cf.* statements of GAO International Division Director Frank C. Conahan, U.S. Export Weekly (BNA), No. 366, A-3 (May 5, 1981) (the system is a paper process that burdens exporters).


130. *See MUNITIONS CONTROL, supra note 52, at 3.*

131. *Id.*

132. For example, on July 8, 1981, President Reagan signed a directive on U.S. Arms Transfer Policy which provides guidelines for U.S. licensing decisions. The text of the directive provides in part:

The United States views the transfer of conventional arms and other defense articles and services as an essential element of its global defense posture and an indispensable component of its foreign policy. The United States will evaluate requests primarily in terms of their net contribution to enhanced deterrence and defense. It will accord high priority to requests from its major alliance partners and to those nations with whom it has friendly and cooperative security relationships. In making arms transfer decisions the United States will give due consideration to a broad range of factors including:
- the degree to which the transfer responds appropriately to the military threats confronting the recipient;
- whether the transfer will enhance the recipient's capability to participate in collective security efforts with the United States;
- whether the transfer will promote mutual interests in countering externally supported aggression;
- whether the transfer is consistent with United States interests in maintaining stability within regions where friends of the United States may have differing objectives;
- whether the transfer is compatible with the needs of United States forces, recognizing that occasions will arise when other nations may require scarce items on an emergency basis;
- whether the proposed equipment transfer can be absorbed by the recipient without overburdening its military support system or financial resources; and
- whether any detrimental effects of the transfer are more than counterbalanced by positive contributions to United States interests and objectives.

All requests will be considered on a case-by-case basis. Those for coproduction, or the transfer of sensitive or advanced technology, will receive special scrutiny, taking into account economic and industrial factors for both the United States and other participating countries, the impor-
policies; national security policies; OMC precedents; and whether a particular export is in the overall interest of the United States.133

III. The Export Administration Act of 1979

A. Background

The Arms Export Control Act of 1976 is only one means by which the U.S. government maintains control over the commercial export of goods and technical data.134 The Export Administration Act of 1979135 provides the President with authority to implement export controls on goods, services and technical data. The Export Administration Act of 1979 and its three types of controls136 evolved from the Export Control Act of 1949137 and the Export Administration Act of 1969.138 The changes in the degree of export control evidenced by each of
tance of arms cooperation with NATO and other close friends and allies, potential third party transfers, and protection of sensitive technology and military capabilities.
133. See Munitions Control, supra note 52, at 2.
134. Other departments of the executive branch retain jurisdiction over the export of certain commodities. For example, the Department of Commerce has licensing jurisdiction over all commodities and unclassified technical data exported from the United States except certain specialized items handled by other government agencies. See text accompanying note 157 infra. Defense articles, services, and technical data related thereto are licensed by the Office of Munitions Control, U.S. Department of State. See text accompanying notes 115-35 supra. Exports of nuclear equipment, facilities, and materials are licensed by the U.S. Nuclear Regulatory Commission. Re-exports of nuclear equipment and materials are licensed by the Department of Energy. Narcotics and dangerous drugs are licensed by the U.S. Department of Justice. Natural gas and electric energy are licensed by the U.S. Department of Energy. Endangered species of fish and wildlife are licensed by the U.S. Department of Interior. See 15 C.F.R. § 370.10.
136. U.S. Dept. of Commerce, A Summary of U.S. Export Administration Regulations (Oct. 1981) (available by writing to the U.S. Dept. of Commerce, Office of Export Administration, Washington, D.C. 20520). The U.S. Department of Commerce has described the applicability of these three types of controls as follows:
(1) National security controls are instituted to provide control of exports making a significant contribution to the military potential of countries to the detriment of the United States, such as strategic commodities and technical data to the USSR, other Warsaw Pact countries, Laos, and the People's Republic of China.
(2) Foreign policy controls are instituted to further significantly United States foreign policy or fulfill its declared international obligations, such as restrictions on exports to the Republic of South Africa, and Namibia, which are maintained in part to further U.S. policy and in part to support United Nations Security Council Resolutions. Controls may be in effect for both security and foreign policy reasons, such as controls on North Korea, Vietnam, Kampuchea, and Cuba.
(3) Short supply controls are used to protect the domestic economy from excessive drain of scarce materials and to reduce inflation induced by export demand. Id. at 1.
these statutes reflect the changing political relationship between the United States and the Communist world.\textsuperscript{139}

