EXPORT LICENSING OF ADVANCED TECHNOLOGY: A REVIEW

HEARINGS

BEFORE THE

SUBCOMMITTEE ON INTERNATIONAL TRADE AND COMMERCE

OF THE

COMMITTEE ON INTERNATIONAL RELATIONS HOUSE OF REPRESENTATIVES

NINETY-FOURTH CONGRESS

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SUBCOMMITTEE CHAIRMAN'S PREFACE

The Export Administration Act of 1969 states in section 3(1) that

> It is the policy of the United States both (A) to encourage trade with all countries with which we have diplomatic or trading relations, except those countries with which such trade has been determined by the President to be against the national interest, and (B) to restrict the export of goods and technology which would make a significant contribution to the military potential of any other nation or nations which would prove detrimental to the national security of the United States.

The responsibility for balancing these two considerations of export promotion and export control rests with the Department of Commerce and is carried out principally through its Office of Export Administration (OEA) in cooperation with other interested Government agencies. By law, almost all exports from the United States must be licensed. Most exports are permitted under a blanket authority called a "general license" which does not require specific application for each proposed export. In some cases, however, specific "validated licenses" are required for each export. Validated licenses are most commonly required for the export of advanced technology to the Communist countries. It is such exports which pose the most vexing problems of balancing our desire to promote trade in the interest of strengthening our domestic economy with our desire to control exports in the interest of protecting our national security.

With these problems in mind, the Subcommittee on International Trade and Commerce held five hearings in March and April 1976, on "Export Licensing of Advanced Technology," designed to assess the adequacy of the export-licensing process.[1] These hearings were intended to preface and supplement subsequent consideration by the Committee on International Relations of the extension and possible amendment of the Export Administration Act, which is scheduled to expire on September 30, 1976. It is the purpose of this preface to summarize the major themes of the hearings, to draw some conclusions about the adequacy of the export-licensing process, and to suggest possible remedies. I hope this document will prove useful to the members of the Committee on International Relations in their deliberations, as well as to others interested in export administration.

The subcommittee finds that, most of the time, the licensing system works routinely, effectively, and without conflict. Furthermore, where

[1] The fifth hearing, held on April 12, was a closed hearing with witnesses from the intelligence community. It will be published separately once it is declassified.

there are problems, the Bureau of East-West Trade, under the leadership of Deputy Assistant Secretary of Commerce Arthur T. Downey, has worked conscientiously to improve the system and fulfill the intent of the Export Administration Act. However, the subcommittee finds continuing cause for serious concern as to whether the export-licensing process achieves its national security goals with minimum injurious effect on business and the economy.

The hearings have suggested five interrelated areas of concern where remedial action by Congress and the executive branch might be possible and helpful. First, many export-licensing decisions are so inherently complex that the Office of Export Administration should be better equipped, in terms of manpower, to deal with them. Second, these complex decisions could be more easily handled if both Congress and the Executive provided clearer criteria to guide them. Third, the licensing process itself is cumbersome and unwieldy, and needs to be rationalized if sound decisions are to be reached in a timely fashion. Fourth, the multilateral export control system known as COCOM is both "leaky," in the words of one witness, and unfair in its impact on American business, and needs to be revamped. Fifth, the export control system is unnecessarily secretive, to the detriment of both American business and congressional oversight.

Complexity of the Problem

The inherent difficulty of the problem can be illustrated in four ways. First, advanced technology is complex by nature. Export-licensing decisions require a sophisticated knowledge of the capabilities of the technologies in question. Second, advanced technology has multiple sources. The United States is often not the only potential supplier, and the likelihood that the customer will simply purchase the technology elsewhere if he cannot secure it in the United States must be taken into account in the licensing decision. Third, advanced technology is typically "dual-use" technology. It can be used for both civilian and military purposes. This necessitates a sophisticated assessment of the probable "end use" of the technology in question, and of the probable consequences for the recipient country's military capabilities and our national security of diversion from the anticipated end use. Fourth, technology flows through a variety of channels, many of which are not currently subject to the export-licensing process. The most frequently cited example in the hearings were the numerous commercial and technological exchange agreements currently in existence between the Communist countries and American agencies and companies, which are not monitored by OEA.

Considerable sentiment is expressed by both defenders and critics of the administration that OEA is simply not equipped with enough manpower of sufficient technical competence to deal adequately with these assessments of the capabilities of the technology, the capabilities of foreign competitors, and the capabilities and intentions of the recipient country, and to do so in a way which allows for timely licensing decisions. Industry and other witnesses argued forcefully in the hearings that their inability to secure quick permission from the bureaucracy to make sales for which foreign companies were competing has

resulted in a loss of business to them and in a loss to the United States of its proper share of East-West trade. Were we to require OEA to monitor technology exchange agreements as well, its personnel would be even more inadequate.

Lack of Adequate Criteria

Given the complexity of the problem, it is of paramount importance that there be clear criteria to guide export-licensing decisions. Two of the subcommittee's hearings brought out the lack of such criteria. Witnesses stressed the lack of adequate policy guidelines for making the tradeoff between export expansion and export control. The legislative language in this area is vague and sometimes contradictory, reflecting our disagreements, and changing views in our society over time, about what our general policy toward the Communist nations should be. For example, the so-called "Jackson amendment" of 1974 to the Export Administration Act of 1969 is more restrictive than the act as a whole, as is the "Battle Act" of 1950, which is cited by the administration as authority to enter into multilateral export control agreements. The ambiguity of the statutory language is in turn reflected in the inability of the administration to develop adequate policy criteria to guide the export-licensing bureaucracy in making day-to-day decisions.

Witnesses also stressed the lack of technical guidelines—of criteria for determining what technology should be controlled for export on national security grounds. They argued that too much time is spent controlling the export of less important end products, to the detriment of the control of vitally important know-how. This contributes to the length of the Commodity Control List and to the inefficiencies of the process. Tighter criteria would result in a shorter list, better control of the items on it, and less paperwork for industry. Better policy and technical guidelines should also help resolve the current dilemma over how liberally to grant temporary export licenses for the display of controlled technology at trade fairs and trade exhibits abroad.

Unwieldiness of the Export-Licensing Process

Recognizing the variety of considerations that must be weighed in making export-licensing decisions, Congress has directed the Department of Commerce, the lead agency in the process, to work in full consultation and cooperation with other interested agencies. However, in the absence of an overarching set of licensing criteria, each agency brings its own concerns to the table. Although Congress has explicitly given a veto over the approval of export license applications only to the Department of Defense, in practice it appears that any interested agency can withhold approval of an application. The result is that a system which was designed to facilitate the balancing of diplomatic, commercial, and military considerations in export-licensing decisions has turned into a system based on unanimity in which negative decisions are in fact made by default.

The intent of Congress is that licensing decisions be made within 90 days. If that deadline cannot be met, the Secretary of Commerce is

to inform the applicant of the reasons for the delay and give an estimate of when the decision will be made. The Department can show that only a minuscule percentage of the total number of applications require more than 90 days. However, given the fact that some product lines are more troublesome than others, some industries can show that very significant proportions of their license applications take more than 90 days—some as much as a year—to wend their way through the bureaucracy. It is even charged that applications to export previously approved products to previously approved destinations for previously approved end uses sometimes take a long time to decide, and in any case require a vast amount of repetitive paperwork each time. Meanwhile, business is lost, late penalties are paid, and reputations are damaged. It also appears that the so-called "90-day notices" are so vague that the applicants are not really meaningfully informed of the circumstances causing the delay.

Problem of Multilateral Export Controls

At the outbreak of the cold war, in recognition of the fact that the United States alone could not control the flow of technology to the Communist countries, an informal Coordinating Committee (COCOM) was set up by the NATO countries (minus Iceland, plus Japan) to administer a common export control policy. Three fundamental issues associated with the existence of COCOM arose at the hearings.

First is the problem again of efficiency. The unwieldiness of the domestic export-licensing process is paralleled—and exacerbated—at the international level. Only with the unanimous consent of the 15 participating governments can an item on the COCOM list be exported to a Communist country. The list is periodically revised and updated by a long and arduous review process which last time around consumed 18 months. No sooner is it promulgated than requests for "exceptions" to it begin pouring in; there were 1,798 such requests in 1975. In the United States the bureaucracy which handles our participation in COCOM is headed by the Department of State and is largely separate from the licensing bureaucracy headed by Commerce. The weakness of this system is matched only by the difficulty of determining how to devise a better one.

Second, since COCOM is not a treaty, each participating government applies the COCOM controls in its own way. The subcommittee was unable to secure conclusive documentation of the degree of consistency in the application of the controls. Allegations, however, were rife that the participating governments interpret the controls differently, enforce them with varying degrees of rigor, and have different provisions for controlling the reexport of their exports to unauthorized destinations. Stricter countries, such as the United States, lose business to competitors in those countries less strict. The United States maintains the largest unilateral control list over and above the COCOM list, and critics charge that this causes more business to be lost to COCOM competitors.

Third, serious question was raised at the hearings as to whether COCOM, which was established a generation ago at the height of the

cold war, provides an adequate institutional basis for a modern multilateral export control system. Non-COCOM countries such as Switzerland and Sweden have become competitive with the COCOM countries in advanced technology, but are not subject to COCOM controls. Furthermore, the political configuration of the world has changed sharply since COCOM was established, raising question as to whether the designation of countries as "Communist" is any longer an adequate basis for controls on exports of advanced technology. Subtle variations in our relations with both "Communist" and "free-world" nations suggest that the current system of uniform export controls for nations within each group may no longer be appropriate.

Problems of Secrecy, Disclosure, and Access

Section 7(c) of the Export Administration Act provides that

> no department, agency, or official exercising any functions under this Act shall publish or disclose information obtained hereunder which is deemed confidential or with reference to which a request for confidential treatment is made by the person furnishing such information, unless the head of such department or agency determines that the withholding thereof is contrary to the national interest.

The Department of Commerce has construed this provision to mean that no particulars about any license application or the disposition thereof can be provided to Congress, industry, or anyone else. In addition to proprietary information withheld under this provision, other information is withheld on national security grounds. The result is a system virtually closed to effective congressional oversight. Particular license applications are secret. Factors entering into particular licensing decisions are secret. Estimates of the effects of export controls on the military capabilities of other countries are secret. COCOM agreements, procedures, deliberations—even the COCOM list itself—are secret. It is difficult to see how progress can be made on the other problems unless the system is opened up for scrutiny.

The problem of secrecy lies at the root of some industry complaints about the process. For example, Congress in 1972 directed the Secretary of Commerce to establish a series of Industry-Government Technical Advisory Committees to facilitate communication between the two sectors. While the subcommittee's hearings provide no reason to doubt the Department's good faith in implementing this provision, industry is far from satisfied, particularly because it is not informed of whether its recommendations through the Technical Advisory Committees are accepted and, if not, why not. Industry itself demands substantial secrecy in commercial and business-government dealings. But both government and industry would seem better served by less secrecy in the export licensing process.

Conclusions

I must reemphasize at this point that the process works well most of the time, and that the Bureau of East-West Trade is making a

good-faith effort to make it work better. Nevertheless, all witnesses agree that serious problems remain. The purpose of the hearings, and of this preface, has been to identify those problems with a view to formulating possible remedies. It is not to detract in any way from the progress which has already been made on a most difficult—one is tempted to say intractable—problem.

In principle, the direction we must go seems rather clear, namely to increase the capacity of OEA to deal with these inherently complex decisions. We need to clarify and perhaps rethink the criteria governing the administration of national security exports. We need to rationalize the export-licensing process, dispensing with the informal unanimity rule and authorizing someone short of the President to make decisions. We need a modern multilateral export control system which takes account of the changes which have occurred in the world in the past 30 years. We need to lift the veil of secrecy enough to make the bureaucracy accountable for its decisions, but without violating national security and exposing trade secrets. And we need to do all that without exacerbating one aspect of the problem in our attempt to solve another. It is easy, for example, to think of "reforms" which would in fact increase the complexity of the process and prolong the delays.

In practice, it is exceedingly difficult to know just how to move in those directions—how to mandate changes which are not counterproductive. Some of the desired changes could no doubt be more effectively made by the exercise of administrative discretion than by legislation. However, in order to stimulate informed debate, the following legislative options seem worth considering:

(1) In the hearings, Deputy Assistant Secretary Downey enumerated several steps being taken to increase the capacity of OEA. As he recognizes, these go beyond mere addition of manpower. But more manpower is needed. If the resources at OEA's command were sufficiently strengthened, it might be advisable to direct OEA to monitor the flow of technology by all channels. In this connection, the committee might consider seeking to assert the authority periodically to authorize funds for OEA.

(2) It would be difficult and perhaps unwise for Congress legislatively to impose better technical guidelines for determining what technology should be controlled, although the subcommittee was favorably impressed by the guidelines proposed by the Defense Science Board witnesses. However, Congress could provide better policy guidelines. It could clarify the intent of section 3(1) of the act regarding how to make tradeoffs between export promotion and export control. And it could clarify its intent regarding the weight to be given to foreign availability by striking the foreign availability language in either section 4(b)(1) or section 4(b)(2).

(3) There is only one way to streamline the export-licensing process, and that is by authorizing, or directing the President to authorize, a single agency of the Government to exercise final responsibility for implementing the purposes of the act, and by making it clear that the provisions of the act for consultation and cooperation by other agencies are not meant to deny the authority of that agency to act as the

final arbiter of agency views in the interest of reaching prompt and clear export-licensing decisions.

(4) The matter of reforming the multilateral control mechanism would seem to require further study before legislative options can be considered.

(5) The primary need with regard to the secrecy problem is to amend section 7(c) of the act to assure that the Congress shall have right of access to any information it requires to fulfill its oversight responsibilities.

JONATHAN B. BINGHAM,
Chairman, Subcommittee on International Trade and Commerce.

EXPORT LICENSING OF ADVANCED TECHNOLOGY: A REVIEW

THURSDAY, MARCH 11, 1976

HOUSE OF REPRESENTATIVES,
COMMITTEE ON INTERNATIONAL RELATIONS,
SUBCOMMITTEE ON INTERNATIONAL TRADE AND COMMERCE,
Washington, D.C.

The subcommittee met at 2:20 p.m. in room 2255, Rayburn House Office Building, Hon. Jonathan B. Bingham (chairman of the subcommittee) presiding.

Mr. BINGHAM. The Subcommittee on International Trade and Commerce will be in order.

I would like to apologize to our witnesses for being delayed in starting. We were having a meeting with the Canadian Parliamentarians. I know that the gentleman from Ohio and the gentleman from Pennsylvania are on the way, and I will start the meeting with a brief statement.

The Subcommittee on International Trade and Commerce today begins a series of hearings reviewing U.S. export control procedures and policies with respect to so-called "advanced technology." These hearings, as well as a later series the subcommittee plans on export promotion programs, are preliminary to—and hopefully will supplement—deliberations by the full International Relations Committee on the Export Administration Act and its proposed extension beyond the present termination date of September 30, 1976.

The hearings of the subcommittee begins today and will continue on March 15, 24, and 30. Executive branch witnesses will appear on the 15th. Industry and other public witnesses on the 24th.

NATIONAL SECURITY CONTROLS

With limited exceptions, the Export Administration Act and the Mutual Defense Assistance Control Act of 1951 (the so-called "Battle Act") are the basic statutory authorities for regulating U.S. exports for national security, foreign policy and short-supply purposes. Controls on "advanced technology" are primarily national security controls.

National security controls have a long history dating back at least to the beginnings of the Cold War. From that time until about 1969, controls over exports to nations about which we had national security concerns—primarily the Communist nations of East Europe and Asia—were extremely strict. With the coming of detente and the

extensive revision in 1969 of the export control laws, we entered a period of increased trade with these nations under somewhat more relaxed control procedures limited primarily to "advanced technology."

We have now had more than 5 years experience with these procedures. While the basic intent of détente with respect to trade has been realized in the form of expanded trade with Eastern Europe, the Soviet Union and the People's Republic of China, problems and conflict have persisted in implementing remaining controls on this trade. We now have the benefit of numerous studies—both Government and independent—of these problems and conflicts, and their consequences for the American economy and American foreign policy. The purpose of these hearings is to review some of these findings, as well as the export control procedures and problems themselves in hopes of translating them into remedial legislative action.

Our witnesses today are Mr. J. Kenneth Fasick, Director of the International Division of the General Accounting Office, Prof. Graham T. Allison, chairman of the Public Policy Program and associate dean of the John F. Kennedy School of Government, Harvard University, and Dr. John P. Hardt, senior economist with the Congressional Research Service specializing in East-West Trade.

I think if all three of you gentlemen will take the witness table, we would like to hear your statements and then proceed to the questioning of all three of you, if that is agreeable. Would you come forward, then, and we will start with Mr. Fasick. You are most welcome to the subcommittee, and we are very grateful to you for giving us the benefit of your experience and your views.

Mr. Fasick.

STATEMENT OF J. KENNETH FASICK, DIRECTOR, INTERNATIONAL DIVISION, GENERAL ACCOUNTING OFFICE

1. Present duties and responsibilities: Mr. Fasick, as the Director of the International Division, is responsible for the overall direction of the accounting, auditing, and investigative work of the General Accounting Office with respect to all U.S. Government programs and activities conducted in foreign countries and Hawaii. These responsibilities cover military and civil activities of the various Government agencies that are responsible for the administration of U.S. programs in foreign countries. The major agencies, programs, and functions involved are the Department of State and its related international activities; agencies of the Departments of Defense, Commerce and Treasury; and any other Government programs or functions having an international character.

2. Schools: Indiana University; University of Maryland; and Harvard University Graduate School of Business Administration (Advanced Management Program).

3. Career highlights: Mr. Fasick has had broad and diversified experience in accounting and auditing the agencies of the Federal Government since joining the General Accounting Office in January 1954. Prior to joining the General Accounting Office, he was associated with the public accounting firm of Price Waterhouse and Company. He is a Certified Public Accountant in the District of Columbia and served in the U.S. Army from 1942 through 1945.

Mr. Fasick assumed the position of Director of the Logistics and Communications Division on April 3, 1972. In this position he was responsible for the overall direction of the accounting, auditing, and investigative work of the General Accounting Office with respect to materiel requirements, supply management, maintenance, transportation, warehousing, communications, facilities acquisition, facilities management, military housing, military preparedness and

records management. These responsibilities primarily involved the Department of Defense, General Services Administration, Office of Telecommunications Management, and the Government Printing Office. He was responsible for conducting Government-wide reviews, involving all Federal agencies, of functional areas related to logistics and communications.

Mr. Fasick assumed his present position on July 1, 1973.

Mr. FASICK. Mr. Chairman, we welcome the opportunity to appear before the committee today to discuss some of our observations on export licensing of advanced technology. With me, behind me, are two of my associates, Mr. Richard Price and Mr. Arthur Shantz, who have been involved in the detailed work and traveled around the world in connection with the report which our testimony is based on. This was a report we issued several weeks ago on the "Government's Role in East-West Trade—Problems and Issues." [1]

This report included certain problems and findings associated with administering and monitoring exports to and technology exchanges with Communist countries. Although this work centered on trade with Communist countries, many of these conclusions and recommendations apply to such exports to all countries.

EXPORT CONTROL REGULATIONS

As you pointed out, Commerce has licensing jurisdiction over all export commodities and unclassified technical data, except for certain specialized items under the jurisdiction of other Government agencies. Commerce's export licensing controls apply to: (1) direct exports of commodities and technical data; (2) reexports of U.S. originated commodities and technical data from one foreign country to another; (3) U.S.-originated parts and components used in a foreign country to manufacture a foreign end product for export; and (4) in some instances, the foreign-produced direct product of U.S.-originated technical data. Controls extend to exports of U.S. subsidiaries, affiliates or branches in foreign countries.

The United States also partcipates as a member in the Multinational Coordination Committee [COCOM] system for controlling strategic exports. COCOM, whose membership consists of NATO countries—except Iceland—and Japan, was created in 1949 to effect a common Western embargo on shipments of strategic goods to Communist countries. It exists with no basis in any treaty or international agreement.

Various organizations share the responsibility for administering and enforcing current export controls. Controls required by the Export Administration Act are administered by Commerce's Office of Export Administration and the Interagency Advisory Committee on Export Policy chaired by Commerce. Controls required by the Battle Act, Mutual Defense Assistance Control Act, are administered through COCOM. U.S. participation in COCOM is administered by State's Office of East-West Trade and the Interagency Economic Defense Advisory Committee chaired by State.

Both interagency committees consist of representatives from Commerce, State, Defense, Treasury, the Nuclear Regulatory Commission and the Central Intelligence Agency.

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[1] Summary Statement of Report to the Congress by the Comptroller General of the United States, February 4, 1976.

Mr. BIESTER. Mr. Chairman.

Mr. BINGHAM. Mr. Biester.

Mr. BIESTER. At this point, I wonder if I might ask what the average time for decision might be in passing through that.

Mr. FASICK. That is one of the problems; there are sometimes lengthy delays on many cases.

Mr. BIESTER. All right.

OVERVIEW

Mr. FASICK. The major observation of our report is that the implementation of export control policy and procedures has resulted in a continuous series of ad hoc decisions and fragmented consideration of strategic export controls. We noted an absence of agreement on criteria and standards for determining which goods and technology should be controlled and whether foreign policy, commercial or defense considerations should dominate export control policy. We concluded that lack of agreement reflects fundamental interagency and international differences regarding licensing standards and procedures to be followed in controlling exports.

We believe there are several reasons why present export control policy and procedures are plagued with problems. I will briefly identify these reasons and then discuss them in slightly more detail in the rest of my testimony.

First: Present export control efforts are predominantly directed at national security concerns regarding trade with Communist countries. However, there is limited monitoring and assessment of technology exports for strategic or other national interests.

Second: Current legislation provides no clear-cut guidance or policy on criteria or standards to be used in controlling exports. The legislation contains inconsistent guidance, provides for widely delegated responsibility and establishes broad criteria for executive implementation.

Third: Private sector marketing and business practices facilitate the transfer of strategic technology without Government review and approval.

Fourth: Executive branch administration of export controls is inadequately organized and staffed to perform the job.

Fifth: The interdepartmental export control coordinating committees are now functioning in a policymaking rather than advisory role. Committee procedures are time consuming, duplicative and reflective of parochial departmental interests.

Sixth: The altered international environment has limited the U.S. ability to maintain multilateral export controls.

Now I would like to discuss in detail these matters I mentioned.

LIMITED MONITORING OF TECHNOLOGY EXPORTS AND ASSESSEMENT OF IMPACT

The present export controls predominantly involve national security concerns and are directed to monitoring trade with Communist countries. Access to technological know-how is often of greater strategic significance than is possession of the products of the technology.

Effective regulation of technology exports is probably the most complex export control problem because of the difficulties of pinpointing areas of technology which should be controlled and of establishing effective controls.

There is limited monitoring and assessment of technology exports for strategic or other national interests. Existing control regulations for the transfer of technology are ineffective for a variety of reasons. Most important is the need to improve executive branch understanding of the many ways technology can be transferred and the impacts of these transfers on national security and domestic economy.

Existing regulations exempt educational data, patent information and information necessary to make a sales proposal from the requirements of obtaining a validated export license. Thus, exporters can interpret the regulations and determine whether or not technology can be transferred without government review and approval. For example, a recent book noted an American firm's technology for an air traffic control system was transferred to the Soviet Union during negotiations for a sales agreement. The agreement with the United States was never consummated.

The Technical Data Division of Commerce's Office of Export Administration is the principal organization responsible for monitoring technology exports. This Division has only three professional employees and the Division Director considers technology controls unenforceable without private sector cooperation.

The basis for existing technology controls is the assumption that business would not voluntarily disclose marketable technology and that technology which is marketable is also proprietary and thus would not be exported without application for a validated license. However, business practices contradict this assumption. For example, an American firm proposed to give an East European country state-of-the-art technology for manufacturing advanced semiconductors in order to sell the machinery for the manufacturing process.

Executives of computer companies and trade analysts have called attention to Soviet contracting practices for competitive rebidding of projects in which detailed specifications of various firms are compared against each other for an optimal mix of the technology involved.

Although the Government is directly involved with technology development through such efforts as research and development activities, it has no mechanism nor any clearly defined authority for monitoring the export of technology to assess its impact on such economic national interests as employment, balance of trade, et cetera. Even for strategic reasons, no reporting system exists through which the government would be informed of the many technology transfers private industry makes. For example, the executive branch has no authority to require the submission of private sector-Communist government technology exchange agreements for review and approval.

In its reply to our report, the East-West Foreign Trade Board stated its belief that the executive branch has been successful in applying export control laws to prevent technology transfers to

Communist countries when such technology would likely be applied to enhance military capabilities. However, the Board's reply also stated that there was no doubt some technology has entered the Soviet Union and Eastern Europe in violation of U.S. and COCOM export controls and enforcement procedures.

NEED FOR CHANGES IN LEGISLATION

The legislation which provides authority for controlling exports to Communist countries does not provide clear guidance or standards to be used in controlling exports for national security reasons. Recent amendments encourage the promotion of trade which also have supported the executive branch's shift of export policy emphasis from controlling trade with Communist countries to promoting it. Further, foreign policy considerations and diplomatic initiatives since 1969, not explicit national security considerations, have resulted in continued relaxation of national security export controls.

The Mutual Defense Assistance Control Act of 1951, the Battle Act, was designed to extend U.S. export controls to a multilateral control system. It authorized an administrator, and this function was exercised by the Secretary of State. Over the years State has liberally interpreted the Battle Act in deference to diplomatic necessity. For example, in 1958 with COCOM, State agreed to remove all commodities under one title of the international embargo list and to permit the export of these commodities if the export transactions were reported, while at the same time agreeing to prohibit all military exports.

This permitted multilateral liberalization of trade with Communist countries without risking congressional debate over allied military sales to these countries. Instead of the international export control lists reflecting U.S.-initiated controls as they once did and were intended by the Battle Act, U.S. domestic export controls are now modified in accordance with international initiated controls.

PRIVATE SECTOR MARKETING AND BUSINESS PRACTICES

American businesses have exported an extensive amount of strategic technology to firms in other advanced Western nations. Although existing control regulations permit these technology exports, some of this exported technology has repeatedly been approved by COCOM for reexport to Communist countries where comparable American technology previously was not directly exportable. For example, the United States opposed at least three foreign COCOM exception cases, these are cases where foreign countries request permission to export embargoed items, for exporting semiconductor manufacturing technology to an East European country. This opposition resulted in ultimatums to the U.S. Government to approve the exception cases or the foreign country would withdraw from COCOM. Consequently, Presidential decisions were made approving two of the exception cases and one case was successfully opposed. Since the technology for which COCOM export approval was sought in all cases was originally licensed by U.S. companies, it is clear that existing regulations limiting technology exports only to

Communist countries do not insure that such exports to other countries will not "seep." This practice also increases the level of exportable technology if U.S. firms are allowed to compete for market position in these countries with other Western firms.

ORGANIZATIONS ADMINISTERING CONTROLS ARE OFTEN INADEQUATELY EQUIPPED

Commerce's Office of Export Administration, the principal organization responsible for administering export controls, has significant limitations on its effectiveness. Its personnel has been reduced from 197 to 141 since 1971 despite its increased responsibilities. OEA presently has too few professionals to review the increasingly complex technical parameters on permissible exports to Communist countries.

Trade promotional activities of Commerce's Bureau of East-West Trade and the Department of State have created pressure on the Office to approve exhibits or exports of controlled commodities to Communist countries. For example, approval was given for exhibiting controlled equipment at the U.S. Machine Tool Show in Moscow in April 1974. This pressure for approval weakens the asserted general rule that Commerce should not license for exhibition what it cannot unilaterally license to sell.

Restrictions on the Office's compliance activities have necessitated using Department of State personnel for foreign and Communist country compliance efforts and Central Intelligence Agency personnel for diversion-related information. However, compliance activities of the Office of East-West Trade in the Department of State have ceased and export control work of specifically assigned personnel overseas has been reduced. State's positions for this overseas compliance work have also been reduced.

INTERDEPARTMENTAL EXPORT CONTROL COMMITTEES

Requests for exporting controlled items must be decided on a case-by-case basis because there is no basic interagency agreement on criteria for export controls nor for whether diplomatic, commercial, or strategic considerations should dominate trade policy with Communist countries. There is also a reluctance to publish the characteristics of approved export licenses for particular commodity exports because of the fear of developing a precedent which would prevent denial of similar cases under different conditions.

Commerce's licensing procedures are slow, awkward, and needlessly dependent on unaccountable practices such as a requirement for unanimous approval and arbitrary, unlimited and unstructured discussions in its interagency advisory committee. Also without a rule of precedent, because of interagency conflict over export control policy there is no assurance that even hard-won interdepartmental consensus on particular export control cases is not undone by the handling of other similar cases.

The slight difference in the nature of activities does not justify the existence of two separate export control review committees chaired by two different executive departments. A more balanced

review of national security complications of export control cases is more likely under the Commerce committee than under the State committee where diplomatic considerations are dominant. In addition, the State committee principally reviews foreign exception cases which are also reviewed by the Commerce committee because of the need for reexport approval of U.S.-controlled components or technology. Thus, the Commerce committee should assume the responsibility of the State committee and improve its operating procedures to consider export control cases in a timely manner. This improvement can principally be made by changing the requirement for unanimous to majority approval.

LIMITED ABILITY TO MAINTAIN A MULTILATERAL CONTROL STANDARD

Most U.S. officials concerned with export controls have little confidence in COCOM as a strategic control mechanism. They believe the United States must rely on its own export control regulations to insure compliance with national security interests. Thus, the U.S. role in COCOM has been a restraining one.

There is a pronounced feeling among some COCOM members that the United States uses its approval of strategic export controls to further U.S. commercial interests. This belief has little regard for inherent national security concerns about controlled exports. These countries see Soviet or Chinese military power as largely unrelated to singular or aggregated Western imports. Instead, they feel that the United States first restrained the development of their Eastern markets during the cold war when it could not compete and later gained commercial advantage in these markets by exporting more sophisticated technology while reserving its veto power over comparable COCOM exports.

These assertions, however self-serving or self-evident they may be, have not been effectively rebutted by U.S. behavior in COCOM. For example, the United States has exported high-technology items to Communist countries while opposing comparable exports to the same countries by COCOM partners. Such actions are detrimental to maintaining a multilateral consensus on export controls.

In addition, the United States is traditionally tardy in dealing with exception requests by other COCOM members. Yet, since 1972, the United States has greatly increased its number of exception requests in pursuit of diplomatic initiatives and expanded U.S. trade with Communist countries. For example, during August 1974, COCOM approved 31 U.S. exception requests while the U.S. representative to COCOM was forced to postpone taking a U.S. position on 25 requests by other members for lack of long-overdue instructions.

SUMMARY

Our East-West trade report made a series of recommendations to the executive branch which were intended to improve the administration of national and international export controls. Specifically we believe: (1) the role of the Department of Commerce should be expanded; (2) approval for COCOM exception cases should be more carefully assessed against U.S. national security interests; and (3)

the understanding of international technology transfers should be increased to permit assessment of their impacts on security and other national interests.

Our report also identified several important matters for consideration by the Congress. The administration of export controls and technology exchanges has important implications for many national interests. This subcommittee's efforts to examine the need for amending the Export Administration Act should include consideration of national policy goals for relationships with Communist countries. Such consideration requires coordinated attention by various congressional groups involved with specific political, economic or strategic issues of this relationship. The formation of export control policy and its relationship to national goals also requires the joint effort of the legislative and executive branches of our Government. The responsibilities of private interests in the policy formation and implementation process should be considered as well as the Government's need for information about private sector activities.

Mr. Chairman, this completes my statement. We would be pleased to respond to any questions you might have.

Mr. BINGHAM. Thank you very much, Mr. Fasick. I think we might suspend now. We have a vote on the floor and we will recess for about 10 minutes.

[At this point a brief recess was taken.]

Mr. BINGHAM. The subcommittee will resume its session.

We will now hear from Professor Allison.

STATEMENT OF GRAHAM T. ALLISON, PROFESSOR OF POLITICS AND ASSOCIATE DEAN, JOHN F. KENNEDY SCHOOL OF GOVERNMENT, HARVARD UNIVERSITY

Graham T. Allison, Professor of Politics, Harvard University, is Associate Dean of the John F. Kennedy School of Government and Chairman of the Public Policy Program. His teaching and writing concentrates in the areas of political analysis and American foreign policy. His major publications include *Essence of Decision: Explaining the Cuban Missile Crisis* and articles in FOREIGN AFFAIRS, FOREIGN POLICY and the AMERICAN POLITICAL SCIENCE REVIEW. He is a member of the Council on Foreign Relations, the Trilateral Commission, and the Foreign Affairs Task Force of the Democratic Advisory Committee. He served as Director of Defense and Arms Control Studies for the Murphy Commission, the Commission on the Organization of the Government for the Conduct of Foreign Policy, where he directed a study on controlling exports on national security grounds.

Mr. ALLISON. Mr. Chairman, it is my privilege to be able to testify today. I appear not as a representative of an organization or interest, nor indeed as an expert on matters of trade and commerce, or more specifically, on export controls. As a believer in the application of the truth in advertising criteria to other realms of disclosure, even including testimony at congressional hearings, let me state my qualifications, such as they are, for testifying before your committee today.

For approximately 1 year, ending in June 1975, I served as director of defense and arms control studies for the research program of the Commission on the Organization of the Government for the Conduct of Foreign Policy, known more generally as the Murphy

Commission, after its chairman, Robert D. Murphy. In that capacity, I directed approximately 25 case analyses of decisions and actions taken by the U.S. Government in the sphere of defense and arms control. One cluster of these cases focused on export controls, including some on national security controls, specifically.

A summary volume entitled "Controlling Exports on National Security Grounds" was prepared by Richard Huff, Robert E. Klitgaard and me. That study is the basis for my written statement today, and the subcommittee staff has a copy of that written study which I submitted for the record.[1]

Now, with your permission, Mr. Chairman, and given that time is getting on, maybe rather than reading the statement, the written statement I have given you today, I could try to summarize it more quickly.

Mr. BINGHAM. Please do.

FLAWS IN CURRENT EXPORT CONTROL SYSTEM

Mr. ALLISON. The crux of the argument, which I think is quite consistent with the argument Mr. Fasick has already presented is that the current policies and procedures for controlling exports are not effectively serving national interests or, more specifically, that current policies and procedures for controlling exports of advanced technology under the national security provisions of the Export Administration Act, the Battle Act, and related statutes, are not serving the broader interest of the country.

To put the point sharply, my argument is that current policies and procedures are not serving adequately U.S. national security interests, that they are not serving U.S. economic purposes, and that they are not serving U.S. diplomatic or political objectives. The question arises, whose interest might they be serving, and that is something that perhaps I may come to in the end. In short, and to put the matter provocatively, current policy and procedure in this area is mainly an anachronism, a vestige of an earlier period; policy and procedures were assembled in the 1950's for one set of purposes, but they have persisted largely unchanged, into another period for which they are not particularly relevant.

THE "SERPUKHOV COMPUTER CASE"

To make the argument more concrete, let me start with a case, one of the few examples that is available in the public record. One of the difficulties in discussing these issues, as I am sure you have discovered already, is that most of the material about particular examples in the licensing of advanced technology remains classified, and this inhibits public discussion.

An example which is available is the Serpukhov computer case, which I will summarize very briefly. In the early seventies the Soviet Union wanted to buy a CDC 6600 computer for their high-energy physics lab at Serpukhov. The civilian use of the machine was clear, the high-energy research to be carried out had no mili-

[1] The study referred to is available as part VII of vol. 4 of the Appendices to the Report of the Commission on the Organization of the Government for the Conduct of Foreign Policy (Washington, D.C.: U.S. Government Printing Office, 1976).

tary, indeed, perhaps no commercial application. American scientists were going to be participating in the project: similar physics labs in the United States used the same CDC 6600. The only question was whether the computer could have military uses or could be converted to military uses during off-hours.

When this arose in the interagency process that Mr. Fasick has described, it was decided that one could not fully guarantee that the computer would not at some point be used for some military purpose, and on that ground the license was denied.

As a consequence, the Russians went to the British and tried to buy two British machines which together provided the equivalent capability of the CDC 6600. This new case went up through COCOM. There the British made an exception request. When it came to the United States, Commerce and Defense opposed the granting of the license and the request was rejected. At that point, British Prime Minister Heath reopened the case at a political level and the U.S. Government was forced to do yet a further study of this issue to determine whether the British should be permitted to sell these two computers.

In the course of that study, the Office of Science and Technology got in the middle of the study and posed a central question which had not been posed in the rest of the process: namely, if the two computers that the British were proposing to sell to the Soviet Union were for some reason diverted, perhaps at night and perhaps on some other occasions, to military purposes, would that make any significant difference? That is, would the computers contribute significantly in any respect to Soviet military capabilities?

Once that question was posed the participants in the interagency study had to consider what capability these two British machines had that current Soviet computer capabilities did not have. And it was discovered that when five of the Soviet BESM-6 computers were joined together, they had essentially the capability of the two British machines that the Soviets were proposing to buy, and that there would be large numbers of these operating in the Soviet Union at the point that the two British machines came on line in the Soviet Union.

In those terms, then, the two machines looked like just a little more of what the Soviets were able to do with their own machines, and in that sense not all that different from trucks or wheat or other things that are generally sold to the Soviet Union, and the license was granted.

What is the conclusion of this story? I think it is that the current system doesn't do well by our national security objectives or our economic objectives, or indeed even our political and diplomatic objectives.

If I can put the point again somewhat extremely, as I do in this longer study which I have submitted to the committee, a careful study of the documentation in considering various licenses and exemption requests came to the following characterization of the behavior of the agencies involved:

The positions taken by each of the agencies appear almost a caricature: Defense officials vetoing any item they can get a handle on, if even to delay for a couple of years Communist acquisition of the technology, reflecting their

earlier commitment to economic warfare against Socialist states; State and the White House, especially in the Nixon period, prepared to make an exception for almost any item as long as it appears to contribute in some way to detente; Commerce generally making American firms' case that since the technology is going to be sold anyhow, the United States should at least reap some of the benefits from making the sale.

My written statement lays out the argument in three parts: (1), the faults of the current export control system; (2), some of the major sources of the problem; and (3), some general strategies for improving the process. Let me see if I can summarize the article briefly under each section.

CURRENT SYSTEM DOES NOT SERVE NATIONAL SECURITY

As to the flaws in the current export control system, I will make three points. The first point is that the system is not effectively serving U.S. national security objectives. The national security objectives in question are to delay Soviet acquisition of technologies that could contribute significantly to Soviet military capabilities.

For example, hardened or minicomputers which have what the computer people call ruggedization—that is, they are capable of withstanding shocks—are an important component of a nuclear warhead; they permit higher, and more reliable accuracy. Denying or delaying Soviet acquisition of rugged minicomputers is something that I think most Americans would agree is in the U.S. interest, to the extent that it is possible.

But the current system does not necessarily catch all of the items that might be of significant concern, that might contribute significantly to Soviet capabilities. This happens for a variety of reasons, in part having to do with the ambiguity about the classifications that face American companies who want to export items; in part because of the loose enforcement procedures; in part because of the long delays in processing license applications; in part because American firms know that foreign firms are in some instances selling the restrictive goods in any case; in part because both the classification scheme and the system permits a smart export license writer to write a valid application for, say, a microprocessor under any of a half-dozen classifications, and, consequently, in effect, frustrate some of the purposes of the system.

CURRENT SYSTEM DOES NOT SERVE U.S. ECONOMIC OBJECTIVES

Second, I want to argue that the current system does not serve U.S. economic objectives, and again I will just summarize the argument. Some people would argue that the major effect of the current U.S. export control system is to handicap American firms in their efforts to sell technological products to the Soviet Union and other Socialist states, in effect shifting sales from U.S. firms to foreign firms, or to American subsidiaries operating abroad.

One indicator of the effect of this handicap cited by those who make this argument is the fact that U.S. manufactured products exported to the Soviet Union are 4 percent of the Soviet imports of manufactured products, whereas U.S. products are 16 percent of the manufactured products sold by the West in general on the world

market. In fact, there are a number of reasons for the differences between that 4 percent and the 16 percent, but some of the reasons have to do with the processes for America and export controls.

Former Secreary of Commerce Morton, in his report issued last year, estimated that U.S. exports of manufactured goods alone, leaving out agricultural sales, to the Socialist countries could, by 1980, amount to $4.5 billion a year if a vigorous effort were made on behalf of U.S. products and if U.S. controls were no greater than those of our competitors. This compares with only $700 million in 1974.

The argument, I think, has been put probably most sharply by former Secretary Peterson, and I will just read a quick quote, if I can. This is from his report of August 1972. He says:

> With the industrial and technological developments of other major economies, the United States no longer has the monopoly it once enjoyed in the production of certain goods. Our overall trade balance is a melancholy reminder of these changed circumstances. The increased availability of high technology products elsewhere rendered some of our original curbs on exports to the Soviet Union increasingly anachronistic. The real loser from these restraints would have increasingly been the U.S. producer and worker, not the Soviet consumer or the Soviet economy. There comes a point at which we must face the fact that business is business, and if it is going to go on in any event we might as well have a piece of the action.

Though that argument appears somewhat differently to today's environment, I think it is an important one.

In addition, my statement makes the point that current procedures neglect the fact that in dealing with the United States and particularly U.S. firms, the Soviet Union has a significant monopolistic power. I think that problem is complex, and I would be happy to discuss it in the question period, if you like.

CURRENT SYSTEM DOES NOT SERVE POLITICAL AND DIPLOMATIC OBJECTIVES

My third point is the system is not serving U.S. political and diplomatic objectives, and there the key flaw is that the system essentially forfeits many opportunities for using trade as a bargaining chip in relationship with the Soviet Union or with the People's Republic of China, or with other Socialist states.

In some instances, the White House or the Secretary of State intervenes in the processes that Mr. Fasick described, to pick up an item and use it as a special plum. But the normal procedures don't permit the regular use of this instrument for broader American foreign policy objectives. So much for the flaws in the system.

As far as the sources of these flaws or the sources of the problems, as I see them, my written statement outlines four. Let me just say the names of them.

SYSTEM IS A HANGOVER OF PROCEDURES AND PERSONNEL

The first is that the sytem is in effect a hangover of procedures and personnel. The system emerged with COCOM in 1949, the Battle Act in 1951, and was part of an economic warfare effort against the Soviet Union through the fifties in the high cold war period. But

the objectives were changed by Congress in the 1969 Export Administration Act. The extent to which the behavior of the process has changed, I think, is an issue your committee should examine.

COHERENT RATIONALE FOR CONTROLS IS LACKING

Second, there has been a continuing erosion of the rationale for the export controls. Here the argument is a complicated one. I am sure that Congressman Whalen will want to get into it, and might even want to explain it to us further. Economists have a parable, sometimes called the parable of gains from trade, which says that if we sell the Soviet Union butter, for example, at less than the cost in Soviet factors of production to produce that butter, they then are left over some gain that can be used to buy guns, if they choose to. So any trade with the Soviet Union, if it is wise trade from their point of view, increases the amount of both guns and butter that they can have.

If you appreciate that fact, and also the fact that the United States is selling a broad spectrum of goods to the Soviet Union, the question then becomes, what is the rationale for restricting particular classes of exports? The current argument for controlling exports focuses on goods that embody some technological know-how. But criteria for identifying those are very difficult, and indeed from an economic point of view one might well be as interested in restricting other goods where there is a sharp discontinuity in what economists call the production possibility frontier for the Soviet economy. That argument gets unduly complicated. I think the general point is a difficult one so let me just stop with that part of the summary.

FOREIGN AVAILABILITY

The third point is foreign availability. This I think is a very important point, namely that under the current COCOM procedures, the United States and some of its COCOM allies restrict their behavior, whereas there are now many advanced countries like Sweden and Switzerland which are not members of COCOM. Many of our COCOM partners engage in sales which the United States is restricted from making.

Again, I think some of your industrial witnesses may want to testify about the details. The reports which I have seen suggest that both France and Japan have sold plants for making products which the United States was restricted from selling; for example, microprocessors.

A BIG FIX

Finally, what is to be done? In my written report, I lay out two separate notions. One is called a big fix. The proposition is that East-West trade inevitably entails costs and benefits of three importantly different kinds, military costs and benefits, economic costs and benefits, and political costs and benefits. The challenge is therefore to devise a coherent policy and a procedure for identifying costs and benefits on each of these three dimensions, weighing them and making explicit tradeoff.

Organizationally, that is a hard problem. The East-West Trade Board provides a mechanism that might be used, but it would require higher level attention and a different set of procedures than those that we have previously had. This is laid out in somewhat greater detail in the Commission study which, as I mentioned, has been submitted for the record.

SMALLER STEPS

Alternatively, I offer a list of smaller steps that could be taken and would, I think, contribute significantly to better performance. Perhaps, I will just read the headings.

The first would be a revised, updated, and streamlined list of industrial strategic technology. There I recommend to the committee the recent conclusions of the Defense Science Board. Perhaps you will be hearing late from Mr. Bucy, who was the Chairman of that Board. They have devised a much shorter list of truly strategic items.

Second would be preparation of an alphabetized list of controlled and/or embargoed "strategic commodities" separate from the Census Bureau's "Schedule B" list that is used primarily for the purpose of collecting foreign trade statistics. The point there is the current list used for control purposes is a list constructed for other purposes, which does not have the categories especially useful for the strategic control objectives.

The third point is a sharp reduction in reliance placed on often-unenforceable end-use guarantees in licensing decisions. And this is a point argued by the recent Defense Science Board report as well.

The fourth point would be the establishment of alternative sources of information on technological developments in Communist countries and on the foreign availability of proposed U.S. exports. There, technical advisory groups might be made to work better.

The fifth point is that the manufacturers of specified technological products judged to be of potential strategic importance should be required to register with the Office of Export Administration for the purposes of monitoring and controlling the export of those products. I think again if the list were shortened and the procedures clarified, one could depend on a registration device of this kind to cut administrative costs. One could rely on something more like the bulk licensing procedure which currently is used for export of goods to non-Communist countries.

Finally, I think that it is worth thinking about processes for reviewing U.S. technological sales to Communist countries, and calculating some minimum "upset price," that is, a price for the sale of a particular technology that captures U.S. national interests in that technological product as against the interests of a particular firm that may be willing, given that it is only one of many firms in the United States, and since it alone will capture the benefit of the sale, to sell it at a price lower than what would be in the best interests of the United States. Trying to devise a mechanism for calculating and enforcing such an upset price is, I think, quite difficult and indeed almost leads one back to a big fix solution.

But with that, Mr. Chairman, let me stop.

Mr. BINGHAM. Thank you very much, indeed.

[Professor Allison's prepared statement follows:]

PREPARED STATEMENT OF GRAHAM T. ALLISON, PROFESSOR OF POLITICS AND ASSOCIATE DEAN, JOHN F. KENNEDY SCHOOL OF GOVERNMENT, HARVARD UNIVERSITY

Mr. Chairman and members of the Committee, it is my privilege and pleasure to be able to testify before your committee. I appear today not as the representative of any organization or interest. Nor am I here as an expert on matters of trade and commerce, or more specifically of export controls. As a strong believer in the application of "truth in advertising" criteria to other realms of discourse, including testimony at Congressional hearings, let me state clearly my qualifications, such as they are, for testifying before your committee today.

For approximately a year, ending in June, 1975, I served as director of Defense and Arms Control studies for the research program of the Commission on the Organization of the Government for the Conduct of Foreign Policy, known informally as the "Murphy Commission," after its Chairman, Robert D. Murphy. In that capacity, I directed approximately twenty-five case analyses of decisions and actions taken by the U.S. government in the sphere of defense and arms control. One cluster of these cases focused on export controls. A summary volume entitled "Controlling Exports on National Security Grounds" was prepared by Richard Huff, Robert E. Klitgaard and me. That study is the basis for my testimony and I am submitting the study for the Committee's record.

As I understand, the purpose of these hearings, Mr. Chairman, is to explore the nature, causes and consequences of problems in export licensing of advanced technology under the national security control provision of the Export Administration Act and related statutes. Your objective is background information and judgment, rather than preparation of specific legislation. In that spirit, and in the assurance that you will soon be hearing members of the Administration make the case for the current system of export controls, your staff has requested that I state, as best I understand it, the case against the current system. As a target for others to shoot at, I will try to state my case sharply and briefly. The argument proceeds in three steps: (1) flaws in the current export control system; (2) sources of the problem; and (3) strategies for improving the current process.