The Export Control Act of 1949 was the first legislation designed specifically to regulate non-military exports.\textsuperscript{140} The 1949 Act was primarily an outgrowth of American concern over Soviet domination in Eastern Europe.\textsuperscript{141} This concern prompted the U.S. government to take measures to protect national security. Specifically, the U.S. government used this concern for national security as its basis for licensing controls on exports to the Soviet Union and the countries of Eastern Europe.\textsuperscript{142} The national security rationale became more compelling as the "Cold War" consciousness took hold of Congress.\textsuperscript{143} American involvement in the Korean conflict provided additional justification for restricting U.S. exports to Communist nations. National security required closer scrutiny of exports to North Korea's communist allies and led to a complete embargo on exports to North Korea and the People's Republic of China.\textsuperscript{144} In general, the United States prohibited any exports which would assist the Communist nations militarily or economically.\textsuperscript{145}

By the late 1960's, as the national security rationale for strict trade prohibitions on exports to the European communist nations became less compelling,\textsuperscript{146} the United States implemented fewer controls on trade with Eastern Europe.\textsuperscript{147} Congress enacted the Export Administration Act of 1969 to encourage this trend toward more liberal export controls.\textsuperscript{148} The Export Administration Act of 1969 narrowed the broad controls mandated by the 1949 Act.\textsuperscript{149} Specifically, the 1969


\textsuperscript{140} For a detailed account of the development of U.S. export controls, see Berman & Garson, supra note 6, at 791; Abbot, Linking Trade to Political Goals, 65 MINN. L. REV. 739 (1981) [hereinafter cited as Abbot].

\textsuperscript{141} See Berman & Garson, supra note 6, at 796.

\textsuperscript{142} Id. By 1948, Congress and the Truman Administration were alarmed by Soviet activities. After the Communist coup in Czechoslovakia, the Department of Commerce placed most exports to the Soviet Union and the countries of Eastern Europe under licensing control. In December 1948, a Senate Committee investigating U.S. export regulations reported that "the national security aspects of our export control program are of transcendent importance, particularly in view of the present activities of the Soviet Union and its satellites." See S. Rep. No. 1775, pt. 2, 80th Cong., 2d Sess. 15 (1948). See also, Berman & Garson, supra note 6, at 796.

\textsuperscript{143} Berman & Garson, supra note 6, at 795.

\textsuperscript{144} Abbot, supra note 140, at 757. See also Berman & Garson, supra note 6, at 795.

\textsuperscript{145} See Export Machinery, supra note 139, at 83.

\textsuperscript{146} The national security rationale for strict trade prohibitions on exports to the European communist nations became less compelling for several reasons. First, the Korean War, which had been a major reason for national security controls, had ended in 1953. Second, tension eased in Europe after the death of Stalin; Stalin's successors took on a more amicable posture toward the United States and Western Europe. Third, national security controls became less effective in light of the economic recovery of Western Europe. This fact spurred the increased use of foreign policy export controls. See Berman & Garson, supra note 6, at 799; Abbot, supra note 140, at 757.

\textsuperscript{147} See Abbot, supra note 140, at 758.

\textsuperscript{148} Pub. L. No. 91-184, 83 Stat. 841 (1969); see generally Abbot, supra note 140, at 758.

\textsuperscript{149} See Abbot, supra note 140, at 758. See also Export Machinery, supra note 139, at 83-84.
Act banned for export to the communist states only goods of potential strategic value. 150

Congress continued this trend toward more liberal export controls by later substituting the Export Administration Act of 1979 for the 1969 Act. 151 The EAA of 1979 authorizes the President to control exports of U.S. commodities and technical data to all foreign destinations whenever such controls are necessary to achieve any one of three purposes: to protect national security; to further foreign policy; or to prevent the excessive drain of materials in short supply. 152 The EAA of 1979 is an indication of a greater willingness on the part of Congress to expand East-West trade. 153 This willingness is evidenced by provisions in the EAA which attempt to limit presidential authority to control exports. 154

The EAA of 1979 is also a Congressional attempt to comprehensively set forth U.S. foreign policy legislation. Prior to the enactment of the EAA of 1979, Congress enacted piecemeal foreign policy export control legislation throughout the seventies. First, in 1974, shortly after the OPEC oil embargo of the United States, Congress amended the Export Administration Act of 1969 as a means to implement U.S. policy to use export controls as a means to secure the removal of restrictions imposed by foreign nations on U.S. access to supplies. 155 Second, in 1977, Congress again amended a foreign policy declaration to the Export Administration Act of 1969. The amendment authorized the President to use export controls "to encourage other countries to take immediate steps to prevent

150. See Export Machinery, supra note 139 at 83-84. See also Abbot, supra note 140, at 758. The enactment of the 1969 Act significantly increased East-West trade. During the first year of the existence of the Act of 1969, the Commerce Department made available 1550 commodities in 775 Commodity Control List Categories for export to Soviet bloc countries. See DEP'T OF COMMERCE 95th QUARTERLY REPORT, EXPORT CONTROL 5 (1971).