I. FLAWS IN THE CURRENT EXPORT CONTROL SYSTEM

1. *The current system is not achieving the U.S. national security objectives for which it is designed.*—It fails to prevent shipment to the Soviet Union of technological products of potential concern to the U.S., while restricting American companies from selling many products of no strategic importance. Some "leakage" through the export control web may be inevitable in a complex economic system such as ours in which over a hundred billion dollars worth of goods are exported annually by thousands of individual firms. Yet present procedures for controlling exports of strategic technologies leave considerable room for improvement. The present Commodity Control List (CCL) includes many items of relatively minor strategic importance, thereby diverting scarce manpower and budgetary resources away from the enforcement of controls on more important technologies. The CCL is based on the classification system of the Census Bureau's "Schedule B" used for the collection of foreign trade statistics. But this system was devised without serious attention to strategic considerations and is therefore ill-suited to the task of controlling strategic technologies. Classification of goods under Schedule B is often so general and vague that a wide variety of goods with equally wide differences in strategic importance will fall under a single category. Similarly, a given product may reasonably be interpreted to fit under several different categories subject to differing degrees of control.

For example, microprocessors, an electronic component used in everything from pocket calculators to Minuteman missiles, are a technological product that many, including the Defense Science Board, would like to see controlled. Yet "microprocessors" do not appear as a separate category on Schedule B,

and therefore are not listed on the CCL. A potential exporter of microprocessors must therefore choose among the various code numbers for the larger products of which microprocessors are a part products as diverse as calculators, computers, or electronic fuel injection systems for automobiles. In most cases, he will tend to choose the least restrictive category in order to expedite the sale. This combination of ambiguous classifications, loose enforcement procedures, long delays in the processing of license applications for advanced technology exports to communist countries, and the knowledge that foreign firms are selling the restricted goods anyway all conspire to discourage American businessmen from cooperating fully with the export control system. The incentives all point in the wrong direction: to either evade the controls on exports from this country or to relocate production for the communist market to foreign subsidiaries, thereby costing U.S. jobs.

2. *The current system imposes substantial economic costs on American exporters based in the U.S. and thus on the entire American economy.*—It handicaps U.S. firms in the international competition to sell many technological products to communist countries. In addition, the sometimes capricious application of U.S. export controls has been especially harmful to U.S. firms attempting to establish themselves as regular, dependable suppliers to Eastern State-trading agencies—an important consideration in planned economies. As a result, the U.S. share of Western exports of manufactured goods to the communist countries is currently only about four percent, although the U.S. supplies some 16% of the West's total exports of manufactured goods to the world. This is well below our competitive potential and represents, as Secretary Simon testified last December, a loss of hundreds of millions of dollars in foregone sales, sales which mean jobs, profits, and capital for new investment.

3. *The current system forfeits opportunities for a more deliberate use of trade as a bargaining chip in the developing relationships with the Soviet Union, Eastern Europe, and the People's Republic of China.*—East-West trade is inevitably a political as well as an economic transaction. Certainly this is recognized by the communist countries, who have long seen the linkage between foreign trade and foreign policy. Evidence from the recent past illustrates both the opportunities and dangers involved in such a political use of foreign trade. For example, in spite of the May, 1972, mining of Haiphong harbor, the Soviet Union did not cancel President Nixon's planned trip to Moscow later that month, largely, it seems, because of their hopes for the economic benefits that would come from improved U.S.-Soviet relations. In addition, they appeared willing to increase Jewish emigration from the Soviet Union in return for trade benefits, at least until the Trade Act of 1974 insisted on public acknowledgment of the fact, affronting their sense of national sovereignty. At that point they renounced the 1972 U.S.-Soviet trade agreement and cut back on Jewish emigration, frustrating both U.S. objectives. While the President or Secretary of State can intervene in the normal precesses of export controls to make "exceptions" on foreign policy grounds, regular procedures include no consideration of such objectives and no individual knowledgeable about Administration strategy for bargaining with the Soviet Union or China.

4. *The current system neglects important economic problems and opportunities beyond the narrow national security criteria it imposes.*—Although, in theory, export controls are only one part of the larger issue of East-West trade, in practice they have often determined U.S. policy on that issue. Consequently, it has frequently been assumed that if a given transaction met the national security standard, it was all to the good. But trade with the communist countries is a qualitatively different matter than trade with other market economies, and there is a real danger that the distribution of the benefits from that trade may be highly uneven. As the General Accounting Office reported to the Congress last month, "The United States has not achieved commercial reciprocity in trade with the Soviet Union. This imbalance in commercial benefits is attributable to the basic differences between the two economic systems." The centralization of all economic decision-making in the Soviet government makes verification of discrimination against U.S. products extremely difficult, if not impossible. And the concentrated buying power of Soviet state-trading agencies has enabled them to repeatedly play off Western firms against each other to their own advantage. Is the U.S. getting a fair return on the technology sold by American firms to the East? Putting a price on technology is always

difficult, but it is clear that some U.S. companies have been willing to sell technology at a price that is profitable to them (since the marginal cost of the technology to the firm may be near zero), but which fails to reflect other costs borne by the U.S. economy as a whole (such as government R&D contracts under which the technology may have been developed, Eximbank financing, or tax deferrals through the use of DISC corporations). Present export control procedures, however, make no attempt to right this imbalance or to maximize the economic benefits of East-West trade to the U.S. as a whole.

5. *The current system even endangers détente.*—As Secretary Kissinger has repeatedly emphasized, "In the age of thermonuclear weapons and strategic equality, the relaxation of tensions is the only responsible course and the only policy that can be pursued by any Administration charged with the responsibility for the lives of Americans." Yet, to the extent that the overall distribution of the gains from East-West trade is skewed in the wrong direction, tension may not be relaxed. Some now charge that détente has been a process of give-and-take: we give and they take. In the light of the pattern of U.S.-Soviet trade thus far (most notoriously the Great Grain Robbery of 1972), this view is not entirely without merit. By its failure to balance the commercial benefits of trade between East and West, the present export control system has contributed to the current controversy over détente.

II. SOURCES OF THE PROBLEM

Most of these problems stem from the fact that the current export control system is an anachronism.

1. *Hangover of procedures and personnel.*—Present export control procedures reflect past political objectives. The post-war system of export controls was one element in a policy of explicit "economic warfare" against the Soviet Union, designed to embargo exports of goods and technologies that might aid the Soviet economy (as well as its military). Although the economic warfare objective was officially abandoned in the Export Administration Act of 1969, many of the same officials continue to administer the system; few have changed their minds about the threat to the U.S. posed by Soviet economic growth. Moreover, export control decision-making has generally followed a "case law" approach relying heavily on precedent. This process is poorly suited to rapidly changing technology, where new products emerge and others change their basic character without appearing in a test case.

2. *Erosion of a coherent rationale.*—Because the Soviet Union is the United States' military competitor and potential adversary in war, the U.S. is rightly concerned about Soviet military strength. Consequently, the U.S. has sought to restrict sales to the Soviet Union that might enhance Soviet military capability. In practice, however, the problem of identifying those products that might add to Soviet military strength has proven to be extremely difficult. All sales of strictly military hardware have been, of course, forbidden. But wheat makes bread that can be eaten by soldiers as well as civilians. Trucks carry soldiers as well as cargo. The U.S. sells wheat and trucks to the Soviets. Indeed, most products have a similar dual use. Thus, the extent of military use of a product has usually been defined rather mechanically: if the U.S. military uses more than X percent of a product, it is judged to have extensive military use and is consequently embargoed. But extent of use is not a good test of the significance of a product's contribution to the Soviet military potential. This procedure misses some goods that could contribute significantly to Soviet military potential and certainly bans sales of many items that make no significant military difference. Moreover, there is a further intellectual quandary: Because of what economists call "gains from trade," *any* trade between the U.S. and USSR presumably enlarges the supply of Soviet resources available for military production. If the Soviet Union buys butter from the United States at a price below Soviet costs for producing additional butter, their gain from trade will permit them both more guns and more butter than they could afford without trade. Theoretically, the U.S. should refuse to sell goods to the Soviets (over which it has unilateral control) where there are sharp discontinuities in the Soviet production possibility frontier. But criteria for identifying such goods were never developed as part of the export control process.

3. *Foreign availability.*—The current export control system tends to neglect or downplay the role of Western Europe and Japan as competitors to the U.S. For many years the U.S. maintained a unilateral control list much longer and

more restrictive than the multilateral COCOM list, despite the fact that the Soviets could (and did) easily go elsewhere to obtain American-embargoed items. We are still suffering from the misguided neglect of foreign availability, since our COCOM partners, as well as non-COCOM nations such as Sweden and Switzerland, used this period to establish long-term commercial relationships with the communist countries, relationships which now make them the preferred suppliers. Moreover, although the foreign availability of a particular good or technology is now an official criterion in the license application review process, it is up to the discretion of the officials who administer the export control system (in this case the CIA) to rule on whether a comparable European or Japanese product is in fact equivalent to its American counterpart. In the past, the CIA's preference for stringent controls has colored its judgment about the foreign availability of equivalent goods.

4. *Outmoded assumptions.*—The export control system still operates on the assumption of a largely bipolar world. But neutral countries, such as Sweden and Switzerland, have emerged as alternate suppliers of advanced technological items. (Indeed, last year a Swedish firm won the contract to develop an air traffic control system for the Moscow and Kiev airports after IBM's export license application was denied.) COCOM's solidarity, and thus the efficacy of its multilateral controls, is rapidly eroding due to its perception of the diminished Soviet military threat and the need of all of these countries for exports to pay, among other things, for their imported oil. The decline in the U.S.'s economic and political power vis-a-vis its COCOM partners over the past quarter-century has made the enforcement of the multi-lateral embargo increasingly difficult. And there is a real danger that by pressing to hard for the right to review our allies' advanced technological exports to the communist countries, the United States may be opening itself to their demands to review U.S. arms sales. Finally, the breakup of the "Communist Bloc" has made the USSR and PRC bitter enemies. Yet, for purposes of U.S. export controls, they are still treated as a bloc. With the Chinese now buying jet engine production technology from Britain and negotiating to purchase Mirages from France, the idea of U.S. military sales to the PRC—unthinkable only a few years ago—has become a live issue.

III. IMPROVING THE PROCESS

The current export control system is in a state of flux. A number of the criticisms made above may become dated as action is taken to correct them. Nonetheless, this seems to be an important problem to which serious attention should be devoted. Below are two alternative strategies for improving the process:

1. *A big fix.*—The time would seem to be ripe for someone to step in and reorganize the whole process from the bottom up: conceiving a coherent policy for the whole of East-West trade—including, but not limited to, export controls—and developing procedures for its implementation. Such a policy should recognize, as the Murphy Commission case argues, that East-West trade inevitably entails costs and benefits of three importantly different kinds: military, economic, and political. The challenge is to devise a coherent policy and appropriate procedures for identifying costs and benefits on each of these dimensions, weighing them, and making an explicit trade off. Organizationally, this would probably require the designation of someone at a high level as the overseer of the process, the establishment of a high level committee for approving policy and procedures (possibly the East-West Trade Board or a Commerce-based alternative), and a new set of working level committees and procedures, probably involving some new people. Ideally the new policy and procedures would deal not only with technological products but also with agricultural and other products.

The outlines of first steps toward such a big fix are presented in the Commission study in Chapter 5, pp. 81-92. But as that study notes, the big fix would be expensive not only in the initial energy required to change the current system, but also in the longer run opportunity costs. Given the scarcity of the kind of intelligence and energy required to do the big fix right, the opportunity cost of allocating those resources to export controls rather than to some higher priority problem may be too high.

2. *Smaller steps.*—The following proposals represent a series of administrative reforms much less sweeping than the "big fix," but which we feel would result in significant improvements over the present process.

(1) A revised, updated and streamlined list of truly strategic technologies. The Defense Science Board has just drafted a list. In addition, improved procedures for regularly updating the list should be instituted. A decision will have to be made on whether to attempt to resuscitate COCOM around the shorter list. If the number of manufacturers in COCOM countries producing items on the new list is manageable, we might request our COCOM partners to institute the identification and monitoring process suggested below for domestic manufacturers.

(2) The preparation of an alphabetized list of controlled and/or embargoed "strategic commodities" separate from the Census Bureau's "Schedule B" list used in the collection of foreign trade statistics. The present system depends upon Schedule B as the index that potential exporters use to review the Commodity Control List to determine whether a validated license is required for a particular item they want to ship. This represents the ultimate weakness of the entire system, since the Schedule B classifications are often so general that they allow goods that should be controlled to slip through unnoticed.

(3) A sharp reduction in the reliance placed on often-unenforceable "end-use" guarantees in licensing decisions. The vast majority of high-technology products should be described in sufficient detail so that their basic capabilities are the determining factor in whether they require embargo or some less severe form of monitoring and licensing. As the Defense Science Board's review of export controls recommended: "Control of product sales should emphasize their intrinsic utility, rather than commercial specifications and intended end-use." Certain very large systems with significant dual capabilities should continue to be judged on the basis of end-use and include certain safeguards, such as proposed for some computer cases recently.

(4) The establishment of alternative sources of information on technological development in the communist countries and on the foreign availability of proposed U.S. exports. Additional government/industry technical advisory groups might fulfill these functions.

(5) Manufacturers of specified technological products judged to be strategic should be required to register with the Office of Export Administration for purposes of monitoring and controlling the export of those products. This would help to eliminate much of the ambiguity in the current classification system, which leaves considerable doubt as to the proper status of a given product under the CCL. A "bulk licensing" procedure, similar to the existing Distribution License, could be instituted in order to facilitate the export of such goods to noncommunist countries.

(6) Further study to see if a process for reviewing the economic benefits of selective technology sales is feasible. Raymond Vernon and Marshall Goldman, two students of the problem, have recommended that an agency be established for the purposes of reviewing U.S. technology sales to the communist countries and be authorized to set a minimum "upset price" for a given sale if the U.S. firm's price was judged to be too low to provide an adequate return to the U.S. economy as a whole. Of course, upset prices would be difficult to determine and U.S. firms would surely complain about the additional constraint. But the dangers arising from a maldistribution of economic benefits are real, and should not be easily dismissed. Here, however, we tread close to the questions which more properly belong in the "big fix."

Mr. BINGHAM. We will now hear from Mr. Hardt.

STATEMENT OF JOHN P. HARDT, SENIOR SPECIALIST IN SOVIET ECONOMICS, CONGRESSIONAL RESEARCH SERVICE, LIBRARY OF CONGRESS

Name: John P. Hardt.

Position title: Senior Specialist in Soviet Economics.

Major fields of interest: East-West commercial relations, Soviet, East Europe, and Peoples Republic of China economy's policy and performance.

Major congressional activities: Editor and coordinator of annual Joint Economic Committee compendia on economies of PRC, Soviet Union, Eastern Europe. Committee prints and advice for hearings to Senate and House Foreign Relations and International Affairs Committees. Advisor to Senate

Finance and House Ways and Means on U.S. trade policy to East. Advisor to Senate and House Banking, Committees on Export Import Banking and government financing. Advisor to Senate and House Commerce Committees on East-West trade. Frequent, recent traveler as technical advisor with Congressional Committees to USSR, Poland, Hungary, Yugoslavia, United Kingdom, FRG, Italy, and Sweden (prepared committee reports for each trip).

Professional activities: A Founder and Past President of Washington, D.C. Chapter of the American Association for Advancement of Slavic Studies [AAASS]. Editor of *Bulletin* of Association of Comparative Economic Studies [ACES]. Recent lectures at Council on Foreign Relations [NYC], Yale Seven Springs Farm, Stockholm Institute on Eastern Affairs. Technical advisor to U.S. Delegation to East-West Initiatives Meeting, Vienna 1974 (U.S. delegation head George Ball). Member of Faculty of Institutes of Sino-Soviet Studies and Department of Economics, George Washington University. Visting lecturer at Foreign Service Institute, all Senior Military Schools. Numerous books; articles and monographs published in English, French, German, Italian, Spanish as well as in American publications.

Academic background: Ph. D.—Economics, and Certificate, Russian Institute, Columbia University. Honors: Rockefeller Award, Air University Fellowship, Purdue "Old Master."

Previous experience: Chief Strategic Study Division, Research Analysis Corporation. Research Positions Operations Research Office, Johns Hopkins, CEIR, Inc. Academic Appointments: George Washington University, Maryland, Huntingdon College (Alabama); University of Washington (Seattle). Visiting Lecturer: Harvard, Yale, Columbia, Indiana, Purdue, Princeton, Georgetown, Oxford (U.K.).

Mr. HARDT. Thank you, Mr. Chairman.

I am John Hardt, from the Congressional Research Service. With me in the hearing room are my associates George Holliday, Ronda Bresnick, and Vladimir Pregelj. We have a requirement of nonadvocacy and nonpartisanship, and I try to adhere to that requirement. This was the condition under which the chairman of the Rules Committee agreed to my appearing.

I would like to follow the precedent of the previous witness, if I may, in not adhering to my formal statement, but drawing from it and commenting on those differences that may appear in my statement and the statements of others on this panel.

CLARIFICATION IN LAW IS NEEDED

I focused primarily on the legislative questions and I think this is appropriate, because the administration of licensing does have to reflect the law and congressional intent. I would like to suggest to you that a good deal of clarification would be useful in the law and, in the process of these hearings, to make clear what the intent of Congress in the administration of licensing is.

Many things were said about export administration, in terms of its need of clarification, simplification, shortening of time, and changing of philosophy, in my statement and in the statements of others. These are aspects that I think most of us agree on and I will therefore not touch on them at this time.

But it seems to me that it will be much easier and more effective if Congress, in extending the act, will further clarify what the intent of the law is.

I think we should recognize that circumstances have changed dramatically in recent years. Our policy changed, of course, in the Export Administration Act, when the policy of export promotion

took precedence over export control. That was a major change in policy. This change fits into the major policy change in our relations with the Communist countries. But because this is a watershed period, it is not unusual to have a lag of adjustment in policy.

Beyond that, technology is very dynamic, and the very technology that we are addressing is particularly dynamic. This technology changes from year to year as does the interrelationship among countries. The interrelationship of economies has become so great that the ability of one country, even the United States, to unilaterally control technology, even in critical areas, has been greatly eroded. Likewise, the impact of U.S. technology on the Soviet Union, People's Republic of China, and Eastern Europe, has dramatically changed, and is continuing to change. We are dealing, therefore, in a very dynamic situation which requires a policy reassessment.

As you review the act in the hearings, you will wish, I think, to consider the policy objectives of section 3 of the act. Are they appropriately and clearly stated? Are the critieria and procedures and questions applied by the Department of Commerce in the Advisory Committee for Export Policy necessary and appropriate for carrying out the intent of Congress as expressed in the legislation? Are other nonlegislative actions appropriate to carry out the national interest as well as the national security aspects of section 3?

TWO SCHOOLS OF THOUGHT

Now, in this sense, I believe there are two schools of thought expressed in the Congressional sentiment. First, the restrictive view which might say that the change in philosophy of the 1969 act and extensions were too broad in trade promotions and relaxation of controls, especially licensing high technology products and processes, and therefore should be tightened. Second, the less restrictive review, which would perhaps generally reaffirm the policy statement of the 1969 amendments, but point to the Export Control Act or Battle Act carryover in the philosophy of licensing administration, and thus call for streamlining, simplifying and expediting procedures.

Turning to page 4 in my statement, I refer to section 3, and raise questions as to how one might consider changes in the wording. The application of this policy and congressional criticism of the recent record of the administration of export licensing suggest that the policy might be more clearly stated in terms of the risk, probability, and presumed burden of proof, relating to the military impact of proposed exports. A more or less restrictive wording of the relevant sections may provide a basis for illustrating possible modification in the formulation of this section (see my written statement for specifics).

I think changes in wording are significant only if they have some meaning in congressional intent. This goes to the point that I end on in the formal testimony, and that is, where should the burden of proof lie? Should the burden of proof lie on those who apply for the license? Or should the burden of proof lie on those who deny the license? In effect, what is the policy posture? Is it to take a restrictive view on what is a contribution to military potential or capability, or a less restrictive view?

The less restrictive view might imply direct contributions or inputs to the military capability of a nation and also might imply a policy differentiation between the Soviet Union and other countries.

There has been a good deal of discussion, for example, of differentiating more between the Soviet Union and the People's Republic of China. In earlier times there was an assumption that there would be a seepage from any place within the Communist world as it was called. We might want to look at the policy in terms of it being less restrictive in that sense.

The wording, backed up by discussion in the committee might be more selective and, as a result, might be more meaningful in terms of an expression of congressional intent.

A change in wording could also involve other parts of the legislation—perhaps direct involvement in the licensing procedure, as was suggested by Professor Allison. For example, there might be, from the standpoint of legislation, specific commodities identified.

In the past, licensing procedure has been largely left to the Executive Department to determine and administer. If it were desirable to be more explicit, even though less restrictive, it might also be desirable to look at other sections of the law and consider adding specific guidelines or directives to influence the application of criteria. The criteria as applied pose difficulties in areas of complexity, time, and expense.

UNANIMITY AND FULL CONSULTATION IN PROCESS

One of the problem areas has been alluded to by both previous witnesses—I refer to the problem of unanimity and full consultation, to which Congressman Biester reacted immediately. Any process that requires as much consultation as the existing process does, is inherently time consuming. It may be necessary, but on the other hand it is a cost because it is a complex process that sets as its pattern the requirement that everyone must be advised, and consulted. Everyone includes many executive agencies, foreign countries, and sometimes various private industries.

Is it necessary? I think this in an appropriate question.

Additional implications are raised in the legislation which requires consultation and unanimity with the Department of Defense. This legislation brings Defense into a special role.

The Defense Appropriation Authorization Act and section 4(h) of the Export Administration Act give the Secretary of Defense special authority. The former act also requires that the President be informed and the Congress then have a right to override.

Now, this all may be a useful procedure, but it is another extension of the problem of unanimity and greater consultation. It requires time. It is complex, and so forth.

This procedure also suggests not only a differential expertise between agencies, but also a somewhat built-in feeling that there are some who have different answers. This leads to the suggestion that some agencies may come out with different answers, not necessarily because of their expertise, but because of their understanding of the intent of Congress.

Now, that may be useful, and it may be necessary, but I think the committee should review it from the standpoint of: is this the proper way of administering the law as you see it?

PRESUMPTION OF LICENSE DENIAL

Another reservation that has been referred to in other ways by the witnesses is a procedure that I think has a presumption of license denial built into it. The presumption of license denial is independent of directions to reduce the length of the list, which of course does reduce the implications of licensing for a range of commodities.

But to an outside reviewer, the list that was in Secretary Morton's testimony of the criteria for licensing, in addition to this consultation and unanimous procedure, is a very complex list.

I might generalize that if I were conducting a research effort and could fund all of this activity, it would be very expensive. The questions raised here are complex questions.

Again, they may be necessary, but the hurdles placed in the way of the procedure by these kinds of questions suggest at least a complex procedure, not a simple procedure, and a procedure of many hurdles and therefore inherently, I suggest, a presumption of denial.

It is very difficult to document whether or not there is indeed a philosophy of denial, because it is hard to tell what kinds of licenses are not applied for. If a license is turned down, and there are singular cases which are well-publicized in the papers, do some companies then choose not to apply for licenses? What is the negative impact?

It is extremely difficult to assess that. The record indicates that few license applications are turned down, few in number, few in value. I suspect, however, that the record understates the necessary impact of the criteria.

EXPORT PROMOTION AND THE NATIONAL INTEREST

The other part of section 3 deals with national interest. It deals with promotion and a broader consideration of national interest. We have been concerned with national interest, as is certainly well-known, by formal linkages of exports with other considerations, whether they be emigration or Angola or whatever.

I think there has been enough discussion on that, but it seems to me that one should keep this in mind as relevant to that policy section of the act.

But more relevant to the reexamination of the congressional intent in section 3, I think, is the broader interest or broader definition of national interest that may be obtained even though the list may be very narrowly stated.

Even though a product process is not enjoined from export by a license denial, it does not mean that it is not in the national interest to take a broader look at it, to have a national view of our involvement in technology transfer in exchanges, trade, and so forth.

MAINTAINING THE TECHNOLOGICAL LEAD

Are we following an export policy designed to maintain our technological lead? This is a germane question, I think, to that section.

Are we receiving adequate return to recoup our investment in research? Are U.S. multinational companies operating abroad contributing to broader American economic interests in their policies of trade and production? Are there indirect or long-run effects of current international trade policy options that may influence our long-term national security?

These are all questions meriting further assessment and in this regard the appropriate question is what can be done in regard to these broader interests?

It seems to me that we should not underrate the importance of informal consultation, the importance of consensus, the importance of meeting together of industrial interests, executive agencies, and so forth.

I may be reading from an incorrect sample, but I find a good deal of uneasiness and even distrust at the corporate level in many quarters. Not that there aren't plenty of media for getting together, but the effectiveness of those media, I think, falls short.

RATIONALE FOR EXPORT LICENSING CHANGE

Now, the point, I think, that one should close on, and I do in the testimony, is the rationale for export licensing change. I think there is an impression that the philosophy of export administration changed with the 1969 act, but the spirit of the administration did not.

This philosophy change is communicated in section 3, which reads, to restrict the export of goods and technology which would make a significant contribution in military potential of any other nation or nations which would prove detrimental to the national security of the United States.

Now, this statement carries a neutral ring, or is a policy statement that licenses will be granted. In contrast, the criteria for administration of license approval with its performance of consultation and unanimity creates the impression that licenses will be delayed or refused.

Even if they are correct inferences, these different interpretations do not indicate which should be acceptable congressional policy, the broad approach or the restrictive approach.

At the same time, whichever of the two interpretations is preferred, the committee may favor steps towards revised approval machinery that is simply made more effective and more predictable. This would be aided if the conditions of congressional intent were clarified and delineated in the policy statements in the legislation.

It might be useful to summarize some of the factors which presumably directed the 1969 and 1974 changes toward trade promotion and away from control. These are partly speculative as the formal congressional record is not clear or complete.

First, is that the eroded and limited U.S. technological leadership no longer permitted unilateral denial of technological exports to any countries—Western European nations and Japan could and would supply technology not licensed by the United States. The effective list of U.S. controllable items was effectively reduced by the closing of the technology gap with the West and the weakening of the U.S. alliance control. These were developments outside of our control.

Second, the Communist alliance system has weakened to the point that trading with one country was no longer considered equivalent to trading with all countries. And I continue on points that I have made, arguing for a more clearly identified nation-by-nation approach.

Third, the advancement in Soviet weapons research and technology indicated that with priority resources and time there were few changes they could not make or counter in military technology without imports.

Corollary to the assessment of Soviet military technological advances was the view that major Soviet bottlenecks were in management of military research applications rather than in basic research or military-related technology.

Now, some of the above-noted interpretations are possible rationales for the changes that may throw light on the appropriate use of the word "significant" in section 3. In licensing, as in other matters, it is difficult to predict which will happen, but as we have some experience with the modified licensing procedure since 1969 we may ask—what did happen? Are there any examples of significant improvements of military capabilities that might have occurred because of or in spite of technological transfers from the West that effected Soviet military capability? And here I mean documented ones, not ones that are from the latest newspaper discussion.

If we conclude that the Soviets could improve, catch up, and pass us in some areas of military technology, in spite of our controls, we might want to look at the other side of the coin—the advantages to us in high technology transfer beyond the income from sales.

In many areas, the Soviets are, we are told, very advanced, but nonetheless may need and seek advanced U.S. technology, for example, in computer systems. By installing these systems and servicing them, we may greatly increase our own knowledge of the state of their advanced technology and limit their development into areas in which we have possibly temporary technological edges.

Now, these reassessments by knowledgeable witnesses would help the committee in deciding where the burden of proof on licensing should lie. Should it be on the applicant or application for license to demonstrate little or no risk of military enhancement of a putative enemy? Or should the opposite hold? Should the approval system require that the evidence be overwhelming before most licenses are disapproved on grounds that significant effective military capability would result?

Clarification of congressional intent would presumably aid the export administration in applying a consistent, perhaps simpler, more efficient system of licensing exports to socialist countries.

Thank you, gentlemen.

[Mr. Hardt's prepared statement follows:]

PREPARED STATEMENT OF JOHN P. HARDT, SENIOR SPECIALIST IN SOVIET ECONOMICS, CONGRESSIONAL RESEARCH SERVICE, LIBRARY OF CONGRESS

A REASSESSMENT OF U.S. EXPORT LICENSING IN EAST-WEST COMMERCIAL RELATIONS

Control by licensing certain exports to non-market economies has been a characteristic feature of Executive response to U.S. legislation on East-West commercial relations in the post World War II period. Currently licensing focuses on high technology products, such as computers, that might be deemed

capable of significantly enhancing the military capability of a potentially hostile country. Particular attention has been directed to exports to the Soviet Union, as that nation represents the military capability with the greatest global potential, including the ability to inflict damage directly on the United States. The export policy has been legislatively set primarily by the Export Control Act of 1949 and the Export Administration Act of 1969. United States export control coordination has been extended to most of its NATO allies and Japan by the Mutual Defense Assistance Control Act of 1951 (the "Battle Act"). [See appendix for a brief legislative history on p. 32.]

A purpose of these Hearings, preceding action to consider extension of the Export Administration Act, is to determine whether that Act should be amended and/or whether the intent of Congress should be clarified or changed in reference to the administration of the Act. Specifically, the Committee may wish to ask: (1) Are the policy objectives in Section 3 of the Act appropriate and clearly stated; (2) Are the criteria, procedures and questions applied by the Department of Commerce and the Advisory Committee for Export Policy necessary and appropriate to carrying out the intent of Congress as expressed in the legislation; (3) Are other non-legislative actions appropriate to carry out the national interest as well as the national security aspects to Section 3.

Based on an assessment of the Congressional reaction to current export licensing practice and the administration of the law one may detect two divergent schools of congressional thought: the restrictive views might say that the change in philosophy of the 1969 Act and its extensions were too broad in trade promotion and relaxation of controls, especially relating to export licensing of high technology products and processes, and therefore should be tightened. The less restrictive view would perhaps generally affirm the policy statement of the 1969 amendments but point to the Export Control Act or "Battle Act" carryover in the philosophy of licensing administration, and thus call for a streamlining, simplifying, and expediting procedure for the administration of licensing. Those calling for a broader interpretation of the law might suggest that the criteria and procedures of export administration are designed to restrict and delay approvals more than should be the case if the congressional intent were properly interpreted in the spirit of the law as expressed in Section 3. It should be noted, however, that most applications for export licenses are handled routinely and expeditiously. Only a relative few are subject to lengthy review procedures. In order to address these alternative views, the Committee may wish to revise the policy statements in the law and provide a clearer record for guiding the administrators on the intent of Congress for applying the law to license applications. Congressional change might be effected in the licensing procedures merely by clarifing its intent with no change whatsoever in the law. Or the law might be amended to state a specific list of products or processes that should not be licensed. The latter approach would involve a degree of congressional involvement in the administration of policy without clear precedent in the postwar history.

Changing nature of export administration policy

The past emphasis on national security export controls was a reflection of Cold War tensions and the widely-held view that exports of U.S. goods and processes that would contribute to the military and economic strength of the Soviet Union and other putative adversaries. The first major postwar export control legislation—the Export Control Act of 1949—was implemented by establishing controls on all exports to Communist countries. Controls were gradually relaxed at various steps, beginning in the middle 1950s and throughout the 1960s. The Export Control Act was amended and extended several times throughout 1969. At that time, the Nixon Administration was not encouraging further trade with Communist countries. The initiative for change was in the Congress, spearheaded by the Export Administration Act of 1969, which replaced the Export Control Act. Sponsored by Senator Edmund S. Muskie and Congressmen Wright Patman and Thomas L. Ashley, the new Act maintained export controls, but called for a removal of controls on goods and technology freely available to Communist countries from non-U.S. sources and on items that were only marginally of military value. The 1969 legislation represented a new mandate for export controls. Whereas the thrust of the Export Control Act of 1949 had been to limit East-West trade, the new Act was designed to foster such trade. The 1974 extension of the Act continued and extended the less restrictive trend. Presumably, the Committee will wish to ask itself whether this trade promotion thrust, restrained only by direct national secu-

rity considerations, should be retained as our national policy in East-West commercial relations.

If the general policy thrust is retained you may wish to look specifically to Section 3 of the Act which states:

"It is the policy of the United States both (a) to encourage trade with all countries with which we have diplomatic or trading relations, except those countries with which such trade has been determined by the President to be against the national interest, and (b) *to restrict the export of goods and technology which would make a significant contribution to the military potential of any other nation or nations which would prove detrimental to the national security of the United States.*" (Italic added).

The application of this policy and Congressional criticism of the recent record of the administration of export licensing suggest that the policy might be more clearly stated in terms of the risk, probability, and presumed burden of proof, relating to the military impact of proposed exports. A more or less restrictive wording of the relevant sections may provide a basis for illustrating possible modification in the formulation of this section (referring only to the words underlined). The following is a suggestive editing of Section 3, intended to illustrate changes in wording that might clarify the policy intent of the law. Discussion on revisions, whether any are made, also develop a record to reflect the intent and interests of Congress. The restrictive policy statement would retain more of the export control policy of the past.

Restrictive policy.—To restrict the export of goods and technology which *might* make a significant contribution *directly* or *indirectly* to the military potential of any other nation or nations which *might* prove detrimental to the national security *interests* of the United States."

Less restrictive policy.—To restrict the export of goods and technology which would make a significant contribution *directly* to the military *capability* of any other nation or nations which would prove seriously detrimental to the national security of the United States."

Acceptance of the restrictive policy wording would indicate that the scope of the controls should not be further narrowed and that the past restrictive trade policy should be continued as applied to national security considerations.

The less restrictive type policy statement as drafted above would represent a clear departure from the past export control policy of the Export Control Act of 1949 and the "Battle Act".

Clarification of criteria may be important in order to establish closer correlation in policy statements and the philosophy of the control administration. Adoption or reaffirmation of the less restrictive statement might require changes in the criteria and procedures enclosed in administration of licensing. A restrictive policy statement would be consistent with some of the current licensing criteria. The current administration may be restrictive in part because of procedures requiring time and complex analyses and judgments:

1. *Unanimity and full consultation*

The policy as administered continues to be applied as one of withholding approval until all agencies involved in licensing reach agreement. Moreover congressional sentiment, as expressed in the Defense Appropriations Authorization Act and amendments to the Export Administration Act, reinforced this restrictive view by requiring that dissent by one agency, the Defense Department, should receive special White House attention. The Defense Appropriation Authorization Act further provided an opportunity for the Congress to override approval of a license if Defense dissented. This congressional action strengthened the policy of unanimity and full consultation. A policy of requiring unanimity and full consultation is not only inherently time consuming but also reduces the probability of approval.

Congress thus strengthened the restrictive approach to export licensing by the passage of the Defense Appropriation Authorization Act (P.L. 93 365). This Act also tended to confuse congressional intent by being parallel but different from the Export Administration Act. The Export Administration Amendments of 1974 also provide a stronger review role for the Secretary of Defense but the procedure differs somewhat from both the Department of Defense Appropriation Authorization Act and the Export Administration Act of 1969. The key section of the Defense Appropriation Authorization Act (709) is quoted below (italic added):

Sec. 709. (a) The Congress finds that the defense posture of the United States may be seriously compromised if goods, technology, and industrial tech-

niques which have been developed in whole or in part as a direct or indirect result of research and development programs or procurement programs financed in whole or in part with funds authorized by this or any other Act authorizing funds for the Department of Defense are exported to a controlled country without an adequate and knowledgeable assessment having been made to determine whether the export of such goods, technology, and techniques will significantly increase the present or potential military capability of any such country. It is the purpose of this section, therefore, to provide for such an assessment, to insure notice of proposed exports to the Secretary of Defense, and to authorize the Secretary of Defense to review the proposed export of goods, technology or industrial techniques to any such country wherever he has reason to believe that the export of such goods, technology, or techniques will significantly increase the military capability of such country.

(b) Effective upon enactment of this section, any application for the export of any goods, technology, or industrial techniques described in subsection (a) shall, before being eligible for export to a controlled country, reviewed and assessed by the Secretary of Defense for the purpose of determining whether the export of such goods, technology or techniques will significantly increase the present or potential military capability of such country.

(c) *If the Secretary of Defense determines, after his review and assessment, that the export of such goods, technology or industrial techniques will in his judgment significantly increase the present or potential military capability of any controlled country, he shall recommend to the President that the application for export be disapproved.* In any case in which the President disagrees with a recommendation made by the Secretary of Defense to prohibit the export of such goods, technology, or techniques to a controlled country, the President shall submit to the Congress a statement indicating his disagreement with the Secretary of Defense together with the recommendation of the Secretary of Defense. *The application for the export of any such goods, technology, or techniques may be approved after submission by the President of his statement and the recommendation of the Secretary of Defense* to the Congress and 60 days of continuous session of the Congress has elapsed following such submission unless within such 60 days period Congress has adopted a concurrent reolution disapproving the application for the export of such goods, technology, or techniques.

(d) As used in this section (1) the term "controlled country" means the Soviet Union, Poland, Romania, Hungary, Bulgaria, Czechoslovakia, the German Democratic Republic (East Germany), and such other countries as may be designated by the Secretary of Defense, and (2) the term "days of continuous session of the Congress" shall not include days on which either House of Congress is not in session because of an adjournment of more than three days.

(e) The Secretary of Defense shall submit to the Congress a written report on his implementation of this section not later than 30 days after the close of each quarter of each fiscal year. Each such report shall, among other things, identify each instance in which the Secretary recommended to the President that exports be disapproved and the action finally taken by the executive branch on the matter.

The requirement of unanimity is extended from the Committee on Export Policy to the White House and to the U.S. Congress by this provision. Although this section, in practice, appears to have been superseded by the subsequent Export Administration Act Amendments, it is still law and provides procedures for reference to Congress in cases under Defense jurisdiction as a result of defense funding support. Although Defense may have primary jurisdiction for licensing decisions under Section 4(H) of the Export Administration Act, there is no procedure for Congressional override in those cases where the majority votes differ from that of Defense.

The consultative procedure also extends to COCOM (composed of NATO partners, except Iceland, and Japan) by the "Battle Act." Under COCOM procedures unanimity is required to reach agreement on many issues, e.g. change of the composition of the control lists. Further consultation is also normal though committees and directly with industries in the United States.

A requirement of unanimity and full consultation is bound to be time consuming. In itself the process need not encourage a restrictive or a broader interpretation of the legislative policy. There is however a presumption in many industrial quarters that the process is restrictive and that the enhanced

Defense role makes the policy of licensing administration more so. On the other hand, aside from the time factor, consultation with COCOM or industry might lead to a broader interpretation of policy. Likewise, absence of specific reference to the Peoples Republic of China in the Defense Appropriations Act might be viewed as a narrowing of country coverage and thereby be less restrictive.

2. *Presumption of license denial*

In a recent assessment prepared by Secretary of Commerce Rogers Morton in August 1975, *The United States Role in East-West Trade, Problems and Prospects*, one can derive a negative inference in the description of the process of license approval by virtue of its complexity and rigor. The fact that the list of commodities controlled had been so narrowed, which implies less restriction, is countered by the interpretation of the Administrators, who maintain that any applicant for a validated license would tend to be "hard core" cases in threatening our national security (as items on the list are those with high military significance) and therefore subject to thorough and rigorous review. Only applications that "raise policy questions or pose serious problems," it is noted, are documented for formal consideration of the Operating Committee for Export Policy. The documentation may be rather extensive and complex as indicated by the licensing considerations described by Secretary Morton (on pp. F8 and F9 in his testimony) as involved in the decision to approve or reject an application for a socialist destination:

(a) What is the normal use in the U.S. and elsewhere in the free world?

(b) Is the item designed for military purposes? Is the intrinsic nature of the commodity or data such as to make it of significant use to the military? Is it currently used importantly by the military establishments in the West? In the country for which it is destined?

(c) If the item has both military and civilian uses, is the intended end-use peaceful in nature?

(d) Is the prospective foreign end-user engaged in peaceful or military-oriented work?

(e) Does the item incorporate advance or unique technology of strategic significance that could be extracted?

(f) Is there a shortage of the item in the area of destination that affects the military potential?

(g) Are comparable commodities or data available to the country of destination outside the U.S.? If COCOM controlled, are they available outside the COCOM countries?

(h) Would significant economic/commercial benefits flow to the U.S. from consummation of the transaction? (pp. F8, F9)

Both those favoring a restrictive and a less restrictive revision of policy might favor simplifying this process. The restrictive view might suggest expanding the list or simplifying the criteria to exclude more items that might be approved. The less restrictive view might be served by further narrowing the coverage but also simplifying the procedures. The cost in time and effort of the present procedures is not its only weakness. The uncertainty of the procedure also raises some questions. Some simplifications might reduce the coverage of applications applying to the Peoples Republic of China, and certain other socialist countries which may be considered of less direct military threat to the United States and who may not be expected to transfer technology to those who are a putative threat. Likewise, assessments of end use of commodities might be removed which involve difficult assessments and uncertainty. Approval of an advanced computer for a Soviet truck plant and disapproval of the same model computer for the Soviet tourist agency use is such an example.

The number of licenses that are approved, may tend to ameliorate the contention that a negative bias exists in the review process, (note in the appendix table that most applications are ultimately approved) but a value measure might support the case. However, the complexity, uncertainty and cost of the process may limit the number of applicants for licenses.

Although criticism of the process may be directed to its implied negative bias, the problem may be more of complexity and uncertainty. The simplifying of criteria would seem to be consistent with the current act. The criteria now employed seem to have been based on the philosophy carried over from either the Export Control Act of 1949, the "Battle Act" of 1951, or both.

National interest and the broader definition of security

Section 3 also refers to a national interest determination by the President. Two lines of consideration might be explored in clarifying this part of the policy of export licensing:

1. Formal linkage of trade and other issues.

There have been many congressional and other suggestions that export controls be tied to human rights (emigration, etc.), crisis resolution (Angola, etc.) or other issues. As this issue has been fully aired elsewhere it need not be further explored here.

2. Informal linkage of trade and other issues.

A broader view of our national security and national interest suggests that export of U.S. technology may be adverse to our economic, political and other non-military interests or security. Are we following an export policy designed to maintain our technological lead? Are we receiving adequate return to recoup our investment in research? Are U.S. multinationals operating abroad contributing to broaden American economic interests in their policies of trade and production? Are there indirect or long-run effects of current international trade policy options that may influence our long term national security? These are all questions meriting further assessment, although probably not lending themselves to legislation.

In reviewing Section 3 of the Act the Committee may wish to explore how compliance with its provisions may be encouraged within Export Administration legislation. Encouragement of more structured governmental and industry dialogue might be useful in Section 3. Although some agencies have made successful efforts to bring in industry on an advisory and consultative basis, others appear to have been less successful. Specifically, the question of how national and private interests are interrelated in export of technology by multinationals is not adequately aired. To be sure, industries wish to protect their industrial secrets and some distrust of government has been generated. However, during the course of hearings the issue of a broader definition of national security and its relevance to export of products and technology might be appropriately explored.

Rationale for export licensing change in policy and administration

There is an impression that the philosophy of export administration changed with the 1969 Act but the spirit of the Administration did not. This philosophy change is communicated in Section 3, which reads: "to restrict the export of goods and technology which would make a significant contribution to the military potential of any other nation or nations which would prove detrimental to the national security of the United States". This statement carries a neutral ring or is a policy statement which suggests that licenses will be granted. In contrast the criteria for administration of license approval with its requirement of full consultation, unanimity, and conformance to complex criteria creates the impression that licenses will be delayed or refused. Even if they are correct inferences, these different interpretations do not indicate which should be acceptable congressional policy—broader approach or the restrictive approach. At the same time whichever of the two interpretations is preferred the Committee may favor steps toward revised approval machinery that is simplified, more efficient, and more predictable. This would be aided if the differences in congressional intent were clarified or eliminated in the policy statements in the legislation. It may be useful to summarize some of the factors which presumably contributed to the 1969 and 1974 changes toward trade promotion and away from control. These are partly speculative as the formal congressional record is not too clear or complete:

1. The eroded and limited U.S. technological leadership no longer permitted unilateral denial of technological exports to any countries. West European nations and Japan (even though members of COCOM) could and would supply technology not licensed by the United States. The effective list of U.S. controllable items was effectively reduced by the closing of the technology gap in the West and the weakening of U.S. alliance control. These were developments outside of our control.

2. The Communist alliance system had weakened to the point that trading with one country was no longer considered equivalent to trading with all. This was especially true of technological transfer or "leakage" as between the Peoples Republic of China and the Soviet Union. Therefore concern was focused directly on the Soviet Union as the nation with the most advanced and poten-

tially dangerous arsenal. Export licensing to other socialist countries should be controlled, it is argued, on a nation by nation basis.

3. Advancements in Soviet weapons research and technology indicated that with priority, resources, and time there were few changes they could not make or counter in military technology without imports. Corollary to the reassessment of Soviet military technological advances was a view that the major Soviet bottlenecks were in management of military research applications rather than in basic research on military related technology.

Some of the above interpretations of the possible rationale for change may throw light on the appropriate use of the word "significant." in Section 3. In licensing, as in other matters, it is difficult to predict which will happen, but as we have some experience with the modified licensing procedure since 1969 we may ask—What did happen? Are there any examples of significant improvements in military capability that might have occurred because of or in spite of technology transfer from the West that effected Soviet military capability.

If we conclude that the Soviets could improve, catch up, and pass us in some areas of military technology in spite of our controls, we might want to look at the other side of the coin—the advantages to us in high technology transfer beyond the income from sales. In many areas the Soviets are, we are told, very advanced but nonetheless may need and seek advanced U.S. technology, e.g. computer systems. By installing these systems and servicing them we may greatly increase our own knowledge of the state of their advanced technology and limit their development into areas in which we have possibly temporary technological edges.

These reassessments by knowledgeable witnesses would help the Committee in deciding where the burden of proof in licensing should lie. Should it be on the applicant or application for license to demonstrate little or no risk of military enhancement of a putative energy? Or should the opposite hold—should the approval system require that the evidence be overwhelming before most licenses be disapproved on grounds that significant affect of military capability would result? Clarification of Congressional intent would presumably aid the export administration in applying a consistant, perhaps simpler, more efficient system of licensing exports to socialist countries.

Appendix—U.S. National Security Export Controls—A Survey of Postwar Laws and Administration

Several legislative enactments since 1945 have provided the authorization for the U.S. strategic export control program. Their original purpose was primarily to deny the Soviet Union and other Communist countries exports which could facilitate their industrial growth and enhance their military potential. The following text describes the major acts which have regulated U.S. exports to the Soviet Union.

The Export Control Act of 1949 (50 U.S.C. App. 2021–2032 as amended, Supp. V, 1964) authorized the President to "prohibit or curtail" all commercial exports except shipments to U.S. territories and most exports to Canada. The purpose of the Act was to use export controls: (1) to prevent domestic economic shortages; (2) to protect the national security; and (3) to promote the foreign policy of the United States. The national security purpose has been the primary rationale for regulating exports to the Communist countries. The act was extended and amended several times through December 1969. The 1962 extension of the Act specified that its intent was to prevent a significant contribution not only to a Communist country's military potential, but also to its economic potential. Subsequent legislation has removed the latter goal, but has provided for the continuation of the essential features of the export control system established by the Export Control Act.

Pursuant to the goal of protecting national security, selective controls are exercised over U.S. exports to the Soviet Union and other Communist countries. In addition, exports of U.S. origin products and technical data are controlled to non-Communist countries to prevent reexports that would frustrate U.S. controls over direct exports to Communist countries. Thus, a Japanese or West European firm may receive a license for importing certain kinds of U.S. technology only on the condition that it not reexport that technology to another specified country.

To regulate U.S. exports, a licensing system was established. Under this system, which is still in effect, the Office of Export Administration of the Department of Commerce regulates all U.S. exports by granting (or not granting) one of two types of licenses: a general authorization which permits shipment of certain types of goods to certain destinations without a specific application by the exporter, or a validated license to an individual exporter for a specified export.

Over 90 percent of U.S. exports are made under general licenses. Validated licenses are required for commodities and technical data of a more sensitive nature which may not be exported freely to designated countries. To administer the program the Department of Commerce maintains the Commodity Control List which identifies, for each listed commodity, the destinations to which a validated license is required. For export control purposes, the Soviet Union is classified in Country Group Y with most of the Eastern European countries, Mongolia, and the People's Republic of China. Romania and Poland are in Country Groups Q and W, respectively, and are subject to more lenient controls. North Korea, Vietnam, and Cuba are in Country Group Z, which receives the strictest controls.

In determining how exports should be regulated, the following factors are generally taken into account concerning each commodity:

(i) Its essential features (distinguishing physical or operating characteristics; variations between types, models, grade, etc.; and the technical and strategic significances of these differences).