151. 50 U.S.C. app. §§ 2401-2420. See also Abbot, supra note 140, at 857.

152. 50 U.S.C. app. § 2402 (1980) provides in part:

(2) It is the policy of the United States to use export controls only after full consideration of the impact on the economy of the United States and only to the extent necessary —

(A) to restrict the export of goods and technology which would make a significant contribution to the military potential of any other country which would prove detrimental to the national security of the United States;

(B) to restrict the export of goods and technology where necessary to further significantly the foreign policy of the United States or to fulfill its declared international obligations;

(C) to restrict the export of goods where necessary to protect the domestic economy from the excessive drain of scarce materials and to reduce the serious inflationary impact of foreign demand.


153. See Export Machinery, supra note 139, at 84.

154. See Abbot, supra note 140, at 857. For discussion of these provisions, see text accompanying notes 214-59 infra.

the use of their territories or resources to aid, encourage, or give sanctuary to international terrorists."156 Third, the emergence of the United States as a proponent of human rights widened the scope of foreign policy export controls. In 1976, Congress declared that a principal goal of the foreign policy of the United States was "to promote the increased observance of internationally recognized human rights by all countries."157 This declaration explicitly expanded the purposes for which the United States could implement foreign policy controls.158 The enactment by Congress of the comprehensive foreign policy section of the EAA of 1979 signified the abandonment of the piecemeal approach used throughout the seventies.159

B. Definition of Technical Data Under the Export Administration Act of 1979

The Export Administration Act of 1979 is similar to the Arms Export Control Act of 1976 in that the former provides the President with broad powers to control the flow of technical data from the United States.160 With respect to controls on technology, Congress, in the EAA of 1979, stated the finding that it is important that the administration of export controls . . . give special emphasis to the need to control exports of technology (and goods which contribute significantly to the transfer of such technology) which could make a significant contribution to the military potential of any country or combination of countries which would be detrimental to the national security of the United States.161

In addition, the EAA of 1979 includes broad statements of policy justifying the restriction of technological exports.162 Thus, Congress made a major innovation in this Act by attempting to focus national security controls on technology rather than on goods.163

158. See 22 U.S.C. § 2304; see generally Abbot, supra note 140, at 776.
159. See Export Machinery, supra note 139, at 112-13. In addition to responding to the political developments of the 1970's, the 1979 Act advanced some logistical and procedural reforms. The 1979 Act extended the authority of the 1969 Act and the appropriations thereunder, improved the efficiency of export licensing that had suffered from increasing procedural delays, provided for a systematic review and revision of export control procedures, and revised the list of goods and technology subject to export control. See S. Rep. No. 169, 96th Congress, 1st Sess. 2-3, reprinted in 1979 U.S. CODE CONG. & AD. NEWS 1147, 1149; see also Soviet Intervention, supra note 6, at 564.
163. 50 U.S.C. app. §§ 2401(8), 2404(d); see generally, Abbot, supra note 140. Indicative of this increased concern over technology controls is the statute's requirement that the Secretary of Defense
The Commerce Department has primary responsibility for promulgating regulations under the EAA.\(^{164}\) Although the general provisions of the Export Administration Regulations apply to technical data as well as to commodities,\(^{165}\) the Commerce Department has promulgated special regulations to control the export of technical data in accordance with the policy of the statute.\(^{166}\) For purposes of the 1979 Act, Congress defined “technical data” to mean “information of any kind that can be used, or adopted for use, in the design, production, manufacture, utilization, or reconstruction of articles or materials.”\(^{167}\) The technical data may be in tangible form, such as a prototype, blueprint or manual, or in intangible form, such as know-how\(^{168}\) or the performance of technical services.\(^{169}\)

An export occurs whenever a person either physically sends technical data abroad or releases it in the United States with the knowledge or intent that the data will be transmitted to a foreign country.\(^{170}\) Any release of technical data of U.S. origin by a person in a foreign country also constitutes an export subject to licensing.\(^{171}\) Such a “release” of technical data may occur through a number of circumstances such as: (1) any visual inspection of equipment and facilities originated in the United States; (2) verbal communication; or (3) the application abroad of personal knowledge or technical expertise acquired in the United States.\(^{172}\)

\(^{164}\) 50 U.S.C. app. § 2403(b).