(ii) Its civilian uses.

(iii) Its military or military-supported uses.

(iv) Its end-use pattern in the United States.

(v) Its technological state of development. (Whether it involves a new product and represents the current state of the art. Whether it contains advanced technology that can feasibly be extracted.)

(vi) Its availability abroad (whether the same or a comparable commodity is available from other non-Communist countries and where and by whom. Whether the foreign product is manufactured abroad with U.S.-origin technology or components).[1]

In March 1951, all general licenses to export to the Soviet Union were revoked. This requirement for validated licenses was relaxed somewhat in 1956, when a number of specified items was again made exportable to the U.S.S.R. and Eastern Europe under general licenses. Since that time, there has been a gradual trend toward relaxation in the licensing of exports to Eastern Europe. Poland, in 1957, and Romania, in 1964, were placed in separate categories for which validated licenses for fewer exports were required. In 1966, the requirement for validated licenses for exports to the other Eastern European countries, including the Soviet Union, was removed for over 400 items. In subsequent years, several hundred more commodities were placed in the general license list for export to Eastern Europe.

This trend toward relaxation accelerated in the late 1960s, particularly after passage of the *Export Administration Act of 1969* (50 U.S.C. App. 2401–13, 1970), which replaced the Export Control Act. The new Act maintained export controls, but called for a review of control regulations and control lists. It called on the Commerce Department to lift controls on commodities freely available to Communist countries from non-U.S. sources and on items that are only marginally of military value. In short, the 1969 legislation represented a congressional mandate for a new direction in export controls. Whereas the thrust of the Export Control Act of 1949 was to limit East-West trade, the new legislation was designed to foster such trade. The Export Administration Act expired on June 30, 1971, but Congress enacted joint resolutions (twice in 1971, once in 1972) extending export controls to August 1, 1972.

Upon expiration of the Export Administration Act on August 1, 1972, the President invoked the authority of Section 5(b) of the *Trading With the Enemy Act of 1917* (50 U.S.C. App. 5(b) 1970) to continue the export control program. That Act authorizes the President to prohibit all private financial and commercial transactions with U.S. enemies and their allies during time of war or during any period of national emergency. In the postwar period, this law had previously been used to regulate trade with North Korea, the People's

[1] 15 C.F.R. 370.1(b)(2) 1973.

Republic of China, and North Vietnam (it no longer applies to trade with China).

On August 29, 1972, the Export Administration Act was amended and extended to June 30, 1974 by the Equal Export Opportunity Act (PL 92-412). Section 4 of the new law called for further relaxation of controls on exports freely available from sources outside the United States:

. . . The President shall remove unilateral export controls on the export from the United States of articles, materials, or supplies, including technical data or other information, which he determines are available without restriction from sources outside the United States, except that any such control may remain in effect if the President determines that adequate evidence has been presented to him demonstrating that the absence of such a control would prove detrimental to the national security of the United States.

It also directed the Secretary of Commerce to report to the President and to the Congress on the progress of export control liberalization.

On October 29, 1974, the Export Administration Act was again amended and extended to September 30, 1976 by the Export Administration Amendments of 1974 (P.L. 93-500). The 1974 amendments included a provision which strengthened the role of the Secretary of Defense in reviewing exports of goods or technology that would "significantly increase the military capability" of a Communist country. The Secretary of Defense is directed to determine, in consultation with the Office of Export Administration, the types and categories of transactions which he should review. If the Secretary determines that an export does make a significant contribution to the military capacity of a controlled country, he is directed to recommend to the President that the request for export be disapproved. Upon receiving such a recommendation, the President may, within 30 days, disapprove the export if, however, he overrules or modifies the Secretary of Defense's recommendation, he must report this decision to Congress.

An earlier law passed by the 93d Congress, the Department of Defense Appropriation Authorization Act, 1975 (P.L. 93-365), enacted August 5, 1974, had also redefined the review role of the Secretary of Defense. This Act authorizes the Secretary of Defense to review and to recommend to the President that he disapprove the exportation of goods or processes developed with Department of Defense funds that would "significantly increase the potential military capability of a controlled country." (The law defines the Soviet Union, Poland, Romania, Hungary, Bulgaria, Czechoslovakia, and East Germany as controlled countries.) It also provides that, if the President disagrees with the Secretary's recommendation, the Congress may overrule the President by concurrent resolution.

Other Government agencies, such as the Department of State, the Federal Power Commission, and the Nuclear Regulatory Commission exercise primary authority for regulating exports of goods and technical data that are within their specialized jurisdiction. For example, the *Mutual Defense Assistance Control Act of 1951* (the "Battle Act", 22 U.S.C. 1611 et seq., 1970) and section 414 of the *Mutual Security Act of 1954* (22 U.S.C. 1934, 1970) authorize the State Department to administer controls over implements of war and certain strategic materials and related technical data. The Nuclear Regulatory Commission licenses exports of nuclear energy material and data, and the Federal Power Commission licenses natural gas and electric energy exports.

The Battle Act is also the main legislative basis for coordination of U.S. export control policy with the policies of its western allies. A Coordinating Committee (COCOM), including all of the NATO countries, except Iceland and Japan, meets periodically to set guidelines for controls on exports to the Communist countries. The Battle Act (which was amended in 1961) not only prohibits the export of implements of war, atomic energy materials, and other strategic commodities to Communist countries, but also provides that all U.S. military, economic, or financial assistance be denied to any nation that knowingly permits shipment of such goods to the Communist Bloc. Although the President may waive this provision if he finds it in the national interest, its enactment provided him with a bargaining tool for persuading other countries to apply the strategic embargo.

As COCOM has no formal charter, its decisions are not binding on member countries. Rather, it is an advisory board which issues recommendations of goods to be embargoed or controlled. These are regarded as minimum lists to

which each member might add commodities. Since its inception, COCOM has steadily reduced its list of embargoed items. In September 1972, for example, COCOM completed a review of its controls which led to many changes to decontrol products and technical data. A few changes were also made to increase coverage, especially in the electronics and communications areas.[2] In the past, the U.S. Commodity Control List has contained considerably more controlled items than COCOM's International List. Perhaps because of their traditional trade ties with the Soviet Union and other East European Communist countries, the other members of COCOM have consistently lobbied for fewer controls, while the United States has favored more.

The COCOM liberalization of export controls has been paralleled (albeit at a slower rate) by the trend in U.S. export control policy. The Export Administration Act has effected significant changes in the U.S. administration of export controls. In the first year after its passage, 1,550 commodities were made exportable under general license to countries in Group Y. Trade with Romania was further liberalized, and in 1971 the President relaxed the U.S. embargo on Communist China, freeing many nonstrategic goods for export to China under general license. Since passage of the law in 1969, there has been a sustained effort to remove controls from most items not controlled by other COCOM countries. It is likely that the United States will maintain somewhat more rigid controls because it has much more developed military research and development and production programs. Other COCOM countries have fewer problems with export controls because they have less sophisticated military technology. Still, most of the export license applications for Eastern Europe that have been denied by the U.S. Government have been for items also under COCOM controls. In its 111th quarterly report on export controls, for example, the Commerce Department reported that all applications for export to Communist countries that were denied for the first quarter of 1975 involved commodities subject to COCOM controls.[3] A Department of Commerce report to the Congress and the President in May 1973 noted that the Department had reduced the number of unilaterally controlled entries on the Commodity Control List from 550 to 73. The remaining entries had been limited in scope through decontrol of specific commodities. For example, whereas most computers were once restricted, only specified computer equipment is now controlled for export to the Soviet Union. The report stated that most items which were still unilaterally controlled embodied technology that was unique to its U.S. manufacturer or which would make a significant contribution to the military potential of Communist countries.[4] The reduction of the number of controlled items has been accompanied by new export clearance procedures to expedite the licensing process.

The U.S. exporter to Communist countries is still confronted with greater barriers than his counterparts in other Western countries. U.S. businessmen complain that tighter U.S. controls and time-consuming procedures for licensing exports of technology give other Western companies a considerable advantage. Foreign competitors sometimes obtain information on pending U.S. exports which puts them in a favorable competitive position. Approval of applications of export licenses can take from a few weeks to several months.

Nonetheless, evidence suggests that relaxation of controls has rapidly expanded opportunities for sale of American technology to Communist countries. Following enactment of the Export Administration Act in 1969, there was not only a reduction of the Commodity Control List, but also a rapid increase in the value of validated licenses issued for exports to Communist countries. (See following table.)

The large increase in the value of licenses approved during 1970–73 was largely a result of numerous approvals of machinery and equipment exports to the Kama River Truck Plant in the Soviet Union. Among other important items receiving validated licenses in recent years have been electronic computers, parts and accessories. In 1974, the total value of licenses approved decreased, reflecting primarily a reduction in the number of applications.

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[2] U.S. Department of State. *The Battle Act Report*, 1972, p. 1.

[3] U.S. Department of Commerce, Bureau of East-West Trade. *Export Administration Report*, 111th Report on U.S. Export Controls to the President and the Congress. First Quarter 1975. Washington, D.C., 1975, p. 8.

[4] U.S. Department of Commerce. Export Control, special report by the Secretary of Commerce to the President, the Senate, and the House of Representatives. Washington, U.S. Government Printing Office, May 29, 1973, p. 3.

TABLE 1.—DOLLAR VALUE OF COMMODITY LICENSE APPLICATIONS PROCESSED, LICENSES ISSUED, AND ACTUAL EXPORTS TO EASTERN EUROPE AND THE PEOPLE'S REPUBLIC OF CHINA, QUARTERLY, 1962—FIRST QUARTER 1975

[Thousands of dollars]

Quarter	Applications processed [1]	Licenses issued [1]	Actual exports [2]
1962:			
First quarter	14,046	13,340	45,466
Second quarter	12,019	10,836	42,076
Third quarter	61,475	16,859	21,389
Fourth quarter	10,896	8,530	16,249
1963:			
First quarter	11,258	9,860	21,365
Second quarter	17,319	19,467	65,186
Third quarter	20,146	19,467	26,378
Fourth quarter	95,309	93,178	53,753
1964:			
First quarter	339,687	334,328	158,010
Second quarter	27,303	26,985	107,301
Third quarter	17,858	13,769	38,587
Fourth quarter	32,258	30,989	35,683
1965:			
First quarter	35,229	34,856	25,253
Second quarter	30,950	28,191	39,059
Third quarter	40,787	39,006	24,214
Fourth quarter	43,145	41,328	51,383
1966:			
First quarter	47,000	46,049	56,458
Second quarter	43,433	41,601	45,457
Third quarter	35,553	34,967	35,994
Fourth quarter	30,848	30,503	59,828
1967:			
First quarter	42,384	41,961	70,916
Second quarter	26,046	24,523	45,709
Third quarter	23,426	23,130	36,304
Fourth quarter	27,606	27,245	43,049
1968:			
First quarter	37,437	37,237	55,150
Second quarter	49,074	44,108	49,194
Third quarter	38,922	36,827	50,046
Fourth quarter	42,644	42,386	62,453
1969:			
First quarter	37,618	36,463	39,349
Second quarter	102,234	33,553	63,269
Third quarter	44,719	44,566	62,508
Fourth quarter	62,501	61,525	84,163
1970:			
First quarter	73,353	73,137	91,462
Second quarter	97,638	97,067	84,407
Third quarter	33,589	33,118	77,311
Fourth quarter	56,916	55,950	100,140
1971:			
First quarter	52,657	51,327	114,557
Second quarter	119,865	119,001	88,250
Third quarter	206,899	206,476	85,583
Fourth quarter	970,776	967,718	95,563
1972:			
First quarter	435,609	432,501	158,803
Second quarter [3]	270,293	269,433	123,809
Third quarter	97,511	96,910	224,697
Fourth quarter	140,673	139,838	365,711
1973:			
First quarter	129,637	129,198	506,610
Second quarter	32,960	32,872	642,242
Third quarter	477,095	477,039	671,055
Fourth quarter	36,937	36,777	670,756
1974:			
First quarter	31,515	25,419	725,625
Second quarter	35,723	26,421	559,509
Third quarter	32,957	26,080	488,954
Fourth quarter	34,692	32,204	464,972
1975:			
First quarter	56,176	49,834	(4)

[1] Beginning with the second quarter 1967, "Applications Processed" and "Licenses Issued" no longer include applications and licenses for temporary exports, e.g., trade fair exhibit, demonstration, or testing.

[2] Actual exports include shipments under validated licenses, some of which were issued during the quarter and others in previous quarters, as well as shipments under general licenses.

[3] Beginning with the second quarter 1972, figures in all three columns include the People's Republic of China. Prior quarters reflect licensing and exports for Eastern Europe only.

[4] Not available.

Source: U.S. Department of Commerce, Export Administration Report, First Quarter 1975, p. 11.

Mr. Bingham. Thank you very much, Mr. Hardt. I must say that this is a most difficult and complex field, and one in which the lay person is likely to feel somewhat overwhelmed.

SHOULD THE SYSTEM BE MORE OF LESS RESTRICTIVE?

Might I start with a kind of a general question of all three witnesses, and perhaps make it in the form of a statement and see if I am wrong.

I got the impression from Mr. Fasick that he feels that the system until now has been too loose, even though it involves long delays and so on; that he would prefer to see a more restrictive system.

I get the impression from Professor Allison and Mr. Hardt that they would like to see less restriction than we have now.

Is that a fair interpretation of your presentations?

Mr. Fasick. Let me start by saying that we haven't said it is too tight or too loose. Within the framework of the legislation, and what we interpret to be the intent of the legislation, we believe that administration of the program is, as some people characterize it, in disarray, and that there is a need for improving the program, if indeed the intent of the legislation is to be followed.

As to whether it should be liberalized or tightened, I think that is a question that is for the executive branch and the Congress to decide. But our basic premise is that the system isn't effectively working now.

Mr. Bingham. Well, I take it you, Professor Allison, certainly agree with the last point.

Would you also agree with my interpretation that you think that essentially the system is, as you said, anachronistic, in the sense that today it is operating in too restrictive a fashion?

Mr. Allison. I think, sir, that I would agree that my argument implies that the system is both too restrictive and too loose. The Serpukhov case illustrates the first point. Although the system has changed somewhat since that time, I believe that the system made a mistake in refusing to allow CDC to sell that computer to the Soviet Union in the early 1970's. American companies are denied the opportunity to sell many products which if sold to the Soviet Union would not contribute significantly to Soviet military capability in a way that would hurt U.S. national security. Indeed the current system achieves mainly an objective which I think is no part of the congressional intent, nor indeed of the Executive's objective either, that is, of shifting these sales to France or Japan or to subsidiaries of American companies abroad.

On the other hand, if it doesn't seem like I am trying to have it both ways, I argue the system is also too loose in the sense that it is not defining clearly enough the items that are of real strategic concern.

By having a system both too restrictive in terms of its number of items, and too loose in its administration, we may end up with the worst of both worlds: Lost sales of items of no strategic concern and failure to restrict some items of greatest importance.

This applies both to sales of American companies and American-based companies abroad, and to other COCOM countries. Given that the COCOM list is so long even though it has been significantly pared down over the last decade, and that a number of the items on it are not evidently strategic, items slip through that could have been controlled more effectively, especially where there are only a limited number of suppliers of these items. In those cases, it might be possible to lean on the Japanese or the French to get them not to sell those items to the Communist countries. So, I guess I am trying to have it both ways.

Mr. BINGHAM. Would you comment on that, Mr. Hardt?

Mr. HARDT. Yes, I would certainly agree with that latter point of the need for priorities, and giving particular attention to those things, such as high technology itself, which is clearly of significance and where we have broad agreement that it is of significance.

But saying things like, "The system is too complicated and too time consuming," and so forth, I think is too difficult to document further. My experience, unfortunately, is that every time I get a specific case which I think tells me something, the more I learn about the case, the less it tells me about changing the system.

I cited the example of the IBM system, which was sold to operate the foundry at Kama, and the system which was not approved for Intourist, in my testimony.

Well, that is not as good a case as I suggested it might be, because it is much more complicated than that. It is a different system, because although the equipment is similar, it is organized in a different fashion. There is a different end-user.

Now, whether or not it sets appropriate criteria may be open to question, but the more I learned about it, the more I realized that what seemed like an inconsistency, an unnecessary complexity, was a justifiable complexity.

I think we have to look at this whole process in terms of specifics. Unfortunately the more we look at specifics, the more difficult it is to generalize.

Therefore, I recommend to the legislators that you concentrate on clarifying policy which I think is not clear, and work with the administrators and try to engender and stimulate on all sides a degree of openness to change, because change, I think, is needed.

Precisely what, beyond the list that you identify with Mr. Bucy, is something hard to say.

NO ATTENTION GIVEN TO PRECEDENT

Mr. BINGHAM. One of the three of you, and I forget now which it was, said that in the administration of this there is no attention to precedent.

Mr. ALLISON. Yes.

Mr. FASICK. That is correct.

Mr. BINGHAM. Did I correctly state that?

Mr. FASICK. And that follows the same——

Mr. BINGHAM. That is a rather astonishing statement to me, as a lawyer.

Mr. FASICK. Why?

Mr. BINGHAM. That is a deliberate, stated policy, is it, that each case will be looked at on its merits, and without regard to what was done in a similar case?

Mr. FASICK. In practice this is what we found them to be doing. I don't know whether it is a stated policy or not.

STATEMENT OF ARTHUR A. SHANTZ, GENERAL ACCOUNTING OFFICE

Mr. SHANTZ. It is a stated policy.

Mr. BINGHAM. Would you identify yourself?

Mr. SHANTZ. Yes. My name is Arthur Shantz. I am with GAO.

BURDEN OF PROOF

Mr. BINGHAM. The matter of burden of proof, it seems to me, might be something that we could explore a little bit.

Do existing statutes deal with the question of burden of proof at all? I will let anyone answer who cares to.

Mr. HARDT. No. I think the legislation leaves the licensing procedure itelf, the need for licensing, and the criteria for approval and disapproval, to the administration. It presents the policy and the philosophy, but——

Mr. BINGHAM. Yes, but the question of——

Mr. HARDT. But it doesn't speak directly to this. It creates an environment.

Mr. BINGHAM. It seems to me that burden of proof might be something that one could deal with legislatively. I can't conceive of the Congress attempting to draw up the kind of a list that you have in mind.

Surely that must be at an administrative level. Noting the great difficulty that all three of you have had in trying to articulate your conclusions as to the correct policy. I foresee great difficulty in the Congress legislatively trying to articulate what the policy should be, beyond possibly the kind of concept that is implicit in the notion of burden of proof.

Mr. WHALEN. I say that should not be surprising, Mr. Chairman, Congress——

SUGGESTIONS FOR LEGISLATION

Mr. BINGHAM. Really, not one of you has suggested, as far as I can recall, or has made a specific suggestion to us of what kind of new or different policy should be articulated in the legislation which will extend the Export Administration Act.

Mr. FASICK. No, we haven't. I think we did not cite specific policy that should be articulated, but I think we did identify, first of all, the need to define what it is we want.

Mr. BINGHAM. Well, that is another way of stating what the policy might be, though.

Mr. FASICK. Yes sir, and that needs to be done within a framework of considering many other complex issues that involve our

relationships with other countries, strategic, diplomatic and economic.

I think we tried to make the point that this isn't an issue that is subject to a simple answer or a simple solution. It is extremely complex.

In our own approach to the problem, we did look at the administration of the present acts. We identified some difficulty and confusion that people experienced trying to understand the act. We also identified many areas of administration where the executive branch could do things to make administration a bit better, but there is still a need for guidance from the Congress, or guidance or policy developed possibly jointly with the executive branch that would be workable. And I think it could be expressed legislatively.

But at this time I think it would be difficult to identify that policy. You have to go through this deliberative process that, thank God, the committee is going through.

Mr. BINGHAM. Well, I can visualize an attempt to set forth legislatively certain factors that ought to be taken into account in the process. But I would see really no prospect of defining how you were going to weigh those relative factors in making your decision.

TRADE-OFFS

I think it was you, Professor Allison, who spoke of trade-offs. But these are trade-offs in entirely different concepts. A diplomatic political consideration is terribly difficult to weigh against a military consideration or an economic consideration.

And granted you all make the case very effectively that the system isn't working very well now, I find myself without any clear idea of how the Congress could proceed in new legislation to help to correct those shortcomings.

Mr. ALLISON. Let me just, if I could, Mr. Chairman, say one word to that.

I think that we have all agreed with your initial statement about the complexity of the problem, but as you point out, generally that is less helpful, since you suspected that before the hearing opened.

CHANGES SHOULD BE IMPLEMENTED BY ADMINISTRATION

I think that the issues that I identified as flaws and the suggestions that I put forward both in the written testimony and in the study about the kinds of things that might be done are mostly steps for the Executive rather than Congress. As a matter of general philosophy, I am not much in favor of legislating administrative procedures, since if the individuals involved don't want to follow them, they can usually find some way around them in any case.

I would think that vigorous oversight and investigation in light of objectives stated might have considerable utility, though I would, of course, defer to the committee's judgment.

But, as I say, I didn't take it that we were to push to the particular actions that the committee could take, but rather just to lay out the background issues.

OVERSIGHT OF CONGRESS IS IMPORTANT

Mr. FASICK. In our report, we probably have several dozen recommendations. Many of them are parallel to, or at least complement his "small fix"—not his "big fix," but his small fixes—and the oversight or the interest of a committee of this nature would enhance the potential for the administration to seriously consider them.

That, in our opinion, would go a long way to overcoming many of the problems.

I agree with the professor, that specific legislation, legislative changes, may not be necessary, but the pressure of oversight or influencing the administration to do what it now can do within the framework of administration has great potential.

Mr. BINGHAM. Thank you, Mr. Biester.

Mr. BIESTER. Thank you, Mr. Chairman.

I am certainly glad I came this afternoon, because I feel a certain new humility as a result of these hearings. And I served on a subcommittee of the Judiciary Committee dealing with the effort of trying to define obscenity some years back, and while the evidence there was to some degree more stimulating, the ultimate result was just as elusive.

TIME LAG IN PROCESSING

The reason I broke in, as I did, at the outset of your testimony, sir, was that it seemed to me that the time lag of approaching all that multiplicity of agencies and varied criteria would mean that what was advanced technology at the moment of initiation would become "state of the art" halfway through, and obsolete by the time the license was granted.

I have been looking at the table on page A-11 of your statement, Mr. Hardt, and assuming that time lag, would I be correct that sometime fairly early in 1969 something happened that led to a considerable jump in applications in the second quarter of 1971, which continued on raising the level of licenses granted in actual exports, four, five, six, or sevenfold, by late 1975? What was it that happened, and how did that change the rules of the game?

Mr. HARDT. George, would you answer that?

STATEMENT OF GEORGE HOLLIDAY, CONGRESSIONAL RESEARCH SERVICE, LIBRARY OF CONGRESS

Mr. HOLLIDAY. Yes, I am George Holliday, from Congressional Research Service.

Well, what happened, I think, was that there simply were many more applications in that period, and as a consequence, many more applications were approved.

KAMA RIVER TRUCK PLANT PROJECT

One of the big projects that accounted for a lot of those applications was the Kama River Truck Plant in the Soviet Union.

Mr. BIESTER. The what?

Mr. HOLLIDAY. The Kama River Truck Plant in the Soviet Union. There were many applications for licenses to export technology to that project. And there were some other projects which also add to the number of applications.

Mr. BIESTER. To go from 55,000 to 177,000 in one project?

Mr. HOLLIDAY. I think that the Kama River project might account for a lot of that, but there were certainly other projects, as well.

Mr. BIESTER. All right.

Mr. ALLISON. Excuse me, sir. On your question, were these dollar amounts or numbers of licenses?

Mr. BIESTER. Dollar amount.

Mr. HARDT. This is dollar amount.

Mr. BIESTER. Thousands of dollars, or millions of dollars.

Mr. HARDT. These are dollar amounts.

Mr. BIESTER. All right. Thousands?

Mr. HARDT. Right.

Mr. BINGHAM. If the gentleman will yield.

Mr. BIESTER. Yes.

Mr. BINGHAM. The point is still very interesting, if it is up from say $33 million in the third quarter of 1970, which appears to be kind of a low, to $970 million in the third quarter of 1971.

Mr. BIESTER. Right, and that can't be accounted for just by one project.

Mr. HOLLIDAY. We should keep in mind, too, that this was at a period when the administration was actively promoting trade with the Eastern bloc.

Mr. BIESTER. That was during détente.

Mr. HARDT. That was the beginning of the 5-year plan as well.

AMERICAN TECHNOLOGY COMPARED TO OTHER WESTERN TECHNOLOGY

Mr. BIESTER. As a point of information, and I am searching for a generalization here which is useful in terms of trying to find where a policy judgment ought to fall—I know that this is an impossible question to answer, and even as I ask it I feel strangely about it—but is American technology, as a general proposition, ahead of other Western or industrial technology, to the extent that access to it on a regularized basis is significantly important to the Soviet Union?

Mr. HARDT. Well, may I?

Mr. FASICK. I will say yes, and you elaborate.

Mr. HARDT. Well, I think the question of defining technology is the essence. What the Soviets need is large-scale technology.

Now, we are talking again about the North Star and natural gas project. That project is very large scale in terms of technology, management, and so forth. To be sure, U.S. technology and liquefaction is advanced, but it isn't just that. It is the ability of Tenneco and other big multinational U.S. companies to put it together. And it is Northern Slope technology, and the ability to manage it, to put together an international consortium of credit, too, to put together the whole thing.

Now, the Soviet economy is particularly in need of U.S. technology of this sort, because they are a very large economy and they

have very large problems, very large project problems. It is very difficult, even if the Swedes are advanced of the United States in certain things, for the Swedes to put together that package.

And that is the reason why your "yes," I think, is correct.

Mr. BIESTER. We may have a dissent over here.

RELEASE OF RESOURCES

Mr. ALLISON. Yes, I wouldn't dissent from the general thrust of the remark, but I think the particular example is quite difficult. That is, if you took this particular conglomeration of technology, capital and know-how that is represented in this North Star deal, and ask whether the intent of the congressional legislation is to stop American companies from selling that, and whether if that indeed is the intent, it ought to be the intent, I think is a good way to sort of focus the issue.

Mr. BIESTER. Yes.

Mr. ALLISON. I would think that the answer is no, that it should not be the intent. Indeed as I read it, it is not the intent, if one takes the question of oil refineries.

Mr. BIESTER. Depends on what you are after.

Mr. ALLISON. Right.

Mr. BIESTER. And that changes from era to era.

Mr. ALLISON. Yes, sir.

Mr. BIESTER. It now has a lifespan of 2 or 3 years. We have succeeded in compressing eras to that short span.

Mr. ALLISON. Yes, the point is that it is very difficult to determine, in terms of the general well-being of the Soviet economy, whether under the current circumstances selling wheat, as against selling them technology that goes with an oil refinery, has greater consequences for the Soviet economy.

The intent of the legislation, as I understand it, and as I think Mr. Hardt's paper puts it clearly, is to restrict controls to high technology that would contribute significantly to military capabilities. Oil obviously can contribute. You use oil in a tank as you do in a truck. But soldiers eat bread, so you even have a bit of a problem there. Isolating the items that are high technology and that have some potential significance for military capabilities that are of national security concern, I think, is quite hard.

The example that you gave is one that in the current process gets stopped, and maybe it ought to be. But if it is to be stopped, I am unclear why we should not stop wheat as well.

Mr. BIESTER. Under that premise?

Mr. ALLISON. Under that premise, because then if it is not going to be stopped, then the policy needs to be redefined to talk about minicomputers which are rugged, which I can see a military interest in, or particularly know-how for a factory that would produce chips that would be useful for minicomputers, that would be useful for MIRV warheads. But it is harder to see the rationale for stopping the oil deal, and it is particularly unclear why we should let foreign suppliers put together that deal if we don't, unless we have some particularly subtle interest in expanding foreign export activity, which I don't think is part of our objective.

Mr. FASICK. I would just like to help John. He wasn't saying that we should not export technology. The Soviets want it and we have a vast amount of technological know-how that the Russians desire. It is an attractive market for them, highly attractive.

Mr. ALLISON. No, I don't mean to suggest he was saying not to sell. I was just taking it as an example.

Mr. HARDT. Let me add, if I may, another note. The assumption that the development of the West Siberian energy complex is going to be primarily or solely resource releasing I think has to be examined. In many cases it is resource demanding and competitive with defense activities.

Because to develop the infrastructure to develop their own petroleum refineries, to develop their peroleum technology, they have a greater demand on their sophisticated technology. So you have a balance question.

Mr. BIESTER. Right.

Mr. HARDT. Just as when the trucks are built, the infrastructure in the roads, and there is greater pressure on the resources, as when they import feed grain there is more pressure to keep the livestock and to build the farm-to-market roads, and so forth.

So that in terms of our economic relations, we have a kind of a balance between resource releasing and resource demanding, if you will. I don't know if that is the terminology you used.

Mr. BIESTER [presiding]. The record should note that Mr. Biester is in the Chair, for the first time in 10 years. It may never happen again.

Mr. WHALEN. Thank you, Mr. Chairman. I think we have all agreed on one thing today, that this subject is extremely complex. Let me take a risk and try to simplify it at least for my own edification.

TWO PRIORITIES IN EXPORT CONTROL LEGISLATION

Mr. Fasick, when you went to the Harvard Business School, you probably recall that the first question the professor asked the class was what is the problem in this case. As I perceive the problem, it simply is that the Congress, in passing export control legislation, defined two objectives, and has given relative equality of priority to these two objectives.

The first is our own security interests or not promoting the security capabilities of Eastern Europe, the second to promote trade. Am I correct in that analysis?

Professor Allison, I don't know whether you use the same approach at the John F. Kennedy School as they do at the Harvard Business School.

Mr. ALLISON. We would deny it, but we probably do, yes.

Mr. WHALEN. But as you indicated, we are apparently not meeting either objective. I further gather that what you are trying to tell us in a nice way is, Congress should assign a priority to these two objectives by letting the administrators know which is more important, is this correct?

Of course, Congress is pretty good at avoiding this kind of a stand. I think we have done an outstanding job in this respect in connection with the Trade Act of 1974. I made a speech on that on the House floor in which I said my concern was that Congress gave no direction in that bill.

In effect Congress said, "Mr. President, you and the trade negotiator, if you want to engage in protectionism, we give you the authority to do it. If you want to try to achieve more liberalized trade, we give you the authority to do this."

So, as I understand it, I think the view of the panel is that we can help the executive branch help avoid delays, help avoid or overcome some of the other problems, simply by assigning higher priority to one or the other issue.

CREDIT FINANCING

My only other question, Mr. Chairman, is this: Are we saying, too, that this problem is compounded by the fact that much of our technology transfer is being financed by credit? Are we saying that by financing this through credit we are permitting, in effect, release of resources or "gains of trade," whereas if there were an equal exchange of goods this would not occur?

I don't know. If you have any comments on any of those points I have raised I would appreciate it.

Mr. HARDT. Yes, on that last question, sir I think there is an additional problem. In the Export Administration Act amendments it seemed to me the Congress made its view very clear that credit in that formulation, and particularly the very long-term credit, and on what were considered to be the low market considerations, was not, in the congressional view, an appropriate national posture, and that an acceptance of the Peterson report was not concurred in by Congress.

Now, technology transfer and sales, which is why the Export-Import Bank closed, in fact the current status as far as the limited trade the United States has, is a different question.

They are interrelated, but for cash or for current balance is one thing. For credit and for very long-term credit is another.

Mr. WHALEN. Of course we did impose other restrictions, the Jackson-Vanik trade amendment, and so forth.

Mr. HARDT. Yes, the Jackson-Vanik amendment stopped changes in trade. But beyond that is the Stevenson amendment, and the Export-Import Bank amendments itself, which are much more specific in reference to credit. I think that question is addressed in that legislation.

Mr. WHALEN. I don't know if there are any other comments to my observations or not, Mr. Chairman.

Mr. ALLISON. Just one comment, I think, on your first observation. I think that after our sometimes confusing presentations you put the matter so directly and simply that it seems we must be saying something more complicated than that, but I think I would subscribe to your statement.

Mr. WHALEN. I have no further questions, Mr. Chairman.

U.S. CONTROLS GIVE ADVANTAGE TO COMPETITORS

Mr. BINGHAM [presiding]. Let me ask just this one thing. In your appendix to your statement, Mr. Hardt, you say:

> The U.S. exporter to Communist countries is still confronted with greater barriers than his counterparts in other Western countries. U.S. businessmen complain that tighter U.S. controls and time-consuming procedures for licensing exports of technology give other Western companies a considerable advantage.

Do you all agree with that statement?

Mr. FASICK. What page is that?

Mr. BINGHAM. A-9, the middle of the page.

Mr. ALLISON. I would agree with it from what I know of the problem. I think that it would probably be useful for the subcommittee, if I can suggest it, Mr. Chairman, to take testimony from some of the company heads who are involved.

I know of at least one who for a while had lost interest in the issue, but now has become somewhat more interested. He deals with it by doing more than a half-billion dollars' worth of business through a foreign subsidiary, because that is easy, and if American procedures are so cumbersome, too bad for the sales from his American plants. I regard this as sad, from the point of view of American interests.

NEED FOR COCOM

Mr. BINGHAM. What would happen if we did away with COCOM altogether?

Mr. FASICK. I think you need it for multilateral purposes. Unilaterally, you would have no ability to control other countries strategic exports, particularly those exports which are United States licensed and produced or manufactured by United States affiliates or other organizations in the industrialized world. I would not suggest getting rid of COCOM at all at this point in time.

Mr. BINGHAM. Would you disagree with that?

Mr. ALLISON. I think I would agree with that. In the course of doing the study which I submitted to you for the record, I talked to a number of people involved in the administration of the current export control system, and one of the subjects that they discussed in the study is taking bets about when COCOM will collapse of its own weight. I think the standard betting says in 4 or 5 years.

Another way to put the issue is whether in the interim the benefits of COCOM's delay in Soviet acquisition of some technologies that may contribute significantly to their military capabilities outweighs the costs to the United States in sales foregone to France, Japan, and other countries—who interpret COCOM regulations much more liberally than we do.

COCOM UNANIMITY RULE

Mr. BINGHAM. Would there be some virtue in changing the rule of unanimity at COCOM?

Mr. SHANTZ. Well, I think as a practical matter that already has happened. The United States has taken pro forma positions which are in effect a waiver of the unanimity rule.

Mr. BINGHAM. Would you explain that please a little more. What do you mean by a pro forma position?

Mr. SHANTZ. It has taken a position of reaching an understanding with COCOM countries that the United States objection would be merely for the record as opposed to censure intended to stop the transaction.

Mr. BINGHAM. So the transaction goes forward although the United States objects?

Mr. SHANTZ. That is correct. However, the exporting country may propose additional safeguards permitting the United States to withdraw its objections, or there may be an informal understanding that the exporting countries not present the case for an exception.

Mr. BINGHAM. Very interesting.

Mr. ALLISON. Just a footnote on that point. In a number of instances when COCOM has stopped the sale of an item, France has threatened to withdraw from COCOM, and COCOM's decision was reversed.

Mr. BINGHAM. Well, thank you very much, gentlemen. You have given us a great deal of food for thought and I think that difficult as it is, we are dealing here with a very important set of questions. I hope that we will, with your advice and that of others, be able to make a contribution. I will say that we do intend to have industry witnesses.

Thank you, the subcommittee will adjourn.

[Whereupon at 4:32 p.m. the subcommittee adjourned, to reconvene on Monday, March 15, 1976.]

EXPORT LICENSING OF ADVANCED TECHNOLOGY: A REVIEW

MONDAY, MARCH 15, 1976

HOUSE OF REPRESENTATIVES,
COMMITTEE ON INTERNATIONAL RELATIONS,
SUBCOMMITTEE ON INTERNATIONAL TRADE AND COMMERCE,
Washington, D.C.

The subcommittee met at 2:10 p.m. in room 2255, Rayburn House Office Building. Hon. Jonathan B. Bingham (chairman of the subcommittee) presiding.

Mr. BINGHAM. The Subcommittee on International Trade and Commerce will be in order.

We expect other members shortly but, in the interest of saving time I think we had better proceed.

The subcommittee today is continuing its hearings on export licensing of advanced technology. Our witnesses today represent the three major executive branch departments directly involved in the export control process.

We have asked them to review this process with particular emphasis on problems based on more than 5 years experience with export controls under the Export Administration Act of 1969.

I would like to start today with the representative of the State Department. We had expected Mr. Maynard Glitman here as Deputy Assistant Secretary for International Trade Policy, but he has been called out of town on urgent business.

He will be represented by Mr. Robert B. Wright, Director of the Office of East-West Trade of the State Department. I understand, Mr. Wright, that you are, in fact, in active charge of the program that we are inquiring into today. Is that correct?

STATEMENT OF ROBERT B. WRIGHT, DIRECTOR, OFFICE OF EAST-WEST TRADE, DEPARTMENT OF STATE

Mr. Wright was educated at Allegheny College and the Fletcher School of Law and Diplomacy. After doing economic intelligence work for the Army Air Force during World War II, he joined the Department of State in 1945 and has worked since then in the field of trade and commercial policy. He has been Director of the Office of East-West Trade in the Bureau of Economic and Business Affairs (EB) of the Department of State since 1965. In that position he is responsible, under the Assistant Secretary for Economic and Business Affairs, for the administration of the Mutual Defense Assistance Control Act, for coordinating U.S. participation in COCOM, and for East-West trade policy matters in the EB Bureau.

Mr. WRIGHT. Yes, sir; that is correct, particularly with respect to the U.S. participation in COCOM.

Mr. BINGHAM. That is what we are very much interested in.

Will you proceed, sir, with your statement? You may read it or summarize it, as you prefer.

Mr. WRIGHT. The statement has been directed toward the specific topics and questions that were posed in your letter of February 10 to Secretary Kissinger, and we felt that it would be most useful to the committee if we directed comments specifically to each of those topics and questions.[1]

LEGAL BASIS FOR COCOM

The first of those which you asked us to be responsive to was the question of the legal basis for COCOM or the Coordinating Committee, and the U.S. obligations in that committee.

In accordance with the request of the subcommittee, we have provided you with documentation on the establishment of COCOM, its procedures and the character of COCOM's decisions. Although they were enacted after the creation of COCOM in 1949 and 1950, the Mutual Defense Assistance Control Act of 1951, otherwise known as the Battle Act, as well as the Export Control Act of 1949, as amended in 1962, succeeded by the Export Administration Act of 1969, both provide a legal basis for continued U.S. participation in COCOM.

As the committee will understand from the material we have provided, COCOM and its senior body, the Consultative Group, is an informal organization whose proceedings are confidential. It was not created by a formal treaty or executive agreement, and the members have no legal obligation to participate in COCOM or to abide by its recommendations.

Through the years it has adopted and then modified various basic regulations and procedures. These have not been codified in a comprehensive set of rules and bylaws but are to be found in records of discussions and decisions taken over the years.

We have documented for the subcommittee the most important of these: the list of items controlled by all members of COCOM, the procedures under which exceptions may be made to these lists, and the arrangements to insure enforcement of the controls.

By way of summary, I would emphasize that COCOM is a voluntary organization which, as its name indicates, coordinates the policies of independent governments. Actions in COCOM are, in effect, recommendations to member governments, and actions by COCOM become effective only as they are carried out by member governments through the individual export control programs under their own national laws and regulations.

A basic rule of COCOM from the outset has been that there must be unanimous agreement on all COCOM final recommendations. A COCOM decision therefore means, in effect, that each member country has decided, under its own laws and policies, to embargo an identical list of items, but this is, in the case of each country, a uni-

[1] The letter referred to appears on p. 245.

lateral decision; there is no legal obligation to embargo the items, and no surrender of individual sovereignty.

In the case of actions on exceptions cases, while the rule of unanimity applies, there is not, in reality, a veto power. In the case of exceptions, the action of COCOM constitutes a recommendation to the exporting government. Although governments normally follow such recommendations, they do not invariably do so, if they feel their national interests are deeply enough involved.

The cement that holds COCOM together is the recognition that unless COCOM members follow the coordinated decisions in COCOM, there will no longer be a common policy, and there will no longer be any purpose in COCOM.

I should like to emphasize at this point that COCOM is an unusual example of international cooperation. It was established at the beginning of 1950 and has now existed for more than 26 years. This is no small achievement. A small group of sovereign nations agreed at that time to follow a common policy on trade in support of the mutual security of the free world. Despite the changes that have taken place over the years, as we have moved away from direct confrontation and cold war, the member countries have, by and large, maintained this common policy. They have, at times, had differing views of the dangers of communism. They have also been under differing political and commercial pressures to change their policies toward the Communist countries.

In view of this, it is not surprising that there have been instances where member countries appear to have acted contrary to what we regarded as COCOM policy. What is surprising is that there have been so few of these instances and that today, after 26 years of cooperation, COCOM continues as a viable and functioning instrument for the support of the security of the free world in the trade area.

DECISIONMAKING IN COCOM

The second topic that you asked us particularly to address was the process of making decisions with respect to COCOM.

As the subcommittee is perhaps aware, COCOM holds a formal list review every 2 to 3 years. Prior to the opening of such a list review each member country may submit its proposals for the addition or deletion of items or for a modification.

Member countries are not precluded from proposing changes in the definition of particular items between list reviews, but the general practice is to concentrate such changes in the periodic major list review negotiations.

Prior to the deadline for submitting U.S. proposals to COCOM the working level group of the interdepartmental committee (the Economic Defense Advisory Committee chaired by State) that deals with backstopping COCOM asks all government agencies having the necessary expertise and interest to provide proposals for changes in the international lists.

The views of private industry as they may apply to list changes are obtained by the Department of Commerce through its Technical Advisory Committees. These proposals, whether from Government

or non-Government sources, are then examined by special groups of technical experts drawn from the interested government agencies including, in some cases consultants to the Government, for a technical evaluation.

These evaluations are then reviewed by the Economic Defense Advisory Committee through its subsidiary working group to determine if they qualify for submission under the COCOM criteria.

These criteria that are used by COCOM to determine the qualification of items for inclusion on the embargo list are those that were adopted by the committee in 1958. We have made those available to the subcommittee in conjunction with some of the other basic classified documents that pertain to the committee.

In summary, the three criteria that are applicable are: first, whether the items constitute weapons and equipment for their production; second, whether they are items incorporating unique technological know-how of military significance; or, third, whether they represent materials in deficient supply in relation to military potential in the Communist countries.

If all the executive agencies agree that the proposed change in the international list meets the COCOM criteria and is in the U.S. interest the proposal will then be presented to the committee.

We believe this process of working up proposals for list changes assures that adequate consideration is given to commercial, technological, and strategic considerations through participation of the advisory agencies.

Thus, the Department of Commerce in particular reflects U.S. commercial interests within the context of its strategic control responsibilities under the Export Administration Act. It also provides the main body of technical expertise on COCOM listing questions.

The Department of Defense, in addition to providing technical and strategic expertise from its various services and research institutes, also provides the authoritative estimate of military impact.

Other advisory agencies provide expert evaluation on particular items. And, of course, the Department of State, for its part, is responsible in the overall for insuring the negotiability of any proposal and its consistency with both COCOM commitments and precedents and with our general foreign policy objectives.

The practice has been to act only on the basis of a consensus among the agencies concerned in an effort to insure that every interest will be properly reflected. In the case of a conflict of views a proposal will be referred to consecutively higher levels for resolution, up to the level of the President.

A similar procedure for interdepartmental consultation is followed in responding to proposals made by other countries at the beginning of a COCOM list review. The proposal is first evaluated by the technicians and is then considered at the working level of the Economic Defense Advisory Committee.

A position with respect to the proposals by other countries is then drawn up as guidance for the U.S. delegation in the multilateral negotiations. This may indeed be a rather complex problem technically when several countries make differing proposals on a single item.

Then, during the list review itself, which takes place in Paris, the U.S. resident delegate heads the U.S. delegation, but he is assisted in the discussions by expert technicians sent from Washington for particular categories.

They are able to supply supporting arguments for U.S. proposals and engage in a meaningful exchange with experts from other countries both on U.S. proposals and on the proposals of other member countries.

On the basis of these exchanges, the U.S. experts can then assist the U.S. COCOM delegate in making recommandations for Washington consideration of possible modifications in U.S. proposals or in the proposals of other countries.

DATA ON COCOM: LISTS

You also asked for information on the character of the COCOM lists and procedures. The new list, which resulted from the latest review in COCOM, has 149 items: 105 items on the so-called list I embargo, which covers strategic equipment and materials, 21 items on the international munitions list and 23 items on the international atomic energy list.

This represents a reduction of two items from the list currently in force and made available to the committee. The reduction resulted from the deletion or consolidation of four items and the addition of two new items.

The previous list, which was in effect from 1969 to 1972, has a total of 156 items, of which 112 were on list I.

A simple comparison of the number of items under control at different times can be somewhat deceptive since there are qualitative differences between items, and in many instances, a single item will cover a large category of equipment.

VOLUME OF EXCEPTIONS

With respect to the volume of exceptions, in 1974, a total of 1,380 exceptions requests were submitted to COCOM. Of this total, the United States submitted 567 requests. In 1975, out of a total of 1,798 cases submitted by all delegations in COCOM, the United States alone submitted 798 cases.

Most of the other active industrial trading members also submitted cases to the committee.

The subcommittee has expressed interest in your letter of the 10th as to what the reasons may be why the United States submits a relatively larger number of cases than many other member states.

The basic reason for the U.S. position certainly is the increasing commercial interest among American companies in developing the Communist country market, and probably primarily, the importance of the U.S. position as a supplier of the high-technology items and efficient production equipment now under COCOM control necessarily results in a need for COCOM review of many proposed U.S. transactions.

For example, in 1974 there were some 343 exception requests in COCOM that involved computers or computer equipment and, of course, the predominant U.S. position in the world computer market is well known and can lead to the obvious conclusion that many of these cases will be U.S. cases.

We believe that the time taken for a U.S. case in COCOM is not a major part of the total processing time for a U.S. case. We have made some effort to determine what the average length of time is in this respect.

Although our information is not as recent as it might be, for the period of the last half of 1974, the average time that was involved in consideration of an urgency exception case in COCOM was a little over 8 days, de minimis classes of cases took a little over 19 days, while regular exceptions took a little over 21 days.

We have not made a comparable study of the time taken by the U.S. Government for processing U.S. cases to relate it directly to the COCOM issue but we do know that there is a category of COCOM cases submitted by other member governments but including parts or components from the U.S. which require U.S. export licensing action which tend to take a rather long time to process because of the practice of deferring a U.S. position on the COCOM case in COCOM until the United States has approved the parts or components that are involved coming from the United States.

RATIONALE FOR COCOM

One of the key questions that you asked us to comment on was what would happen if there were not a COCOM organization, and whether we might be as well off without it.

We are inclined to believe that if that were the case it would be necessary for us to undertake to create such an organization. We base this conclusion on the relevant U.S. legal requirements in the Battle Act, section 301, which directs the President to invite other countries to cooperate in controlling exports to the U.S.S.R. and countries under its domination, and in the Export Administration Act, which requires the formulation of a trade control policy in cooperation with other nations.

The most efficient mechanism for this purpose has proven to be a multilateral arrangement such as COCOM.

If we were to attempt to accomplish the same purpose with a series of bilateral arrangements we feel the result would be a lower level of control, an absence of uniformity, and a complicated process of negotiation.

In fact, it was substantially for these reasons the decision was made in 1949 and 1950 to shift the approach to a multilateral organization, namely, COCOM.

We feel that there are not, as suggested in the chairman's letter, two separate diplomatic processes in COCOM; that is, one to create and maintain a list and the other, to handle exceptions cases. In fact, both activities are actually carried out in COCOM and are closely interrelated.

The country that proposes a change in a COCOM item is also likely to propose exception cases that illustrate the need for such a change. A regular COCOM meeting could perfectly well take up an exception request from a COCOM country and also consider proposals for changes in the listed items, but the tendency has been to find that it is more efficient in terms of the time of the committee and the use of experts that are brought to Paris for that purpose to have questions of changes in the COCOM lists handled at one time in a major negotiation.

You also suggest that we should consider the possibility of a short embargo list for COCOM with no provision for exceptions and that this might assist in some of the problems of delay and confusion that are involved in administering a selective control.

This is a possibility that has been considered and we certainly can and will consider it further. There are formidable problems involved in such an approach, however, because if such a list contains what might be called dual use items, that is, items that have civilian as well as military uses, there can be difficulties in connection with the desire of individual countries to allow the possibility of approving cases that are genuinely for nonmilitary uses.

As long as there is a valid civilian use of commercial significance for other COCOM countries as well as the U.S. itself they and we will insist on not ruling out the possibility of exceptions. While at least some of the other COCOM countries would probably have no great difficulty with what would be a strictly military-use list, it is doubtful that all U.S. agencies could agree to such a list.

It might also be viewed as being inconsistent with the requirements in the Battle Act, which clearly go beyond solely military items, and the Export Administration Act, which speaks in terms of controlling items that might damage the national security.

This still would not rule out a list more closely tied to sensitive technology and related equipment of military significance. Such a list would presumably reduce the number of hardware items having broad industrial applicability and hence, would reduce the number of individual exception cases that load up the COCOM agenda.

Of course, every time there is public criticism of a machine tool or computer going to the Soviet Union, it raises a question about the practical prospects for a more selective control.

Although more limited in scope than at its inception, the Battle Act provision for cutting off aid to countries sending listed strategic goods to Communist countries still has some applicability.

However, the countries now receiving aid are not the industrialized countries with the capability of producing the higher technology items on the Battle Act or COCOM lists. The sanction is certainly not a significant element in assuring continuation of the COCOM System.

PROTECTION OF U.S. COMMERCIAL INTERESTS

The question you raise of other member countries using the COCOM veto power to prevent the United States from exploiting its trade advantages in high technology reflects a concern that is by no means limited to the United States.

I think all COCOM countries have been sensitive to the possibility of the use of COCOM for commercial advantage. Looked at from the perspective of the other COCOM countries they see the United States in the position of being able to reap commercial advantage precisely because of its advanced technological capability.

In practice, we do not consider that other countries have been able to use COCOM to strengthen their own commercial positions at the expense of the United States, although the U.S. technological position means that it is probably more affected by COCOM controls over advanced technology and sophisticated equipment than are the other countries. Nor, has there been any clear tendency on the part of the other countries to extend the embargo into higher technology areas where U.S. products would be mainly affected.

On the contrary, it has generally been the United States which has proposed an extension of the embargo in the higher technology areas, and the United States has led other countries in proposing new areas for control in COCOM.

With respect to the record on exception requests, though the United States has objected to a number of requests from other countries—12 in 1974 alone—other countries have objected to no U.S. requests in recent years.

PROBLEMS

Finally, Mr. Chairman, you asked for our thoughts on problems that we face, and our views on what constructive initiatives might be considered.

I think that we do have to anticipate some continued operating difficulties in COCOM arising from the numerous U.S. exceptions cases as well as, of course, the cases of other countries, and the problems of delay in giving prompt views on exceptions cases.

I believe, however, that the steps that have been taken by Commerce and Defense to reduce processing delays on U.S. cases will also be generally helpful in improving the handling of COCOM cases.

It is also timely in the wake of the last list review to consider possible proposals for changing the rules in COCOM to make it more responsive to the needs of both the other countries and the United States.

It would be premature for me to make specific proposals, but I can certainly indicate that we want to look particularly at two areas; first, the exception procedures to see whether there is any way of reducing the number of cases requiring COCOM review; and second, the underlying rationale for the COCOM list, to see whether there is a better set of premises that would allow a more streamlined list.

Mr. BINGHAM. Thank you, Mr. Wright.

CHEATING IN COCOM?

The one area which perhaps wasn't sufficiently emphasized in my lettter and which the subcommittee is very much interested in is the area of whether or not the United States is cooperating with the COCOM procedure in good faith and making a real effort to do so

and other members of COCOM are not giving it the same cooperation, are, in effect, cheating on the procedure to our disadvantage.

First of all, have you made a review and study of the degree to which transactions that ought to have been brought before COCOM for review have simply not been, and that other countries have, in effect, engaged in end runs around the COCOM procedure?

Mr. WRIGHT. Yes, Mr. Chairman, that is a matter we keep under very careful scrutiny. One of the problems with the COCOM approach is that the COCOM list becomes effective in the individual countries through their own national controls so that there is inevitably the element of interpretation that is involved.

It is possible that some COCOM countries may interpret a COCOM item as not covering a particular shipment, whereas the United States, or perhaps some third COCOM country might regard it as being covered.

When cases of this kind come to our attention the procedure that we follow is to raise that question in COCOM for a resolution of the interpretation of the item, and if one country says, "We don't think that this definition covers the kind of transaction we have in mind", and another country says, "We think it does", then the matter should be decided either one way or the other, or the item modified accordingly. This is the way we intend to deal with problems of this kind.

Mr BINGHAM. What if the matter is not brought to your attention? What if the transaction simply takes place without your knowing about it?

Mr. WRIGHT. It is to be assumed that the company that is affected by such a decision would make it known to us.

Mr. BINGHAM. Meaning, the American company which has suffered by reason of competition from some company abroad?

Mr. WRIGHT. Yes. I think this is frequently the case and it is this kind of contention that will raise a question. Sometimes it is brought up the other way around in which a company in another COCOM country will raise a question as to the licensing action taken with respect to one of their cases.

Sometimes, I would add, the perception of the individual company as to what is an inconsistent action by another government may not be entirely accurate because the circumstances of the particular case or cases may seem identical to the company or individual concerned, but, in fact, there may be differences in the circumstances of a particular case that would explain why what is apparently the identical item is denied by one country and approved by another.

ADMINISTRATION AND ENFORCEMENT OF COCOM

Mr. BINGHAM. What kind of resources do you have as the person in charge of this to, in effect, see to it that the decisions of COCOM are observed?

Mr. WRIGHT. In the case of the administration and enforcement of the COCOM arrangements, it is the Department of Commerce in the case of the United States, of course, that carries out the embargo policy that has been recommended by COCOM.

Mr. BINGHAM. I realize that.

Mr. WRIGHT. We work very closely with the Department of Commerce in identifying questions of enforcement either with respect to U.S. controls or with respect to the controls of other COCOM countries which we feel should be taken up with them.

We have, in the COCOM, what is, in effect, an enforcement committee that meets periodically to deal specifically with questions of common enforcement of the COCOM controls and to discuss differences or improvements in the administration of controls.

In answer to your question, as far as we are concerned, the particular facility we have to provide is the use of the COCOM as a means of attempting to coordinate the enforcement and administration of the individual country controls.

Mr. BINGHAM. What about the fact that Sweden and Switzerland, both of which are high technology exporters, are not COCOM members? What impact does this have on the whole process?

Mr. WRIGHT. This is, naturally, a reality that has to be recognized. It has been a characteristic of the COCOM system since the beginning. The fact that the neutral countries could not participate in such a program is recognized and this had to be one of the guiding elements.

I think, in instances where one or another of these countries is capable of producing a given high technology item and can provide it in trade with Communist countries, then this indicates there is very little effectiveness to be gained from having a COCOM embargo on that item by the COCOM countries, so that the availability of equipment from the non-COCOM members is an important consideration in deciding what we should put on the COCOM list.

UNITED STATES HAS TOUGHER POLICY ON STRATEGIC CONTROL

Mr. BINGHAM. I get the impression from your statement that we are really taking the lead in trying to preserve a kind of reasonably tough policy, and that our COCOM partners are less rigorous in their approach.

You might say, taking more advantage of the concept of détente than we are in pressing for an increase in trade. Is that a fair statement?

Mr. WRIGHT. I think I would have to qualify that significantly. I feel from the beginning there isn't any question but that the United States was in a preeminent position with respect to a multilateral strategic control.

In the early days the other participating European countries were aid recipients, so that the sanction in the Battle act was applicable. The circumstances of the cold war were also such as to make it easily accepted that we should have a control system of this kind.

Moreover, the predominance of the United States as a supplier of high technology and as the preeminent producer in the Western World in the postwar years made it easier for the United States to impose what, in effect, was a very sweeping embargo policy.

So that, from the beginning, the United States has played a leading role in attempting to do what you suggest, having a tight, impressive and effective strategic control system and bringing the other countries along with us on that.

But there have been continuing differences, as suggested in my statement, in the perception of these risks internationally so that a number of other countries in COCOM have not been as enthusiastic about continuing a tight system of control.

Over the years the scope and extent of the COCOM control has reduced. We feel that by-and-large this reduction has been one that is justified in terms of a realistic evaluation of the essential items that should be kept under control, while taking account of the commercial interests that other countries have and that, to some extent, we have been sharing more equally in recent years.

EFFECT OF DÉTENTE POLICY ON U.S. ROLE IN COCOM

Mr. BINGHAM. How has the adoption of the détente policy, that for present purposes we would assume is still policy, though the word has gone out of fashion in some quarters—how has that affected your approach to your job?

Mr. WRIGHT. I think it will be apparent from what I said about the course of exceptions in COCOM and the agreement of the United States to the submission of exceptions, that the United States is taking a more active role in COCOM in terms of proposing business transactions that we feel would be justified.

I think the beginning of a more liberal trade policy toward the Soviet Union and other Communist countries has meant we have been more active in COCOM in proposing U.S. commercial transactions that we feel are justified.

Of course, we feel we have done that within the continuing framework of COCOM, so the adoption of a liberalized trade policy and a more open economic relationship with Communist countries has still been premised on the maintenance of a strategic embargo in COCOM.

Mr. BINGHAM. If the United States were to decide that a policy of détente were a mistake and go back to a more rigorous "cold war" attitude, do you feel, from your experience, that our partners in COCOM would cooperate in such a move?

Mr. WRIGHT. I think I would have to say it depends very much on the conditions that would exist internationally that would lead the United States to make a decision to go back to a more restrictive policy.

I assume that if we took that decision on the basis of a real justification in terms of international events that this would have some impact on our partners. But I don't want to play games on the point with you. I think you are absolutely correct in indicating that the attitudes of other cooperating countries is an attitude that would not respond very easily to a proposal for a return to a strict control.

Mr. BINGHAM. Thank you, Mr. Wright.

Mr. Whalen.

Mr. WHALEN. Thank you, Mr. Chairman.

Mr. Wright, on page 5 you referred to the fact that the list is reviewed every 2 or 3 years. You indicate that during this review period on occasion there are additions to the list. I can see this is very possible in view of the technological developments that are taking place.

WHO PROPOSES ADDITIONS TO COCOM LIST?

I am curious who proposes the additions to the list; the representatives of the countries that have developed these new products, or representatives of countries who might be in a competitive disadvantage because firms in their countries haven't gotten into this technology?

Mr. WRIGHT. I think I would have to say, Congressman, that in most instances the proposals for additions to the list have been U.S. proposals and they have grown almost entirely out of our perception of what we believe to be important technological advances that should be covered.

Mr WHALEN. You would say that most of these suggestions come from us?

Mr WRIGHT. Yes; that is correct.

Mr. WHALEN. Do you have any specific figures, Mr. Wright? For example, how many proposals have we made, let's say, during the most recent meeting or meetings and how many of these were adopted?

Mr. WRIGHT. I do not have those figures in my mind, but I would be happy to provide them.

[The information referred to follows:]

During the last list review proposals were presented for changes in 85 items. The United States alone proposed changes in 7 items. Of this 7, additions were proposed for three items; two of these were largely accepted one was rejected. For one item, an addition and a liberalization was proposed, which were accepted. A less restrictive definition was proposed for two items and accepted by the Committee. The deletion of one item was proposed and accepted by the Committee. In addition the United States made a number of counterproposals during the discussions on the proposals presented by other countries.

Mr. WHALEN. Moving over to page 10, you cite the exceptions that were requested in each of the last 2 years. You didn't indicate, however, how many of these were granted and how many were turned down. Do you have any figures on that?

Mr. WRIGHT. Yes, again, subject to confirmation subsequently. My impression is certainly the great majority of these have been approved. It may even be that virtually all of them have, but I would have to provide you specific information.

[The information referred to follows:]

Other countries have raised questions on U.S. exceptions cases as to technical details and justification but have not finally objected to any U.S. exceptions in recent years.

Of a total of 1,380 exceptions requests submitted to COCOM by all member countries during 1974, all were approved except for 12 that were disapproved, 16 that were withdrawn and 109 that were carried as pending at the end of the year. Of a total of 1,798 exceptions requests submitted to COCOM during 1975, all were approved except for 22 that were disapproved, 36 that were

withdrawn, and 94 that were carried as pending at the end of the year. The cases withdrawn represent orders that fell through for one reason or another, or that on further examination did not in fact require COCOM clearance. The disapprovals in each case reflected objections by the United States.

Mr. WHALEN. My next question relates to this and also to the query posed by Congressman Bingham. On page 3 you refer to the recommendations and I am quoting here:

Although Governments normally follow such recommendations, they do not invariably do so if they feel their national interests are deeply enough involved.

How many recommendations have been ignored?

Mr. WRIGHT. It is a set of data that really doesn't lend itself to statistical presentation because the cases have been so rare. Certainly one of the most significant cases, and indeed, one of the few cases was the decision in 1957 by some of the other COCOM members simply to discontinue the special controls that had applied to mainland China, dating from the Korean war period.

This was a decision that was taken by a number of COCOM members without the unanimous approval of COCOM. There have been occasional actions on export exception cases that have represented unilateral decisions by governments, but they have been so few as to be, as I say, not a statistical element.

They have always been characterized by a view of the originating government that there were circumstances that justified it, either their determination that the item was not properly covered by the list, or their view that there were such important economic and political considerations involved in the case that they felt they had to act, despite the recommendation of COCOM.

Mr. WHALEN. So you say the number of——

Mr. WRIGHT. There were very few cases.

Mr. WHALEN [continuing]. Is minimal.

If your previous answer is accurate, since so few exceptions are turned down, it wouldn't give rise to this kind of ignoring?

Mr. WRIGHT. This is true.

REVERSE FLOW OF TECHNOLOGY

Mr. WHALEN. I think perhaps our discussions here assume that a great technological lead is held by the United States. Yet, we hear evidence to the contrary. Just recently the President released a report which showed that our country's technological lead is diminishing.

The Department of Defense very frequently points out that indeed, the Eastern European countries, Russia particularly, hold technological leads in certain areas. I make that point to raise this question.

Is there any reverse situation where technology flows from the East to the West? Is there an organization in Eastern Europe similar to the one we are discussing here?

Mr. WRIGHT. I would say there is not an organization in the East that is directly comparable to COCOM. The CEMA organization doesn't have the same set of premises. I think it is more responsive

to comparison with Western European organizations that deal with coordinating economic policy, rather than strategic denial policies.

Mr. WHALEN. Would you say the advanced technology at least flows from West to East predominantly?

Mr. WRIGHT. I think predominantly, although I would have to say that there are observers of this matter who feel that the assumption that the technology flow is entirely of obvious benefit to the East may be an oversimplification.

There are technical processes and areas of technological advance on the Eastern side that are, to some extent, flowing West, except that we don't really know that much about it. I think the burden of the presumption made is that the flow is primarily from West to East. But I think the other side of it is an aspect that we think we might study a little bit more carefully.

Mr. WHALEN. To your knowledge, how are these transfers of that technology being financed, primarily on credit terms?

Mr. WRIGHT. It depends a little bit on what type of transaction it is. If it is a transfer of technology but is involved, say, with the production of substantial plants or provision of a large amount of equipment, it may well be covered by a credit financing.

Of course, if we are speaking of the United States, this financing would be available only in the case of such transfers to Poland and Rumania, but not to the U.S.S.R. or other Communist countries.

A BETTER SET OF PREMISES

Mr. WHALEN. In the last sentence of your statement, page 18, you refer to "a better set of premises." Could you elaborate a little bit on that? What new premises should we consider, or what old premises might be discarded?

Mr. WRIGHT. I think that we have in mind a couple of things. One of them is that the governing criteria in COCOM haven't been changed since 1958. They might well warrant another view.

The second thing that we have in mind is a matter that I think has been referred to earlier in these hearings and that is, the completion of a study by the Defense Science Board. This identified particularly sensitive areas of technology, devoted to weapons development systems, relating them to the industrial base that they would depend upon. Certainly, it is clear that it is an element that should be examined. It seems to me that perhaps that kind of approach, or some other refinement that we could justify, that is related to the importance of high and sensitive technology, would be worth looking at, in terms of COCOM activities.

We do feel that there is a great deal of time being spent, both in the U.S. Government, and in COCOM, on individual exceptions cases that involve hardware items. And it seems warranted to examine this situation, to see if perhaps we couldn't get a more limited set of controls, or something that would refine our approach sufficiently, that we wouldn't be involved in all of this day to day difficulty of trying to deal with a lot of cases.

Mr. WHALEN. The point was made by our witnesses last week regarding the ambivalence of the congressional policies. That is, the question of security on the one hand, versus the desire to expand

trade on the other. Do you feel your job could be enhanced by a more precise definition of objectives by the Congress? Let me add to that. Can Congress do this? Is it possible for Congress to be more specific or more precise?

Mr. WRIGHT. I think your amended question reflects some of my own reservations. I think it may be very difficult for the Congress to do much more than it has done, by way of providing a direction of policy and intent on their part, and if the effort is to be more specific, this may raise more problems than it solves.

Mr. WHALEN. Thank you, Mr. Chairman.

Mr. BINGHAM. I would just like to ask you one more question before we go to our next witness.

POSSIBILITY OF REEMBARGOING COCOM ITEMS

Following up on my question about the possibility of what might happen if we decided to abandon detente, as a practical matter, would it be possible to embargo some items that had previously been released and exported?

Mr. WRIGHT. I would have to say this would be very difficult to do, because our experience in COCOM has been that it is extremely difficult to get an item back under control once it has been taken off of control. I think this depends upon there being sufficient justification. It is difficult to see what this could be.

Mr. BINGHAM. Does the fact that we have asked the larger number of exceptions indicate that other countries are proceeding without benefit of COCOM review, or that they don't bother to come in to ask for the exceptions?

Mr. WRIGHT. If we feel that there is a problem of that kind, it is something that we should take up, in terms of the particular item—if we feel that there is an area where there is a difference in treatment. No, I think I would say that it reflects rather the fact that, in terms of high technology and sophisticated production equipment, the United States, to some extent, is a preferred source. And this preeminence in this area I believe, is reflected in the fact that we have quite a number of exception cases.

Mr. BINGHAM. My information is, and I believe that this comes from the Commerce Department report, that in 1974, Western sales of advanced technology to Socialist countries totaled $7 billion, of which the U.S. share was only a little over a half a billion. If that is correct, that would not seem to support your explanation that we are the leaders in the field.

Mr. WRIGHT. It would depend on what is included in the definition of advanced technology. I can't help wondering if it might not be a difference in terms of the rather limited kind of advanced technology that would fall under the COCOM listing. I am not sure. I should let Commerce comment on that also.

Mr. BINGHAM. That leads us quite naturally to our next witness. We are happy to welcome back to the subcommittee the Deputy Assistant Secretary of Commerce for East-West Trade, Mr. Arthur T. Downey.

Mr. Downey, would you proceed. And I might say, Mr. Wright, if you can, if you have the time, we would appreciate your staying.

There may be other matters we would like to ask you questions about.

Mr. Downey, you have quite a lengthy statement. If you can summarize it, I think it would save us time.

STATEMENT OF ARTHUR T. DOWNEY, DEPUTY ASSISTANT SECRETARY FOR EAST-WEST TRADE, DEPARTMENT OF COMMERCE

Arthur T. Downey became Deputy Assistant Secretary for East-West Trade, U.S. Department of Commerce, on January 6, 1975. He has specialized in international law and international relations, both in private practice and as a civil servant.

From 1964 to 1969 he served at the State Department, providing advice on legal aspects of U.S.-European relations, serving from September 1967 to February 1969 as the legal adviser at the U.S. Mission in Berlin, Germany.

As a staff member of the National Security Council from 1969 to 1972, Mr. Downey's responsibilities related to virtually all aspects of U.S. foreign relations with Europe, including Eastern Europe and the U.S.S.R.

From 1972 until his new appointment he was a member of the law firm of Morgan, Lewis & Bockius, at its Washington, D.C. office, representing firms engaged in international trade, including the Socialist economies.

Training: St. Vincent College, B.A. 1959, Villanova University, L.L.B. 1962, Georgetown University, L.L.M. 1963, Studied at the Hague Academy of International Law, Summer of 1964.

Personal: Born in New York, August 17, 1937, married.

Mr. DOWNEY. Yes. It would save us both time. Thank you, Mr. Chairman.

FLOW OF TECHNOLOGY

Since you and Mr. Whalen have both raised questions about the flow of technology in the general sense, perhaps it might be useful for me to place our discussion in a general context.

In 1974, the 15 nations of the industrialized West exported about $185 billion worth of high technology manufactured goods to the world. Our share in that was about 22 percent. We were the leaders in the overall flow of technology to the world. If we turn and look at that technology flow with respect to the Soviet Union, using the same year, 1974, as our base we find the industrialized West shipped a little over $2 billion worth of high technology manufactured goods to the Soviet Union, which is a little over 1 percent of the total flow of technology.

Of that total to the Soviet Union, the United States shipped about $225 million, or 10 percent of the West's flow of high technology manufactured goods that country. Putting that figure into further context, the movement of U.S. technology manufactures to the Soviet Union represents about three one-hundreths of 1 percent of the Soviet's GNP. A rather small figure indeed.

With respect to intangible property, that is, patents, licenses, trademarks and the like, we have only U.S. figures.

In 1974 we earned, through the overseas sales of these intangibles, about $3 billion. Of that figure, only $13 million, or a little less than 0.4 percent—four-tenths of 1 percent—went to the Socialist countries.

This I hope, is a useful context for our discussion, because it indicates that our concern is not with the quantity of the technology flow to the Socialist world. It is rather the unique nature of our

relationship with the Socialist countries which warrants the concern that you are evidencing in these hearings.

I will turn briefly to the operations and the responsibilities of the Department of Commerce in this area.

JURISDICTION OF COMMERCE DEPARTMENT IN EXPORT CONTROL

As you know, under the Export Administration Act of 1969, the Department of Commerce has the responsibility to administer the system of export controls. Within the Department, the Office of Export Administration, in the Bureau of East-West Trade, is charged with the daily administration of the act. Aside from the national security controls, we also administer the short supply and foreign policy controls.

Our direct controls affect the exports of commodities and technology from the United States. We also have indirect controls which involve reexports of those commodities and technology to third countries, as well as the use of the U.S. technology and U.S. origin parts and components in commodities manufactured abroad for sale to third countries.

Although our legal jurisdiction extends to almost any export from the United States—and aside from general embargoes on certain countries [Vietnam, Cambodia, North Korea, and the like]—a specific export license is not always necessary. In fact, we have a system of general licenses, under which approximately 90 percent of all exports from the United States are shipped.

Our licensing extends not only to commodities themselves, but also to raw technology and technical data, to the extent that these are not generally published; or educational and scientific in nature.

Let me take just a moment to deal with two of your questions.

First: Are the controls adequate to achieve the national security purposes?

And, second: Are we administering these controls expeditiously enough so as not to damage our American business interests?

THE LICENSING PROCESS

Perhaps it would be useful if I gave you a brief overview of the licensing process.

There is attached to my statement a flow chart, which I regret to say, resembles the wiring diagram of the MIRV. And I do not propose, unless you insist, to review this in detail.

Mr. BINGHAM. I think that is wise. I was looking at it before, and wondering if any exporters taking a look at that wouldn't give up in disgust before they started.

Mr. DOWNEY. This is not our purpose, but there are those who would accuse us of that.

Please understand that this flow chart is intended for internal purposes, and is therefore excessively detailed. But let me briefly walk you through the process. When an application is submitted, it goes first to a station, where it is numbered and logged in; and then it is checked to be sure that all the blanks are filled in, and it is properly signed and so on. The names of parties to the transaction

are then checked against a list of persons and companies who we have reason to believe may divert material.

We receive about 200 applications every day, of which on the average, 90 to 95 percent are high-technology commodities. Of those 200 applications, a little over 20 applications a day, approximately 10 or 12 percent, are for Communist countries. Our applications then move on to a brief stop at our computer terminals, where they are logged in, so that we can utilize our retrieval systems when we need information. The application is then sent to one of three licensing divisions. One for computers, one for electronics, and one for capital goods and production materials.

At that stop the technician will review the application and check it in light of a certain set of criteria. If he believes it should go on, it goes to yet another division called policy planning, where it is then coordinated for our own office policy, or if warranted, for further checks with other agencies or other governments. In the case of COCOM it moves on.

The act in section 5(a) requires us to seek information from the various other agencies. Pursuant to that provision, we do consult with the other agencies, both informally, on a daily basis, and formally, through a system of committees and controls.

At the senior staff level, we have an Operating Committee which meets on a weekly basis, and which has in its membership, the State Department, the Defense Department, ERDA, CIA, and the like. The Commerce Department chairs that committee. If there are policy issues or——

Mr. BINGHAM. Excuse me, there is one committee chaired by Commerce, and a similar committee chaired by State?

Mr. DOWNEY. It is an analogous committee at best. The committee that the State Department chairs is the committee that deals with COCOM. It involves the relationship with foreign governments, and it is the committee which reviews the U.S.-negotiating position in the COCOM.

Mr. BINGHAM. The same transaction might then be of concern to both committees.

Mr. DOWNEY. These are not really transactions. And they don't happen at the same time. When you have a list review for example, the State Department would chair a committee, but membership is the same, almost all the way through. It depends on who is in the chair; who is going to call the meeting. The State department would chair the list review meetings which relate to the items we have to negotiate with our COCOM allies to determine which ought to be on the list.

Those meetings which I am talking about, the Operating Committee, these are meetings with broad, interagency representation. That committee reviews a specific case of possible national security significance, or a set of policy guidelines.

Any issues which are not resolved at that level, are referred to the Deputy Assistant Secretary level, or higher, to the senior body, the Export Administration Review Board, at the Cabinet level. This Board is chaired by the Secretary of Commerce, and has among its members the Secretary of State and Secretary of Defense. As of

March 1 this year, the Secretary of Treasury, in his capacity as Chairman of the East-West Foreign Trade Board, also became a member.

In addition to consulting other members of the executive branch, we also consult with industry. We have seven industry-government technical advisory committees, which advise us on the range of activities.

My colleague from the State Department has already explained to you the COCOM procedure. Unless you have particular interest, I don't think I need to review that.

Perhaps it would be useful if I offered what amounts to a check list, used by our licensing divisions when they get an application across their desk. In the case of an application for high technology products, that are going to what we call the Free World, the main concern is whether or not the commodity is likely to be diverted to another consignee, the use to which he intends to put the equipment, and the appropriateness of the equipment for that use.

When the licensor has an application for an export to a socialist country, he examines a variety of questions. What would be the normal use of this particular equipment in the United States? And also, is the item designed for military purposes? Would it be of significant use to the military? How is this item currently used in the West, and in the socialist country in the military sense? If it has both military and civilian uses, what is the intended end use of the particular equipment?

In addition to the end use, what is the role, or the nature of the end user in a particular country? Is it a research institute that we know is engaged in public, peaceful work? Or is it a research institute that is involved in military research, as well? Does the item incorporate advanced or unique technology that could be extracted through reverse engineering? Is there a shortage of this particular item which could benefit the military? What about the comparability of this product, other products, and the availability in other countries outside of COCOM? And would there be significant economic and commercial benefits to the United States from the transaction?

We rely, as I said, very heavily on the Department of Defense for advice as to the military issues raised by particular transactions. We also refer to a wide variety of intelligence sources.

DELAYS IN PROCESSING

Now, as you can well imagine, even without regard to the diagram, this process of review, analysis, and exchange of judgments does require great care. This very process, by its nature, entails a substantial amount of time. We have been accused, with some justice, of having unnecessary, extended delays in our processing. In order to see how we were doing, we took a sample study of a 2-week period, last fall.

It revealed that out of the over 200 applications a day, accumulated during that 2-week period, 85 percent of the applications that had been received were processed in 10 days; 90 percent were proc-

essed within 20 days. Now the great majority of the applications that took more than 20 days, were high technology projects—products to the Communist countries.

Looking at it in a slightly different context, we looked at just the Communist country exports. In that area, we found that 35 percent of those applications were processed in 30 days, 54 percent in 50 days, and 77 percent in 90 days.

There are a whole series of product lines, which are most troublesome, including numerically controlled machine tools, semiconductor processing equipment, electronic testing and measuring equipment, integrated circuits, computers, and the like.

We have also been reviewing very carefully, measures we can take to speed up the process of considering these applications, without at the same time, increasing dramatically, the chance of error. This statement contains a list of particular measures which we have employed since 1974 to effect this.

One of the key areas which has caused us difficulty, has been simply the shortage of personnel. We are in the process of remedying this now with an infusion of substantial numbers of personnel. It will, however, take some time before we have everybody on board, and the civil service clearances and security clearances are issued. Additionally, new personnel must be properly trained.

It will take many months before the measures we have taken are fully injected into the system. In the meantime, in order to push down the backlog of cases which has built up over the years, we undertook earlier this year, a one-time, overtime, crisis effort to reduce the backlog.

Earlier this year, large percentages of people in the Office of Export Administration worked, for many weeks, on a full-time overtime basis. This has been very successful in reducing our backlog. As an illustration, the number of cases in our Licensing Division that were there for more than 30 days, at the end of January when we began this process, were measurable in the hundreds. Now, we are at a point where there are less than 20 which have been there over 30 days.

We hope this spasmodic effort will be useful in moving the backlog down to a point where the infusion of these other measures will begin to take hold, and to allow us to operate on a more efficient basis.

Mr. Chairman, the whole control and processing program must reflect the constantly changing set of relationships among the countries involved, and the constant change in the movement of advanced technology. We are committed to deal with this, and administer the act in as prompt and as vigorous a way as possible. We do not believe that major change in our governing statute are necessary to the achievement of the objectives of the act, although we are currently considering the adequacy of the civil and criminal penalties in the act.

REVERSE FLOW OF TECHNOLOGY

If I may, I would like to note just one small point, which I think Mr. Whalen raised, about the reverse flow of technology. The essen-

tial reasons why the socialist countries do not have an export control system similar to ours is because they are State controlled economies. Accordingly, any product shipped from those countries, already has the blessing of the State. An apparatus such as we have, is needed in a free economy, where the private sector is doing the exporting.

If you have any interest in what we call the reverse flow of technology, we would be delighted to provide you with a rather extensve list of high technology items or processes, and know how, which U.S. companies have bought from the socialist countries. They range from coal gasification technology to medical suturing devices—I'd be happy to insert——

Mr. WHALEN. Mr. Downey, I was referring to an international organization rather than national control.

Mr. DOWNEY. I'm sorry. That concludes my summary of my statement, Mr. Chairman.

[Mr. Downey's prepared statement follows:]

PREPARED STATEMENT OF ARTHUR T. DOWNEY, DEPUTY ASSISTANT SECRETARY OF COMMERCE FOR EAST-WEST TRADE

INTRODUCTION

I appreciate this opportunity to appear before the Subcommittee on International Trade and Commerce to present the Department's views on our national security export controls, particularly as they affect the export of advanced technology.

The Department of Commerce administers the Export Administration Act of 1969, as amended, under delegation from the President. Within the Department, the Office of Export Administration (OEA) in the Bureau of East-West Trade is the organizational unit charged with the day to day administration of the Act and the regulations promulgated under it.

The Act calls for the control of exports to the extent necessary (1) to exercise the necessary vigilance over exports from the standpoint of their significance to the national security of the United States, (2) to further significantly the foreign policy of the United States and to fulfill its international responsibilities, and (3) to protect the domestic economy of the United States from the excessive drain of scarce materials and to reduce the inflationary impact of foreign demand.

Export controls administered by Commerce cover not only direct exports of commodities and technology from the U.S., but also reexports of those commodities and technology to third countries, and the use of U.S. technology and U.S.-origin parts and components in commodities manufactured abroad and destined to a third country. Failure to restrict such activities abroad not only would circumvent the intent of our direct export controls, but also would unfairly discriminate against those who, for business or other reasons, choose to make their exports of the same kinds of goods from the United States and hence are subject to export controls.

Although the Department has legal jurisdiction over most of the normal commercial exports from the U.S., not all of these exports require specific licenses. A number of general licenses have been established that permit most goods to be sent to all but embargoed destinations (Cuba, North and South Vietnam, Cambodia, North Korea, and Southern Rhodesia), without the necessity of filing a license application with Commerce and receiving specific license approval. Approximately 90 percent of all exports from the United States are shipped under the authority of a general license. Commodities that do not qualify for a general license, and are, therefore, under specific licensing control, include:

Products judged to be strategic by the countries participating in the international (COCOM) strategic control system, and additional commodities considered by the Department and its advisory agencies to be capable of contributing significantly to the design, manufacture, and utilization of military hardware.

Petroleum and related products that are under control for short supply reasons.

Certain commodities related to nuclear weapons and explosive devices, and crime control and detection apparatus, that are controlled for foreign policy reasons.

Technical data related to the design, production or utilization of the commodities under control are also under licensing control by Commerce to the extent that the data are not published or otherwise generally available to the public without restriction and are not basically scientific or educational in nature.

Access to technological know-how is in many instances of greater stretegic significance than possession of finished items produced from that technology. While we can limit the amount of manufactured items that are exported, and to a useful extent control their use in communist countries, the export of design, production, and operations data allows the end-product to be produced in unlimited amounts and effectively removes U.S. influence on end-use. For this reason it has been necessary to exercise broader and tighter controls over technical data than commodities, but the variety of ways in which technology may be transferred or exported makes it difficult to control.

NATIONAL SECURITY CONTROLS

You have asked us to focus today on the controls we exercise in the interest of national security, particularly as they affect the export of high technology items. I propose to treat the subject to addressing two basic questions: First, are the controls adequate to achieve the national security objectives of the Act; and second, consistent with this, are the controls being administered so as to minimize the adverse impact on U.S. economic/commercial interests? These are not mutually exclusive, of course, since certain review procedures established to assure adequate control contribute to the time it takes to process applications. In the course of treating these two broad concerns, Mr. Chairman, I shall deal with the aspects you identified as central to the Subcommittee's interests. This approach should give the Subcommittee a clearer picture of the goals, procedures, and effects of the controls administered by the Department in the interest of national security and foreign policy.

Adequacy of control

Turning first to the adequacy of controls, let me begin by outlining briefly the export licensing process, and then come back to particular stages of the process and describe them in more detail. I have attached an application processing flow chart that may be helpful in giving an overview of the process.

Description of the licensing process

Although an application to export a high technology item to a communist country may go through one or more special steps in addition to the routine processing stages, there is a basic structure to the process. The incoming application is numbered, examined to see if all the critical parts are present and complete, and the names of the parties to the transaction checked against a list that includes known or suspected diverters of strategic goods. Approximately 200 applications for validated licenses for all destinations are, on the average, received daily, approximately 90-95% of which cover high technology items. Applications next make a brief stop for data entry into the Office's computer system, and then are sent to a technician in one of the three commodity licensing divisions: Computers, Electronics, and Capital Goods and Production Materials Divisions.

The technician reviews the application, concentrating on the function and uses of the equipment, its level of sophistication, its normal pattern of military/civilian uses in the U.S. and in the country of destination, the unrestricted availability of comparable equipment elsewhere, the suitability of the equipment for the proposed end-use, known activities of the end-user, the likelihood of diversion from the stated end-use to less acceptable uses, and the economic/commercial implications of the transaction for the U.S. If the licensing officer is not sufficiently familiar with the end-user, the technician may refer the application to the Export Information Division, or seek background from intelligence sources. It may be necessary during the course of this analysis to consult informally with technicians in other agencies. The technical spec-

ifications of the equipment and the transaction in general are evaluated against established guidelines to determine the extent of further review required. With the exception of a limited number of cases involving communist countries that are decided at this point in the licensing division, the technician/licensing officer documents his analysis of the application and forwards it with the application to the Policy Planning Division for coordinating general office policy and for consultation with other agencies and governments involved with export controls as appropriate. An application may be acted upon by this Division on the basis of agreed interagency guidelines, referred to one or more advisory agencies for their individual comments and recommendations, or discussed formally in an interagency committee, depending on the degree of concern the agencies have over export of the particular equipment. The case moves to a higher level only when there is disagreement among agencies at the senior staff level. I will discuss interaction among the various advisory agencies in more detail later in my statement.

If we and our advisor agencies agree that a transaction involving an item or technology on the international (COCOM) list, should be approved, details of the proposed transaction in most cases must be submitted to COCOM as an exception to the embargo and the concurrence of the 14 other member governments sought. Only after unanimous agreement in COCOM is the application approved for licensing.

In the event an application is rejected (less than 1% of total receipts in 1975), the applicant has the right to appeal to the Assistant Secretary for Domestic and International Business. Upon receipt of an appeal, the Assistant Secretary's Appeals Advisor forwards it to the Appeals Coordinator in OEA for comments and evaluation. The denial action and any new information supplied by the appellant are reexamined by the technical staff in OEA and its documented findings reviewed by the Coordinator. Our advisory agencies may be consulted if appropriate. The OEA memorandum of findings along with the supporting file is transmitted to the Assistant Secretary's Appeals Advisor, who makes the memorandum and unclassified portion of the file available to the appellant and affords him the opportunity to respond within 30 days. Following this, the Appeals Advisor submits his recommendation to the Assistant Secretary. If the Assistant Secretary confirms the original rejection action, the appellant is fully informed of the reasons therefor, to the extent permitted by national security considerations.

This system permits expedited handling of an appeal because it is an informal process and does not oblige the appellant to employ counsel to represent him in a hearing. Further, unlike a hearing under the Administrative Procedure Act, the consideration of an appeal can deal with policy as well as procedure. Thus, it represents a faster, less expensive, and more comprehensive review.

INTERAGENCY CONSULTATION

In describing the licensing process, I mentioned the interagency consultation process briefly but did not review in detail the complexities of the system in order to avoid losing sight of the overall processing flow. I would like to return now to this important element in the Department's process of determining what shall be controlled and the extent to which exports shall be limited. Section 5(a) of the Export Administration Act obliges the Department to seek information and advice on these subjects from the several executive departments and agencies concerned with aspects of our domestic and foreign policies and operations having an important bearing on exports. Pursuant to this, we consulted the Department of Defense on a number of selected items of particular concern to them. Section 709 of the Department of Defense Appropriation Act of 1975, which was passed in August 1974, required the Department of Commerce to refer to the Department of Defense *all* applications for licenses to export goods or technology to communist destinations.

On October 29, 1974, the Export Administration Act was amended and Section 4(h) mandated a Defense Department review of export license applications for all communist countries (including Yugoslavia), but, in contrast to the Department of Defense Appropriation Act, authorized the Secretary of Defense, in consultation with the Department of Commerce, to determine the types and categories of transactions to be reviewed. During the early part of 1975 the Defense Department reaffirmed the majority of the previously agreed

licensing delegations under which the Department of Commerce could act on license applications without Defense Department review on a case-by-case basis. More recently a similar delegation respecting computers was up-dated and broadened and additional delegations are under consideration. In 1975, 686 applications were formally referred to the Department of Defense under Section 4(h) and all were approved.

Consultation with other agencies is generally undertaken both informally through day to day contact, and formally through a system of inter-agency committees at different administrative levels. At the senior staff level, there is an Operating Committee chaired by Commerce that meets weekly to discuss export control policy problems and significant individual transactions. Commerce, Defense, State, Treasury, the National Aeronautics and Space Administration, and the Energy Research and Development Administration are regular members, and CIA a regular adviser.

Interagency policy differences that cannot be resolved by the Operating Committee are referred to the Deputy Assistant Secretary level, and if necessary to the Assistant Secretary committee, the Advisory Committee on Export Policy (ACEP).

Continued differences are referred to the Export Administration Review Board, consisting of the Secretary of Commerce, as chairman, and the Secretaries of State and Defense, and as of March 1, 1976, the Secretary of the Treasury in his capacity as the chairman of the East-West Foreign Trade Board. Other concerned cabinet members are included in the deliberations as appropriate. Highly sensitive problems may ultimately be referred to the White House for final resolution.

All applications to export commodities to the communist countries are processed by the Department in accordance with procedures established in consultation with our advisory agencies. Originally, when the level of trade was very low and the controls much more total in scope, other agencies would be consulted formally through the interagency committee structure on *each* application. Over the years, however, we have established with our advisors guidelines for approval or rejection of applications, covering a wide variety of commodities, without the necessity of seeking specific interagency advice on each proposed transaction. In 1975, 1,325 applications of a total of 3,451 communist country cases were acted upon (approved or denied) by OEA under such guidelines. Although this process has shortened what otherwise would have become a really prolonged processing time and relieved some of the burden on the committee structure in several commodity areas, a substantial number of individual applications for high technology items are still reviewed by the Operating Committee.

There is a heavy workload factor in documenting applications that must be reviewed by all the agencies participating in the Operating Committee deliberations.

The Operating Committee documentation includes, as a minimum, the following:

A technical description of the commodities or data involved and the intended end use;

An evaluation of the strategic significance of the proposed transaction;

Information on the foreign availability of comparable commodities or data;

The licensing history of past applications for like or similar commodities or data; and

A recommendation for approval or denial, and the rationale supporting the recommendation.

Preparation of the documentation requires care and can be time consuming. Facts, not merely judgments, are needed and they may be hard to establish. Sources in the export trade or in other parts of the government must often be consulted on technical aspects.

The documentation for computers, for example, must include pages of detailed technical specifications and schematics of the proposed system so that the technicians of the other agencies can fully comprehend the proposal. We are preparing a new form for computers which should help in easing the docu-

mentation burden. The initial review in Commerce, or later, in the Operating Committee deliberations, may reveal that the computer system, as proposed for export by the applicant, creates serious strategic concerns, but that if certain modifications were made, the concerns would diminish. In such instances, the applicant is consulted to see if the modifications would be acceptable to him and still meet his customer's needs. This enquiry may be drawn out, inasmuch as communication with the customer often must inlve the applicant's sales force abroad.

Once the documentation on any given transaction is completed, the case is put before the Operating Committee agencies and their advice sought. This advice and the chairman's recommendations are forwarded to the Director of the Office of Export Administration for his decision or, in some instances, for referral to the Bureau Director for decision. If any agency objects to the proposed course of action, it is given full opportunity to appeal to a higher level. During 1975, 445 transactions were submitted to the Operating Committee for formal review; eventually 272 were approved and 125 were denied; 48 are still pending action.

Many of the applications that do not require formal Committee review still must be referred to one or more other agencies for advice, usually the Department of Defense, but sometimes State, ERDA, NASA, or CIA. While the documentation for these referrals is not as extensive as for an application formally reviewed by the Operating Committee, there still must be a memorandum setting forth the details of the transaction, policy considerations, previous approvals, end-use and end-user information, and extensive technical information. If an advisory agency has problems with the transaction, it can request formal review by the Operating Committee. In 1975, 995 applications were referred to one or more agencies and approved under this less formal procedure.

When Section 4(h) was inserted into the Export Administration Act in 1974 it added applications for export to Yugoslavia to those requiring referral to the Department of Defense. During 1975, 83 applications to export to Yugoslavia were processed under existing delegations of authority and 416 were referred to Defense. Recommendations for approval were received on all but 44, phich present special problems or are still pending DOD analysis and concurrence in the proposed actions.

COCOM

To complete the picture of the consultation process, let me describe briefly the international controls administered through the Coordinating Committee, or COCOM. I shall touch only briefly on this, since you have asked my colleague from State to address this specifically. COCOM is an informal, voluntary multinational organization formed in 1949 to control exports of strategic commodities from member countries to communist countries. The nations establishing COCOM realized that effective controls required agreement by all major producing countries. The fifteen member countries are the United States, Belgium, Canada, Denmark, France, the Federal Republic of Germany, Italy, Japan, Luxembourg, the Netherlands, Norway, Portugal, the United Kingdom, Greece, and Turkey. Although the membership is closely parallel to that of NATO, COCOM is an independent organization.

The COCOM embargo list consists of commodities that all member countries have accepted as their minimum level of control. Each country may control a broader list of products, if it wishes. The COCOM list is subject to periodic review and updating. Unanimous consent must be received before any list changes can take place. The most recent review began in October 1974 and continued through 1975. The final round of changes is now being assessed to determine what revisions should be made in the national control lists.

The determination of the U.S. position and the negotiations in Paris are the responsibility of the Department of State, but all the concerned agencies participate in both phases of the review.

Although the COCOM list identifies strategic items to be embargoed, exceptions are made for specified transactions. Exception requests for individual

shipments may be presented to COCOM by member nations. If all members agree that the proposed export would not constitute a security risk, the transaction may be licensed and the export effected. Inasmuch as most high technology items are on the COCOM list, a large proportion of U.S. applications that we determine, after interagency consultation, warrant approval, must they be sent to the U.S. delegate to COCOM who is to present the case to that body. The information the delegate receives must then be transcribed into COCOM format, translated into French, and distributed. The other delegates must be given time to submit the proposal to their governments and review the presentation before a discussion is scheduled. If no questions are raised by the other delegates, this process takes approximately four weeks before the OEA is informed that a license can be issued. Occasionally, however, one or more of the participating country delegates will raise questions. These must then be transmitted to OEA; answers prepared and sent back; and again scheduled for another COCOM discussion. In such circumstances, months may pass before approval is agreed upon and license issued.

Some measure of the workload involved may be obtained from the fact that the United States presents more applications to COCOM for an exception to the international embargo than any other country. In 1972, 506 U.S. exception requested were presented, representing 36% of the total requests submitted by all member countries. This increased by 55% to 782 in 1975. The following table sets forth a summary of these data.

U.S. EXCEPTION REQUESTS

	Number	Percent of requests by all countries
Year:		
1972	506	36
1973	519	38
1974	567	41
1975	782	44

CONSULTATION WITH INDUSTRY

In developing information that will permit us to make the proper decision on control and licensing, the Department consults extensively with industry. There currently are seven government-industry technical advisory committees, established pursuant to the 1972 amendments to the Export Administration Act. In addition, individual firms are consulted on technical matters and foreign availability of commodities under licensing control. The formal technical advisory committees meet regularly and the members have been cleared for access to security classified information so that they can make a maximum contribution. The industry members were chosen from firms, large and small, affected by our controls, but the industry members serve as individuals, not as company representatives. They were chosen for their technical knowledge and bring that expertise to their respective committees. By their charters, the Committees serve strictly in an advisory capacity too the Department. Their reports receive the most serious consideration, but the final judgment on the issues is and must be reserved to the government.

Prior to discussion of certain commodity areas in the recent COCOM list review, a number of the committees submitted reports on their findings and made recommendations respecting control levels. Although the government could not in every instance agree with the national security evaluations of the committees, their technical evaluations and findings respecting foreign availability were in many instances very useful in the formulation of the U.S. position in COCOM.

LICENSING CRITERIA

I shall turn now to the criteria used in deciding whether to approve or reject an application for export of a high technology item. In considering

applications for free world destinations, the main consideration is whether or not the commodity is likely to be diverted to a proscribed destination. We consider the known reliability of the consignee, the use to which he intends to put the equipment, and the appropriateness of the equipment for that use. In reviewing applications to export to communist destinations, we examine such questions as:

(a) What is the normal use in the U.S. and elsewhere in the free world?

(b) Is the item designed for military purposes? Is the intrinsic nature of the commodity or data such as to make it of significant use to the military? Is it currently used importantly by the military establishments in the West? In the country for which it is destined?

(c) If the item has both military and civilian uses, is the intended end-use peaceful in nature?

(d) Is the prospective foreign end-user engaged in peaceful or military-oriented work?

(e) Does the item incorporate advanced or unique technology of strategic significance that could be extracted?

(f) Is there a shortage of the item in the area of destination that affects the military potential?

(g) Are comparable commodities or data available to the country of destination outside the U.S.? If COCOM controlled, are they available outside the COCOM countries?

(h) Would significant economic/commercial benefits flow to the U.S. from consumation of the transaction?

In determining the impact of a proposed export on the military capability of a communist country, we place strong reliance on the Department of Defense to supplement our own analysis. Technical and intelligence specialists throughout the military establishment contribute the advice and guidance.

They concentrate on the military needs and capabilities of the recipient country in assessing the likelihood of diversion of equipment or technology to military uses, and the effect of such diversion on our national security. Additionally, they make their own assessment of the activities of the proposed end user.

The effectiveness of controls is judged not by whether or not we prevent development of certain military capabilities in the communist countries, since they obviously have the know-how and resources to make significant advances on their own, given the time to do so. More realistically, we can exercise controls in such a manner that the development of military capabilities is slowed substantially. Thus, it is by delaying military advances, not by seeking to prevent them, that we measure success.

The licensing considerations are focused primarily on national security, but such factors as foreign availability and economic benefit are not overlooked. The Act requires us to use export controls both to encourage trade and to restrict the export of goods and technology which would make a significant contribution to the military potential of any other nation or nations which would prove detrimental to the national security of the United States. In implementing this section of the Act, we concentrate first on the less flexible factor, the impact on U.S. national security. Economic and foreign policy factors take on increasing importance as strategic factors diminish. We attempt to evaluate the significance of a major transaction to the U.S. domestic economy and to make our advisory agencies aware of the economic potential of such exports so they will have a balanced picture. Generally speaking, most transactions are relatively small in value, involving as they do all limited number of products.