\(^{165}\) See 15 C.F.R. § 370.

\(^{166}\) 15 C.F.R. § 379. The provisions of § 379 do not apply to “classified” technical data, i.e., technical data that has an officially assigned security classification (such as “top secret,” “secret,” or “confidential”). The Office of Munitions Control of the State Department controls the export of classified technical data. 15 C.F.R. § 379.1 n.2; see text accompanying notes 114-16 supra.

\(^{167}\) 15 C.F.R. § 379.1. While the definitions under both Acts appear similar, technical data under the Arms Export Control Act must relate to an article on the Munitions List. 22 C.F.R. § 125.01. See text accompanying notes 54-57 supra. Under the Export Administration Act, technical data need not meet such a condition. Technical data under the 1979 Act includes any unclassified information related to any industrial process. 15 C.F.R. § 379.3; see generally U.S. DEP’T OF COMMERCE, A SUMMARY OF U.S. EXPORT ADMINISTRATION REGULATIONS (Oct. 1981).


\(^{169}\) 15 C.F.R. § 379.1(a).

\(^{170}\) 15 C.F.R. § 379.1(b)(1).

\(^{171}\) Id.

\(^{172}\) 15 C.F.R. § 379.1(b)(2).
C. Licensing Under the Export Administration Act of 1979

The EAA of 1979 authorizes the President to delegate licensing authority to appropriate executive agencies and departments. The Commerce Department maintains primary licensing jurisdiction over commodities and unclassified technical data. The export licensing system administered by the Commerce Department applies to: (1) exports of commodities and technical data from the U.S.; (2) reexports of U.S. origin commodities and technical data from a foreign destination; (3) U.S. origin parts and components used in a foreign country in the manufacture of a foreign end-product or export; and (4) foreign-produced products that are the direct result of U.S. origin technical data. The purpose of the system is to prohibit, with few exceptions, all exports from the United States to any destination unless licensed by the Office of Export Administration (OEA) of the Commerce Department.

Most American exports leave the country under a "general license" which is a license of general applicability that permits the export of commodities which are essentially peaceful in nature. For commodities requiring stricter controls, the Commerce Department issues a "validated" license. Whether a particular commodity requires a validated license depends upon whether the Commerce Department has listed the particular commodity on the Commodities Control List (CCL). The CCL is a complete listing of commodities subject to licensing control by the Office of Export Administration. The CCL is the key to determining whether a person may export a specific shipment under an established general license authorization, or under a validated export license.

173. 50 U.S.C. app. § 2403(e).
174. 50 U.S.C. app. § 2409(a)(1)(2) (1980). The legislation requires, however, that prior to imposing controls to further the foreign policy or national security interest of the United States, the Secretary of Commerce consult with the Secretaries of State and Defense. See 50 U.S.C. app. § 2409(a)(1)(2) (1980).
175. 15 C.F.R. § 379.
176. Id. Reexport of technical data means "an actual shipment or transmission from one country to another, or any release of technical data of U.S. origin in a foreign country with the knowledge or intent that the data will be shipped or transmitted to another foreign country." 15 C.F.R. § 379.1.
177. Id.
179. See 15 C.F.R. § 370.3(a). The principal exceptions are: (1) nearly all exports to Canada for consumption there, id. at § 370.3(a)(1); (2) exports regulated by another U.S. agency, id. at § 370.3(a)(3); (3) certain exports to U.S. armed forces, id. at § 370(a)(2); and (4) exports to territories, dependencies, and possessions of the U.S., id. at § 370.4.
180. 50 U.S.C. app. § 2403(a)(3); 15 C.F.R. § 371.3. For a listing of other types of general licenses applicable to particular products, see 15 C.F.R. § 371, 15-22.
181. 15 C.F.R. § 372.2(a).
182. The Export Administration Act of 1979 authorizes the Secretary of Commerce to establish a list, referred to as the "Commodities Control List," which comprises the goods and technology subject to control under the Act. The Commodities Control List can be found at 15 C.F.R. § 399.1.
183. Id.
184. 15 C.F.R. § 372.2(a).
ease with which an exporter may obtain a license depends in large measure on the destination of the export. 185

Individuals may export technical data pursuant to either a general or a validated license. 186 Exporters have authorization under a general license 187 to export data that is already generally available to the public, or is of a scientific or educational nature not significantly related 188 to industrial processes. 189 Technical data not included under the general license requires a validated license for export. 190 The Office of Export Administration of the Commerce Department issues validated export licenses upon receipt of an export license application. 191 The applicant must disclose to the OEA all details of the transaction including the parties to the transaction, the destination and type of technical data to be exported, the intended use of the technical data and the foreign availability 192 of comparable technical data. 193 The OEA, on a case-by-case basis, uses this information to determine whether it will grant a validated license. 194