IMPROVING ADMINISTRATIVE IMPACT OF CONTROL

I would like to turn now to the other major question that should be considered, and that is whether the licensing procedures I have just described, with their analyses, reviews, and consultations to assure sound judgments, can be and are being administered in such a way as to assure licensing decisions without excessive delay.

We received 52,107 applications in 1975, of which an estimated 90–95% were for high technology exports. In 1975, 52,031 were acted on. Approvals totalled 45,523; rejections, 341; and RWA's 6,167. These figures include foreign policy and short supply applications.

A study of all applications received during a 2-week period in October and November 1975 reveals that 85% were processed within 10 days and 90% within 20 days. The great majority of applications that required more than 20 days to process were for high technology products destined for communist countries. In this particular study, 35% of communist country applications were processed in 20 days, 54% in 60 days, and 77% in 90 days.

The most troublesome product lines include numerically controlled machine tools, semiconductor processing equipment, high strength materials, high temperature polymers, nuclear related materials, computers, electronic testing and measuring equipment, magnetic recorders, and integrated circuits.

I have already discussed the complexities of our technical and policy reviews of these applications. A 1974 amendment to the Export Administration Act was aimed at processing all applications within 90 days. When difficult technical analysis, Operating Committee review, and COCOM clearance are essential, that deadline can be difficult or impossible to meet. It would, of course, be inappropriate to resolve all complex, time-consuming questions by denial of the license application involved. This would mean that a number of transactions involving dual use commodities where the intended use is, in fact, in the civilian sector of a communist nation, could not be consummated. Such action would needlessly deprive U.S. firms of business and would run counter to stated policy of the Act that trade is to be encouraged unless contrary to national security or foreign policy objectives.

The Department is thus obligated to apply fully the criteria and policies of the law before either approving or denying the licensing of a proposed transaction. A decision to approve, arrived at in haste, would run the risk of authorizing an export that would adversely affect the national security of the United States. A decision to deny, arrived at in haste, would run the risk of needlessly restricting U.S. business.

The administrative burdens associated with the increasing complexity of applications for exports to Communist destinations, including the increased need to communicate with and obtain the advice of other agencies, has fallen on a small group of technicians. These burdens have increased faster than the ability of the Department to recruit and train additional technicians.

STEPS TAKEN TO REDUCE PROCESSIVE DELAYS

Set forth below are the steps that have been taken since 1974, when Congress urged more expeditious handling of applications, or are being taken to reduce processing delays. Some of these have not been in effect long enough for their full effect to be felt.

a. The Department is making additional personnel available to the Office of Export Administration to handle the increased analytical, documentary, and other tasks associated with the interagency review of applications for export to communist countries. To provide the resources for the overall export control program, the Department is requesting $5.5 million for FY 1977.

b. A computerized retrieval program has been installed to provide a readily accessible source of essential information describing U.S. license applications (approved, rejected, and pending) for installation of computer equipment in communist countries. When fully operating, this program will eliminate much of the manual searching of files, and accompanying delay, that is presently required in order to obtain information basic to the making of licensing decisions.

c. Arrangements have been made with the National Bureau of Standards to utilize the services of its Institute for Computer Sciences in the review and analysis of computer export transactions that present special control policy problems and in the review of export controls over computers in general.

d. Various government-industry technical advisory committees, established under the provisions of Section 5 of the Export Administration Act, have been requested to provide advice with respect to the Department's export licensing procedures, The Computer Systems Technical Advisory Committee has a formal subcommittee on licensing procedures that, among other things, is studying means to facilitate the presentation to the Department of technical details concerning proposed exports of computer systems to Communist destinations. Other technical advisory committees, while they have not established formal subcommittees on this subject, are expected to respond to the request for advice on licensing procedures in their formal reports to the Department.

e. A new tracking and status retrieval system has been devised to show the current processing status of each pending application, thereby giving management a tool to use in identifying those applications that are not being processed in a timely manner.

f. A new position, Special Assistant to the Director, Office of Export Administration, has been established to provide the Director with the means to identify problem cases, to anticipate delays in their processing, and to take preventive action.

g. A concerted effort was made in the month of February through extensive overtime to reduce the backlog of aging applications. In late January we had 683 applications over 30 days old; 200 of these were awaiting or undergoing technical review in the licensing divisions and the balance were in the later stages of processing: undergoing interagency consultation or in COCOM. A month later, the total was reduced to 569; but more important, in that month the licensing divisions had completed their analysis of 165 of the 200 cases they had held at the outset. This effort moved a heavy volume of applications to the Policy Planning Division and from there most of them have gone into various stages of clearance with other agencies, the Operating Committee, or COCOM. I am confident that this bulge in the end of the pipeline will be reduced. The additional resources and operational changes being infused into the Office of Export Administration should assure that a backlog situation does not recur.

h. In cooperation with Departmental management specialists a special task group has studied the paper flow and a computer specialist has been detailed to examine data processing support. As a result of their recommendations and our own evaluations, a number of changes have been made. The Technical Data Division has been disbanded, with its activities to be integrated into the commodity licensing divisions. The former director of that division remains on the staff of the Office Director to deal with international technical exchanges. The Scientific & Electronic Equipment Division, which had grown to an unwieldy size, has been split into two divisions, one for Computers and the other for Electronics.

i. Consultation is continuing with the Department of Defense with the objective of reducing still further the types and categories of transactions that need be referred to that agency for review. The possibilities for expediting consultation with other agencies are also being explored.

j. An informal working group, at the Deputy Assistant Secretary level, has been formed to deal with policy issues related to export license applications and other matters that cannot be resolved at the senior staff (Operating Committee) level. The objective is to obtain a more rapid resolution of interagency differences than could be obtained by the scheduling of a formal Advisory Committee on Export Policy (ACEP) meeting.

In addition to processing delays, which is the single most significant problem at present, there are other aspects of our controls that trouble the exporting community. I shall touch briefly on some of these.

Complaints are made about the lack of clarity of our control list and the consequent difficulty of determining whether a license is or is not required for certain commodities. Our Commodity Control List is based on the Census Schedule B as a convenience for exporters. We believe it is complete and

informative. At the same time, we recognize that some exporters, particularly those dealing in sophisticated electronic products, have difficulties in locating their commodities on the list and ascertaining the licensing requirements. We are exploring ways of introducing more details without making our list excessively long and cumbersome and plan to consult out technical advisory committees on the problem.

I should also note the problem of meeting exporters needs for the guidelines as to the likelihood that licenses will be granted for their products. The likelihood of approving or rejecting a specific application has continually posed difficulties for the OEA because no decision is made on the specifications of the commodity alone. Our decision depends on the end use and end-user, intelligence information, and other variables that could not be incorporated into overall guidelines. To advise a firm definitively as to the likelihood of a specific transaction being approved would take as much time and as much review as an actual application. We do give advisory opinions based on previous experience with similar commodities, but these opinions are not commitments and must be carefully couched, with caveats to assure that the exporters does not place excessive reliance on this preliminary advice and act imprudently. This best that we can do is all too often inadequate for the exporter's purposes.

CONCLUSION

I have attempted to give you a detailed overview of our national security controls and licensing procedures, and a notion of some of the problems involved in administrating export controls. There are, of course, difficulties inherent in serving a number of differing policy objectives. National security, foreign policy, and economic considerations may all be involved to varying degrees in our review of a specific export transaction. In the process of reaching a licensing decision, all three will be taken into account. As I noted earlier, we place primary emphasis on national security. When this factor is relatively marginal, and foreign policy and economic considerations are significant, the latter may well predominate.

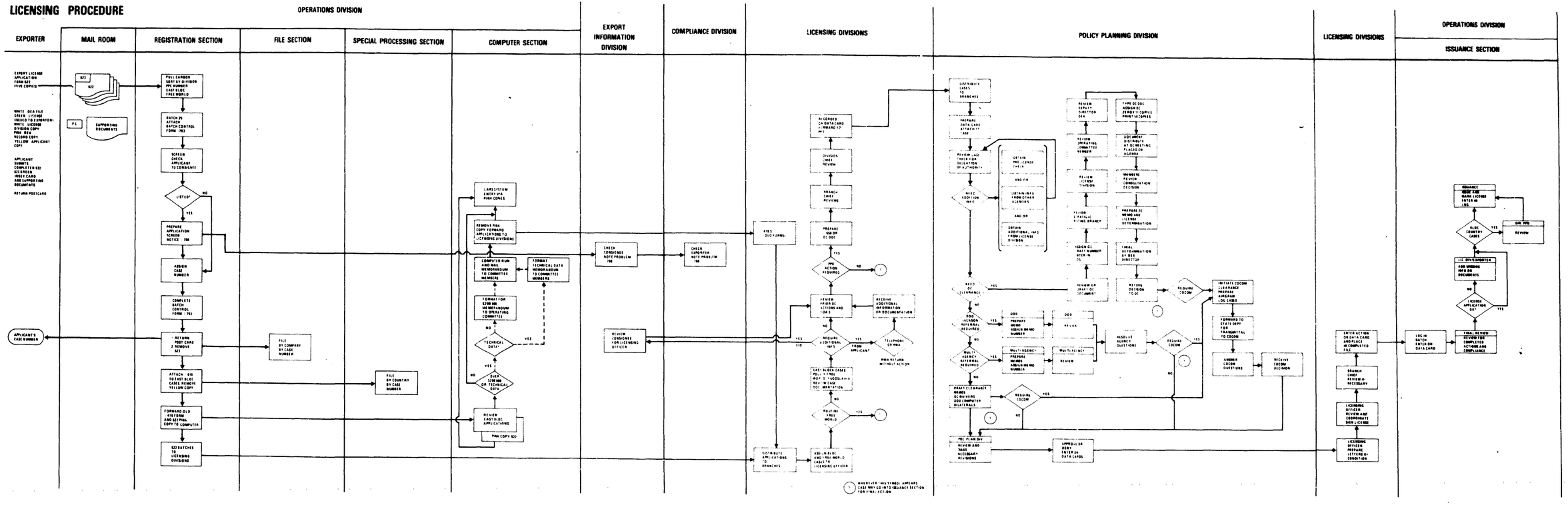
The control system is not a mechanism which yields results that can be measured with precision. Licensing judgments must generally be made on the basis of imperfect information, particularly as it relates to the state of technological development in the communist countries. The degree to which a transaction, if consummated, would contribute to the military potential of the communist country involved is, of course, a matter of judgment. Correspondingly, the effect of our controls in delaying the development of a specific military system or the military potential of a country in the broad sense cannot be measured with any certainty. We and our advisor agencies know that there is a technology gap between the West and the Communist countries in commodity areas that are critical to a modern military machine, computers and integrated circuits, for example. We believe our export controls have served to delay the closing of that gap and to this extent have retarded the development of the military capabilities of our potential adversaries. For this reason, I believe that our control system is adequate to achieve the national security objectives of the Export Administration Act.

We are making every effort to ensure that the controls are being administered in such a way as to minimize the adverse impact on U.S. economic interests consistent with national security considerations. I have noted some of the problems we encounter and have gone into some detail as to what we have done and are doing to deal with the problem of delays in processing license applications. I believe we are well on the road to resolving this administrative difficulty. Others will likely develop in the future, since the control program is a dynamic process that must reflect constantly changing world relationships and advancing technology. But we are committed to deal promptly and vigorously with administrative problems that arise.

The Department does not believe that major changes in our governing statute are necessary to the achievement of the policy objectives of the Export Administration Act. We currently have under consideration the adequacy of the penalties provided by the Act.

OFFICE OF EXPORT ADMINISTRATION

LICENSING PROCEDURE



Mr. BINGHAM. Thank you, Mr. Downey. I know that your responsibility and your position is very much one of promoting East-West trade. Therefore, I think we can presume you are anxious to see these various obstacles removed, to the extent they can be.

COMPLAINTS FROM AMERICAN BUSINESS

I had occasion to meet recently with a group of American businessmen, and they were full of complaints about the slowness of this procedure, and the complexity of it. And they felt that their foreign competitors are given an advantage, and so on. I'm sure you get a great deal of this, undoubtedly every day.

Perhaps I should ask the question this way. Do you feel, with this intensive effort, and so on, you have been able to take care of a good part of the backlog? Are you still getting just as much complaining from the American business community? Or has that diminished also?

Mr. DOWNEY. May I first suggest that I am not sure that I would characterize my responsibilities as relating soley to the promotion of trade. I feel it is equally imperative to ensure that our trade is not damaging our national security. However, I also recognize that probably the most efficient trade promotion device is a very efficient control system. So I have an interest from both ends, in having an efficient system. Have the complaints from the American business community declined? It is so hard to assess. I think the business community has an appreciation that we are making a good faith effort to move the backlog down to something manageable, and to institute internal reforms that would allow us to keep it down. I think they are now having greater understanding that we are really trying to do something. They are being cooperative.

"CHEATING" IN COCOM

Mr. BINGHAM. Could you respond to some of the questions I asked Mr. Wright about the degree to which, from where you sit, you are aware of companies outside of the United States cheating on the COCOM procedures, and taking advantage of the fact that we are conscientiously trying to impose these controls on our exports?

Mr. DOWNEY. I think I would agree with Mr. Wright's statement in its entirety. There is illegal leakage in any system, from the United States and from other countries. We do our best with our compliance effort to assure that it is kept at a minimum. We hear very frequently, as I am sure you do, from businessmen, that "I was in country X, and I saw a machine tool that was produced in one of the COCOM countries. And I couldn't get that licensed." We hear that about equipment. And as soon as we hear that, we analyze the other commodity, and see if in our judgment it is one that should have been licensed, or not licensed, or went through the COCOM system. Through the State Department we engage in consultations with the other COCOM countries. Sometimes we are convinced that the other countries should have caught the product but most times, we all

agree that it is a product which was below the line, below the COCOM list line.

The American business community is very vigilant in looking at what its competitors are doing in other countries. And we try to respond to their presentation of evidence. Very often they are not able to provide us with evidence, but only a rumor. "I understand this country doesn't care, and is shipping things in wholesale." We have not been able to substantiate any kind of reports like that. We try to.

CHANGE IN PENALTIES FOR VIOLATIONS

Mr. BINGHAM. You mentioned the possibility of some change in the penalties for violation of these acts. What must be the nature of the legislative changes?

Mr. DOWNEY. Yes, Mr. Chairman. We are considering these. The current penalties in the act have not been adjusted for many years. If for no other reason than to take account of inflation, it may very well be useful to increase the level of penalty. It also reflects an interest which we all share, in making it clear to the business community that we just cannot have illegal diversion, and that we are serious about it.

Mr. BINGHAM. Do you anticipate having other recommendations for the Congress in the area of possible changes in the present Administration Act?

Mr. DOWNEY. I do not.

SOVIET ADVANCES IN ELECTRICAL POWER TRANSMISSION

Mr. BINGHAM. On the matter of the reverse flow of technology, I was wondering about a matter of long distance transmission of electrical power. I was told, when I was in Moscow last year, that the Soviets are way ahead of us on this. And that we are really seriously deficient in our work of this area. As a result of their advances, they are rapidly going to be in a position of providing the entire continent of Europe with power. Would you comment on that?

Mr. DOWNEY. You have touched on a few points. The Soviet Union now is an exporter of energy to Western Europe in a variety of forms, including oil, oil products, and natural gas. It has developed, because of its continental size, great hydroelectric power advances and skills in the long-distance transmission of electric energy. In fact the Soviets have made available to the United States, through one of the Government-to-Government science exchanges under the bilateral Agreement for Cooperation in the Field of Energy, information on their long-distance electrical transmission techniques.

In other areas, as I suggested earlier, the area of underground coal gasification—the Soviets have sold a license to the United States. They have sold a license—many licenses in the metallurgy area. There is one that happens to come to mind. It relates to aluminum processing which, when employed, will cut down the united energy needed to make aluminum.

There are many areas in the energy field where we have obtained know-how, licenses, and technology from the Soviet Union, and from the other socialist countries.

SOVIET EXPORT CONTROLS?

Mr. BINGHAM. Are you aware of cases where the Soviets, or other Eastern European countries, have declined to make their technologies available or export them to the West on some security grounds?

Mr. DOWNEY. I am presently not aware of any instance where a private company interested in purchasing know-how, has been turned down on security grounds. It certainly would not surprise me if that were the case, however, I have no personal knowledge of a specific case. Perhaps it is just a product of the American companies not bothering to ask for certain very sensitive information.

Mr. BINGHAM. Thank you.

Mr. Biester.

Mr. BIESTER. Thank you, Mr. Chairman.

I apologize, gentlemen, for being late. A fellow Pennsylvanian was just sworn in as our new Ambassador to the United Nations. I wanted to be there. Not necessarily to congratulate him, but to wish him well.

NUMBER OF U.S. EXPORTS NOT LICENSED

This question may have been asked before. And if so, I will just get the information from counsel. Have you given any examples of commodities, or examples of contracts turned down? And if not, could you give me one or two, to give me a sense of the pattern?

Mr. DOWNEY. An example of U.S. exports for which a license was not granted?

Mr. BIESTER. That is right.

Mr. DOWNEY. In terms of numbers, the quantity may be useful for you. We have denied less than 1 percent of the license applications we have received. I can't give you a specific example in terms of citing a company. It might involve a very powerful computer system with a very large number of memory cores, which we felt contained inadequate safeguards against diversion to strategic military use. This we would deny. A very high precision machine tool, which could be used for fabricating nuclear weapons, we would deny that. A certain piece of laser equipment, or a certain kind of oscilloscope, or other electronic and measuring devices that would have a direct strategic use, we would turn down.

Mr. BINGHAM. If the gentleman will yield, you will recall at our breakfast meeting with the businessmen in Moscow a year ago, we were told an application for a computer system by Intourist had been turned down.

Mr. BIESTER. I do recall that. Was it because of the kind of computer it was?

Mr. DOWNEY. As you know, under section 7(c) of the act, we have to insure that the confidentiality of applications is safeguarded. So, I cannot discuss with you the particulars of any spe-

cific application. That is why I spoke in general terms about a large computer with high memories, and the like.

LICENSING PROCESS FOR AMERICAN FOREIGN SUBSIDIARIES

Mr. BIESTER. With respect to foreign subsidiaries of American companies, let us suppose that there is a foreign subsidiary of an American company which has an opportunity for a contract, and it is permitted by the indigenous host country government. They say, "All right, that sale is an alright sale." Are there any steps that we can take with respect to that?

Mr. DOWNEY. First of all, if the commodity which that foreign subsidiary wishes to export is on the COCOM list, then the host country, if it is a COCOM country, would have to request an exception from the embargo and thus bring the matter into COCOM. The United States, as well as the other 14 member countries, would have an opportunity to offer our views on this transaction.

Second, to the extent that that product is made with U.S. parts and components, or with U.S. technology, a U.S. license is also required.

Mr. BIESTER. Supposing that it is not a COCOM country? And supposing that the patent is a patent out of a host country? And the technology is essentially out of the host country? What role could we play here in preventing that sale?

Mr. DOWNEY. If a commodity contains any U.S. parts and components, those parts and components would have to be licensed here, or if any technology involved in the manufacture of that commodity is American technology, it would have to be licensed here. If the product is one in which no U.S. parts or components are involved, or no U.S. technology is involved, it would be wholly the product of country X, and we would not have any reach.

Mr. BIESTER. Even if the company involved were run by an American company?

In my assumption, an American company owns a subsidiary in country X, which is not a COCOM country, and the technology is not American owned. The patent is there. And none of the flow of items go to construct it. The ultimate end product does not come from the United States. Do we have any control of that product's sale to the Soviet Union?

Mr. DOWNEY. I don't think so. Let me consult.

I am advised that if the end product does not come from the U.S., what I said was correct so far as the role of the Commerce Department is concerned. The Treasury Department, which implements the transaction controls under the Trade With the Enemy Act provisions, is able to control the transaction if it involves a COCOM item, by virtue of the corporate relationship of the subsidiary to the American parent. If the ultimate end product comes from the U.S., the Commerce Department controls it regardless of the relation of the foreign seller to a U.S. company.

Mr. BINGHAM. Will you identify for the record, the gentleman with you, with whom you consulted?

Mr. DOWNEY. Yes. Mr. Rauer Meyer, who is the veteran Director of the Office of Export Administration.

Mr. BIESTER. So, if the Treasury were to catch that, they would be able to take some steps with respect to the American company?

Mr. DOWNEY. I believe so. If it is a COCOM item. I wasn't sure if you were speaking—I believe you said it was not a COCOM country.

Mr. BIESTER. But a COCOM product.

Mr. DOWNEY. Yes, a COCOM item.

CREDIT COMPETITION

Mr. BIESTER. My recollection, in terms of the problems in East-West trade, is that our competition with other European countries, has also been in the extent of credits, the size of those credits, the interest rates charged, in terms of sale, in addition to these other kinds of problems.

Mr. DOWNEY. Absolutely. If you take the case of the Soviet Union alone, our allies and competitors in the last year and a half have extended government subsidized credits, in the neighborhood, depending upon your figures, of $11 billion. And as you know, the United States has not been able to offer any credits. That has been a major factor in the flow of trade. Or the absence of trade.

Mr. BIESTER. Thank you, Mr. Chairman.

Mr. WHALEN. I would like to determine, if I could, whether the other members of COCOM view the security issue as seriously as we do here in the United States. I suppose that this relates to the whole question of one country's view of détente, for example. I know that is a broad question. So perhaps we might give you some specifics. I think Congressman Biester has just alluded to one, the fact that our share of the trade with Eastern Europe is substantially less than our allies in Western Europe. Perhaps this is due to political inhibitions rather than security restrictions.

Second, do other COCOM countries have laws similar to ours, affecting trade with Eastern Europe? And if they do, are they as stringent as the laws on our statute books?

LAWS OF OTHER COCOM COUNTRIES

Mr. DOWNEY. Reversing it, when you speak about laws of the other COCOM nations, I assume you mean in addition to the security area. Because generally——

Mr. WHALEN. No, I don't mean in terms of general credits and so forth. It seems to me that the so-called Jackson-Vanik amendment was a political decision made by Congress, not a security decision. And yet, as you have indicated, this legislation certainly does affect the total of our trade with Eastern Europe and the Communist States. I was speaking strictly in terms of security and the exchange of technology. Are there similar laws on the statute books of other COCOM countries?

Mr. DOWNEY. I think Mr. Wright would be able to respond better than I would on that. But I think it is fair to say that all the COCOM members have a common undertaking.

Mr. WHALEN. I know they do, but in addition to this, is there domestic legislation?

Mr. DOWNEY. May I refer to my colleague?

Mr. WRIGHT. Yes, the situation is that the other COCOM countries have an adequate legislative basis, or I should say, an adequate legal basis, to make effective in their own country, the necessary controls that are recommended by COCOM. Now, I believe that the situation differs from country to country. And they may not have the same kind of law on the books that we have in terms of the Export Administration Act, the Battle Act, but they have the necessary legal authority.

And they also, I think, in the case of the participating countries, have adequate authority to impose penalties of one kind or another on violations of their regulations.

Mr. WHALEN. Well, I was going to get to that question. But since Mr. Wright raised it, maybe I could allude to it now.

VIOLATIONS AND PENALTIES IN UNITED STATES

Since Mr. Downey indicated that we might want to consider increasing the penalties, how many violations have been uncovered here in the United States? And how many penalties actually have been assessed against violators?

Mr. DOWNEY. I will have to give you a statement inserted for the record, if you don't mind. In our quarterly reports to the Congress, now issued semiannually, we list the number of investigations opened in that quarter, the number of prosecutions, the number of instances in which export privileges have been suspended or denied or where civil or criminal penalties have been imposed.

[The information referred to follows:]

PENALTIES IMPOSED AGAINST U.S. IMPORT CONTROL VIOLATORS

During the first quarter of 1975, three compliance orders denying the violator export privileges were issued and one order was extended for an additional 45 days. On the other hand, the export privileges of a firm previously under a denial order were reinstated. During the same quarter no monetary or criminal penalties were imposed on any firms.

During 1974 and 1975, the Department's Office of Export Administration had 435 cases involving alleged violations of export regulations under investigation for administrative or criminal proceedings or both. Of these, 97 were pending at the beginning of 1974 and 338 cases were opened during the two-year period. A total of 308 cases were closed: 37 on the basis of a determination of no violation or insufficient evidence; 228 after warnings to the parties involved for various types of violations considered not serious enough to warrant institution of formal charges or compliance proceedings, and 43 after completion of compliance proceedings. There were 30 referrals to the Department's Office of General Counsel for administrative and/or criminal action. Of the 127 cases pending at the end of 1975, 12 were with the Office of General Counsel or before the Hearing Commissioner and 115 were under active investigation.

The Commerce Department issued 42 denial orders during 1974–1975. These involved 76 parties (24 U.S. firms, 10 U.S. individuals, 22 foreign firms, 20 foreign individuals). There were 5 related party actions and determinations (involving 7 foreign firms and 2 foreign individuals). There was one investigative case referred to the Department of Justice for criminal prosecution. Also, during 1974–1975, 15 civil penalties were invoked (involving 13 U.S. firms, 3 U.S. individuals and one foreign firm).

Mr. WHALEN. Could you give us a broad figure?

Mr. DOWNEY. We had 156 cases under investigation in the first quarter of 1975.

Mr. WHALEN. How many penalties were imposed in the same period?

Mr. DOWNEY. A total of 45 cases were closed: seven on the basis of a determination of no violation or insufficient evidence; 36, after warnings, were considered not serious enough to warrant institution of formal charges. Four were referred to the Department's office of General Counsel for administrative or criminal action. Of the 111 cases pending at the close of the quarter, 23 were with the Office of General Counsel or before the Hearing Commissioner, and 88 were under active investigation.

VIOLATIONS AND PENALTIES IN OTHER COCOM COUNTRIES

Mr. WHALEN. Did you and Mr. Wright have any information regarding the situations in other COCOM countries? That is, the number of cases uncovered, the number of penalties imposed?

Mr. DOWNEY. I would not. Mr. Wright may.

Mr. WRIGHT. We have some information on that. Enough to make it clear that other countries do effectively prosecute violators, and impose penalties. I would like to see if we could provide you for the record, with some indication of what the record is with respect to other countries.

[The information referred to follows:]

PENALTIES IMPOSED BY COCOM COUNTRIES AGAINST EXPORT CONTROL VIOLATORS

We do not have complete statistics on the number of investigations and penalties imposed by other cooperating countries in cases of violation of their export control laws. However, we have recently undertaken a study to secure this as well as related information on compliance questions, and can report to the Committee further upon its completion. On the basis of the data we have received to date for this study we think it likely that other COCOM countries have had a lesser volume of cases involving violation of their export control laws than the United States. Thus, for one reporting country having substantially less trade than the United States with the communist countries, 40 investigations were carried out during 1975; twenty of these cases are still open and two cases resulted in successful prosecution of the offenders.

It is understandable that the United States would have more potential enforcement cases than other cooperating countries. For one thing, the United States is probably an especially important target for illegal purchases by the communist countries in view of their interest in high technology goods of U.S. origin. For another, U.S. controls cover some items not controlled by other COCOM countries, and include complete embargoes on trade with certain areas—Cuba, North Vietnam, South Vietnam, North Korea. Moreover, many U.S. cases involving U.S. firms also involve foreign firms suspected of trans-shipping or forwarding U.S. goods in violation of U.S. regulations. In such cases the investigation is carried out by U.S. agents in cooperation with the authorities of the other COCOM country.

All COCOM countries provide penalties, as does the United States, for violation of their export control regulations. Usually these include both fines and imprisonment ranging from 6 months to 8 years. The illegal goods are also usually confiscated.

Mr. WHALEN. Recognizing that the trade of these countries is substantially greater than ours with Eastern Europe, are the number of imposed penalties relatively the same?

Mr. WRIGHT. I am not sure enough of that to make a quick answer.

Mr. WHALEN. Thank you, Mr. Chairman.

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SALES BY AMERICAN SUBSIDIARIES

Mr. BINGHAM. Thank you. I would just like to ask one more question, on the matter of sales by subsidiaries. Do you have any figures on the relative values of sales in this area of high technology by the subsidiaries of American companies operating abroad, as against the parent companies operated from the United States?

Mr. DOWNEY. I certainly don't have those figures on hand. I am not sure we can get the statistics for you. These would be situations where foreign subsidiaries apply for an export license to reexport an American commodity, or a foreign commodity incorporating U.S. parts or components or technology to a third country. Can we endeavor to see if we can locate that? [1]

Mr. BINGHAM. Yes. Would you bear in mind, our interest is, of course, in trying to find out the degree to which American companies may be using their subsidiaries to, in effect, get around the controls that are imposed by the strictness of the controls.

Mr. DOWNEY. I think we will find there are virtually no instances where a major American company with subsidiaries abroad, COCOM countries or elsewhere, would attempt, by utilization of their subsidiaries, to subvert the control system. It is exactly for this reason, to prevent subversion of the system, that we have controls over reexports.

Mr. BINGHAM. You are patient, Dr. Shields.

We turn now to Dr. Roger E. Shields, Deputy Assistant Secretary for International Economic Affairs, for the Department of Defense.

Would you proceed, Dr. Shields, and to the extent you can, summarize your statement?

STATEMENT OF DR. ROGER E. SHIELDS, DEPUTY ASSISTANT SECRETARY FOR INTERNATIONAL ECONOMIC AFFAIRS, DEPARTMENT OF DEFENSE

Present position: Deputy Assistant Secretary of Defense (International Economic Affairs), Office of the Assistant Secretary of Defense (International Security Affairs).

Born: November 8, 1939, at Salt Lake City, Utah.

Schools: University of Florida, 1961, B.S.; 1965, M.A. University of Virginia, 1969, Ph. D.

Career highlights: 1968—Interim Assistant Professor of Economics, University of Virginia. 1968–70—Assistant Professor of Finance, University of Texas at Austin. 1970–71—Economist, Professional Staff, TEMPO General Electric, Center for Advanced Studies. 1971–73—Assistant to the Assistant Secretary of Defense (International Security Affairs) for Prisoner of War/Missing in Action and Economic Affairs. 1973 to date—Deputy Assistant Secretary of Defense (International Economic Affairs).

Other: Graduate with High Honors, University of Florida, 1961; Beta Gamma Sigma, Honorary Fraternity, 1960; Pi Sigma Phi, Honorary Fraternity, 1960; Phi Kappa Phi, Honorary Fraternity, 1961; and Department of Defense Distinguished Civilian Service Medal, 1973, 1975.

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[1] The Commerce Department subsequently informed the subcommittee that further investigation revealed that such data are not available.

Mr. SHIELDS. Thank you very much, Mr. Chairman, and members of the subcommittee.

I am extremely pleased to have the opportunity to appear before the subcommittee, to express the views of the Department of Defense on this important topic of export licensing of advanced technology, under the National Security Control Provisions of the Export Administration Act and related Statutes.

At the outset, let me say that the Department of Defense is not opposed to peaceful trade, nor to the expansion of commercial and economic ties with countries in the communist world.

DEFENSE DEPARTMENT CONCERN IS SOLELY NATIONAL SECURITY

Our sole concern and care is for the national security aspects of this traffic. As you know, the responsibilities of the Secretary of Defense in export control matters, which have long been implicit in U.S. export legislation, were explicitly set forth in the Export Administration Amendments of 1974 which went into effect on October 29 of that year. Section 4(h) authorizes the Secretary of Defense to review any proposed export of goods or technology to a controlled country and to determine whether the export of such goods or technology will significantly increase the military capability of that country. In addition, under subsection (2) the Secretary of Defense is required to determine, in consultation with the export control office to which licensing requests are made, the types and categories of transactions which should be reviewed by him.

DEFENSE PROCESSING TIME

Because it is often alleged, and sometimes believed, that Defense pursues dilatory tactics in handling export cases where national security is involved, let me give you some idea of our processing time. Our records show that during the period 1 July to 31 December 1975, Defense received 1,558 export license cases. We have prepared a tabulation of our response time which you may wish to include in the record. It shows that action on 68 percent of these cases were completed in 5 working days, on 77 percent of the cases in 10 working days, and on 90 percent of the cases in 30 working days. Only 11 cases, or a fraction of 1 percent of those acted upon, took more than 90 days.

Another common assertion is that Defense, by reason of parochial and outmoded views, blocks a great number of transactions. The record shows that of the 1,558 cases I have just referred to, Defense recommended or concurred in Commerce's recommendation of denial in only 74, or less than 5 percent. I think I should point out that all of these 1,558 cases—not just the 74 on which we recommended denial—involved items of military significance. Otherwise an evaluation by Defense would not have been required.

DEFENSE CRITERIA IN MAKING LICENSING RECOMMENDATIONS

The fundamental criterion employed by the Department of Defense in making licensing recommendations is whether the export of the goods or technology being considered will significantly increase the military capability of a controlled country. By definition, the items on the embargo list, which has been compiled on the basis of the judgments of technical experts, are of significant military value. But they are different from items on the munitions list in that they also have legitimate civilian uses. Large computers are one obvious example. They have, in short, a dual nature which is why classifying them in terms of some intrinsic quality is virtually impossible. Our problem, therefore, is to judge the extent to which a given export is likely to be put to military use. And how significant such use would be.

In making our judgments, we consider the previous licensing history of the commodity to controlled countries, note the stated end-use in the particular case, and obtain an intelligence evaluation of the activities and products of the end-user. In addition, we seek to determine the answers to a number of specific questions. Among them are the following:

First. Is the stated end-use reasonable and appropriate?

Second. If this item is sold to the country of destination, is it likely to be diverted from the stated civil end-use to an application in their military programs or shipped to another country for a military end-use?

Third. Does the item contain extractable technology—that is, is there a reverse engineering potential—which would be significant for military or military-supporting production in the country of destination?

Fourth. In order to make the transaction viable, will it require extensive training of the recipient's personnel or disclosure of technical information which would in themselves be of military significance?

From a military standpoint, the technology of significance is principally that involved in the design, development, production, and operation of military and military-supporting industrial equipment. It is, moreover, the technology of the factory more than the technology of the laboratory, the know-how born of experience rather than the knowledge arrived at by theorizing, which is the focus of our interest.

EFFECTIVE EXPORT CONTROLS

And this brings us to the question of what constitutes effective export controls. Permanent prevention of the acquisition by Communist countries of any particular military capability cannot be and is not our goal. Any country with the brains, the resources, and the will to do so can, over time, acquire any weapon or military capability it chooses. There is little we can do to prevent it, and to make

such an attempt would be wholly unrealistic. However, we can, through the judicious use of export controls, retard the achievement by countries hostile to us of military capabilities which would be detrimental to our security. Thus, delay is the measure of success. So viewed, our security trade controls have proved to be highly effective, particularly in the area of production capabilities.

We currently have a clear margin of advantage over the Soviets in this regard and in a number of militarily significant technologies the margin is measured in years. In terms of our national security, the result is that the Soviets have less accurate, less reliable, more vulnerable, and more costly weapons systems. Much of this advantage would be reduced if not eliminated, were it not for the existence of export controls.

Mr. Chairman and members of the subcommittee, to the extent that we and our allies maintain careful controls over the export to the Soviets and their allies of this and other technology of military significance, we are retarding the growth of Warsaw Pact and PRC military capabilities, contributing to the success of our deterrent strategy, and reducing the expenditures we must make for our defense.

I will be happy to answer any questions you may care to ask.

[Dr. Shields' prepared statement follows:]

PREPARED STATEMENT OF DR. ROGER E. SHIELDS, DEPUTY ASSISTANT SECRETARY, INTERNATIONAL ECONOMIC AFFAIRS, DEPARTMENT OF DEFENSE

Mr. Chairman, and distinguished members of the Subcommittee, I am pleased to have the opportunity to appear before the Subcommittee on International Trade and Commerce to express the views of the Department of Defense regarding export licensing of advanced technology under the national security control provisions of the Export Administration Act and related statues.

At the outset let me say that the Department of Defense is not opposed to peaceful trade nor to the expansion of commercial and economic ties with countries in the Communist world. Our sole concern and care is for the national security aspects of this traffic.

As you know, the responsibilities of the Secretary of Defense in export control matters, which have long been implicit in U.S. export legislation, were explicitly set forth in the Export Administration Amendments of 1974 which went into effect on October 29th of that year. Section 4(h) authorizes the Secretary of Defense to review any proposed export of goods or technology to a controlled country and to determine whether the export of such goods or technology will significantly increase the military capability of that country. In addition, under Subsection (2) the Secretary of Defense is required to determine, in consultation with the export control office to which licensing requests are made, the types and categories of transactions which should be reviewed by him.

During the period 1949–1974, the Secretary of Defense had arranged with Commerce for the processing of certain classes of proposed exports without Defense consultation and clearance. In response to Subsection (2) these arrangements—some 63 in all—were suspended in order to make a fresh determination of whether the commodities and technology involved possessed sufficient strategic significance in the light of today's circumstances to warrant review by the Secretary of Defense of export transactions in which they are included.

For a time, then, after the enactment of Section 4(h), Defense examined all export applications to controlled countries (Commerce receives between 5,000 and 6,000 cases per year) while conducting an intensive review of the previous arrangements to determine to what extent they could be renewed. As a result of this effort, in which Defense analysts from the Services, the intelligence agencies, and OSD components participated, it was determined that, with a few exceptions, all of the delegations of authority could be restored to Commerce without detriment to the national security.

Accordingly, the Department of Defense now reviews some 2200 Commerce license applications annually, predominantly involving exports to controlled countries but also including some for the free World, only a small fraction of which are turned down.

Because it is often alleged, and sometimes believed, that Defense pursues dilatory tactics in handling export cases where national security is involved, let me give you some idea of our processing time. Our records show that during the period 1 July to 31 December 1975, Defense received 1558 export license cases. We have prepared a tabulation of our response time which you may wish to include in the record. It shows that action on 68% of these cases was completed in 5 working days, on 77% in 10 working days and on 90% in 30 working days. Only 11 cases, or a fraction of 1% of those acted upon, took more than 90 days.

Another common assertion is that Defense, by reason of parochial and outmoded views, blocks a great number of transactions. The record shows that of the 1558 cases I have just referred to, Defense recommended or concurred in Commerce's recommendation of denial in only 74, or less than 5%. I think I should point out that all of these 1558 cases—not just the 74 on which we recommended denial—involved items of military significance. Otherwise an evaluation by Defense would not have been required.

We do, of course, have some problems. One has been the resolution of the massive number of licensing applications involving the export of computers systems and components to controlled countries. This problem has plagued interagency export control deliberations for the last four years because at that time we were unable to agree amongst ourselves, and consequently with our COCOM allies, on embargo parameters.

A White House directed study subsequently resolved many of the policy issues and agreement has been reached with our allies in the recently completed COCOM List Review. This agreement has made possible the working out of arrangements with Commerce for processing a number of classes of computer classes without referral to Defense. As a result, the log jam of cases involving computers is being broken and reduced to manageable proportions.

Our Strategic Trade office in ISA participates in both Commerce and State Department-chaired interdepartmental coordinating committees involved in the high technology licensing process with particular emphasis on exports to controlled countries. A senior staff officer participates in the interagency Advisory Committee on Export Policy's Operating Committee which meets on a weekly basis to handle significant and controversial export applications requiring U.S. licenses. To prepare for these meetings, he reviews extensive documentation on proposed exports of commodities or technology which are prepared by Commerce analysts. He disseminated them as appropriate to Service and OSD technical and intelligence specialists for evaluation before arriving at a Defense policy determination. In significant landmark cases, such as proposed exports of computerized seismic systems for oil exploration purposes, he would seek the direction of higher Defense echelons before presenting the department's position in the Operating Committee. Another senior staff officer is the Defense Department's member of Working Group I of the Economic Defense Advisory Committee and he performs similar functions regarding those cases requiring COCOM licensing action. In addition, analysts from Defense participate in the Technical Advisory Committees, which are set up by statute to examine and make studies and recommendations regarding export of equipment and technology associated with such items as machine tools, computers, semi-conductors, and telecommunications.

The fundamental criterion employed by the Department of Defense in making licensing recommendations is whether the export of the goods or technology being considered will significantly increase the military capability of a controlled country. By definition, the items on the embargo list, which has been compiled on the basis of the judgments of technical experts, are of significant military value. But they are different from items on the munitions list in that they also have legitimate civilian uses. Large computers are one obvious example. They have, in short, a dual nature which is why classifying them in terms of some intrinsic quality is virtually impossible. Our problem, therefore, is to judge the extent to which a given export is likely to be put to military use and how significant such use would be.

In making our judgments, we consider the previous licensing history of the commodity to controlled countries, note the stated end-use in the particular case, and obtain an intelligence evaluation of the activities and products of the end-user. In addition we seek to determine the answers to a number of specific questions. Among them are the following:

1. Is the stated end-use reasonable and appropriate?

2. If this item is sold to the country of destination, is it likely to be diverted from the stated civil end-use to an application in their military programs or shipped to another country for a military end-use?

3. Does the item contain extractable technology (i.e., is there a reverse engineering potential) which would be significant for military or military-supporting production in the country of destination?

4. In order to make the transaction viable, will it require extensive training of the recipient's personnel or disclosure of technical information which would in themselves be of military significance?

To help us answer these questions, we call upon the expertise of a large number of highly trained and knowledgeable technical and intelligence specialists throughout the government.

The underlying concern we have in all cases is whether a commodity purchased for a presumably peaceful end-use is likely to be diverted to a military purpose and, if so, how detrimental to our security that diversion would be.

It is at this point in the process that we are confronted with a number of inescapable realities which outside critics tend to ignore. In the first place, there is the problem of uncertainty. Our knowledge of what goes on in the Soviet Union is not as precise or complete as we could wish. Consequently, in all of our judgments about the likely end-use of a given strategic item there is room for error.

Recognizing this fact, a second reality is that the potential cost to the U.S. of a mistaken judgment varies considerably depending on the direction in which it is made. If, for example, we err on the side of being too restrictive, whatever the impact on the prospective vendor, the loss to the U.S. economy cannot in any case be very great for the simple reason that factors other than export controls on strategic items—such as a Soviet shortage of hard currency—impose the significant limits on increased U.S. trade with the Soviets. If, on the other hand, we should err on the side of relaxing controls in a way which enhanced Soviet strategic capabilities, the price in subsequently increased defense costs and greater security risks could be very large.

A third reality is that errors made on the side of being too restrictive can be easily and instantly corrected whenever the error is discovered. All we have to do is reverse our position and there will be no resistance to the change. By contrast, as experience has shown particularly with international controls, once an item has been decontrolled even if in error, it is impossible to get it re-embargoed.

A fourth reality is that asking how much an individual export will adversely affect our security—as recommended by the Murphy Commission study—is the wrong question. It is fanciful to suggest that one strategic commodity could have overwhelming importance by itself. Indeed, we would be prepared to stipulate that there is probably not an item on the embargo list which if exported in one isolated transaction to the Soviet Union and used by

them for military purposes would, by itself, represent a disaster for our national security. But in the world of export control, where every release is seized upon by other vendors or by other countries as a precedent for seeking equivalent releases, there is no such thing as an isolated case any more than there is an isolated stone in a dike.

Theoretically, every transaction must be dealt with on its merits; but the cumulative impact of a number of transactions must also be weighed and as we consider in each case those transactions which have preceded it so we must also concern ourselves with those consequences which, based on experience, we know are certain to follow.

All of these problems are especially severe where technology transfers are concerned. To estimate the potential impact of an export of technology is much more difficult than to assess the importance of exporting a finished product. Where a piece of hardware is concerned, we usually have a fair chance of determining that it went to its intended destination. Should diversion be detected we can reduce its value by shutting off follow-on spares and we can exercise the additional sanction of refusing to make any further shipments of similar equipment. Even if we occasionally judge incorrectly, the damage to our security tends to be limited if only because machines and equipment have a finite utility and a finite useful life. This is not so with technology. We cannot be assured of the uses to which its end products will be put; we cannot recall it; nor is it necessarily a wasting asset.

A further complication is the fact that the transfer of technology takes place in a number of different ways and that the amount of significant information which can be transferred varies in each case. At one end of the scale is simple visual inspection of, or access to, an item of hardware. At the other end would be the transfer of a partial or complete turnkey production facility. Between these extremes are other means such as oral communications, descriptive documents, engineering and manufacturing drawings, training of personnel, technical and management assistance, specialized tooling and test equipment, assistance in R&C and production, and the like.

From a military standpoint, the technology of significance is principally that involved in the design, development, production and operation of military and military-supporting industrial equipment. It is, moreover, the technology of the factory more than the technology of the laboratory, the knowhow born of experience rather than the knowledge arrived at by theorizing, which is the focus of our interest.

This brings us to the question of what constitutes effective export controls. Permanent prevention of the acquisition by Communist countries of any particular military capability cannot be and is not our goal. Any country with the brains, the resources, and the will to do so can, over time, acquire any weapon or military capability it chooses. There is little we can do to prevent it, and to make such an attempt would be wholly unrealistic. However, we can, through the judicious use of export controls, retard the achievement by countries hostile to us of military capabilities which would be detrimental to our security. Thus delay is the measure of success. So viewed, our security trade controls have proved to be highly effective, particularly in the area of production capabilities.

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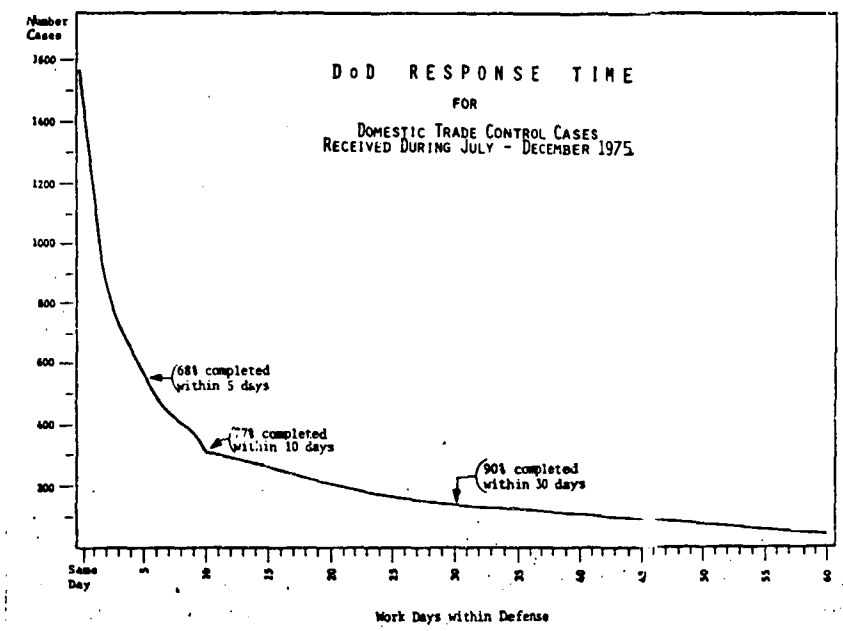
Mr. Chairman, and members of the Committee, to the extent that we and our Allies maintain careful controls over the export to the Soviets and their Allies of this and other technology of military significance, we are retarding the growth of Warsaw Pact and PRC military capabilities, contributing to the success of our deterrent strategy, and reducing the expenditures we must make for our defense.

DEPARTMENT OF DEFENSE RESPONSE TIME FOR DOMESTIC TRADE CONTROL CASES RECEIVED DURING JULY-DECEMBER 1976

Response time (work days)	Number of cases completed	Accumulative number of completed cases	Percent
Same day	407		26
1	323	730	47
2	124	854	55
3	57	911	58
4	78	989	63
5	78	1,067	68
6	57	1,124	72
7	30	1,154	74
8	25	1,179	76
9	21	1,200	77
10 to 14	71	1,271	82
15 to 19	66	1,337	86
20 to 24	45	1,382	89
25 to 29	25	1,407	90
30 to 59	93	1,500	96
60 to 89	17	1,517	97
90	11	1,528	98
Pending	27	1,155	99.8
Withdrawn	3	1,558	100



Mr. BINGHAM. Thank you, Dr. Shields, and I must say that the dispatch with which you delivered that statement speaks well for the dispatch with which the Department attacks these problems. You skipped over some parts, and, as a matter of fact, I would like to ask you a question about one item. You will recall in an earlier discussion, I think it was with Mr. Wright, I asked whether, if we

are going to apply a more stringent standard—that is if we were to depart from current concepts of what is permissible, and what is appropriate under the general rubric of détente—would it be possible to reembargo items that have been decontrolled? I see that you have a very flat statement to the effect that once an item has been decontrolled, it is impossible to get it reembargoed.

Mr. SHIELDS. I think that is correct.

REVERSE ENGINEERING POTENTIAL

Mr. BINGHAM. Would you explain the term, "reverse engineering potential," used on page 8?

Mr. SHIELDS. This in essence, is the process by which scientists or technicians would examine an end-item, and in their possession and reconstruct how that item was produced, the technology which produced its various components, and perhaps the techniques of the assembly line on which it was produced. Such an analysis would enable them to start from scratch and produce the end-item with their own capability.

VIOLATIONS IN COCOM

Mr. BINGHAM. I think it is a fair statement that your two colleagues, today, have generally indicated that cheating by other members of COCOM is not a major problem. It seems to me they don't take as serious a view of this as some of the people from industry that I have spoken with.

In the Department of Defense, how do you feel about this matter?

Mr. SHIELDS. We do feel that when cheating occurs it is a very serious matter. And I believe that I can speak for my colleagues here, also, in saying that we do view this with a great deal of seriousness.

The question, of course, is the frequency with which this occurs, and the extent of the damage done. It is very difficult, because of our less than precise information of activities within Communist countries to know when it is occurring. Mr. Wright mentioned, and Mr. Downey also, that we hear this frequently through our own industrial producers who, in their travels, or in the course of their business, have had occasion to note that a diversion or violation of COCOM rules appears to have occurred.

We do the best we can in ascertaining the facts in the case. And in some cases, we do find out that beyond any question, some violations have occurred. In other cases, we are unable to ascertain with certainty, that in fact, a violation has taken place. We do view this as a very serious problem. The question, I think, is what can be done about it. And does it constitute a serious enough problem to seriously undermine the value of COCOM controls.

I believe we can expect violations from any system. I think in COCOM the controls have worked rather well. And perhaps, if one examines the system, the amazing thing is the controls have worked so well over such a long period of time, rather than the fact that violations have occurred.

Mr. BINGHAM. I would like to ask a general question of all of the witnesses, particularly Mr. Wright. In view of the fact that the COCOM procedures were inaugurated before there was any statutory basis for them, as I understand it, is there, from the point of view of the COCOM operation, reason to extend the Export Administration Act, and the statutory bases for these controls?

Mr. WRIGHT. I think, from my standpoint, I would say there is not that necessity to amend the act. I think the provisions in the Battle Act, and in the Export Administration Act provide sufficient guidance to cover the control effort in COCOM.

Mr. BINGHAM. Mr. Biester.

Mr. BIESTER. Thank you, Mr. Chairman.

DEFENSE DEPARTMENT COUNTERPART IN OTHER COCOM COUNTRIES

Mr. Shields, are your counterparts integrated into the process in other COCOM countries, as you are in this one in our country?

Mr. SHIELDS. I am not sure I understand your question—Defense Department representatives?

Mr. BIESTER. Yes.

Mr. SHIELDS. We do indeed furnish Defense Department representatives to the COCOM.

Mr. BIESTER. I didn't state it very well. Is there a special shop which corresponds to that in our Defense Department in COCOM countries? A shop that integrated into the general process of screening applications for export licenses in those countries.

Mr. SHIELDS. I'm not sure of the details through which the various Ministries of Defense in COCOM countries would participate in these activities. But in fact, they do. They do provide inputs very much analogous to our own in these procedures, explaining, for example, the military significance of a particular item. They do that just as we do that in this process in this country.

Mr. BINGHAM. But you don't have contact with them?

Mr. SHIELDS. We do have contact with our counterparts, from time to time. It is not a formal type of contact, in which we all participate on a formal basis. But we do have informal contact with them.

Mr. BINGHAM. But you have no structure, no arrangement, for sharing information with them.

Mr. SHIELDS. We have no structured arrangement for that.

Mr. BIESTER. I have just looked once again at the flow chart. Well, flow may be a strong word. But this particular exhibit, do you have one of these in your Department, also? I am about to leave the Congress, and go into law. When I see something like this, I find it very encouraging. Do you have one like this?

Mr. SHIELDS. We do have some organizational charts which would outline our participation in the various groups that meet in this area. I don't believe that it is quite as detailed. It is more simplified because our responsibilities are not nearly as extensive as the Commerce Department's.

Mr. DOWNEY. Mr. Biester, it may be interesting to see the flow chart of the congressional legislative process. I suspect that it would not be too dissimilar from ours.

Mr. BIESTER. With respect to some Members' bills, that is true. Others move right along.

Mr. BINGHAM. Mr. Whalen.

Mr. WHALEN. Thank you.

THE BALL BEARING GRINDER CASE

Mr. Shields, I would like to pose a question about an area I don't think we have discussed today. And that is, when there are requests for exports made with domestic authorities or requests of COCOM for exceptions, I presume that these requests are based upon the fact that the potential buyer has seen the product and expressed a willingness to purchase it. Is this correct?

Mr. SHIELDS. Yes.

Mr. WHALEN. Russia, and other Communist countries of Eastern Europe, they are aware of the existence of an exception requested product?

Mr. SHIELDS. That certainly is true in general.

Mr. WHALEN. You mentioned the fact that domestically, 74 export requests were denied. I am just kind of curious. Do you have any further information? What happened to the needs for these products in Russia? Were they filled in some other manner? Did Russia perhaps attempt to develop its own technology? Or did Russia go to non-COCOM members? Or perhaps, did a COCOM country ship that item?

Mr. SHIELDS. Let me give you an example, from a celebrated case I might add, that occurred some years ago. It has been in the news recently. And that concerns a machine for making precision ball bearings. For approximately 12 years, we prevented the export from the United States of those machines. And, I think, with good reason.

After that period of time, the capability for producing them was established in a number of countries including Switzerland and Sweden. Thus, the basis for denial in this country no longer existed. Had such a denial continued, it would only have penalized our own producers and exporters. So at that point in time, when the full and uncontrolled capability was established, we allowed those bearing grinding machines to go forward.

So, to answer your question, yes indeed, the Soviet and their Warsaw Pact allies would surely find some other mechanism to make up for their inability to obtain these controlled exports from the United States. In some cases, they can only do this with a great deal of time, a great deal of trouble, and a great deal of expense. And if the delay is substantial, and if in the end, they do indeed succeed, then we still feel that the controls have been worthwhile, and the controls have indeed been effective.

The ultimate prevention of the acquisition by the controlled countries of these embargo items is not really our goal. We measure our success, rather, in terms of delay. And I think when you mention the finding of alternative methods to take care of the needs which existed for the embargo—or the embargoed product, sometimes these needs are filled, but in ways which are far less efficient. And we feel that in that case, again, the controls have been effective.

INTERMEDIATE TECHNOLOGY

Mr. WHALEN. We assume, when a U.S. firm comes to the Government for export approval, or when we go to COCOM, and ask for an exception, that this technology is more advanced than that available in the recipient country and is immediately applicable.

This would mean therefore, that it isn't that far advanced. But succeeding generations of technology would be necessary in the recipient country, before this particular item could be applied.

Mr. SHIELDS. I think that depends, Mr. Whalen, on the type of technology that you are describing. For example, in the case of a turnkey plant, the need may exist, and the agreement by the United States to ship a turnkey plant would establish an immediate production capability. It is by no means certain that the denial of that turnkey plant would not, in fact, pose a very heavy penalty, in terms of time and effort for the controlled country, if it were unable to obtain that. Take the case of wide bodied aircraft. If a turnkey factory to produce wide bodied aircraft were provided by the United States, that technology would arrive fully developed, and would establish an immediate capability for producing wide bodied aircraft.

But in the absence of that U.S. technology, in the absence of that turnkey plant, it might very well be almost impossible for the embargoed country to establish that capability in any reasonable length of time. Certainly, it would require years for that capability to be established.

Mr. BINGHAM. Perhaps you said that before, but I didn't catch it, is that a technology that is specifically controlled?

Mr. SHIELDS. Yes, it is.

Mr. WHALEN. Would you concede that there are some very advanced technology items which, even if they were handed to an Eastern European country, could not be employed because of the absence of the intermediate technology and knowhow?

Mr. SHIELDS. There may be some instances of that type of technology. But certainly passing on high technology, leaping, if you will, over the intermediate technology, would certainly result in a very rapid request for the export of that intermediate technology. We have in fact, heard a number of times, well, "If you are willing to provide this end-item, and you are not willing to provide the things necessary to make it work, then what is the coherence and the rationale of your policy?" I think this is true with regard to a factory such as the Kama River Truck Factory, for instance. The turnkey plant requires the machinery to produce trucks, and then comes the subsequent request for a computer, to make that machinery work on schedule, and in an efficient and an effective say. And it would be rather ridiculous, I think, for those of us involved in the control of these items, to send that plant on without recognizing that a concomitant to that would be the request for the computer. I think we would have been surprised in fact, if that request had not come. In fact, it did. And in anticipating that, we were prepared to see a suitable computer system go, which in fact, it did. It was licensed.

Mr. WHALEN. I have two more questions, Mr. Chairman. First, Dr. Shields, I would like to go back to a point that I raised with Mr. Downey, but which I didn't follow through on.

POLITICAL RESTRICTIONS VERSUS SECURITY RESTRICTIONS

I think the IRS has a procedure where they determine income, and therefore, taxes due, on the basis of one's living habits, one's standard of living. I presume we could apply this internationally, by looking at the exports of Western European countries to the East, and compare them with ours. We might construe from that, that they are either not adhering to the COCOM regulations, or their view of security is somewhat less serious than ours.

I think, however, Mr. Downey pointed out in response to a question raised by Congressman Biester and myself that there are other considerations. I just throw this out to the panel.

Would you say that the principal reason why we are lagging behind in our exports to Eastern Europe is that we have political restrictions rather than security restrictions on our statute books.

Mr. SHIELDS. I think our lag could be attributed to a number of different reasons. Certainly, political considerations would be one. I think that we are aware of some political considerations now, which may act as a restraint, in the export of U.S. goods to the Soviet Union. I think there are other factors involved as well.

I think the United States, until comparatively recent times, has been rather inward looking, as far as its international trade is concerned. The size of the international trade sector in the United States has not been as great in proportion as those of some of our COCOM allies, for example.

And I think the internal size of the American market dictated the attention, first of all, to the market within the United States. I think, also, our geographical situation, where we do not have common borders with the Warsaw Pact countries, nor the proximity to the Soviet Union, also has something to do with that. So I think that it is a combination of factors. And I think a very minute examination of the items which go from our COCOM allies to the Soviet Union and to the Warsaw Pact countries would be required before we would be able to say that in fact, that they are violating COCOM regulations, or that there is something more to this other than national trading relations which have developed.

GAINS FROM TRADE

Mr. WHALEN. Second, could you address yourself to a point raised by one of our witnesses last week? He referred to the principle of "gains from trade", or the releasing of resources, when we ship anything, especially on credit, to another nation.

I received communications from constituents who argue that by our sending wheat to Russia we are releasing resources there that can be employed in developing and expanding their own military program.

Mr. SHIELDS. I think it is true, without any question, that there are gains to be recognized from trade. And of course, that is why

trade occurs. It takes two partners, and each partner, the exporter and the importer both feel that they have something to gain from that transaction. I think that is logical, and certainly it is the case.

I think it is also true that any time we ship anything, presumably we are freeing resources which would have had to have been devoted to that particular item, wheat, if you will, and free these resources so that they can be applied elsewhere, perhaps in military programs. That is frequently the inference. I have heard other people explain that sometimes the Sears-Roebuck catalog demonstration principle also works, in that we are diverting foreign exchange from perhaps more essential items which might have been spent on military goods, and instead, are going to be spent on some of our luxury goods. So that is another way of looking at this case. But I think more realistically we have to examine our aims, our goals, in allowing trade to take place. Certainly, peaceful trade in nonstrategic items is something which we all desire. The communication between the countries involved is increased. The understanding of the way we do business. Certainly, I have heard some of the Soviets speak very highly of the efficiency of our business community. And of our free enterprise system. Although perhaps not described in those terms.

But there are gains to be achieved in diplomatic ends, in cultural ends, in terms of trade. I think we have to weigh against those gains the possibility that we may be freeing resources to do something else. I think that if we were to take that view to its logical conclusion, we would totally embargo trade with the Warsaw Pact, and the Soviet Union, particularly, and no further trade of any kind would take place. But I don't think any of us would like to see that kind of world.

I think if we concentrate on those items that have a strategic military purpose, then, I think our goals are far better met.

Mr. WHALEN. Thank you, Mr. Chairman.

SOVIET MILITARY CAPABILITY

Mr. BINGHAM. Thank you, Dr. Shields. On the last page of your statement, you say, "in terms of our national security, the result is that the Soviets have less accurate, less reliable, more vulnerable and more costly weapons system." That is not always the kind of statement that we hear from the Department of Defense.

I wonder if you could, in any way, quantify, or give us an indication of how important this is in the total picture, what you are talking about.

Mr. SHIELDS. Mr. Chairman, as I pointed out in my statement, our security trade controls have retarded the acquisition by the Soviets of production capabilities in a number of militarily significant technologies. The result is that, by comparison with what they might have achieved had our export control sytem been ineffective, the Soviets today have inferior inertial instrumentation, precision guided weapons, satellite-borne sensor technology, high bypass-ratio turbofans, air-to-air missiles, computers, integrated circuit fabrication, and numerically controlled machine tools. The cumulative

impact of Soviet inferiority in these areas is that they have less accurate, less reliable, more vulnerable and more costly weapons systems than would otherwise be the case. I for one, have no question about the magnitude of the Soviet effort in the defense area. One of my other tasks in my position is to examine the Soviet defense budgets, and the types of things which the Soviets are doing. But I have no doubt about the great magnitude of their efforts, the direction of their efforts, and trends of the past years. This is very disturbing to me. I can only say I am thankful our controls have worked as a drag on that Soviet effort. This would say nothing about the absolute magnitude with which we are vitally concerned. Even with this system, the Soviet effort is certainly a great one. There is no question about it. And I think that in no way is this statement inconsistent with other things you have heard from the Defense Department regarding the Soviet defense effort.

Mr. BINGHAM. In using these terms, you are using them in relation to what might otherwise have been the case. Not in relation to what the United States has, I take it.

Mr. SHIELDS. That is correct. These are only terms comparing the Soviet effort, or the Soviet potential, in the absence of these efforts, compared with what in fact has occurred.

TRADE FAIRS AND DISPLAY OF TECHNOLOGY

Mr. BINGHAM. One final question, I understand that there is considerable latitude in terms of trade fairs and the display of technologies that might not be exportable under these procedures. Is that correct? And if so, is that some kind of an invitation to some form of evasion?

Mr. DOWNEY. As a matter of policy, we do not permit an American exporter to exhibit at a trade fair, a commodity which we have reason to believe we would not license for sale. This reduces the risk of a situation occurring where a product on display, presumably for sale, or for demonstration at a trade fair, whets the appetite of a prospective purchaser. That is the policy which we have been operating under. Not all of our COCOM allies have the same policy. Some believe that for one reason or another, it is permissible and desirable to permit products to be displayed, but not sold, even if those products are not ones which we would otherwise agree to sell. In other words, this is the Sears-Roebuck approach. If a company wants to show that it excels in a certain area, it would show its most advanced commodity, understanding that it would not be permitted to sell it. But it would sell only lesser commodities.

Mr. BINGHAM. Do you consider that a problem in terms of the operations of COCOM?

Mr. DOWNEY. The most significant problem is one of perception on the part of the American exporter. If the exporter is unaware of the differing viewpoints within COCOM on this subject, and at a given trade fair, he sees a commodity which one of his competitors has on display, he might not appreciate that the commodity is not for sale, but merely on display.

Mr. BINGHAM. To what extent does the mere display of the item reveal the technology?

Mr. DOWNEY. To the extent that the display of any commodity would reveal strategic technology it must be licensed. Therefore, there are no commodities on display, if it is felt that there would be a transfer of technology merely by the display of the item.

Mr. BINGHAM. That would be true of COCOM? Other COCOM countries?

Mr. DOWNEY. Yes.

For the most part, these are products which are already in the display catalogs of the companies involved.

Mr. BINGHAM. Gentlemen, thank you very much.

Mr. BIESTER. Mr. Chairman, I am reminded by you earlier in the contest for the most complex flow chart, apart from the example you offer, Mr. Downey, of just getting a bill through at all, you might review the new budget procedures Congress now has. Senator Muskie did have an exhibit in the Record recently. It ought to prevent some dollars from getting out the other end, but it undoubtedly won't.

Mr. DOWNEY. We accept that challenge. We will try to produce some more involved flow chart. I understand.

Mr. BINGHAM. Thank you very much, gentlemen. You have been very patient. I apologize for the heat. It is the fault of our friends from the media.

[Whereupon, at 4:25 p.m., the subcommittee adjourned, subject to the call of the Chair.]

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EXPORT LICENSING OF ADVANCED TECHNOLOGY: A REVIEW

WEDNESDAY, MARCH 24, 1976

HOUSE OF REPRESENTATIVES,
COMMITTEE ON INTERNATIONAL RELATIONS,
SUBCOMMITTEE ON INTERNATIONAL TRADE AND COMMERCE,
Washinngton, D.C.

The subcommittee met at 2:15 p.m. in room 2255, Rayburn House Office Building, Hon. Jonathon B. Bingham (chairman of the subcommittee) presiding.

Mr. BINGHAM. Other members will be returning shortly, so the subcommittee will be in order.

The Subcommittee on International Trade and Commerce today continues its review of the licensing of advanced technology for export under the Battle Act, the Export Administration Act, and related statutes.

Today's witnesses represent private industries and firms engaged in the export of advanced technology. The subcommittee welcomes you. We appreciate your willingness to share with us your experiences and views on this important area of our foreign economic policy.

Since the list of witnesses and the written statements submitted for the record are quite lengthy, I would urge the witnesses to summarize their statements and to adhere strictly to a time limit of 10 minutes per witness. If necessary, the Chair will tap the gavel lightly when 10 minutes have elapsed, after which the witnesses will please terminate their remarks as quickly as possible.

I understand that Mr. Alan Spurney, representing the Joint High-Technology Industries' Group on Export Administration, and Mr. Thomas A. Christiansen, representing the Western Electronics Manufacturers Association, both have other commitments which will require them to leave shortly, so the Chair is glad to call Mr. Spurney and Mr. Christiansen as the first witnesses.

The subcommittee will hear next from Mr. James A. Gray, representing the National Machine Tool Builders Association; Mr. Edward W. Stimpson, General Aviation Manufacturers Association; and Mr. Peter F. McCloskey, Computer and Business Equipment Manufacturers Association.

Finally, the subcommittee will hear from Mr. Frederick Van Veen, representing Teradyne, Inc., of Boston; and Mr. Albert Maria, representing Wang Laboratories of Tewksbury, Mass. I

understand that Mr. Maria's statement also reflects the views of the International Center of New England, Inc.

Gentlemen, again I want to thank you for being with us. Will you proceed, bearing in mind our pressure of time. Mr. Spurney?

STATEMENT OF ALAN B. SPURNEY, JOINT HIGH-TECHNOLOGY INDUSTRIES' GROUP ON EXPORT ADMINISTRATION

Presently Staff Director, International Business Council of EIA, Mr. Spurney joined the Association in August, 1973, as Assistant Director of the International Business Council. From 1961 to 1967, he headed his own firm in Switzerland specializing in licensing and acquisitions. Following that, he served as Vice President for Business Development with Adela Investment Company and its subsidiary, Adelatec, in Lima, Peru, from 1968 to 1972. Mr. Spurney is a graduate of Yale University in Industrial Engineering, and has served as a submarine communications officer in the U.S. Navy.

Mr. Spurney lives with his wife, Nicole, and their two children in Kensington, Maryland.

Mr. SPURNEY. Congressman Bingham and distinguished members of the subcommittee, I am Alan Spurney, director of the International Business Council of the Electronic Industries Association.

I am appearing here today as the selected spokesman for a voluntary, ad hoc group formed with the identifying title of the "Joint High-Technology Industries' Group on Export Administration."

Subscribing to the views expressed here are the Aerospace Industries Association, the General Aviation Manufacturers Association, the National Machine Tool Builders Association, and ourselves, the Electronic Industries Association.

This testimony is not intended to supplant the views of any other high-technology industry trade organization opting to present its individual views on behalf of its members.

At the outset, we are aware that the Government has appeared before you in the past few days. We have read some of the testimony. We do not intend to indulge in the game of numbers.

Our industry people deal with the various Government license authorities on a daily basis. They work at establishing a mutually satisfactory working rapport. But, in all candor, when the Government tells you, via statistics, that all is well, that is only the tip of the iceberg that is visible. We believe this review is both necessary and timely, and the private sector appreciates being heard.

Realize, if you will, that the views to follow represent the consensus of a group whose annual contribution to the gross national product runs into $70 billion, with an impressive role in world trade of about $15 billion in combined yearly exports.

Mr. Chairman, these figures are not contrived nor quoted to this body in idle terms. If anything, they should be used for measuring the relative impact of the Nation's high-technology industries on the U.S. balance of payments.

We welcome this opportunity to voice our particular and valid concerns about several aspects of the administration of export controls under the present act as a current mitigating influence on the foreign trade efforts of a range of U.S. high-technology industries.

It is ironic that in this, our Bicentennial year, the question of controlling trade to certain countries becomes a focal point the same as

it was 200 years ago when our Founding Fathers were debating resumption of trade with England.

We hope that our legislators will heed our inputs in order that the country may grow and prosper over the next 200 years as it has done in the past 200.

ADMINISTRATION OF EXPORT CONTROLS IS CUMBERSOME

Our industry fully supports export controls as necessary to the national security of the United States and also as an extension of U.S. foreign policy. However, administration of these controls has become so cumbersome that it impedes commercial activity and prevents U.S. business and industry from performing in a timely and profitable manner.

Please observe our emphasis of commercial and industrial. We are not today speaking of munitions control or foreign military assistance but rather of licensing the exports of commercial and industrial equipment and component parts to controlled destinations.

We urge the Congress to reaffirm the policy, stated in the present Export Administration Act, giving vigorous and practical support to the commercial involvement of U.S. private enterprise in today's interdependent world.

Further, we recommend that existing law be strengthened so that procedures of involved Federal agencies will be simplified, expedited, and made to yield results more equitable to private enterprise.

In the changing climate of international and domestic economic conditions, a need surfaces for a new Government commitment, a commitment in terms of an ongoing policy assessment of the strategic impact of U.S. export control judgments.

Judgments have not kept pace with the U.S. high-technology industries' potential to penetrate international markets, through product sale and technology transfer. This is particularly true of our attempts to secure business from the U.S.S.R. and other nonmarket countries.

Because of poorly defined and partially hidden Government policy directives, ours and other leading-edge technology industries are hampered in our efforts to maintain profit margins.

When dealing in this arena, sales forecasting, a basic essential to any business, cannot be performed with the slightest degree of accuracy because of the chance of license denial. Price and delivery, two fundamentals on which many sales hinge, cannot be quoted with accuracy.

By the time U.S. export controls are applied, determining whether or not a license can be issued, production costs have risen, and we are behind on delivery.

All of this, coupled with the fact that we have made large investments prior to applying for the licenses, places us at an extreme disadvantage in world trade.

U.S. LICENSING PROCESS HAS BECOME A NONTARIFF BARRIER

Gentlemen, one of the complaints most often voiced by our members is the length of time required to obtain a license to ship to

controlled destinations those items classified as "A" or strategic on the commodity control list. The system has become so unwieldy and cumbersome that it is now looked upon as a nontariff barrier imposed by our own Government.

The U.S. licensing system is viewed by our foreign competitors as one of their selling advantages. Even orders as small as $1,000 to $5,000 may take from 6 to 8 months before approval or denial is obtained.

Four to 5 months is not uncommon for obtaining a license for a previously approved commodity, to a previously approved end user, for a previously approved end-use. We will not even discuss the cases that have taken longer, as even the times quoted here have placed us at a seriously competitive disadvantage.

We are aware of the position of the Department of Commerce that the great bulk, some 85 percent, we are told, of all license applications are processed in a matter of a few days. We apparently represent the 15 percent where such speed is not incident to handling, despite the fact that the very nature of our products—electronic systems, equipment and components, machine tools, and aerospace/aviation equipment—is such that they probably represent, dollarwise, a substantial majority of United States industrial product exports.

Let us remember that U.S. companies have been encouraged to sell to controlled destinations not only through the same legislation that controls these sales, but also by a very active Federal Government sales promotion program. It should also be emphasized that our companies are competing with others in the free world for this business.

EXPORT LICENSE APPLICATION REQUIRES SIZABLE INVESTMENT

In order to apply for an export license for an "A" commodity to a controlled destination, a company must have a firm order, which means that it must spend a considerable amount of time and money in advance to obtain this order. This amount, by the way, is much greater than marketing costs that would be spent obtaining comparable orders in the free world.

It is ridiculous to think that any company is content to sit quietly by while an application winds its way through a bureaucratic maze that is unparalleled in these modern times, particularly with the amount of money that has already been invested.

Compounding this situation is the fact that our allies, which are also our industries' greatest competitors, can obtain processed licenses for identical items in a maximum of 6 weeks, including any international controls they may choose to impose. We have just recently verified these times through various foreign governments.

What can be done about this situation? We felt that a partial answer was at hand when, at the last review of the Export Administration Act in 1974, you put in a 90-day limit on processing time.

However, a loophole was found, and letters notifying an applicant of needed additional time have become a common sight in our mem-

bers' mail. We, therefore, urge Congress to take a firm stand in this area.

PROPOSED NEW TIME LIMIT

We recommend that a period of 60 days be allowed to approve or deny a license, and, if additional time is needed, the time be limited to one 60-day extension. If a decision is not made at the end of a maximum of 120 days, the application will receive an automatic approval.

This time frame is realistic provided that you, the Congress, mandate that the entire export control operation as it pertains to all departments and agencies be updated from its present manual intensive form to a modern, practical, well-managed system.

We urge you to spell out the intent of the law, as well as its parameters, in terms unmistakable at all levels of Government. To this end, we recommend that the Congress provide the Secretary of Commerce with authority to develop, implement, and enforce regulations governing all nonagricultural exports not appearing on the munitions control list. The authority should be extended to include all departments and agencies involved in the processing of export licenses either actively or in an advisory capacity.

In view of the time——

Mr. BINGHAM. I was going to ask. Mr. Spurney, since you represent such a large number of companies, I wonder if any of the other witnesses would like to yield you time, as we sometimes do in the House.

If not, I am afraid we will have to say that your time has expired, and your whole statement will appear in the record as presented.[1] It is obviously an important statement, but, if each of the gentlemen wants a full 10 minutes, I am afraid we will have to stick to that schedule. I thank you, sir.

Mr. Christiansen.

STATEMENT OF THOMAS A. CHRISTIANSEN, WESTERN ELECTRONICS MANUFACTURERS ASSOCIATION (WEMA)

Thomas A. Christiansen, born December 2, 1922 majored in physics and graduated from Carleton College, Northfield, Minnesota in 1944 with a Bachelor of Arts degree. In 1954 he received a Master's degree in Business Administration from Harvard University.

Prior to joining the Hewlett-Packard Company, Mr. Christiansen was employed by the Illinois Bell Telephone Company as a Transmission Engineer.

He also served as a First Lieutenant in the U.S. Army Signal Corps in Europe during World War II and in this country during the Korean Emergency.

Mr. Christiansen has been with the Hewlett-Packard Company since 1954. During this time he has held a variety of positions in sales, manufacturing and development and, since 1959, in the international area. He has served as Export Sales Manager, Manager of Hewlett-Packard's Western Hemisphere Trade Corporation and Manager of International Planning. He currently holds the position of Manager of International Trade Relations.

Mr. Christiansen is presently serving as Chairman of the San Francisco District Export Council and Chairman of the Instrumentation Industry Sector Advisory Committee established under the Trade Reform Act of 1974 to provide advice on tariff and non-tariff matters to the U.S. GATT Negotiators. He

[1] Mr. Spurney's entire prepared statement appears on p. 126.

is also a member of the Computer Industry Sector Advisory Committee. From 1974 to 1976 he served as Chairman of the U.S. Department of Commerce's East-West Trade Advisory Committee and is currently an active member of that committee. From 1971 to 1974 he served as Chairman and presently serves as Vice Chairman of the International Committee of WEMA—a trade organization of some 740 high technology companies located mainly in the Western United States.

He is also active in a number of other professional organizations including the International Committee of the U.S. Chamber of Commerce, the joint government-business Western International Trade Group, the World Trade Committee of the California Chamber of Commerce, the California Council for International Trade, the World Trade Committee of the San Francisco Chamber of Commerce, the World Trade Council of the West, the San Francisco Export Manager's Association and the Santa Clara Valley World Trade Club.

Mr. Christiansen is President of the Palo Alto Lions Club and has been a director and an officer of the local Junior Achievement Program for a number of years. He is also active in other civic affairs.

Mr. CHRISTIANSEN. Mr. Chairman, thank you. I am Tom Christiansen, manager of international trade relations for the Hewlett-Packard Co. We are a major manufacturer of electronic products.

I am here to represent WEMA. WEMA is a trade association of over 730 electronics high-technology companies located mainly in the western United States.

Most of WEMA's member firms are small companies; a number are large, but most are small. As a result, some of my comments will pertain to the effect of export control legislation and administration on small companies.

REPORT OF DEFENSE SCIENCE BOARD TASK FORCE

I would like to discuss five areas. The first of these is technology transfer. The Defense Science Board Task Force on Export of U.S. Technology has just issued its report. I received a copy only yesterday, so I am not prepared to discuss it in any depth. I would however, like to respond in writing giving WEMA's views on the report's conclusions and recommendations.[1]

WEMA believes that the Task Force, in putting its finger on nonembodied technology—technology in the form of R & D, engineering, blueprints and things like that, has succeeded in putting the emphasis in the right spot.

The task force shows less concern over embodied technology, technology in products. I think we would agree with this analysis 100 percent. In our experience, technology contained in products is virtually unextractable. We agree that a simplified system of evaluation based upon the product characteristics and not so much upon the end use or the end user, would be much more desirable than the present lengthy case-by-case type of analysis.

We were disturbed a little at one recommendation in the task force's report. This recommendation states that, since the reexport controls the United States exercises over other countries are not very effective, technology transferred to any non-COCOM Western Country should not be any greater than that which the United States would be willing to transfer to the Soviet Union directly. I cannot buy that.

[1] WEMA's views on the report of the Defense Science Board Task Force appear on p. 124.

I think such a sweeping change would be inappropriate. It would mean, for example, that a U.S. firm with a plant in Australia wouldn't be able to transfer any key technology to it. I don't think that would be at all appropriate.

As I said earlier, WEMA would like to comment in writing on the task force's recommendations.

WEMA's major concern with the question of technology transfer is that, any internal system developed in this country to really stop the flow of technology abroad, would have to be so extensive and so intensive that it might well inhibit the future development of technology in this country and thus damage our present edge. In our view, this would be disastrous.

Two years ago, the Congress considered Senate bill 3282. One of the provisions of this bill was a reporting requirement by which the Department of Commerce would receive 15 days after the signing of a technological agreement with a Communist country a description of the agreement for their review.

WEMA had no objection to the measure at the time and does not have any now. This measure might be a useful device to consider writing into the legislation extending the Export Administration Act of 1969. Fifteen days is a little short. I think it should be made somewhat longer, but the basic idea seems to be a good one.

TECHNICAL ADVISORY COMMITTEES

The technical advisory committees are another subject of great interest. A number of WEMA's member companies have people serving on these committees. We believe the committees serve a useful purpose, and should be continued.

One of the major problems of these committees seems to be a lack of knowledge of whether or not their recommendations and their advice are being utilized. Let me put it this way: The committee members presently receive virtually nothing in the way of feedback.

Committee members that I have talked with for example, feel terribly hampered because they put in considerable time and effort developing suggestions and recommendations, but get no feedback. This is very frustrating for them, and WEMA believes a two-way flow of information should be established. This could be done rather simply by adding a paragraph to the Export Administration Act to this effect:

> To facilitate the work of the technical advisory committees, the Secretary of Commerce, in conjunction with other departments and agencies participating in the administration of this act, shall disclose to each such committee, adequate information, consistent with national security, pertaining to the reasons why their recommendations were or were not accepted.

Another problem expressed by members of these committees is the shortness of their terms. The term is 2 years, a length of time with which you gentlemen are very familiar with. The effect is that the industry members go to two or three meetings, meet the other members, find out what they are supposed to do, and then their term expires before they have accomplished a great deal.

WEMA's suggestion is to extend the term for industry members to 3 or possibly 4 years.

LICENSING DELAYS

Licensing delays are another problem. You have heard a lot about these delays. Two years ago, as Al Spurney has pointed out, a 90-day requirement was introduced.

We thought that this would help a great deal, but if you will look at the chart I have included on page 17 of my prepared statement you will see that the situation has gotten worse. The dashed line on this chart reproduces information on Hewlett-Packard's applications which I submitted 2 years ago, and this largely supported the 90-day requirement. At that time about two-thirds of the applications were handled in 90 days. The solid line represents my company's experience since that time, and you see things have deteriorated. Instead of 90 days, something like 4½ months is now required to process two-thirds of the applications.

The Department of Commerce has been very good about sending out 90-day notices. We get lots of them. On page 19, you will see that the 90-day notices really fall into four categories; the texts have been lifted verbatim.

In the 12 months from the 1st of October, 1974, to the end of September 1975, we submitted 294 export license applications for the U.S.S.R. and socialist countries of Eastern Europe. In the year 3 months removed—that is, calender 1975—we received 101 90-day letters. These figures correspond very closely to those mentioned by Secretary Downey.

Secretary Downey has mentioned to you, I believe, that a great shake-up is going on in the office of Export Administration. They are getting more people. They are putting in overtime. They are trying to cut down the backlog. That is wonderful. We are all in favor. I just hope they keep it up.

I think one of the things that would help keep the pressure on would be for the Congress to be periodically posted on the progress being made to reduce licensing delays. Therefore, we suggest that every other semiannual report include a summary of those actions which have been taken or which are contemplated to meet or exceed the objective of approving or disapproving export license applications within 90 days after submission.

I think it would be useful for you gentlemen to have this information, and I think it would help the Commerce Department in their efforts to make sure that license applications are handled quickly.

TEMPORARY DISPLAY OR DEMONSTRATION OF EQUIPMENT

The next to the last item I would like to mention is the particular difficulty we have in obtaining export licenses to temporarily display or demonstrate equipment in the Soviet Union and East European Countries.

This is because U.S. practices are quite different from those employed by most other countries. Two years ago, the Secretary of Commerce was asked to report on various retrictive licensing procedures that the United States was using. He issued a report and subsequently decided that the licensing arrangements in regard to display or demonstration equipment couldn't be changed.

WEMA thinks that it is time to ask the Secretary to reexamine the situation and issue another report not only in regard to this particular practice, but other unusual practices as well.

LICENSING CLASSIFICATIONS

The last item I want to touch on is the difficulties in determining licensing classifications. This is a particular problem for small firms. Many small high-technology companies do not export for their own account. Instead, they contract with firms who are shippers to do this for them.

These small firms, however, are constantly plagued with the need to determine whether their products are licensable. This is difficult to do since the regulations are written for the exporter. Control listings, for example, are based on the schedule B, the export statistical system of the Census Bureau. To find your way into the control list you have to know about the schedule B and this means that you have to be some sort of an exporter in the first place.

Our suggestion is to have the Commerce Department publish what is really a listing by function—not by commodity, but by function—of the controls. This could be a fairly short list, not more than 12 pages or so, we would think.

Such a brief list, of course, would not be complete and, if anything, would err on the side of conservatism. However, it would give a small company a chance to see where its products fell. If they fell into a licensable category, the company could ask somebody—a freight forwarder, a larger exporter, the local field office of the Commerce Department, etc.—for help.

Mr. Chairman, this has been a very rough runthrough of my prepared remarks.

[Mr. Christiansen's prepared statement and letter follow:]

PREPARED STATEMENT OF THOMAS A. CHRISTIANSEN, WESTERN ELECTRONICS MANUFACTURERS ASSOCIATION (WEMA)

Mr. Chairman and members of the subcommittee. I am Thomas A. Christiansen, Manager of International Trade Relations of the Hewlett-Packard Company, Palo Alto, California. My company is a major designer and manufacturer of test instrumentation used in the fields of electronics, medicine and chemistry for scientific research, engineering, production and maintenance. The company also designs and manufactures sophisticated calculators and engineering-oriented computers and selected peripheral equipment.

Hewlett-Packard is a founding member of WEMA, and it is on behalf of WEMA's member firms that I am appearing here today to testify on the export licensing of advanced technology. My testimony will concentrate on the national security provisions of the Export Administration Act of 1969 as amended and extended by the Equal Export Opportunity Act of 1972 and the Export Administration Amendments of 1974. In the course of my testimony I will describe the current administration of the Act as experienced by WEMA member companies and suggest several legislative changes which would improve the ability of U.S. firms to compete against their West European and Japanese counterparts in the expanding markets of the U.S.S.R., the Socialist countries of Eastern Europe and the People's Republic of China.

WEMA is a trade association of over 730 companies, located primarily in the Western United States. WEMA member companies share a common interest in that they are all engaged in sophisticated electronics and information technology. A preponderance of WEMA member companies are small-to-medium in size, designing and manufacturing sophisticated components and equipment for a number of end markets. Some of the types of products WEMA member companies manufacture are: semiconductor devices, such as transisters, diodes,

and integrated circuits; test equipment such as oscilloscopes, signal generators, counters and voltmeters; computers and computer peripheral equipment; calculators; telecommunications equipment, such as radio transmitters and receivers; and finally, components such as tubes, resistors, capacitors and similar items.

The sale of high-technology products abroad, such as those manufactured by WEMA member companies, has been one of the prime areas in which the U.S. has continued to hold its own in the world marketplace. According to U.S. Department of Commerce statistics, the favorable balance of technology intensive exports over imports ranged from $7.5 billion to over $10 billion between 1957 and 1973. In 1974, the last year for which Department of Commerce statistics are available, the favorable balance of trade in these product areas was $10.7 billion.

Despite strong competition abroad, most WEMA companies have been successful in maintaining a technological lead over their foreign competitors and have performed well in the international marketplace. In a recent survey, 189 responding WEMA companies—whose sales volume amounted to slightly over $4 billion in 1973 or approximately 54% of the total sales of our entire membership—indicated that 27% of their 1973 sales came from the export of U.S. manufactured products. This is a substantial increase over several years ago when a majority of the respondents to a similar survey indicated that their international sales represented between 5% and 15% of their total volume.

Some WEMA member companies are much more deeply involved in international trade. For example, in 1975 half of the $1 billion in orders received by my company, Hewlett-Packard, came from outside the United States. U.S. exports represented over 70% of our international volume. Only a relatively small amount of Hewlett-Packard's products, however, have been sold in the Communist countries—some $14 million in 1975, for example. This is not too surprising since the People's Republic of China is a relatively new area, and up to the end of 1967 my company did very little to sell its products in the USSR and the Socialist countries of Eastern Europe.

Other WEMA member companies also experience relatively low sales volumes in these areas. This is not due to any particular lack of credit; the products of a large number of WEMA companies enjoy a good reputation for performance, quality and price and since the value of a typical transaction is relatively small, hard currency can usually be found. Instead the low volumes seem to be due to other factors such as the various export controls which limit the products that can be sold, and to less technically sophisticated and, hence, smaller sized markets in the U.S.S.R., the Socialist countries of Eastern Europe and the People's Republic of China.

Low volumes are also due to: (1) the historic close trading relationship between Western and Eastern Europe, where the former has been a major supplier of more highly sophisticated manufactured goods and the latter has been a traditional source of raw materials, agricultural products, chemicals and certain usually simpler manufactures, (2) the rigidities of the Communist state trading systems and the attendant difficulties this poses for U.S. businessmen and, (3) the shortage of hard currency and the scarcity of attractive products, marketing skills and equal tariff treatment needed by the Communist countries to compete in the U.S. market, an effort which would earn funds which could be used to purchase U.S. goods.

Despite these and other difficulties, Communist markets are of increasing importance to U.S. high-technology firms. Some figures may be helpful. In 1970, only $350 million, less than 1% of the $43 billion in U.S. exports, went to the USSR and Eastern Europe. By 1975 this amount had grown nearly 8 times to $2.75 billion. Although agricultural exports accounted for about two-thirds of this figure, industrial commodities have assumed considerable prominence rising seven-fold in the past ten years to nearly $1 billion in 1975. Technology intensive products represent about half of this $1 billion figure, the market for such U.S. products in the Soviet Union and Eastern Europe having quadrupled from 1972 to $430 million in 1974.

The provisions of the Export Administration Act pose particular problems to every U.S. firm selling high-technology products to the Communist countries. The Act is a living document and, as such, fully reflects the ambivalence with which the United States, and all capitalist countries for that matter, view the Communist countries and their ideologies. As the mood of the United States

has changed from time to time, these changes in attitude have been reflected in various amendments to the Act. For example, the shift from the deep hostility of the early 1950's to a more moderate position at present which recognizes the importance of reaching accommodations short of armed conflict. Improved communications forms an important part of this process and the Congress, in modifying the Act in recent years to permit an increased flow of non-strategic transactions, has recognized that commercial trade in peaceful goods can do much to stimulate communications.

Before reviewing the way in which the current provisions of the Export Administration Act of 1969 affect high-technology U.S. firms it is useful to review some of the liberalizing changes which have occurred in recent years.

THE EXPORT ADMINISTRATION ACT OF 1969

The Congress, in drafting and passing the Export Administration Act of 1969, made extensive changes in the more restrictive economic and potential military usage provisions of the preceding Export Control Act of 1949. The Congress declared "It is the policy of the United States * * * to encourage trade with all countries with which we have diplomatic or trading relations except those countries with which such trade has been determined by the President to be against the national interest * * *". This forthright change in emphasis encouraged many previously reluctant U.S. exporters to begin the arduous and expensive task of actively selling in the USSR and the Socialist countries of Eastern Europe. The clearly expressed intent of Congress to promote trade in peaceful goods also encouraged the Administration to reduce a great number of unilateral U.S. export controls, to narrow the licensing differentials which has existed between the various Communist countries, and to modify some administrative practices which had been weighted towards denial.

THE EQUAL EXPORT OPPORTUNITY ACT OF 1972

In the Spring of 1972 the Congress conducted oversight hearings on the Export Administration Act of 1969 and subsequently prepared further liberalizing and extending legislation. These provisions, signed into law as "The Equal Export Opportunity Act of 1972", emphasized the concern of the Congress over the adverse effect on the U.S. balance of payments exerted by excessive controls, particularly those which are greater than those imposed by other friendly western countries.

To remedy this situation, the Secretary of Commerce was directed to remove, so far as the security of the United States permitted, unilateral U.S. controls over commodities available" * * * without restriction from sources outside the United States in significant quantities and comparable in quality to those produced in the United States * * *". After a relatively slow start, almost all of the remaining small number of unilateral controls over high-technology electronic products were removed. By early 1973 most WEMA member companies were operating under virtually the same controls as their West European and Japanese competitors.

The equal Export Opportunity Act of 1972 also declared it was the policy of the United States to subject all controls to Governmental review in consultation with qualified experts from private industry. To effect this review, the Secretary of Commerce was directed "upon written request by representatives of a substantial segment of any industry which produces * * * (commodities) * * * subject to export controls * * * (to) appoint * * * Technical Advisory Committee(s)* * * (consisting) of representatives of U.S. industry and Government". These Technical Advisory Committees were to be "consulted with respect to questions involving technical matters, worldwide availability and actual utilization of production and technology, and licensing procedures which may affect the level of (unilateral U.S. and COCOM) export controls * * *".

As a result of this legislation, the Secretary of Commerce established seven Technical Advisory Committees: Semiconductors; Semiconductor Manufacturing and Test Equipment; Numerically Controlled Machine Tools; Telecommunications Equipment; Computer Systems; Computer Peripherals; Components and Related Test Equipment; and Electronic Instrumentation. These committees have met a number of times during the past three years.

The Equal Export Opportunity Act of 1972 also directed the Secretary of Commerce to submit a special report to the President and the Congress which would, among other things, list "* * * any procedures applicable to export

licensing in the United States which may be or are claimed to be more burdensome than similar procedures utilized in nations with which the United States has defense treaty commitments, and the reasons for retaining such procedures in their present form." Prominent among the burdensome procedures listed in the report, dated May 29, 1973, was the U.S. policy of not permitting temporary exports of U.S. strategic goods for display and demonstration in Communist countries unless a good likelihood exists that permanent sale would be approved. The report stated that no conclusion had been reached on this practice and indicated that it, along with a number of other burdensome procedures was subject to continuing discussion between the Department of Commerce and its advisor agencies. The Export Administration Report covering the second quarter of 1974 issued a year later stated (on page 13) that "Recent interagency re-review * * * led to a conclusion that * * * there are unacceptable security risks in altering present practice(s)". Accordingly the decision to retain the practice of not permitting such display/demonstration exportation was reaffirmed.

EXPORT ADMINISTRATION AMENDMENTS OF 1974

In the Spring of 1974 the Congress again conducted oversight hearings on the subject of export controls and subsequently proposed amending and extending legislation which was signed into law as "The Export Administration Amendments of 1974". Included among the various amendments were several relating to strategic controls and hence of major significance to U.S. high technology exporters. The intent of these amendments was to:

(1) Strengthen the role of the Joint Business/Government Technical Advisory Committees which review and suggest changes to the export controls. This was to be accomplished by requiring active membership on each Committee of representatives of the Departments of Commerce, Defense, State and other appropriate agencies. In addition, consistent with national security, each Technical Advisory Committee was to be supplied with adequate information concerning the reasons for the export controls in effect or contemplated.

(2) Permit the Secretary of Defense to determine, in consultation with the other participants in the interagency review process, which Communist area export license applications he wished to examine. This was accomplished by adding superseding language to the Export Administration Act of 1969 which removed the Congressional override provisions of the Military Appropriations Authorization Act of 1974 and permitted the Secretary of Defense to resume his former practice of delegating to the Secretary of Commerce the review and subsequent approval/denial of certain low-risk types or categories of license applications.

(3) Reduce the disadvantage U.S. exporters face vis-a-vis their foreign competitors by speeding up the slow-moving U.S. licensing process. This was to be accomplished by requiring the processing of export license applications relating to the national security of the United States within 90 days of submission. If the licensing agencies decided that additional time was required, the applicant was to be informed of the circumstances causing delay and given an estimate of when a decision would be reached.

Let me turn now to a description of some of the problems that WEMA member companies face under the provisions of the Export Administration Act as they conduct their business activities in the USSR, the Socialist countries of Eastern Europe and the People's Republic of China. In the course of doing so I will make some suggestions, legislative and otherwise, how WEMA believes these problems might be alleviated

TECHNOLOGY TRANSFER

Two recent studies, the GAO report on the Government's role in East-West Trade and the report of the Defense Science Board have expressed concern over the looseness and the unenforceability of the existing controls over the transfer of technology. The Defense Science Board sees the major area of concern to be the transfer of design—R & D and engineering—and production know-how. Less concern is expressed over the technology contained in specific products since much of this technology is considered unextractable. WEMA agrees with this analysis and supports the recommendation of the Defense Science Board for the development of a simplified system of evaluation which would speed the processing of license applications for specific products. WEMA

also supports the suggestion that these procedures be based more upon the intrinsic utility of the products rather than commercial specifications and intended end use. WEMA welcomes any suggestions to streamline the licensing process and reduce the effort involved in preparing license applications, including the present requirements for detailed supporting documentation which is often difficult to obtain and frequently of doubtful value.

On the other hand, WEMA views with concern the conclusion which seems to be reached in these and other reports that more stringent controls should be adopted on the transfer of non-embodied technology—R & D, engineering, production know-how, etc. To a considerable degree the technological edge enjoyed by the United States is a direct result of a free and open society, a strong educational system, and a continuous high level of private and governmental support for R & D. In fact, technology is a commodity which improves with use and which must be replenished continually. WEMA's concern is that if the United States tries to stop all leaks to potential enemies the elaborate and comprehensive system of *internal* controls required would endanger the vigor of this interdependent infrastructure and inadvertently dull our technological edge. In stopping leaks we may find, too late, that we have pinched off valuable sparks of creativity.

In general WEMA believes that the innate good sense of U.S. businessmen to retain their most important, latest technology, and the existing technology controls exercised by the Commerce and State Departments and certain other government agencies are adequate to prevent the transfer of vital technology to our potential enemies.

Having said this, let me refer to a measure in S. 3282, a bill introduced some two years ago at the Administration's request to amend and extend the Export Administration Act of 1969. This measure, which did not become law, would have enabled the government to obtain more information on proposed technology transfers. This would have been accomplished by requiring U.S. firms and their associates to report within 15 days any written agreement which might result in the export to a Communist territory of U.S. origin technical data not generally available.