IV. IMPLICATIONS OF CURRENT CONTROLS ON TECHNOLOGICAL EXPORTS

Exporters generally recognize that export restrictions of some technical data are necessary for national security and foreign policy reasons. 195 However, exporters object to the scope and application of the export restrictions. 196 First, the breadth of the restrictions on technology transfers does place a limit on

185. 50 U.S.C. app. § 2414 (1980); 15 C.F.R. § 370 Supp. I. For export control purposes, the regulation divides all destinations into country groups. Country Group Z includes North Korea, Vietnam, Cambodia and Cuba. Group Y includes the U.S.S.R. and other Warsaw Pact countries. Group T consists of the countries of the Western Hemisphere, other than Canada and Cuba. Other classifications are Group W (Poland and Hungary), Group Q (Romania), and Group P (The People's Republic of China). Group V consists of all countries not included in any other country group. 15 C.F.R. § 370 Supp. I.
186. 15 C.F.R. § 379.2.
187. See text accompanying note 204 infra.
188. The regulations do not define what constitutes a "significant relationship." A reasonable inference is that the Commerce Department left the term undefined so as to provide the Department with discretion similar to that under the Edler standard. See text accompanying notes 105-14 supra.
189. 15 C.F.R. § 379.3.
190. 15 C.F.R. § 379.5(a).
191. Id.
192. 50 U.S.C. app. § 2403(c).
193. 15 C.F.R. § 379.5(d).
195. See Use of Export Controls and Export Credits for Foreign Policy Purposes: Hearings on the Increasing Use by the Executive Branch of Restrictions on U.S. Exports and Export Credits for the Purpose of Promoting Foreign Policy Objectives Before the Senate Comm. on Banking, Housing and Urban Affairs, 95th Cong., 2d Sess. 24 (1978) (statement of David Packard, Chairman of the Board, Hewlett-Packard) [hereinafter cited as Export Controls and Credits Hearings]; see also Right to Export, supra note 6, at 264-65.
196. Export Controls and Credits Hearings, supra note 195, at 45 (statement of Donald J. Morfee, Vice-President, Pullman, Inc.).
freedom of speech and the dissemination of ideas.\textsuperscript{197} For example, Commerce Department regulations restrict exporters from communicating with foreign customers regarding technical matters without government approval.\textsuperscript{198} These restrictions apply whether the exchange of information is to occur orally, in person or by telecommunication, or by exchange of documents.\textsuperscript{199} These restrictions raise substantial first amendment questions. Although \textit{U.S. v. Edler} held that the government's national security interest in regulating technical data "significantly related" to munitions outweighed first amendment considerations,\textsuperscript{200} the court left open the question of whether technical data unrelated to munitions will receive first amendment protection.\textsuperscript{201} However, the \textit{Edler} court's emphasis on the military significance of the carbon composites transferred by Edler leads to a reasonable inference that the more attenuated the connection between technical data and its military nature becomes, the greater the possibility of first amendment protection.\textsuperscript{202} A court has yet to interpret technical data as defined by the Commerce Department. Thus, the question remains whether the regulations imposed under the Export Administration Act of 1979, which subject technical data related to any industrial processes to licensing, will receive the same degree of judicial deference that the munitions control regulations received in \textit{U.S. v. Edler}.\textsuperscript{203}

A second objection of the exporting community is its assertion that broad restrictions on exports of technical data are detrimental to U.S. domestic policy.\textsuperscript{204} Former Secretary of State Dean Rusk expressed this concern when he said:

\begin{quote}
Trade occurs when it is of benefit to both parties. When we refuse to trade for security or political reasons, we should recall that we are depriving ourselves of the benefits of that trade, whether in the form of convertible currencies or goods and services which we ourselves need for our national life.\textsuperscript{205}
\end{quote}

Exporters recognize that export restrictions on sensitive technical data are important when comparable technology is either unavailable from other nations or subject to similar restraints within the multilateral framework of the Coordinating Committee on Export Controls (COCOM).\textsuperscript{206} However, when non-American

\begin{footnotesize}
\textsuperscript{197} \textit{Edler}, 579 F.2d at 520.
\textsuperscript{199} 15 C.F.R. § 379 Supp. 1.
\textsuperscript{200} \textit{Edler}, 579 F.2d at 521.
\textsuperscript{201} See generally Soviet Intervention, supra note 6, at 561, 573; Berman & Garson, supra note 6, at 829.
\textsuperscript{202} See Soviet Intervention, supra note 6, at 573; Berman & Garson, supra note 6, at 829.
\textsuperscript{203} See Soviet Intervention, supra note 6, at 573.
\textsuperscript{204} Export Controls and Credits Hearings, supra note 195, at 146.
\textsuperscript{205} Export Controls and Credits Hearings, supra note 195, at 146 (statement of former Secretary of State Dean Rusk).
\textsuperscript{206} Id.; see also Right to Export, supra note 6, at 264-65.
\end{footnotesize}
companies are able to fill the orders that American companies cannot fill simply because of unilateral restrictions by the U.S. government, the American exporters lose customers in the international market.\footnote{207} In addition to this economic consequence, representatives of private industry point out that the increasing development of technology by other nations defeats the practical usefulness of many U.S. restrictions.\footnote{208} The practical usefulness of restricting a technology export to a particular country disappears when that same country has already developed or received the technology being controlled by the United States.

A third objection of exporters is that red-tape and procedural delays in the export control administration act as hindrances to American business.\footnote{209} For example, time-consuming procedures delay operations abroad for American technicians and engineers even when no reason exists to prohibit the disclosure of technical data or the use of technical skills.\footnote{210} These procedural delays are

\footnotesize{207. Export Controls and Credits Hearings, supra note 195, at 146. House Science and Technology Comm. Chairman Don Fuqua disagrees. On January 20, 1981, Fuqua said that discussions with Japanese officials and tours of industrial facilities in Japan reinforced his belief that the United States needs to apply the technology it develops at home rather than export the technology and import the manufactured goods it produces. . . . If our own government and industrial leaders would demonstrate the interest in application of technology to our factories shown by the Japanese, we could compete in the international marketplace with any nation on earth.


208. See, e.g., Export Control Policy and Extension of the Export Administration Act: Hearings Before the Senate Comm. on Banking, Housing and Urban Affairs, Part II, 96th Cong., 1st Sess. 86 (1979) (statement of W. Robert McLellan, Vice-President, FMC Corp.) [hereinafter cited as 1979 Hearings]; Export Controls and Credits Hearings, supra note 195 at 24 (statement of David Packard, Chairman of the Board, Hewlett-Packard); id. at 45 (statement of Donald J. Murfee, Vice-President, Pullman, Inc.); id. at 318-19 (statement of John V. James, Chairman of the Board, Dresser Industries). For an official expression of the view that the steady decline in U.S. productivity growth has caused the United States now to have the slowest growth rate of any industrialized country, see U.S. Export Control Policy and Extension of the Export Administration Act: Hearings Before the Senate Committee on Banking, Housing, and Urban Affairs, Part I, 96th Cong., 1st Sess. 25 (1979) (statement of Elmer B. Staats, Comptroller General) [hereinafter cited as 1979 Hearings, Part I]. But cf. 1979 Hearings, Part I at 153-54 (statement of C. Fred Bergsten, Assistant Secretary of Treasury for International Affairs) (U.S. performance in export of technology-intensive goods remains strong due to U.S. position as by far the most important performer of industrial research and development in the West). See also excerpt from a study issued by the Rand Corp. in Aug. 16, 1981:

The case for export controls is strongest in areas in which the United States has a clear lead over other Western countries. As one moves outside this zone toward technologies that afford the Soviets longer-term industrial gains and that are not areas of clear American superiority over the rest of the West, the benefits of export controls becomes more diffuse and uncertain, while the costs of trying to enforce them become progressively greater. Any widening of export controls outside the first range into the second should be undertaken only with the greatest care.


209. See Van Hee Case Comment, supra note 6, at 107; see also U.S. Export Weekly (BNA), No. 312, C-7 (Dec. 9, 1980), and No. 336, A-4 (Dec. 9, 1980) for a discussion of proposed bills that would attempt to abolish the Commerce Department and set up a separate Department of International Trade, and combine the various export bills into a single package. The proposals have been unsuccessful due to the Reagan Administration's hesitancy to support any increase in the size of government. See U.S. Export Weekly (BNA), No. 341, B-1 (Jan. 20, 1981).

210. See Van Hee Case Comment, supra note 6, at 107.
costly in that they cause considerable losses of present export orders and give foreign purchasers reason to question the reliability of American businesses as future suppliers. Finally, exporters point out that denials of license applications or revocations of previously-granted licenses are the most obvious sources of economic losses. The overall economic costs of export restrictions include lost revenues, unemployment and losses of future orders.