WEMA believes that the vast majority of U.S. firms who might become involved in transferring technology to the Communist countries have kept the U.S. Government informed. However, slip-ups have occurred and the danger will become more intense as trade increases and as the Communist countries place greater emphasis on obtaining technical "cooperation". It's possible that one of WEMA's smaller companies, deeply immersed in a fast moving stream of U.S. technology, might not be aware of the export controls over technical data, or by under-valuing the importance of its technology, might disclose it unwittingly. Leverage might also be a problem. A small high-technology company, relatively inexperienced in international trade and perhaps facing reverses in this country, might find itself pressured into providing a small amount of what seems to be innocuous technology in order to secure a large contract.

There are hypothetical cases but they do arouse some concern and thus when S. 3282 was being considered by the Congress WEMA expressed no objection to providing this information, although it believed that a 15-day time frame was too short. WEMA had no objection two years ago and has no objection now.

While I'm on the subject, however, let me add that WEMA believes that something more than a one-way reporting function is required. WEMA's experience is that U.S. firms seem to have no individual or group of people in the U.S. Government to whom they can outline the problems they face in dealing with the Communist countries and quickly receive comprehensive, high level, responsible advice. It is true that the Bureau of East-West Trade of the Commerce Department is available for consultation. However, many of the problems encountered fall under the jurisdiction or within the special expertise of other departments and agencies within the government—State, Defense, Justice, Energy Research and Development Agency and a host of others. The Bureau of East-West Trade tries to obtain opinions from these other agencies (providing, of course, that the Bureau or the U.S. firm recognizes the agency's involvement). Responses, however, are very slow and, in WEMA's experience, frequently too vague to be very helpful.

WEMA believes an interagency committee composed of fairly high-level officials from the various Government agencies is needed. This committee

would meet periodically with representatives of U.S. firms facing problems with the Communist countries. These firms would appear voluntarily to review their problems and receive counsel from the various Government officials, each according to his area of expertise. The Government would benefit from this arrangement by receiving first-hand information about the difficulties U.S. businessmen face in dealing with the various Communist governments, and the U.S. firms would benefit from the advice. WEMA believes the need for this type of an arrangement is great and will increase as time goes on. WEMA urges the Committee to consider this matter and develop and introduce suitable language into the Export Administration Act of 1969, or a more appropriate legislative vehicle, which would authorize the formation and operation of such a committee.

TECHNICAL ADVISORY COMMITTEES

The major function of the joint business/government Technical Advisory Committees is to review and make recommendations on the U.S. unilateral and the COCOM controls in terms of current U.S. technology and U.S. strategic needs. In 1974 the Congress strengthened the role of these committees by requiring membership of representatives of the Departments of "Defense and State, and, when appropriate, other government departments and agencies". The adoption of this language has broadened government interest and participation so that now the committees are much more than just a "Commerce Department Show". Moreover, there is evidence that greater involvement has caused certain government agencies to view the work of these committees with greater seriousness. WEMA believes, despite the concern expressed by some of the business participants over the amount of time required to achieve results, that the Technical Advisory Committees provide a useful function. They offer the government unique access to "state-of-the-art" technical and commercial expertise which can be provided only by representatives of industry. On the other side of the coin, the committees offer businessmen a rare exposure to some of the basic security problems of the United States.

Although WEMA strongly believes the Technical Advisory Committees should be continued, it also believes that they must be utilized more effectively. Lack of effective utilization has led to frustration on the part of a number of talented people who have voluntarily served on these committees. Specifically, WEMA believes that the recommendations of the committees must be taken more seriously. WEMA understands that on several occasions committee recommendations, apparently agreed to by all participants including those from government, have either come to naught or have been rejected without notification or consultation. For example, the Technical Advisory Committee on Computers worked with the National Bureau of Standards for over a year to improve the technical criteria required to more effectively measure computer performance. WEMA doesn't know all the facts since most of the activities of these committees are, and should be, classified, but it appears likely that the new standards have been rejected and despite all this work the same old, obsolete criteria will continue to be used. It is unfortunate that this has happened, but more disturbing is the fact that the Committee has not received any reasons why its recommendations were unacceptable. In situations like these questions about the meaningfulness of the role of the Technical Advisory Committees are bound to occur.

In WEMA's view, a somewhat similar situation has been dealt with much better in the Trade Reform Act of 1974. In this Act the Congress recognized the need for timely and accurate advice from industry to support the efforts of our country's trade negotiators during the GATT discussions and thus incorporated a number of specific provisions to ensure a *two-way* flow of information. WEMA urges the Congress to ensure an adequate amount of feedback to the Technical Advisory Committees by adding the following additional numbered paragraph to Section 5(c) of the Export Administration Act of 1969:

"(6) To facilitate the work of the technical advisory committees, the Secretary of Commerce, in conjunction with other departments and agencies participating in the administration of this Act, shall disclose to each such committee, adequate information, consistent with national security, pertaining to the reasons why their recommendations were or were not accepted."

WEMA also recommends that the term of the industry members be raised from two to three or four consecutive years. Analyzing the U.S. unilateral and

the COCOM controls and deciding whether or not and, if so, what changes should be made is a difficult task requiring an intimate, relaxed, working relationship among the industry and government members on each committee. The present limitation to a maximum two year term causes disruption and allows very little time for an individual to become familiar with the other members or the work of the committee say nothing of making a substantial contribution to the overall effort. In WEMA's view, the work of the Committees would be accomplished more effectively if the industry members were permitted to serve longer terms.

LICENSING DELAYS

During the oversight hearings on the Export Administration Act of 1969 conducted in the Spring of 1974 a number of trade associations and exporters complained about the lengthy licensing delays which were putting them at a considerable disadvantage vis-a-vis their West European and Japanese competitors who were able to obtain licensing decisions more quickly.

These exporters claimed that time delays, serious in any transaction, were especially serious in dealing in the USSR and the East European markets where U.S. suppliers already faced several built-in disadvantages. Some of these disadvantages are: lack of familiarity with the market; the relative lack of hard currency; remoteness, and thus, the fact that long shipping intervals are required; the unwillingness or inability of U.S. firms to accept merchandise from the USSR and Socialist countries of Eastern Europe in payment for U.S. goods, etc.

The Congress was sympathetic and to stimulate speedier licensing action included provisions in the Export Administration Amendments of 1974 requiring the processing of export license applications relating to the national security of the United States within 90 days of submission. It was recognized, however, that under certain circumstances additional time might be required. As a result provisions were included so that if the 90-day period was to be exceeded, the applicant would be informed of the circumstances causing the delay and given an estimate of when a decision would be reached.

I would like to turn to my company's experience to show that shortened licensing cycles which would benefit U.S. exporters in their competitive struggle with West European and Japanese firms have not been reached.

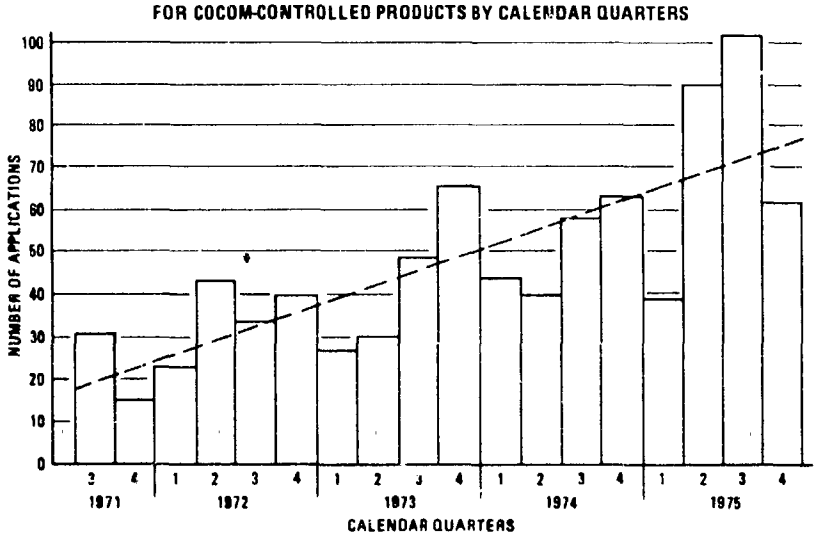

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Exhibit I

The Hewlett-Packard Company currently submits quarterly an average of some 75 license applications for COCOM controlled products destined for use in the U.S.S.R. or the Socialist countries of Eastern Europe. The dashed trend line on Exhibit I, fitted by the linear regression method, shows that this licensing load has risen four-fold in the past 4½ years. Barring any radical reduction in the COCOM controls, Hewlett-Packard's licensing activities can be expected to continue to increase as its trade with the U.S.S.R. and the countries of Eastern Europe grows and as the company supplies more of its products to the People's Republic of China.

Over the 4½-year period from July 1, 1972 to December 31, 1975 the Hewlett-Packard Company submitted 839 U.S. export/reexport license applications for COCOM controlled commodities destined to the U.S.S.R. or the Socialist countries of Eastern Europe. As of December 31, 1975, 65 of these applications were still pending. Some of these had been submitted within the past few weeks and, thus, it was too early to expect a licensing decision, while others had been pending for longer periods of time, the longest some 12 months. Five-hundred forty-six of the 774 license applications for which decisions had been received over the 4½-year period represented the vast bulk of Hewlett-Packard's exports and reexports of COCOM controlled electronic instrumentation, computer systems and computer peripherals to the U.S.S.R. and the countries of Eastern Europe.

Exhibit II shows cumulatively on a percentage basis the amount of time required to reach licensing decisions for these 546 applications. The time interval for each application was measured from the date on which it was airmailed to Washington D.C. to the date on which the Commerce Department issued approval or denial. On those occasions when a license application was returned for additional information, the amount of time it remained in Hewlett-Packard's hands pending receipt of the information and resubmittal was deducted.

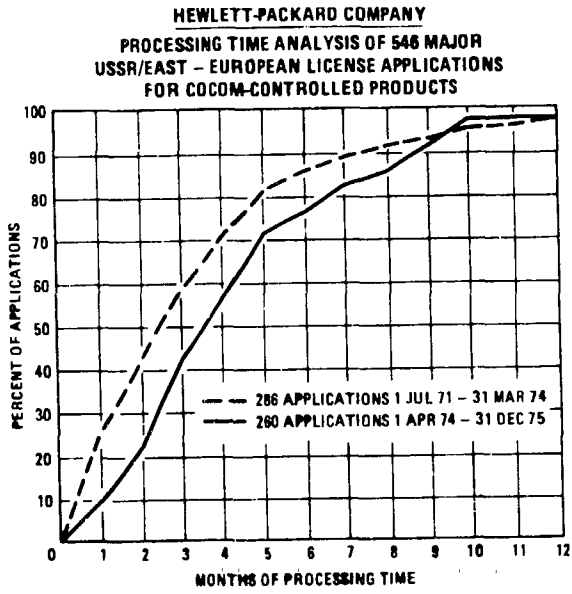

Exhibit II

The dashed curve relates to the 286 major licensing decisions received over the 2¾-year period from July 1, 1971 to March 21, 1974. This chart with this curve was included in my statement to the Congress on April 25, 1974 and, I

believe, provided support for the 90-day requirement which was later written into the Act. An examination of this curve shows that two-thirds of the cases were decided within a period of slightly more than 3 months.

The second curve, the solid line, relates to 260 major licensing decisions received over the following 1¾ years from April 1, 1974 to December 31, 1975. It is obvious that despite the 90-day requirement written into the law, licensing delays increased dramatically. During this most recent 1¾-year period it took 4½ months, 50% more time, to reach a licensing decision on ⅔ of the cases! 80% were handled within 6½ months compared to 5 months during the earlier period and the remaining 20% dragged on, and on, and on. The inability to reach a decision in these cases has caused particular discouragement within our sales force, caused customer unhappiness, subjected us to late delivery penalties and has sometimes even resulted in cancellations.

It is interesting to note that when the statistical work leading to this second, most recent curve was performed an additional analysis was made of the time it took to receive licensing action on the 106 cases decided in the last half of 1975. I'm sad to report that little, if any, change had occurred—licensing delays in the last six months of 1975 were virtually identical to those encountered over the 1½-year period taken as a whole.

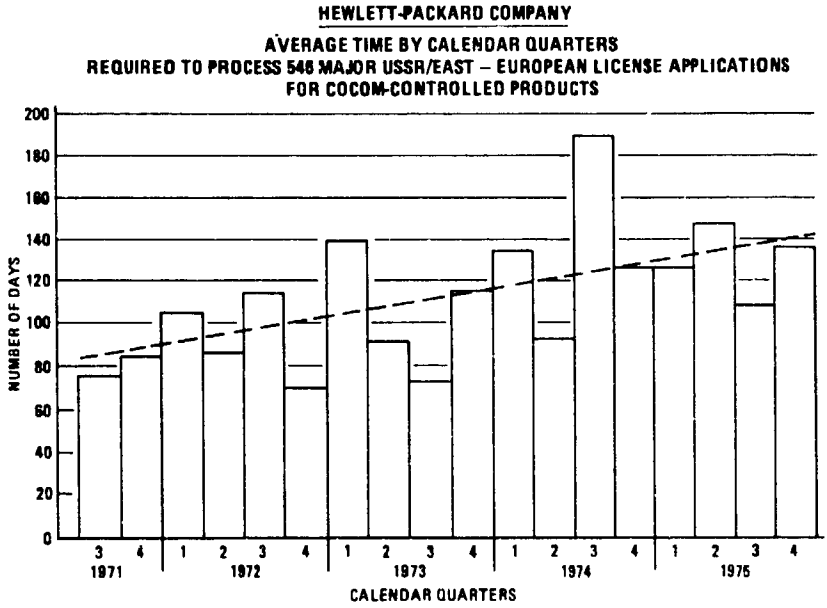

Exhibit III

Not only have the licensing delays of the most recent 1¾-year period been substantially worse than those of the previous 2¾ years, but by year-end 1975 the 130–135 day average amount of time required to reach a licensing decision was nearly twice that of the 80-day average prevalent in mid-1971. The increase in licensing delays is shown graphically on Exhibit III which groups the 546 major licensing decisions into the various calendar quarters in which decisions were reached.

Section 4(g) of the Export Administration Act requires that the applicant be notified if more than 90 days is needed to approve or disapprove a license application relating to the national security of the United States. The applicant is also to be informed of the circumstances requiring additional time and given an estimate of when a licensing decision will be reached.

The Commerce Department has been very regular in sending out "90-day notices" but the information they have contained has not been very helpful

and many of the estimated dates have been quite inaccurate, in either direction. The over 100 notices received by the Hewlett-Packard Company almost invariably fall into one of four formats:

(1) We have tentatively concluded that approval of this transaction is appropriate. We are now consulting with other government agencies that advise us on export control matters. Unless unforeseen circumstances arise, we expect to complete action in ____ months.

(2) We have tentatively concluded that approval of this transaction is appropriate. In accordance with established procedures, we are currently seeking the concurrence of the other countries that participate in the international strategic control organization (COCOM). Unless unforeseen circumstances arise, we expect to complete action in ____ months.

(3) As required by the 1974 amendments to the Export Administration Act (Section 4(h)), your case is now under review by the Department of Defense to determine whether the export would significantly increase the military capability of the country of destination. Unless unforeseen circumstances arise, we expect to complete action in ____ months.

(4) Because of personnel commitments to other aspects of the export control program, including a review of the international export control list, and because priority was given to the processing of other applications you have on file, we have not been able to complete the technical analysis and documentation of this application. We hope to have the analysis ready for consultation with the other government agencies that advise us on export control matters by _____. If following this consultation, we conclude that approval is appropriate, we must seek the concurrence of the other countries that participate in the international strategic control organizations (COCOM). Unless unforeseen circumstances arise, we expect to complete action in ____ months.

One point should be made clear. The purpose of the 90-day notification requirement was two-fold: to convey important information to the exporter and to stimulate the licensing authorities to meet the 90-day commitment. Neither Hewlett-Packard nor any of WEMA's member companies want improved 90-day notices. What we really want is more rapid licensing and the total absence of such notices!

Licensing Delays can be attributed to a number of factors, singly or in combination. Some of these are:

A lack of centralized policy direction at the highest governmental levels which would coordinate the disparate views and opinions held by the various agencies participating in export control activities,

Little or no reduction in the scope of the controls despite the fact that Western availabilities and, for that matter, availabilities within the Communist countries themselves have changed substantially in recent years,

The sudden withdrawal of licensing delegations by the Department of Defense in mid-1974 under an amendment to the Military Authorizations Appropriations Act of 1974 and the slow, and to date incomplete, restoration of these delegations,

The absence of significant additional licensing delegations which would permit more rapid processing of license applications,

A constant increase in the number and difficulty of new applications as U.S. firms increase their business with the Communist countries and as equipment, especially computer systems, increases in complexity,

An inability of the licensing agencies, particularly the Department of Commerce, to either ask for or obtain adequate funding to add the qualified people required to reduce licensing delays, etc.,

Personnel cuts in the licensing agencies, especially the Department of Commerce, along with increased workloads such as those occasioned by sharp increases in short supply activities and in connection with the administration of the Boycott provisions of the Export Administration Act,

A subtle downgrading in the Commerce Department of the importance of export control activities in terms of attention, budget and manpower in favor of more glamourous activities such as negotiating protocols and establishing a host of promotional and ancillary activities,– all of which stimulate demand, much of which must tunnel through a time consuming, incentive robbing archaic licensing system,

Archaic paperwork and slow, manual data retrieval procedures which waste the time of highly skilled licensing officers who would be better employed analyzing applications and speeding them through the licensing process.

In the face of all these difficulties and all this gloom, WEMA is pleased to acknowledge that since early January 1976 a concerted effort to reduce licensing delays has been underway in the Commerce Department. This effort, taking place at the instigation of Deputy Assistant Secretary Arthur T. Downey and his associates, involves, as I'm sure you have been told already, budgetary authorization for some 20 to 25 additional qualified licensing people, serious study and hopefully a streamlining and an automation of the paperwork and data retrieval systems, and a crash program of overtime and weekend work in the licensing divisions, now extending into the Operating Committee, to reduce ever mounting licensing backlogs to more manageable levels. The U.S. export community and especially the high technology sector applauds such long overdue actions and hopes that the momentum can be increased thus confounding those cynics among us who tend to see the effort as sort of a charade staged principally for the benefit of a Congress engaged in the oversight hearings on the Export Administration Act!

In WEMA's view it is unlikely that the problem of licensing delays can be resolved to the satisfaction of U.S. businessmen without the presence of strong policy direction at the highest government levels, the Congress as well as the Administration. Moreover, without such policy direction WEMA feels that efforts to establish the Department of Commerce as an effective "lead agency" as recommended by the GAO or to reduce reliance on the slow case-by-case method of handling license applications in favor of more general, easier to administer guidelines as recommended by the Defense Board face considerable difficulties.

WEMA hopes, of course, that political/strategic relations with the Communist countries will soon relax enough to make possible the development and establishment of strong centralized policies which would lead to the elimination of licensing delays and a host of other problems confronting U.S. businessmen. In the meantime WEMA believes that the Congress should be kept informed as to the progress being made in reducing licensing delays to the specified 90-day period and even, hopefully, improving on that objective. WEMA therefore urges the adoption of the following lettered paragraph to Section 10 of the Export Administration Act of 1969:

"(c) The semiannual report required for the second half of 1976 and every second report thereafter shall include a summary of those actions which have been taken or which are contemplated to meet or exceed the objective of approving or disapproving export license applications within 90 days of submission, as specified by Section 4(g)."

LICENSING OF DISPLAY/DEMONSTRATION EQUIPMENT

The ability to display and demonstrate products at exhibitions, private showings and technical symposia is an important sales tool. Here too, U.S. businessmen active in the Communist countries face disadvantages not experienced by their West European and Japanese competitors. This is because the licensing of U.S. goods for display or demonstration in Communist countries is subject to delays and various restrictive practices. As Secretary of Commerce Dent pointed out in the Department's Special Report of May 29, 1973, "The U.S. has long followed the practice of not approving a license for temporary export of a COCOM-list commodity to a Communist country for display and demonstration . . . when . . . there was substantial likelihood that it would not, for national security reasons, approve a license for subsequent sale and permanent export of the same commodity to the Communist country . . .".

The reasons advanced to support this more restrictive policy include:

(1) The possibility that a displayed commodity might become "lost"—presumably the U.S. exporter might not take appropriate care to see the item was returned to the West or the Communist country might refuse to reexport it,

(2) Display in a Communist country might inadvertently disclose important technology,

(3) U.S. exporters, for prestige purposes, might tend to display/demonstrate their most sophisticated, top-of-the-line products, thus stimulating demand for items which can be neither licensed nor supplied, and

(4) U.S. exporters would pressure the U.S. Government to license the sale of the highly sophisticated products they had been permitted to display/demonstrate.

Although each of these reasons have some basis in fact, the potential dangers are exaggerated. For example, it is hardly conceivable that a reputable U.S. exporter of the type the U.S. Government would be willing to permit to display/demonstrate in a Communist country would perform so carelessly as to run the risk of incurring stiff penalties which could be imposed under the Export Administration Act. Similarly it is quite unlikely that a Communist country would jeopardize its entire future trade with the United States by refusing to reexport temporarily imported commodities. In a like manner, the argument about the possible disclosure of technology is weak—very little of the technology embodied in products is extractable. Moreover, a Communist engineer or official can easily obtain a visa to attend a demonstration or exhibition is a number of nearby Western countries and even, in many cases, the United States.

It is true that a number of U.S. exporters might wish to display/demonstrate their most sophisticated, top-of-the-line products despite the fact that the costs of transportation, exhibition, etc. would not be recovered if the items could not be approved for sale. Still, the risk would likely be quite small since technology contained in products is not all that extractable and as pointed out earlier, Communist officials can easily see these top-of-the-line products in nearby Western countries. It's also true that U.S. exporters are likely to pressure the U.S. Government to approve products which they had displayed. But this is nothing new. Pressure is already being exerted and it's difficult to see how it would increase to any significant degree if the present restrictive U.S. policies concerning exhibition/demonstration in the Communist areas were eased.

All these reasons and arguments aside, the important point is that a number of other COCOM countries, each of whom manufactures products of great technical sophistication, follow a more liberal licensing policy. This puts U.S. exporters at a competitive disadvantage. Again, according to Secretary Dent," * * * at least * * * four (of the COCOM countries) * * * Japan, France, Italy, and the United Kingdom * * * follow a more liberal policy, freely licensing such temporary exports * * * regardless of whether a subsequent sale and permanent export of the same article is or is not likely to win the requisite unanimous approval of COCOM."

The more restrictive U.S. licensing policies also pose additional handicaps. U.S. exporters wishing to display or demonstrate COCOM controlled products in the Communist countries must make their plans and file their license applications considerably in advance. Sales people find this quite difficult to do and still be responsive to the needs of the market. Even then, U.S. exporters have no real idea of whether or not permission will be granted and the display/demonstration can proceed as planned. When rejections occur, frequently perilously close to the display/demonstration date, a frantic scramble ensues for acceptable substitutes. If these cannot be obtained the display/demonstration is either cancelled or limps along as well as possible without the rejected commodity. As can be imagined, the indecision, the inability to show, and the possibility of cancellation has a strong negative effect on would-be purchasers and would-be U.S. exporters.

The net effect of these delays is to provide a considerable advantage to those competitors from COCOM countries following more liberal practices. In the words of Secretary Dent, it seems "that American firms should be given an opportunity at least equal to their competitors in those COCOM countries that permit temporary display on a relatively free basis . . . thus, American firms could display more sophisticated products, thereby creating a better competitive position and enhancing sales of their other products".

WEMA agrees and, despite the decision to retain the present restrictive practices mentioned in the Export Administration Report for the second quarter of 1974, urges adoption of more liberal and more rapid procedures to approve temporary exportations for display/demonstration purposes. Such procedures should apply to all commercial products except, perhaps, a small number of specifically designated strategic commodities for which a real danger exists that important technology might be disclosed, extracted and/or copied. These designated commodities should be clearly identified so they could receive a full licensing review before display/demonstration would be permitted.

WEMA believes that the Congress should take a continuing interest in the overly restrictive display/demonstration policies presently in effect and in

other policies or procedures which place U.S. business at a disadvantage vis-a-vis its West European and Japanese competitors. WEMA urges the Congress to ask the Secretary of Commerce to review these practices once again and submit a special report listing his actions and his recommendations. This could be accomplished by adding the following numbered paragraph to Section 4(b) of the Export Administration Act of 1969.

"(5) Not later than 9 months after the date of enactment of (the extension of the Export Administration Act) the Secretary of Commerce shall submit to the President and to the Congress a special report of actions taken under paragraphs (2) and (3). Such report shall contain a list of any procedures applicable to export licensing in the United States which may be or are claimed to be more burdensome than similar procedures utilized in nations with which the United States has defense treaty commitments, and the reasons for retaining such procedures in their present form."

LICENSING CLASSIFICATIONS

The Export Control Regulations of the United States are voluminous and complex—approximately two inches thick, detailed, available only by subscription, and updated some 15 to 25 times a year mainly by means of loose-leaf replacement pages. Large companies with substantial export sales assign certain people to study the regulations and develop a necessary amount of expertise. These firms realize that compliance with the regulations is essential to protect the national security and are well aware of the penalties that violations might bring. However, many of WEMA's member companies are relatively small and therefore do not have the continuous need or the financial justification which would allow at least one person in their organization to keep up-to-date on the export regulations.

One of the thorniest problems faced by these small high-technology companies is how to determine whether or not their products require export licensing. This frequently becomes an involved problem since licensing depends not only upon the characteristics of the products but also upon such elements as the country of destination, the accessories required, etc. Since the control regulations are rather formidable to someone who uses them infrequently, it is possible that a number of otherwise well-meaning, patriotic smaller firms might inadvertently violate the regulations, perhaps even to the detriment of U.S. national security.

One of the basic difficulties with using the U.S. control list to determine the licensing status of a product is that access to the list is by means of the same numbering system used by the Bureau of Census to gather U.S. export statistics. The Bureau of Census Regulations require that each exporter must classify his products, licensed or not, in terms of a seven digit system at the time of export. Tying the U.S. control list to the export statistics numbering system poses no particular problem for the regular exporter since, after all, he needs to know the numbers in order to export. It does, however, pose a problem for smaller firms, particularly those who, because their exports are handled by freight forwarders or some other intermediate agencies, don't need to know Bureau of Census numbers. These firms don't want to know how to export, they only want to know if their products require licensing!

It has been suggested that a way to handle this difficulty might be to provide some sort of a voluminous alphabetical index which would list every conceivable item under control. WEMA believes that a better, much less cumbersome approach would be a relatively simple listing of the controls themselves by *function* rather than by product. Each functional entry could be followed by references, in the numerical terms of export statistics, to the major items in the U.S. control list which embody that particular control. This listing could be included in the regulations as a kind of index to the control list and made available separately as a rough but fairly complete guide for smaller exporters.

What WEMA has in mind is a highly condensed listing not unlike the "Consolidated List of Goods Subject to Security Export Control" issued by the U.K. Board of Trade. The industrial section of the British list is tightly organized and relatively short—some 13 pages. It seems to WEMA that if such a list were distributed separately it would be used extensively by smaller exporters and would serve as a safeguard to insure against the inadvertent shipment of unlicensed strategic material to unauthorized destinations.

SUMMARY

In the years that lie ahead WEMA forsees a continued growth in the sale of peaceful goods to the USSR, the Socialist countries of Eastern Europe and the People's Republic of China. The success of this effort, however, is largely dependent upon a continuing interest by the U.S. Government in East-West Trade and by a relaxation of the major impediments to that trade. By this I am referring to reductions obsolete or obsolescent COCOM controls, more rapid processing of license applications, the extension of medium term credits and, finally, the judicious extension of non-discriminatory tariff treatment.

For these reasons and the continuing need to maintain controls over strategic goods—goods which would significantly assist an enemy or a potential enemy in his ability to produce or use weapons of war—WEMA supports extension of the Export Administration Act of 1969 to 1979.

WEMA also believes that this Subcommittee should recommend additional measures to assist U.S. firms in their efforts in the Communist countries. These measures include:

(1) Strengthening the role of the Technical Advisory Committees,

(2) Establishing a high-level, interagency committee within the U.S. Government which would be able to provide prompt and comprehensive advice to U.S. firms who are or are considering executing agreements with the Communist countries,

(3) Asking the Secretary of Commerce to report periodically to the Congress those actions taken or contemplated to reduce export licensing delays, and

(4) Asking the Secretary of Commerce to review and report to the Congress his actions and recommendations regarding those U.S. export licensing procedures more restrictive than those of the other COCOM participants.

Mr. Chairman, this concludes my formal presentation. On behalf of WEMA I wish to thank you and the members of the Subcommittee for their attention. I'll be pleased to respond to any questions you might have.

APRIL 6, 1976.

HON. JONATHAN B. BINGHAM,
Chairman, Subcommittee on International Trade and Commerce,
Committee on International Relations, Washington, D.C.

DEAR MR. CHAIRMAN: Mr. Thomas A. Christiansen, manager of international trade relations of the Hewlett-Packard Company, testified in WEMA's behalf before the Subcommittee on March 24. In the course of his testimony Mr. Christiansen said that he had received a full copy of the report of the Defense Science Board Task Force on the Export of U.S. Technology only the day before. He added that WEMA would like to comment in writing on the report's conclusions and recommendations after the report had been circulated to a few key WEMA member companies.

The WEMA member firms contacted in the past week have been impressed by the report's scope and general objectivity. The delineation of several important aspects of technology—the differences between embodied and non-embodied technology and between evolutionary and revolutionary changes, for example—received considerable favorable comment. WEMA believes the report is a most useful contribution and that congratulations are due the members of the task force who obviously put in many long, hard hours of work.

The WEMA member firms agree that active transfers of design and/or manufacturing know-how, especially those of a "revolutionary" nature, are most critical and should be subjected to the greatest licensing scrutiny. They welcome the suggestion that these critical areas be clearly defined and well-publicized so that U.S. businessmen will not spend their time fruitlessly seeking business which cannot be licensed. These member firms also agree that it is high time that policies and procedures be developed which would place maximum licensing effort on the critical high technology cases and correspondingly less effort, with more rapid processing, on less critical cases. Examples of these less critical cases would be product exports accompanied by minimal amounts of operating and/or maintenance instructions and containing either miniscule amounts of strategic technology or containing strategic technology so embodied as to be virtually non-extractable.

WEMA member firms welcome the suggestion of the Task Force to reduce dependence on difficult to obtain and frequently questionable end use informa-

tion, particularly so far as the licensing analysis of specific products is concerned. On the other hand, they are troubled by the additional suggestion that reliance on commercial specifications also be reduced in favor of something called the "intrinsic utility" of the product. If this means a streamlining and simplification of the license process, a sharper review and elimination of obsolete COCOM controls, and reduced concern about products containing non-extractable embodied technology, WEMA is certainly in favor. If, however, as some skeptics have suggested, it means more restrictive licensing practices and little or no attention to retiring obsolete/obsolescent COCOM controls, WEMA would not be in favor. Moreover, WEMA suspects, neither would the industry members of the Defense Science Board's Task Force.

WEMA is also troubled by the Task Force recommendation that "the U.S. should release to non-allied, non-Communist countries only the technology we would be willing to transfer to Communist countries directly." WEMA believes this recommendation would have far reaching adverse effects if it were carried out. High technology U.S. firms would be virtually unable to support licensing or manufacturing activities in most of the Western nations. It would also be impossible to provide advanced technology to these countries to say nothing of turn-key facilities, advanced equipment, particularly that requiring extensive operating and maintenance instructions, etc. In addition to the economic dislocations, the ensuing diplomatic furor and resulting political repercussions caused by such a radical shift in U.S. policy would be intense.

WEMA does share some of the concern that prompted the Task Force to make such a recommendation—that the reexport regulations of most non-COCOM Western countries are either nonexistent or so limited that an unscrupulous and determined person or organization *could* freely reexport important U.S. technology. WEMA believes, however, that the vast majority of these transfers are to responsible firms and individuals who use the technology in their own countries and have not the slightest intention or inclination of diversion. These firms and individuals have signed end-use statements agreeing to prevent diversion, and most make strong positive efforts to guard against such possibilities. WEMA believes that the U.S. is justified in continuing to trust these individuals and firms and that technology transfers should be continued with, perhaps, increased U.S. scrutiny abroad as the GAO Report has recommended. In any event, the draconian restrictive measure suggested by the Defense Science Board Task Force should be avoided.

The Task Force report states that "the initiative for the development of policy objectives and strategies for the protection of key strategic technologies lies with the Department of Defense." The report goes on the recommend the use of ad hoc advisory committees comprised of "knowledgeable individuals from both government and the private sector. . . . to contribute to the development" of these objectives and strategies. Many WEMA member firms have spent considerable time and energy participating in the Technical Advisory Committees established under the Export Administration Act of 1969. These committees not only consist of a broad spectrum of knowledgeable industry participants but also include, by statute, representatives of the Department of Defense, State Commerce and other key government agencies. WEMA wonders why the study on the export of U.S. technology was not conducted by one or more of these Technical Advisory Committees. An allied question is why any subsidiary study directed towards the development of policy objectives and strategies for the protection of key strategic technologies should not be carried out by these existing Technical Advisory Committees. Their wide technically-qualified membership would produce worthwhile studies which would have the added advantage of including advice from parts of government other than the Department of Defense.

WEMA hopes these comments will be of use to the Subcommittee in its consideration of the Defense Science Board Task Force report. We, of course, will be pleased to respond more fully if any of these comments are not clear or if additional information is desired.

Sincerely,

HOPE H. BROCK, ESQ.,
Government Affairs Associate.

Mr. BINGHAM. I appreciate your expeditious summary of your statement, and it is an excellent statement, Mr. Christiansen. I am

particularly appreciative of the very specific suggestions that you have made, both for legislative and administrative action.

We would like a little time for questions before you have to leave.

I understand that Mr. Stimpson has graciously agreed to yield 5 minutes to Mr. Spurney for conclusion of his statement.

Mr. SPURNEY. Thank you, gentlemen. Let me refer to page 7 of my prepared testimony where, I think, is a point that Tom and I would both like to bring up, as well as my friends from General Aviation.

We deem it only reasonable to request that, when license applications are being reviewed, the fact that our foreign competitors in allied and other free world countries are ready, willing, and able to ship those commodities in quantity and of comparable quality, be given full consideration. This competitive situation is true regardless of whether or not the items are subject to an international control, the so-called COCOM list.

COCOM LIST

This list was started during the postwar years when the United States attempted, through cooperation with its NATO allies, to control trade with the Eastern block countries. The effort was needed and was effective at that time.

However, the United States now finds itself, 30 years after World War II, attempting, through one set of Government regulations, to play the same role of trade overseer, while U.S. policy and world trends appear to be headed in the opposite direction.

Times have changed. Tensions have eased. Most-favored-nation status has been granted to some Communist countries. And, most importantly, our allies, our partners in COCOM, have matured and no longer lag us technologically in many fields. They have in fact become our largest competitors in the global marketplace.

We further know that, as competitors, they do not play by the same set of rules we are required to observe. We have seen case after case of our competitors getting around the COCOM controls.

Late last year, it was announced that the Rolls Royce Co. of England had signed an agreement with the People's Republic of China to produce Spey aircraft engines. Here certainly is a case of circumventing the international control organization that we hold so dear.

While our allies invite business representatives to attend meetings and participate actively in the COCOM review process, our Government treats even the COCOM list as classified and denies us access to it. Our companies can, however, freely obtain this list from other COCOM nations.

Mr. Bingham, let me conclude my additional remarks at that point.

[Mr. Spurney's prepared statement follows:]

PREPARED STATEMENT OF ALAN B. SPURNEY, JOINT HIGH-TECHNOLOGY INDUSTRIES' GROUP ON EXPORT ADMINISTRATION

Congressman Bingham and distinguished members of the Subcommittee, I am Alan B. Spurney, Director of the International Business Council of the Electronic Industries Association. I am appearing here today as the selected spokesman for a voluntary, ad hoc group formed with the identifying title of the "Joint High-Technology Industries' Group on Export Administration." Sub-

scribing to the views expressed here are the Aerospace Industries Association (AIA), the General Aviation Manufacturers Association (GAMA), the National Machine Tool Builders Association (NMTBA), and ourselves (EIA).

This testimony is not intended to supplant the views of any other high-technology industry trade organization opting to present its individual views on behalf of its members.

Joining me in this panel presentation are Mr. Robert Mullen on behalf of AIA, Mr. Jesse Maffuid of NMTBA, and Mr. William Edgar of GAMA.

At the outset, we are aware that the Government has appeared before you in the past few days. We have read some of the testimony. We do not intend to indulge in the game of numbers. Our industry people deal with the various Government license authorities on a daily basis. They work at establishing a mutually satisfactory working rapport. But in all candor, when the Government tells you, via statistics, that all is well, only the tip of the iceberg is visable. We believe this review is both necessary and timely and the private sector appreciates being heard.

Realize if you will, that the views to follow represent the consensus of a group whose annual contribution to the Gross National Product runs into $70 billion with an impressive role in world trade of about $15 billion combined yearly exports. Mr. Chairman, these figures are not contrived nor quoted to this body in idle terms. If anything, they should be used for measuring the relative impact of the nation's high-technology industries on the United States balance of payments.

We welcome this opportunity to voice our particular and valid concerns about several aspects of administration of export controls under the present Act as a current mitigating influence on the foreign trade efforts of a range of U.S. high-technology industries. It is ironic that in this, our Bicentennial Year, the question of controlling trade to certain countries becomes a focal point the same as it was 200 years ago when our Founding Fathers were debating resumption of trade with England. We hope that our legislators will heed our inputs in order that the country may grow and prosper over the next 200 years as it has done the past 200.

Our industry fully supports export controls as necessary to the national security of the United States and also as an extension of the U.S. foreign policy. However, administration of these controls has become so cumbersome that it impedes commercial activity and prevents U.S. business and industry from performing in a timely and profitable manner.

Please observe our emphasis of commercial and industrial. We are not today speaking of munitions control or foreign military assistance but, rather, of licensing the exports of commercial and industrial equipment and component parts to controlled destinations.

We urge the Congress to reaffirm the policy, stated in the present Export Administration Act, giving vigorous and practical support to the commercial involvement of U.S. private enterprise in today's interdependent world. Further, we recommend that existing law be strengthened so that procedures of involved federal agencies will be simplified, expedited, and made to yield results more equitable to private enterprise.

In the changing climate of international and domestic economic conditions, a need surfaces for a new Government commitment, a commitment in terms of an ongoing policy assessment of the strategic impact of U.S. export control judgments. Judgments have not kept pace with the U.S. high-technology industries' potential to penetrate international markets, through product sale and technology transfer. This is particularly true of our attempts to secure business from the USSR and other non-market countries.

Because of poorly-defined and partially-hidden Government policy directives, ours and other leading-edge technology industries are hampered in our efforts to maintain profit margins. When dealing in this arena, sales forecasting (a basic essential to any business) cannot be performed with the slightest degree of accuracy because of the chance of license denial. Price and delivery, two fundamentals on which many sales hinge, cannot be quoted with accuracy. By the time U.S. export controls are applied, determining whether or not a license can be issued, production costs have risen, and we are behind on delivery. All of this, coupled with the fact that we have made large investments prior to applying for the licenses, places us at an extreme disadvantage in world trade.

Gentlemen, one of the complaints most often voiced by our members is the

length of time required to obtain a license to ship to controlled destinations those items classified as "A" or strategic on the commodity control list. The system has become so unwieldy and cumbersome that it is now looked upon as a non-tariff barrier imposed by our own Government. The U.S. licensing system is viewed by our foreign competitors as one of their selling advantages. Even orders as small as 1 to 5 thousand dollars may take from 6–8 months before approval or denial is obtained. Four to five months is not uncommon for obtaining a license for a previously approved commodity, to a previously approved end user, for a previously approved end use. We will not even discuss the cases that have taken longer, as even the times quoted here have placed us at a seriously competitive disadvantage.

We are aware of the position of the Department of Commerce that the great bulk, some 85% we are told, of all license applications are processed in a matter of a few days. We apparently represent the 15% where such speed is not incident to handling despite the fact that the very nature of our products —electronic systems, equipment and components, machine tools, and aerospace/aviation equipment—is such that they probably represent, dollar wise, a substantial majority of United States industrial product exports.

Let us remember that U.S. companies have been encouraged to sell to controlled destinations not only through the same legislation that controls these sales, but also by a very active federal government sales promotion program. It should also be emphasized that our companies are competing with others in the free world for this business. In order to apply for an export license for an "A" commodity to a controlled destination a company must have a firm order, which means that it must spend a considerable amount of time and money in advance to obtain this order. This amount, by the way, is much greater than marketing costs that would be spent obtaining comparable orders in the free world. It is ridiculous to think that any company is content to sit quietly by while an application winds its way through a bureaucratic maze that is unparalleled in these modern times, particularly with the amount of money that has already been invested. Compounding this situation is the fact that our allies, which are our industries' greatest competitors, can obtain processed licenses for identical items in a maximum of six weeks including any international controls they may choose to impose. We have just recently verified these times through various foreign governments.

What can be done about this situation? We felt that a partial answer was at hand when at the last review of the Export Administration Act in 1974 you put in a 90 day limit on processing time. However, a loophole was found, and letters notifying an applicant of needed additional time have become a common sight in our members' mail. We therefore urge Congress to take a firm stand in this area. We recommend that a period of 60 days be allowed to approve or deny a license, and if additional time is needed, the time be limited to one 60 day extension. If a decision is not made at the end of a maximum of 120 days, the application will receive an automatic approval.

This time frame is realistic provided you the Congress mandate that the *entire* export control operation as it pertains to *all* departments and agencies be updated from its present manual intensive form to a modern, practical, well-managed system. We urge you to spell out the intent of the law, as well as its parameters, in terms unmistakable at all levels of Government. To this end we recommend that the Congress provide the Secretary of Commerce with authority to develop, implement, and enforce regulations governing all nonagricultural exports not appearing on the munitions control list. The authority should be extended to include all departments and agencies involved in processing of export licenses either actively or in an advisory capacity. The entire process must be modernized and operate in a pragmatic manner. To do less, or not require all involved to update their particular operations, will do no good, and United States high-technology companies will remain at a serious competitive disadvantage.

Export administration regulations, which include the commodity control list, should be clearly stated, consistent with the state-of-the-art, simple to understand, and include distinctions between various situations, quantities, and dollar amounts. Updates of changes in policy should be provided on a regular and frequent basis. Information required to obtain a license should be spelled out in detail and reflect the average exporters' ability to obtain that information so there is no need to return applications for additional data. At the pres-

ent time the "ground rules" in the export administration regulations are poorly explained at best, and certainly cause confusion in the export community . . . particularly the high-technology community. The rules pertaining to reexport are equally as frustrating as those applied to direct export.

Since business is restricted in licensing matters to dealing with the Department of Commerce, we have no direct knowledge on the consistency of views on export control between that department and the Departments of State and Defense. We do believe, however, that many times licenses are denied for reasons stated as national security, national interest, or foreign policy when *full and complete* consideration of the practical, real world aspects of the case has not been given.

We deem it only reasonable to request that when license applications are being reviewed, the fact that our foreign competitors in allied and other free world countries are ready, willing, and able to ship those commodities in quantity, and of comparable quality, be given full consideration. This competitive situation is true regardless of whether or not the items are subject to an international control, the so-called COCOM list.

This list was started during the postwar years when the United States attempted, through cooperation with its NATO allies, to control trade with the eastern bloc countries. The effort was needed and was effective at that time. However, the U.S. now finds itself, 30 years after World War II, attempting, through one set of Government regulations, to play the same role of trade overseer, while U.S. policy and world trends appear to be headed in the opposite direction. Times have changed, tensions have eased, Most Favored Nation status has been granted to some communist countries, and most importantly our allies, our partners in COCOM have matured and no longer lag us technologically in many fields. They have in fact become our largest competitors in the global marketplace. We further know that as competitors they do not play by the same set of rules we are required to observe. We have seen case after case our competitors getting around the COCOM controls. Late last year it was announced that Rolls Royce of England had signed an agreement with the Peoples Republic of China to produce the Spey aircraft engine. Here certainly is a case of circumventing the international control organization we hold so dear. While our allies invite business representatives to attend meetings and participate actively in the COCOM review process, our Government treats even the COCOM list as classified and denies us access to it. Our companies can, however, freely obtain this list from other COCOM nations.

At present the private sector has only one small input to the export administration procedure and that is through the Technical Advisory Committees (TACs). Most of these committees' deliberations are classified. However, word has reached us that not many of the recommendations made by the private sector of the TACs are implemented. The legislation enabling the TACs specified that they would report to the Secretary of Commerce. However, this has been delegated to the Office of Export Administration which has a long history of not wanting or accepting industry inputs. Under these circumstances, we cannot help but question their effectiveness. We urge that these advisory committees be strengthened. One way to do this would be to extend the two year term of the private sector members and restore the committees' mandate to report at the cabinet level.

Finally, there is a potential inherent antitrust problem in industry's representatives getting together to establish a position, albeit a recommendation only, on whether or not a product should be restricted as to its export. Some more specific language in the legislation might be helpful in this regard.

On February 4, 1976, the General Accounting Office transmitted to the Congress a report "The Government's Role in East-West Trade—Problems and Issues" which spelled out in detail the problems our country faces in this area. This report was accurate and certainly came to the same conclusions as those reached by our industry. Further, according to the report, it would appear that some of the agencies were attempting to gloss over inefficiencies or deficiencies by refusing an astute group, like GAO, full access. We should hope Congress would wish to find out the reasons for lack of candor.

As we have earlier pointed out and as stated in the GAO report, the country needs a coordinated East-West Trade policy. To this end the Export Administration Act needs to spell out specifics to (1) Simplify procedures; (2) Insure executive control, not bureaucratic control; and (3) Insure that Government

departments and agencies fulfill the spirit and intent of the Congress in their implementation of the Act.

Mr. Chairman, germane to the type of international trade conducted by our industries is the subject of technology transfer. We are now aware that the Defense Science Board Report on Transfer of U.S. Technology is before the Secretary of Defense for his appraisal. In the overall, our industries have been concerned by the imprecise definition of the term "technology" itself. This is no more obviously illustrated than by decisions rendered on a range of export license applications, many of which are denied on the grounds of possible national security implication, even though only the end product is to be shipped, without any transfer of design, manufacturing, or processing data.

Referring back to our opening statement in which we differentiated between commercial and industrial products as opposed to those carrying a direct military implication, we again foresee that the current fragmented policy in making determinations between the various government departments involved in the export licensing procedure will inevitably result in an excessive amount of case denials. The products denied by this action will find their way into the eastern bloc countries, in most cases through our COCOM allies.

In the real world of international trade and Commerce it is both unrealistic and impractical to have any overriding government policy that would totally inhibit technology transfer via the licensing agreement process when economic factors indicate that such a course is warranted. We would caution against tying the hands of industry in selecting the technical agreement process when technology transfer makes sound economic sense. It should be emphasized that the high-technology industries are surely aware of the inadvisability, not to exclude the impracticality, of entering into any technology transfer agreement in which the criteria invokes United States advanced state-of-the-art design and manufacturing techniques.

In no event do we wish to infer or imply that any technology transfer policy should in any way suggest a breach of the national security of the United States.

Thank you, Mr. Chairman. This concludes my prepared statement. I will be happy to answer any questions.

Mr. BINGHAM. Thank you very much, Mr. Spurney. I was going to ask you—we are particularly interested in the Rolls Royce case, and we do have the article that deals with that case.

Do you have other cases, similar cases, that you can provide us with? I don't mean at this moment, but to supplement your testimony.

Mr. SPURNEY. Yes, sir, I am sure we could provide you with some of these cases that have indeed angered us.

Mr. BINGHAM. I think that would be helpful to us.

You suggest on page 6 of your statement: "We urge you to spell out the intent of the law, as well as its parameters, in terms unmistakable at all levels of government," and you recommend that the Secretary of Commerce by provided with authority to develop additional regulations.

Again, we would welcome your specific suggestions in this regard. The Government witnesses in general told us that the law didn't need to be changed, that the law was all right, that, while they were attempting to improve the speed of processing and so on, that there was no way in which we could make the law more specific and more definite, so as to speed up the process.

If you have suggestions along those lines, we would most certainly welcome them.

DEPARTMENT OF COMMERCE SHOULD HAVE DISTINCT AUTHORITY

Mr. SPURNEY. The key word in this context is "authority." The Department of Commerce, the Secretary of Commerce, we feel, should have the distinct authority to act in the Nation's best interest.