V. Analysis

Congress responded to exporters’ criticisms with provisions in the AECA and the EAA which attempt to limit executive discretion in the export control area. Analysis demonstrates, however, that despite such provisions, and because of the decisions in United States v. Van Hee and United States v. Edler, no effective restraint on executive discretion exists in the area of technological exports.

The AECA provides for two limitations on the Executive’s power to issue licenses for commercial exports. First, if the State Department is considering issuing a license (1) for the sale of any defense articles or services valued at $35 million or more, or (2) for the sale of major defense equipment valued at $7 million or more, the President must submit a report to Congress not less than thirty days before granting the potential seller an export license. The report must include the identity of the intended recipient of the proposed export, the dollar amount of the proposed sale and a description of the items to be exported. Upon a request by the Committee on Foreign Affairs of the House of Representatives, the State Department must promptly supply any additional information.

211. See 1979 Hearings, supra note 208, at 86. See also Right to Export supra note 6, at 273; Export Controls and Credits Hearings, supra note 195, at 146.

212. For example, see discussion of the revocation of the controversial 1978 Dresser Industries license to sell equipment and know-how to the Soviet Union for the production of oil-well drill bits. U.S. Export Weekly (BNA), No. 336, A-4 (Dec. 9, 1980).

213. See Right to Export, supra note 6, at 273.

214. 22 U.S.C. §§ 2776(c); 2778(b).

215. 50 U.S.C. app. §§ 2403(c); 2405(b); 2405(d); 2405(c).

216. The term “defense article” includes:

a) Any weapon, weapons system, munition, aircraft, vessel, boat or other implement of war;

b) any property, installation, commodity, material, equipment, supply, or goods used for the purposes of making military sales;

c) any machinery, facility, tool, material, supply or other item necessary for the manufacture, production, processing, repair, servicing, storage, construction, transportation, operation, or use of any article listed in this paragraph; and

d) any component or part of any article listed in this paragraph.

22 U.S.C.A. § 2794(3). “Defense services” include any service, test, inspection, repair, training, publication, technical or other assistance, or defense information, used for the purposes of making military sales. 22 U.S.C.A. § 2794(4).

217. The term “major defense equipment” means any item of significant combat equipment on the U.S. Munitions List having a nonrecurring research and development cost of more than $50 million or a total production cost of more than $250 million. 22 U.S.C.A. § 2794(b).

218. 22 U.S.C.A. § 2776(c).

219. Id.
information. To the extent specified in such a request, and in consultation with the Secretary of Defense, the President must set forth the capabilities of the export items, an estimate of the number of U.S. personnel who will travel to a foreign country in connection with the sale of the export items, and an analysis of the arms control impact of the sale. However, this reporting requirement fails to serve as an effective restraint on executive discretion in the area of technological exports. This reporting requirement is for informational purposes only; it does not give Congress a veto power over the proposed export.

Second, Congress imposed a limitation on the ability of exporters to enter into high-value commercial sales. Specifically, the Arms Export Control Act provides that exporters may not receive licenses for the export of any major defense equipment sold under a contract of $35 million or more. Congress enacted this limitation in order to subject the sale of significant amounts of major combat equipment to the more rigorous supervision and control system outlined for Foreign Military Sales. The result of the limitation is that all sales of major defense equipment valued at $35 million or more must go through the FMS program and private sellers cannot deal directly with foreign governments in such instances. By these limitation provisions, Congress maintains some supervision over commercial exports, although the executive branch retains primary control in this area.

The EAA also contains provisions that purport to limit executive discretion. One substantive limitation on executive authority is a general limitation based on

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220. Id.
221. Id. The policy of the United States is to encourage arms control and discourage arms races. 22 U.S.C. § 2751. Thus, the State Department analyzes sales of munitions in terms of their impact on these policy goals. A significant reduction in U.S. arms exports is likely to contribute meaningfully to world arms control. For example, on May 19, 1977, President Carter indicated that because of the tremendous volume of arms sold by the United States (as of May 19, 1977, the U.S. accounted for over half of the total $20 billion in world arms sales), a policy to restrain U.S. arms transfers was necessary to encourage world arms control. 13 Weekly Comp. Pres. Doc. 756 (1977).
222. 22 U.S.C. § 2776(c). The conference committee rejected the Senate version of the AECA which would have granted Congress a thirty day review period, during which it could reject any proposed license for the export of defense equipment valued at $7 million or more. See H.R. Conf. Rep. No. 1546, 95th Cong., 2d Sess. 38-40 (1978).
224. 22 U.S.C. § 2778(b). This prohibition does not apply to members of the North Atlantic Treaty Organization, Australia, Japan or New Zealand. Id.
225. 22 U.S.C. § 2778(b). This prohibition does not apply to members of the North Atlantic Treaty Organization, Australia, Japan or New Zealand. Id.
227. Sherzer, supra note 45, at 556.
229. See text accompanying notes 113-33 supra.
foreign availability. The President may not impose export controls for foreign policy or national security purposes on items that he determines to be available without restriction in significant quantities, and of comparable quality from foreign sources. The effect of this provision is questionable because an exception to this limitation allows the President to impose controls if he finds adequate evidence demonstrating that the absence of such controls would prove detrimental to U.S. foreign policy or national security. The legislative history of the EAA shows that this exception allows the President to impose export controls despite foreign availability. However, if the President implements the exception, he must initiate negotiations with other countries to try and remove the foreign availability.233

Congress further attempted to limit executive authority by providing a list of factors that the President must consider before imposing any foreign policy export control. The President must consider (1) the probability that the controls will achieve the intended foreign policy purpose; (2) the compatibility of the proposed control with the foreign policy objectives of the United States and with overall U.S. policy toward the proposed target country; (3) the reaction of other countries to the proposed control; (4) the likely effects of the proposed control on the export performance of the United States, on the competitive position of the United States in the international economy, on the international reputation of the United States as a supplier of goods and technology and on individual American companies and their employees and communities; (5) the ability of the United States to enforce the proposed controls effectively; and (6) the foreign policy consequences of not imposing controls. These factors fail to serve as effective restraints on executive discretion. The Act requires the President only to consider the factors; they are not mandatory criteria that must be met. After the President considers these factors, he is free to disregard any of them.

Another provision in the EAA requires the President to determine, prior to imposing export controls, that "reasonable efforts have been made to achieve the purposes of the controls through negotiations or other alternative means."
However, this requirement is an empty one because the EAA allows the President, in a report submitted to Congress after the imposition of a control, to give reasons for not having attempted negotiation or other alternative means.\(^\text{238}\)

The provisions described show that Congress, while purporting to limit executive control on commercial exports, has actually protected executive discretion.\(^\text{239}\) In addition, as noted earlier, Congress has authorized the executive branch to define technical data for purposes of export regulation. Under this authority, the President and the executive departments have adopted broad definitions of "technical data." The Van Hee and Edler decisions provided support for these broad definitions and bolstered the ability of the executive branch to maintain discretion in this area.

VI. CONCLUSION

The Arms Export Control Act of 1976 and the Export Administration Act of 1979 restrict the flow of technological exports from the United States. The history of these Acts indicates that restrictions are appropriate because of the U.S. interest in protecting national security and furthering foreign policy objectives. To achieve these objectives, Congress has allowed the State and Commerce Departments to use considerable discretion in defining and regulating technical data. The limited case law in the area evidences the Judiciary's deference to the executive branch in matters of national security or foreign policy. A court has yet to delineate the boundaries of first amendment protection in the area of technological exports. For these reasons, the State and Commerce Departments are able to maintain strict controls on exports of technology.

American companies have strongly criticized the scope and application of these export controls. Private exporters correctly claim that restrictions on technological exports interfere with international communication and cause economic losses for American industries. Congress has reacted to these complaints by providing safeguards in the AECA of 1976 and the EAA of 1979 which take into account the likely effects of proposed controls on American companies.

Even with these safeguards, the executive branch maintains broad discretion over technological exports. Private industry will most likely continue to criticize the scope and application of controls on technological exports.\(^\text{240}\) The private sector, however, must comprehend that decisions to control exports of technology are not a matter of pure economics. Selling technology reflects a political decision made by the U.S. government to confer or withhold an advantage upon

\(^{238}\) 50 U.S.C. app. § 2405(e)(2).

\(^{239}\) See Abbot, supra note 140, at 873.

\(^{240}\) See U.S. Export Weekly (BNA), No. 359, C-2 (May 26, 1981).
a foreign nation in light of foreign policy and national security objectives.\textsuperscript{241} Decisions of such a political nature are bound to create uncertainty for private industry, but significant technology transfer decisions should be made by those responsible for our national interests, and not by those intended to maximize profits.\textsuperscript{242}

\textit{Patrick J. Monahan}

\textsuperscript{241} See Abbot, supra note 140, at 873.
\textsuperscript{242} Id.; see Right to Export, supra note 6, at 297-99.