Yes, he can receive the opinions—bear in mind, I am talking of commercial transactions, not munitions. He can receive the opinions of the Department of State and of the Department of Defense and of the CIA and of other agencies involved in the review process, but it should not be as it presently is, a rule of unanimity, whereby any blackball from any one of these agencies does in fact cause the Secretary of Defense to deny the license.

Mr. BINGHAM. You mean the Secretary of Commerce.

Mr. SPURNEY. The Secretary of Commerce. Excuse me. The key word is "authority." The law requires a certain amount of consultation among the various agencies concerned. It also indicates that the Secretary of Commerce should decide in the Nation's best interest. That is not being handled under the current procedures.

Mr. BINGHAM. Let me remind you that you have said that you agree that a system of export controls is necessary to the national security of the United States, but you are now saying that the Secretary of Commerce should have the final say where a matter of national security is concerned and should not be bound by the opinions of the Secretary of Defense, is that right?

Mr. SPURNEY. I am saying that the Secretary of Defense should certainly point out his contention that the particular transaction involves materiel that in his opinion would violate the national security, but in many cases our companies can show that this type of merchandise is available from other industrialized countries, that the state of the art in the world market in fact would dictate that, if the customer does not get it from us, he can get it from the Germans, for example.

TECHNICAL ADVISORY COMMITTEE ON COMPUTERS RECOMMENDATIONS

Mr. BINGHAM. I have one question for Mr. Christiansen, and then I will yield to Mr. Whalen.

Mr. Christiansen, on page 12, you say that it appears that the recommendations of the Technical Advisory Committee on Computers has been rejected and obsolete criteria will continue to be used.

Defense has testified that the interagency agreement on the parameters for making licensing decisions on computers has been reached and the logjam of computer applications has been broken.

Do I take it from your statement that you as an exporter have seen no evidence of this?

Mr. CHRISTIANSEN. I think that is a fair statement, sir. We do have the 4½-month licensing cycle I mentioned earlier, so decisions reached today may not become apparent for some time.

Also, I understand, the latest series of COCOM discussions have been finished, and there will be something coming out shortly, I believe, in April. Now I don't know what these changes are. Until the April release date we won't know.

We can hope that the computer industry will be better served by the revised regulations. But no industry committee member knows whether the changes, assuming there are changes, have had any relationship whatsoever to the recommendations of the technical advisory committees.

Another thing, sir, proceedings of the technical advisory committees are classified. All we are portraying here is an impression that we have gotten from some of the industry members who, of course, have not given us any details and really shouldn't.

But the point is that there is really no feedback, no organized way the committees can learn if their efforts are used, are in vain, or whatever.

Mr. BINGHAM. I understand your point very well on that. Within the limits of classification, could you, Mr. Spurney, provide us with examples of these cases that you mentioned, which frankly shock me, that you had to wait 4 to 5 months for a license for previously approved commodity to a previously approved end user for a previously approved end use?

Mr. SPURNEY. Yes.

[The information referred to follows:]

APRIL 29, 1976.

HON. JONATHAN B. BINGHAM,
Chairman, Subcommittee on International Trade and Commerce, Committee on International Relations, U.S. House of Representatives, Washington, D.C.

DEAR MR. BINGHAM: Herewith submitted for the record of your Subcommittee are narrative descriptions of licensing case delays experienced by two Electronic Companies having day-to-day involvement in the administration of export controls by the U.S. Department of Commerce. See Exhibit "A" and "B".

This information is submitted in response to questions posed to me during the course of March 24, 1976 hearings by your Subcommittee on High-Technology Transfer and Export Controls.

Sincerely yours,

ALAN B. SPURNEY,
Director, International Business Council.

Exhibit A

CASE NO. I

The case involves 15,000 quartz crystals valued at $52,650.00 to be shipped to a watch manufacturing company in East Germany for use in electronic watches.

In September of 1974 a license had been issued for 3,850 of the same item to go to the same company for the same use.

The license application was made on October 9, 1975 and after numerous phone calls the license was approved on February 19, 1976 and received by the manufacturer on March 5, 1976. Total elapsed time from date of application to date of approval, 133 days—4.4 months; total time until applicant received approval, 148 days—4.9 months.

Even after license was received it was of no value as the original Letter of Credit plus one extension, had expired.

Applicant's customer is now in the process of initiating a new Letter of Credit.

The product we refer to here is a quartz crystal which has, in our estimation, absolutely no military potential as it is used only in watches and other timepieces.

CASE NO. II

This case involves 1150 pieces of integrated circuits valued at $2,875.00. These integrated circuits can be used only in watches and have no military significance.

These circuits were the same item destined for the same company to have the same end use as 4600 integrated circuits approved in September 1974.

Application was made October 31, 1975 and approval was granted March 19, 1976—a period of 140 days or 4.7 months.

CASE NO. III

This case involves 57,390 integrated circuits valued at $66,015.00. These ICs were going to Poland for use by a computer factory in "Production and manufacture of ODRA 1300 computers and construction of prototypes of new computers."

Application was made July 30, 1975. Case was denied January 20, 1976—a period of 204 days or 6.8 months.

While this case was denied for national security reasons the applicant felt compelled to appeal the case. During the review time the applicant was approached by a Canadian firm to sell the identical circuits for shipment to Poland. The applicant declined the sale, but has subsequently learned and reported to U.S. authorities that a license was issued by the Government of Canada and another brand of identical integrated circuits are being shipped to Poland from Canada.

CASE NO. IV

This case involves 100 integrated circuits in the amount of $1,430.00 to be shipped to Poland for "scientific research work."—A) Laboratory research of integrated circuits including areas of display timing counters, and B) To test and gain experience with MECL series and their parameters.

Case was submitted March 25, 1975. On April 21, 1975 applicant was asked for more information. Applicant complied and resubmitted application May 1, 1975. On November 19, 1975 applicant was asked for more information and complied within 24 hours. On February 5, the following approval was granted: 25 integrated circuits, value $106.00. Denied: 75 pieces of 10 different types of integrated circuits, value, $1324.00. Total time to final action, 317 days or 10.6 months.

While case was denied on national security grounds, it has been appealed due to extremely small quantities involved and the fact that these items are being sought by a Candian firm for shipment against a valid Government of Canada license.

Exhibit B

EXPORT CASES—EASTERN EUROPE

I. Equipment containing U.S. Components was destined for an East European customer. The same equipment had been approved twice previously for other East European customers. This third case still took eleven months to be approved and the customer nearly cancelled the order.

II. In the spring of 1975, an application was submitted to Commerce for a re-export authorization covering less than $1,000 of U.S. content in four foreign designed modems having a total value of $5,000. These four modems were to be loaned to the PTT Institute in Romania for test and evaluation in their national switching systems as part of the process of selecting equipment for their vast telecommunications modernization program.

In 1976, after 10 months of review by the U.S. authorities, a denial was issued on the basis that "the equipment could contribute significantly to their military capability and constitute a potential threat to our national security." This determination was made despite the recorded fact that the modems had been previously approved for other East European customers and despite U.S. pronouncements and actions toward improved and expanded trade with Romania.

The customer was so angered that our company, as well as other U.S. or U.S. affiliated companies, may be excluded from or severely restricted in our

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participation in a major expanding market. There was no benefit to the U.S. since the customer had little difficulty in obtaining comparable modems to meet the requirement from other sources.

The United States is the only country which imposes a re-export authorization requirement on foreign-based suppliers of East European customers. Because of the demonstrated excessive delays, inequities, and unpredictability of the U.S. licensing process, East European customers tend to avoid U.S. suppliers or U.S. equipment if there is a possible alternative. Consequently, foreign manufacturers are reworking current products and designing new products to exclude U.S. content in order to be free of the endless paper work, delays, and unwarranted restrictions of the U.S. licensing process.

This typical case illustrates the double loss to the United States through lost equipment sales by U.S. or U.S. affiliated equipment manufacturers, and the chain reaction loss to U.S. component manufacturers. Thus, our economy suffers the loss of sales, and the jobs dependent upon such sales, while our international competitors enjoy the increased business on a less competitive basis and can use the added income to finance increased research and development on the products and production technology of tomorrow.

III. At the beginning of the summer of 1975, a re-export authorization application was filed with Commerce. At that time, Commerce was provided with a copy of the firm contract with particular reference made to the stringent delivery and installation requirements of the contract. Some four months after receipt of our application, Commerce advised that an additional seven months would be required to process the case. Comparatively, the foreign-based manufacturer applied to their Government for a license and within 30 days had received full authorization covering the entire transaction. Commerce was so notified.

To this date, this case remains unresolved! We understand that only one of the many U.S. agencies involved in the processing has raised an objection to approval of the case but, under the unwritten rule of unanimity practiced in the U.S. process, this seems to be sufficient to stalemate that process.

In addition to the direct financial loss the company has already suffered under its present contract, the company will probably lose considerable future business as a result of the customers reaction to the delays to its program. Certainly the company's reputation as a reliable source has been significantly damaged.

An interesting aspect of this case is the differing determinations by the two governments in terms of the applicability of COCOM controls. The U.S. feels that the equipment is subject to COCOM clearance while the foreign government has ruled otherwise. Direct communications between the governments continue on this point.

Mr. BINGHAM. I just can't see any excuse for that.

Mr. SPURNEY. I know.

Mr. BINGHAM. Mr. Whalen.

POLICING OF COCOM CONTROLS

Mr. WHALEN. Thank you, Mr. Chairman. Mr. Spurney, just going back to your statement on page 8, I quote: "We have seen case after case of our competitors getting around the COCOM controls."

I think you have indicated you will give us some other case histories.

Now, I think the point ought to be made that the policing of the controls is left to the individual member countries, is that correct?

Mr. SPURNEY. This is a very mysterious process indeed. COCOM manipulations are carried out through an office in the Department of State from which we are absolutely isolated. It goes from Commerce, when you need a COCOM approval through this particular office in State, over to COCOM in Europe. They meet infrequently. They consider cases and accept or reject individual cases.

Now, I suspect——

Mr. WHALEN. If I may interrupt, Mr. Spurney, when you say "cases," are these exception requests or violations?

Mr. SPURNEY. No. What I mean is—you make a license application to the Department of Commerce of the United States for merchandise which actually is for commercial application. It is subjected to an interagency review process within the United States.

But, with regard to certain items on the so-called COCOM list, a list which is not available to our companies, incidentally——

Mr. WHALEN. But which you say you can get from other sources?

Mr. SPURNEY. That is right. You go to the British Board of Trade and ask for it.

[Laughter.]

Mr. SPURNEY. And in those instances where the merchandise in the transaction requires COCOM approval because the merchandise is described on the COCOM list, it enters this mysterious process which has not been codified, and we have no industry representatives over there to affect what is going on in these machinations of COCOM except when we find out that our transaction has been denied a license because of COCOM disapproval, only to find 6 months later——

Mr. WHALEN. All right. You honor that. You abide by it.

Mr. SPURNEY. Yes, sir.

Mr. WHALEN. A similar product in another COCOM country might be sold. I think this is the thrust of your comment.

Now, who should have policed that?

Mr. SPURNEY. Their own country, their own country.

Mr. WHALEN. So what you are saying is that the policing of COCOM is only as effective as any individual country is willing to put into it, is that correct?

Mr. SPURNEY. That is correct, Mr. Whalen.

Mr. WHALEN. I have one other question, and maybe we will refer it to you, Mr. Christiansen, and, Mr. Spurney, you may respond also.

RATIONALE FOR EXPORT CONTROLS

I think that you may have alluded to it already. The whole rationale for this law has been explained by Government witnesses, and they say that it has been accomplished, that indeed, as a result of this legislation which was enacted years ago, the Eastern European bloc has remained behind us technologically.

Now, is that a myth or is that correct?

Mr. CHRISTIANSEN. Let me see if I can respond to that in an indirect way. If it wasn't true, I am sure that we would find little or no clandestine attempts by certain countries, Socialist countries, to obtain U.S. products, and there is a great effort expended to do just that.

Mr. WHALEN. Let me interrupt and explain my question. I think we would agree that technologically the United States is ahead. Is that what you are saying?

Mr. CHRISTIANSEN. In many areas, yes.

Mr. WHALEN. But is it due to this law or other factors?

Mr. CHRISTIANSEN. The reason we are ahead? I think the reason we are ahead is because of the technological base we have in this country, the infrastructure, the school system, and you name it.

Mr. WHALEN. In other words, assuming we have developed this——

Mr. CHRISTIANSEN. I think the thrust of your question, if I may, was: In my opinion, have these controls been effective? Yes, I think so, I really do.

Mr. WHALEN. I think maybe you have answered it the way I anticipated you would. I might rephrase the question. We recognize that due to the infrastructure that we have here in our own country, we indeed have developed the technology which now exists and is available.

My question is: In the absence of this law or these laws, would the Eastern European bloc be up with us?

Mr. CHRISTIANSEN. I think they would be further ahead than they are now. Yes. Now, some people hold that their infrastructure is so poorly organized and other things are so lacking that, even if you gave them something on a silver platter, they would not be able to use it. I don't hold with that at all. I think that is simply not true.

Mr. WHALEN. So what you are saying, then, is that indeed the Eastern European bloc is further behind technologically than they would be in the absence of these laws.

Mr. CHRISTIANSEN. Yes. In some areas, of course, they are ahead of us.

Mr. WHALEN. That is true. I take it, therefore, that your conclusion is that the law should remain, subject to——

Mr. CHRISTIANSEN. If I may digress for one second here and make another observation—a lot of people have the idea that technology flow is a one-way street out of the United States. In reality they have some things which are ahead of us.

I understand some of their drilling equipment, for example. Also their efforts in making hydrodynamic power generation are further ahead. We shouldn't be thinking that we are ahead in everything, although in electronics, we are.

Mr. WHALEN. I raised that q[illegible] last week, and I then also queried the witness as to whether the Eastern European bloc has similar restrictions on technology moving from East to West.

Mr. CHRISTIANSEN. I don't know.

Mr. WHALEN. Do you know? Are American firms able to obtain technology without any restriction on the part of the Russian or Polish or other governments?

Mr. CHRISTIANSEN. I don't know. I know, however, that some U.S. firms have received various commodities.

Mr. BINGHAM. Wouldn't that be a Government transaction in any case?

Mr. WHALEN. You are right.

Mr. BINGHAM. Could I just follow up Mr. Whalen's last question: Do both of you gentlemen favor extension of the law, provided some of these problems that you have raised can be met?

Mr. CHRISTIANSEN. Yes.

Mr. SPURNEY. Yes.

Mr. CHRISTIANSEN. I must admit the suggestions we have made, in relation to the law as it presently stands, are not very major. These are, however, reasonable changes that would help us do our job. This is what we are after.

Mr. BINGHAM. Thank you very much. I understand you have to leave at 3 o'clock, and it is almost precisely 3, so we very much appreciate your being with us, and I can say to the remaining witnesses who have been patient that, since the House has now adjourned, we won't be interrupted for votes.

Mr. SPURNEY. Thank you very much, Mr. Bingham.

Mr. BINGHAM. Now I would like to ask Mr. Gray and Mr. Stimpson and Mr. McCloskey to take the witness table.

Mr. Stimpson, since you were gracious enough to yield some of your time, perhaps you would like to start.

STATEMENT OF EDWARD W. STIMPSON, GENERAL AVIATION MANUFACTURERS ASSOCIATION

Edward W. Stimpson, president and a board member of the General Aviation Manufacturers Association (GAMA), Washington, D.C., joined the association when it was formed on January 1, 1970. He was elected president in November, 1970.

Mr. Stimpson had been vice president, public and international affairs, from January to November, 1970. In that capacity, he directed GAMA's advertising and public relations programs and represented the association in legislative and international affairs.

Mr. Stimpson served with the Federal Aviation Administration in Washington, D.C., from December 1962 until he joined GAMA. He was named FAA's assistant administrator for congressional liaison in July, 1965. In this position, he was responsible for advising the FAA administrator on all phases of congressional activity. He received the U.S. Department of Transportation Meritorious Achievement Award, FAA's Meritorious Service Award and its Decoration for Exceptional Service in recognition of his performance.

Before his Federal Government service, Mr. Stimpson was acting director of the Pacific Science Center Foundation at Seattle, Washington where he developed and administered a program to convert the U.S. Science Pavilion at the Seattle World's Fair into a permanent Science Center.

From 1959 to 1962, Mr. Stimpson was assistant to the president of the Seattle World's Fair and the fair's Washington, D.C. representative.

Mr. Stimpson was born on June 18, 1934 in Bellingham, Washington, and was graduated Cum Laude from Harvard College in 1956. He is a private pilot.

He is married to the former Dorothy Sortor of Seattle. They reside in Washington, D.C.

GAMA represents the nation's leading manufacturers of general aviation aircraft, engines, avionics and major components.

Mr. STIMPSON. There is an advantage in everything, Mr. Chairman.

Mr. BINGHAM. I will repeat for the benefit of our guests. Mr. James Gray is a representative of the National Machine Tool Builders Association. Mr. Edward Stimpson is of the General Aviation Manufacturers Association. Mr. Peter McCloskey is with the Computer and Business Equipment Manufacturers Association.

Mr. STIMPSON. Thank you, Mr. Chairman.

AVIATION INDUSTRY EXPORTS

I might at the outset say we are in agreement with the recommendations made by Mr. Spurney since we were part of that statement.

Some time this year our general aviation industry will export its 50,000th general aviation airplane. Exports are very important to our industry. About 25 percent of our total production here in the United States is exported. Last year, 3,550 airplanes were exported abroad to over 85 different countries, and these airplanes are used primarily for transportation purposes. They are also used for agricultural purposes. They are used for air taxi charter purposes. They are used in industrialized countries for business transportation. They are used in countries like Venezuela, Australia, lesser developed countries, for opening up the transportation systems.

Our airplanes in general aviation usually do not involve high technology. The technology has been developed. It is well known. We have maintained our world leadership position because we have been able to build a superior product and we have been able to market and maintain it.

PROBLEMS IN ADMINISTRATION OF EXPORT LAWS

Consequently, as we look at the problem, we feel that our problems are not without ability to compete, but many of our problems are right here in Washington, D.C., in the export administration and the way this act has been administered.

We view our potential world market as equaling that of the United States. Consequently, it is very important to us that we have an environment in which we are able to market.

I don't think the problem is with the law. I think the problem is with this book right here, which are the regulations under which the law is administered and the way the law is being administered today.

Consequently, I think what you can do is to help simplify or direct the export administration to minimize procedures for licensing. The problems that you have heard before you today are very, very typical of what we are also facing in our industry. Let me give you an example.

COCOM LIST IS OUTDATED

The COCOM list which has been talked about, and we go to the British Board of Trade to get the list which is classified by our government, is a highly technical, highly specialized list, but much on this list is technology which is 30 years old.

Single sideband, 720-channel radios. FAA requires all airplanes here in the United States, including general aviation airplanes, to have 720–channel radios now, but the COCOM list lists this as high technology.

It is just absurd. So, consequently, one of our companies which has a little two-place trainer has a 720-channel radio—but because it is on the COCOM list, you are supposed to get an export license.

DELAYS IN LICENSING

So in you come for a license because it is supposedly high technology. It goes through the process. Here we are. Delays. There are a couple of examples here. For example, Gabon. I am not sure we have a problem with Gabon in foreign policy.

Here is an export license it took close to 6 months to get. Then, when the license was approved—it was for a Cessna 207 airplane, a single-engine airplane, a workhorse airplane which is used probably for air taxi, hauling cargo in Gabon or whatever the conditions imposed state.

[Copies of three export licenses issued by the Department of Commerce to Cessna Aircraft Co. follow:]

FORM DA 629 (REV 3/75)

EXPORT LICENSE

U.S. DEPARTMENT OF COMMERCE
DOMESTIC AND INTERNATIONAL BUSINESS ADMINISTRATION
BUREAU OF EAST-WEST TRADE
OFFICE OF EXPORT ADMINISTRATION

Not approved unless the official validation stamp appears herein.

VALIDATION

LICENSE NUMBER 359

A170242

THIS LICENSE EXPIRES ON: OCT 31 76

1. LICENSEE

Cessna Aircraft Company
Sales Scheduling
5800 East Pawnee
Wichita, Kansas 67201

2. PURCHASE 51009

Same as Item 3

3. ULTIMATE CONSIGNEE IN FOREIGN COUNTRY

Air Service
-Aviones-Helicopteres-
B P 2.232
Aeroport International Leon MBA
Libreville, Gabon

4. INTERMEDIATE CONSIGNEE

NONE

5. COUNTRY OF ULTIMATE DESTINATION

Gabon

6. APPLICANT'S REFERENCE NO.

D6634

QUANTITY	DESCRIPTION OF COMMODITIES	CONTROL COMMODITY NUMBER AND PARAGRAPHING NUMBER	UNIT PRICE	TOTAL PRICE
2 ea	310 & 402 Aircraft, personal & utility type, multi-engine, 3000 lbs & over empty airframe weight, non-military, new	734(2)A 431		$248,000.00

"THIS LICENSE IS ISSUEDON THE BASIS OF CLEAR UNDERSTANDING ON THE PART OF BOTH APPLICANT AND CONSIGNEE, APPLICANT WILL INFORM LATTER IN WRITING WITH COPY TO THE U.S. DEPT. OF COMMERCE THAT SUBJECT FOUR CRAFT, (2) MODEL #310 AND (2) MODEL #401, ARE INTENDED FOR: (A) DEMONSTRATION USE BY THE CONSIGNEE ONLY: (B) RESALE ~~XXEOR~~ LEASE, OR CHARTER, OR REEXPORT, REQUIRES SEPARATE AND SEPECIFIC AUTHORIZATION FROM ~~MX~~ THE U.S. DEPT. OF COMMERCE: (C) SUBJECT FOUR AIRCRAFT WILL NOT BE USED IN SOUTHERN RHODESIA."

FAF Wichita Kansas

TOTAL $248,000.00

NOTE

- An Export License must be returned immediately to the Office of Export Administration, Room 1617M, Domestic and International Business Administration, U.S. Department of Commerce, Washington, D.C. 20230 (a) when it has been fully used, (b) when it has expired, or (c) when it has been determined that it will not be used or will no longer be used.
- Each shipment made against this license shall be entered on the reverse and licensee must sign prior to returning it.
- A Destination Control Statement is required to be shown on all bills of lading, air waybills, and commercial invoices. (See Export Administration Regulations 1384.6.)

VALID IN EXSE EXPIRES

United States of America

DEPARTMENT OF COMMERCE
BUREAU OF EAST-WEST TRADE
OFFICE OF EXPORT CONTROL

LICENSE NUMBER A165727

THIS LICENSE EXPIRES ON: OCT 31 76

1 LICENSEE
THE CESSNA AIRCRAFT COMPANY
Sales Scheduling
5800 East Pawnee
Wichita, Kansas 67218

2 PURCHASER
51009
Same as Item 4

3 ULTIMATE CONSIGNEE IN FOREIGN COUNTRY
AERO SERVICES
B P 774
Brazzaville
CONGO (BRAZZAVILLE)

4 INTERMEDIATE CONSIGNEE
AIR SERVICE
B P 2.232
Aeroport International Leon MBA
Libreville Gabon

5 COUNTRY OF ULTIMATE DESTINATION
CONGO (BRAZZAVILLE)

6 APPLICANT'S REFERENCE NO
4256

QUANTITY	DESCRIPTION OF COMMODITIES	COMMODITY CLASSIFICATION NUMBER	CASE NO	UNIT PRICE	TOTAL PRICE
			165727		
1 ea	Cessna Model U206 Stationair II Aircraft Single Engine, Non-military, new	734 (2) A 431		$60,000.00 FAF Wichita Kansas	

"THIS LICENSE IS ISSUED ON THE BASIS OF CLEAR UNDERSTANDING ON THE PART OF APPLICANT, INTERMEDIATE AND ULTIMATE CONSIGNEE, CESSNA WILL INFORM AIR SERVICE OF GABON AND AERO SERVICES OF CONGO-BRAZZAVILLE IN WRITING WITH COPY TO THE U.S. DEPARTMENT OF COMMERCE, THAT SUBJECT AIRCRAFT IS INTENDED FOR: (1) DEMONSTRATION PURPOSES BY AERO SERVICES OF CONGO-BRAZZAVILLE ONLY; (2) RESALE, OR LEASE, OR CHARTER, OR REEXPORT FROM THE CONGO-BRAZZAVILLE REQUIRES SEPARATE AND SPECIFIC AUTHORIZATION FROM THE U.S. DEPARTMENT OF COMMERCE; (3) SUBJECT AIRCRAFT WILL NOT BE USED IN W SOUTHERN RHODESIA."

TOTAL $60,000.00

Export Control Statement required to be shown on bill of lading or other shipping document
See Export Control Regulations § 386.6

EXPORT LICENSE NOT TRANSFERABLE
058387

An EXPORT LICENSE must be returned immediately to the Office of Export Control, Attn: 247, U.S. Department of Commerce, Washington, D.C. 20230, (1) when it has been fully used, (2) when it has expired or (3) when it has been determined it will not be used or will no longer be used. See Export Control Regulations § 386.2 (b) (4)

BEST COPY AVAILABLE

EXPORT LICENSE

U.S. DEPARTMENT OF COMMERCE
DOMESTIC AND INTERNATIONAL BUSINESS ADMINISTRATION
BUREAU OF EAST-WEST TRADE
OFFICE OF EXPORT ADMINISTRATION

VALIDATION

51008

LICENSE NUMBER

A179771

THIS LICENSE EXPIRES ON: OCT 31 '76

1. LICENSEE
CESSNA AIRCRAFT COMPANY
Sales Scheduling
5800 East Pawnee
Wichita, Kansas 67201

2. PURCHASER
Same as Item 3

3. ULTIMATE CONSIGNEE IN FOREIGN COUNTRY
AIRCRAFT DISTRIBUTORS OF
SOUTHERN AFRICA PTY LTD
Hangar No 2 P O Rand Airport
Germiston Transvaal
Republic of South Africa

4. INTERMEDIATE CONSIGNEE
NONE

5. COUNTRY OF ULTIMATE DESTINATION
Republic of South Africa

6. APPLICANT'S REFERENCE NO
4291

QUANTITY	DESCRIPTION OF COMMODITIES	EXPORT CONTROL COMMODITY NUMBER AND PROCESSING NUMBER	UNIT PRICE	TOTAL PRICE
10 ea.	Cessna Model 150 Aircraft non-military, new	734(2)A 431		$160,000.00

This license is issued on the basis of clear understanding on the part of both applicant and ultimate consignee, applicant will inform latter in writing with copy to the U.S. Department of Commerce, that subject aircraft are intended for normal civilian and commerical purposes in the Republic of South Africa only.
(a) resale to normal civilian and commercial endusers for normal civilian and commerical purposes in the Republic of South Africa only.
(b) sale/lease/charter to governmental entities requires separate and specific authorization from the U.S. Department of Commerce.
(c) reexport from South Africa requires separate and specific authorization from the U.S. Department of Commerce.
(d) subject aircraft will NOT be used in Southern Rhodesia."

TOTAL $160,000.00

NOTE
- An Export License must be returned immediately to the Office of Export Administration, Room 1617M, Domestic and International Business Administration, U.S. Department of Commerce, Washington, D.C. 20230 (a) when it has been fully used, (b) when it has expired, or (c) when it has been determined that it will not be used or will no longer be used.
- Each shipment made against this license shall be entered on the reverse and license must be endorsed prior to returning it.
- A Destination Control Statement is required to be shown on all bills of lading, air waybills, and commercial invoices. (See Export Administration Regulations Sec. 387.5.)

This license is issued on the basis of a clear understanding on the part of the applicant and intermediate consignee and ultimate consignee to inform the consignees in writing with a copy to the U S. Department of Commerce that subject Cessna model 207 is intended for normal business use, that resale or lease or charter or re-export from Gabon requires separate and specific authorization from the U.S. Department of Commerce, and subject craft will not be used within Southern Rhodesia.

Mr. STIMPSON. I think the Rhodesia one explains itself, but the other things—it ties us down to so many limitations on a little $40,000 airplane.

So, Mr. Chairman, I think we are saying to you today——

Mr. BINGHAM. Excuse me. Is that because of that communications that you mentioned? The radio system?

Mr. STIMPSON. Yes. He has to go through the procedure here.

Mr. BINGHAM. Not otherwise? That plane otherwise would not be——

LIST AND PROCESS SHOULD BE UPDATED

Mr. STIMPSON. Yes. What we would like to see is this list updated in the era of the 1970's instead of the era of the 1930's and be updated and reflective of current technology, that we are really pro-

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tecting something. What we are trying to keep out of the Soviet bloc is also applying to the free world of friendly nations. We recommend that the process be updated whereby the friendly nations with whom we do not have foreign policy problems and national security considerations—that there be a real, true flow free system, a simplified system.

We have made these recommendations to the Department of Commerce and the Council on International Economic Policy. I must say we have some sympathetic ears in Commerce, and I hope that between this committee and the Congress and the Administration, perhaps some of these problems can be taken care of as you renew this piece of legislation. So, thank you very much.

[Mr. Stimpson's prepared statement follows:]

PREPARED STATEMENT OF EDWARD W. STIMPSON, PRESIDENT, GENERAL AVIATION MANUFACTURERS ASSOCIATION

I am Edward W. Stimpson, President of the General Aviation Manufacturers Association (GAMA). Our membership is composed of thirty-four companies that manufacture 99 per cent of the aircraft, engines, avionics, and component parts used in general aviation.

We concur completely with the presentation and specific recommendations made by the Joint Industry Group. We hope that this Committee will give serious consideration to the recommendations and facilitate their implementation into law.

The United States general aviation industry has developed and maintained a world leadership position. Sometime this year, the industry will export its 50,000th aircraft, and over 90 per cent of the world's fleet has been manufactured in the United States. We want to keep this world leadership position. We are also the leading producers of engines and avionics for general aviation aircraft produced both in the United States and abroad.

Historically, about 25 per cent of the United States general aviation production has been exported. In 1975, U.S. general aviation manufacturers exported 3,550 airplanes valued at more than 340 million dollars to over 85 countries.

The growth in general aviation, both in the United States and throughout the world, is attributable to the increasing transportation, industrial, and agricultural role of the general aviation airplane. The general aviation airplane is no longer regarded as a luxury, but as essential transportation and economic necessity. Most of the sales abroad are in the private sector for business use.

General aviation products do not usually involve what is regarded as high technology. General aviation products are basically products of well known design and technology.

This successful record of export growth has come about as a result of systematically preparing and establishing a worldwide network of sales outlets (outside of the Soviet Bloc); by training our international sales staff in the techniques of marketing and by designing technological variations of our airplanes to apply them to specific foreign requirements. Independent businesses located in individual countries have been the keystone to the international distributor-dealer network. Substantial capital investments now exist around the world in sales and technical installations to provide repair, overhaul, and warranty services to the airplane customer, and generally perform the functions of a fixed-base operator comparable to the best general aviation installation in the United States.

This effort has been going on for over thirty years, and U.S. manufacturers have been providing airplanes to the peoples of the world because our products have earned the confidence of public and private sector customers due to the integrity of our methods, the quality of our products, and their usefulness.

In addition to being utilized in the industrialized and developed countries, vast benefits and opportunities for use are manifesting in the developing world. There the airplane is inseparable from economic development. To build railroads and other surface transportation systems is time-consuming and costly. The airplane can also establish communications more efficiently in mini-

mum time. In areas where, for centuries, life has proceeded on the village level, peoples' horizons have been widened by the opportunity to travel to distant destinations. Communications are needed with remote and inaccessible sites where raw materials or oil are extracted. Agricultural development programs and the whole spectrum of expanded economic activities require for people to be mobile. As more airplanes are placed in service, more pilots need to be trained, and fleets of single and multi-engine trainers are sold for these requirements. Areas must be surveyed for natural resources; countries have to be mapped. As more airplanes operate, *airport* networks have to be extended, and we supply airplanes equipped with airborne electronics to calibrate the navigation and communications facilities for flight safety. Public health services need airplanes for rescue and evacuation; we have built airplanes with complete intensive care units to bring medical services to the Australian outback or to farmers in the jungles of Venezuela and the new nations of Africa.

We view the world market for the general aviation airplane as increasing and potentially equaling the domestic market. However, to realize this goal, there are many challenges. Foreign competition is increasing, the world energy crisis has precipitated a variety of import restrictions in foreign countries; tariff and non-tariff barriers restrict the flow of trade, protectionistic actions have been taken by a number of countries to protect their aircraft industries. These are serious impediments to the continued growth of general aviation airplane exports. However, one of our biggest concerns is not overseas, but rather, right here in Washington, D.C. with the policies and practices of our own U.S. government.

The U.S. licensing system is viewed by our foreign competitors as one of their selling advantages. Our industry has experienced unnecessary delays and we have lost sales. We have seen needless and apparently unnecessary coordination and confusion between agencies of our government. Unexplained foreign policy considerations have extended the deliberations of validating licenses, and inordinate delays result.

We have attempted for almost two years to have the U.S. Department of Commerce amend the regulations, to update the regulations, and to reflect more realistic controls of technology. For example, Interpretation 20 applies to the export of aircraft for civil use—whether it is a wide-bodied 747 or a two seat type trainer. The equipment list of Interpretation 20 requires a validated license for such ancient equipment as a single side band radio (in existence for 30 years) and a 720 Channel VHF radio which is required by our own Federal Aviation Administration to be installed in U.S. registered aircraft. This technology exists worldwide. It is not new technology. Yet, because of COCOM, United States aircraft manufacturers must apply for a license to export aircraft to many friendly nations. The problems of licensing delays, coupled with the fact that foreign competitors are being assisted by their government, is causing difficulties for U.S. companies.

COCOM, as we understand it, was created to control certain types of technological exports to the Soviet Bloc countries. The COCOM equipment list should be immediately revised and should not be used as a basis to control general aviation airplane exports to countries outside of the Soviet bloc. If there are foreign policy considerations for not doing business with certain countries, this should be duly established and justified to the Congress and the exporter.

The content of Interpretation 20 is woefully outdated and obsolete. Its use for other purposes abrogates the intent of Congress as set forth in Section 3, Declaration of Policy of the Export Administration Act.

In conclusion, we would urge the Congress to be more directive in this legislation with regard to the use of qualified experts from industry in establishing export controls. It does not make sense that technology that has existed for decades and is in use by foreign countries, friends and foes alike, should be an impediment to the export of U.S. made products, by our own government. Through effective consultation with industry and a requirement to be responsive to industry recommendations on a timely basis, these problems could be readily resolved in the best interests of our nation.

In recent weeks, our Association has made a number of recommendations to the Department of Commerce, Council on International Economic Policy, and the Department of State, which we believe will facilitate trade without compromising the stated purposes of the Export Administration Act. The time is overdue for an overall updating and simplication of the current system. We

are hopeful that working together we will be able to achieve legislation and regulations which will improve the entire process.

Mr. BINGHAM. Thank you very much, Mr. Stimpson. Could I just get something clarified—Does your association represent the manufacturers of aircraft that generally go under the heading of general aviation? That is, nontransport, noncommercial aircraft?

Mr. STIMPSON. General aviation. Right. Our companies—Thirty-four companies make 99 percent of the general aviation aircraft: Cessna, Beechcraft, et cetera.

Mr. BINGHAM. You referred to the 747 in your statement.

ALL AVIATION IS "LUMPED" TOGETHER

Mr. STIMPSON. One of our reasons—I think the Department and the Export Administration—lump us all together. Radios, technical equipment, small airplanes, and little trainers are put in the same category as 747s.

So we are all lumped in one big ball, and we are saying, you know, we are not really in high technology. We are out here doing a different thing.

Mr. BINGHAM. Would you like——

Mr. WHALEN. I just want to ask one question for clarification. You mentioned the old technology that still is on the list. However, does this technology exist in the Eastern bloc?

Mr. STIMPSON. Yes, basically. They make airplanes in the Eastern bloc. They make jet airplanes. They make piston airplanes. They basically have the technology. We just think we do a better job of it, and that is why we have our leadership.

WIDE-BODIED AIRCRAFT

Mr. BINGHAM. Can you answer a question that I raised the other day and I couldn't get an answer to it? It is perhaps more curiosity than anything else, but why does the wide-bodied plane require—why is that a peculiar technology which currently the Eastern European nations apparently do not have?

Mr. STIMPSON. I think again it gets back to our leadership in terms of technology.

Mr. BINGHAM. What is it technically about wide-bodied aircraft that is so special?

Mr. STIMPSON. They have got large airplanes in the Eastern bloc countries. There are primarily military airplanes. But it is the economically commercial airplanes, the wide-bodied jets where we have developed the technology and production capacity.

Mr. BINGHAM. Mr. Gray.

STATEMENT OF JAMES A. GRAY, EXECUTIVE VICE PRESIDENT, NATIONAL TOOL BUILDERS' ASSOCIATION

Mr. Gray began his career in association work in 1949 when he left his job as statistician with the Celanese Corporation to assume a similar position with the National Machine Tool Builders' Association. At NMTBA, he steadily advanced with the organization and held the positions of chief statistician, assistant secretary, and assistant secretary-treasurer until he left NMTBA in

1964 to become executive vice president of National Tool, Die & Precision Machining Association. In February, 1966, he returned to NMTBA to serve as executive vice president.

Mr. Gray is a graduate of Marietta College and received further schooling at Western Reserve University, both in Ohio, prior to working for the Celanese Corporation.

He serves as president and general manager of the National Machine Tool Builders' Show, Inc., a wholly-owned subsidiary of NMTBA, which sponsors one of the largest industrial equipment exhibitions held anywhere in the world. In 1970, the last "Machine Tool Show" was held in Chicago, and 1972 marked the beginning of the "International Machine Tool Shows" which are held on a two-year cycle. At the first IMTS, there were over 700 exhibitors from sixteen nations and approximately 65,000 visitors from virtually every industrialized nation in the world. IMTS-76 will be even larger and machine tools and equipment from thirty nations will be exhibited at it.

Mr. Gray attends the major overseas machine tool expositions held by counterpart associations.

As a representative of NMTBA and the machine tool industry, he has made several trips and has participated on trade missions to the U.S.S.R., Poland, Hungary, Romania, Czechoslovakia, and Brazil. He visited Moscow and Leningrad in September, 1973, as a guest of the Minister of the Machine Tool and Tool Making Industry of the U.S.S.R. He is a charter member of the U.S.-Romanian Economic Council and the newly-formed U.S.-Czechoslovakian Economic Council. In 1975, he traveled to Iran to meet with potential buyers of American machine tools and to discuss the possibility of a U.S. machine tool show in Iran.

In April, 1974, he was in Moscow for the opening of STANKI-USA—the first U.S. exhibition of machine tools in the U.S.S.R.—which was initiated by NMTBA and sponsored by the U.S. Department of Commerce. In April, 1973, he attended the Chinese Export Commodities Fair in Kwangchow, the People's Republic of China, and returned to that country in November, 1975, to conduct the joint Manufacturing, Technology and Science Symposium and Trade Mission. That trip took him to Peking where there were meetings with the China National Machinery Import and Export Corporation and on to Shanghai where he and the mission members visited Chinese machine tool factories.

Mr. GRAY. Mr. Chairman, NMTBA appreciates this opportunity to present its views in these oversight hearings on export licensing of advanced technology. I will summarize our full statement and ask that it be included in the record in its entirety.

Mr. BINGHAM. It will be so done.

Mr. GRAY. This afternoon, this distinguished subcommittee will be addressing itself to nothing less than the national security of the United States. Our statement, along with the testimony of other witnesses, should be analyzed from that perspective.

We are asking neither the subcommittee nor the appropriate executive branch agencies to countenance breaches in the national security in the interest of providing business for our members and jobs for our workers.

What we are asking is that you consider whether in fact the national security is today being breached by the haphazard, uneven, and technically unsound administration of the various unilateral and multilateral export control laws and regulations.

IMPORTANCE OF MACHINE TOOL INDUSTRY

Our government spends billions of dollars every fiscal year as indeed it should, to maintain parity, if not superiority, in a myriad of national defense items. However, if the United States does not also have a healthy and viable machine tool industry, our Nation's

ability to equip itself in peacetime, much less wartime, will be seriously compromised. We believe that the seeds of just such a compromise are in existence today.

The charts we have submitted for the record impel us to the inescapable conclusion that the health of the American machine tool industry, and the national security which depends upon it, is heavily conditioned upon our industry's ability to expand its global markets.

Given the European Economic Community's growing interreliance upon the West European machine tool industry, the largest, most dynamic markets available to our industry lie in the Soviet Union, in Eastern Europe, and in the People's Republic of China.

However, our ability to compete with our Japanese and West European trading partners in the vast Socialist marketplace is severely restricted by, among other things, the misapplication and maladministration of the various export control regulations of COCOM and the Export Administration Act.

EXAMPLE OF LICENSING PROBLEMS

Permit me to give you a recent example. An NMTBA member company had consummated a deal with the Soviet Union to supply a pilot order for five machines valued at about $3 million to a Soviet factory.

The Office of Export Administration in the Commerce Department had the license application under consideration for 9 months, despite the fact that the numerical controls on the machines were outdated by U.S. standards and were not under COCOM control. Our member had also demonstrated that comparably accurate machines were available from a non-COCOM source.

In February of this year, the Soviets finally became tired of waiting for our Government to make up its mind whether to grant this license. They canceled the order with the American company and replaced the order with a West German machine tool builder for machines equipped with far more sophisticated numerical controls, which are clearly on the COCOM restricted list.

Now, our member lost a $3 million sale; $3 million worth of jobs were lost to American workers. The West German machine tool industry increased its ability to overcome American technological superiority. And the Soviets got a machine with far more sophisticated controls than they would have been able to buy in the United States.

The recent GAO report on East/West trade indicates that the administration's failure to provide timely answers has both hurt American exporters and has severely strained relations with our COCOM trading partners in cases where the Economic Defense Advisory Committee, EDAC, has been asked to grant COCOM exceptions.

PROPOSED LEGISLATIVE GUIDELINES

Therefore, NMTBA calls upon this subcommittee to provide the following legislative and/or oversight guidelines in order to facilitate timely disposition of license requests, whether originated by U.S. companies or by COCOM.

Many of these guidelines are contained in the GAO report in the form of recommendations to the appropriate executive branch agencies. NMTBA believes that these GAO recommendations need the legislative mandate, which only the Congress can provide, if they are to be promptly adopted.

First: OEA and the Advisory Committee on Export Policy, ACEP, should be required to process license requests from U.S. companies and exception requests within 60 days of their receipt.

Second: If additional personnel, knowledgeable personnel, and computerized data bases are required to promptly process license and exception requests, the necessary funds should be authorized in this legislation and should be appropriated by the Congress.

Three: The unanimity rule in ACEP deliberations should be eliminated. If the ultimate authority lies with OEA—and ACEP's role is merely advisory—then a unanimity rule is not only unnecessary, it is too time consuming.

Four: The EDAC review structure for COCOM exception cases should be transferred to ACEP.

Five: When it is necessary for a license application to be forwarded to COCOM, OEA should be required to clear the documentation submitted with the company applying for the license, to make sure it is valid. And this recommendation was not included in the GAO report.

Six: The current technical criteria used by the Defense Department and others in determining a response to license applications and exception requests should be narrowed to probable, rather than possible, military uses and detrimental effects on U.S. security.

Permit me to illustrate this point. This chair I am sitting on could be possibly converted to be the backseat of an automobile, but it wouldn't be practical, and I doubt very much that anyone would want to spend any time or money to do it.

When this comes up in our discussions with the people in the Government, when we are discussing licenses, we usually have to say: "Yes, it is possible, but it is highly improbable."

COCOM PARTNERS PROSPER AT U.S. EXPENSE

Anyone who believes that the COCOM regulations have resulted in withholding advanced equipment and technology from the Socialist countries has been seriously misled.

Our "virtuous" practice keeps us from selling more to the Socialist countries, while our NATO partners prosper, by taking away the lucrative business that we are still not able to handle. The machine tool industries of other nations reap the profits, which in turn are plowed into research and development to further close the technological lead the United States once enjoyed.

Aggravating the situation is the fact that Sweden and Switzerland, who are not COCOM signatories, are capable of producing very sophisticated equipment. It is known that they have shipped numerically controlled machine tools to the Socialist countries.

Throughout this testimony, we have been talking about the sale of equipment for the manufacture of nonstrategic products. In no way does our industry suggest that machines designed especially for

the production of armament be decontrolled, regardless of its destination.

While the U.S. export control policies have placed the U.S. machine tool industry at a disadvantage, they have not really served the purpose for which they were intended. They have not prevented the Socialist countries from acquiring the equipment they want from other countries.

They have fostered the development of advanced technology in the Socialist countries. The policies have resulted in the loss of many jobs in the United States, and the loss of profits on the sales has meant that less money was available for research and development so necessary to maintain a technological lead.

We are not asking for special treatment. We are asking for fair competition with other COCOM signatories. We are also asking this subcommittee to seriously consider whether the machine tool industry's inability to compete on an equal footing with foreign companies in the nonmarket countries does not, in fact, work against our national security.

I tried to shorten that. I will be glad to answer any questions.

[Mr. Gray's prepared statement and charts follow:]

PREPARED STATEMENT OF JAMES A. GRAY, EXECUTIVE VICE PRESIDENT, NATIONAL MACHINE TOOL BUILDERS' ASSOCIATION

Good afternoon. My name is James A. Gray. I am Executive Vice President of the National Machine Tool Builders' Association (NMTBA). NMTBA is a national trade association with approximately 360 members accounting for about 90% of the United States' machine tool production.

Most of our member companies are small businesses. Over 70% of these companies have fewer than 250 employees. The total annual machine tool shipments of the industry in 1975 were $2.45 billion, and 1975 net new orders were $1.19 billion. The entire industry has approximately 90,000 employees. This represents a drop in 7,000 jobs since 1974.

Thus, we can expect a substantial drop-off in employment in the machine tool industry, unless the mid-1975 pickup in net new orders is sharply increased in 1976. Ours is a long lead-time industry, and it is still working on a backlog of orders from 1973 and 1974, when business was very good. However, the backlog is being steadily reduced, and the employment picture in our industry is unlikely to remain stable without substantial increases in domestic and/or foreign orders.

NMTBA appreciates this opportunity to present its views in these oversight hearings on export licensing of advanced technology.

NMTBA IS VITALLY CONCERNED WITH NATIONAL SECURITY ISSUES

This afternoon, this distinguished subcommittee will be addressing itself to nothing less than the national security of the United States. Our statement, along with the testimony of other witnesses should be analyzed from that perspective.

We are asking neither the subcommittee nor the appropriate Executive Branch agencies to countenance breaches in the National Security in the interest of providing business for our members and jobs for our workers.

What we *are* asking is that you consider whether, in fact, the national security is *today* being breached by the haphazard, uneven and technically unsound administration of the various unilateral and multi-lateral Export Control laws and regulations.

A HEALTHY AND VIABLE MACHINE TOOL INDUSTRY IS VITAL TO THE NATIONAL DEFENSE

In considering the question, let us first examine the products we are attempting to sell at home and abroad. Machine tools are the foundation of

any modern industrial economy. Machine tools are machines which cut, shape and form metal. By definition, machine tools are necessary to the production of virtually all machinery and parts, consumer items made of metal, and most national defense items.

Thus, if the American machine tool Industry does not remain strong, the timely production, in the event of a national emergency, of all types of weapons, armaments, airplanes, missile systems, production machinery and other defense items will be imperiled.

Our Government spends billions of dollars every fiscal year (as indeed it should) to maintain parity, if not superiority, in a myriad of national defense items. However, if the United States does not also have a healthy and viable machine tool industry, our nation's ability to equip itself in peacetime (much less wartime) will be seriously compromised.

U.S. UNDERINVESTMENT HAS CAUSED MUCH OF THE U.S. MACHINE TOOL INDUSTRY'S PROBLEM

We believe that the seeds of just such a compromise are in existence today. In the 1960's, the United States had the lowest rate of capital investment of any major industrialized nation.[1] As a result of this insufficient investment, we also had one of the lowest rates of productivity growth of any Western nation.[2] This resulted in an average national economic growth rate of four percent per year, which was sixth among the seven major competing industrialized Western nations.[3]

As other nations channeled relatively more of their resources into capital investment, acquiring more modern plants and equipment, they eroded our competitive edge in world markets adding to our potential for unemployment, inflation, capital shortages, *and*, ultimately, this contributed to the 1974 recession. *Chart 4* shows the American economy's consumption of machine tools for the past fifteen years. Our nation's purchases of machine tools looks like the proverbial roller coaster. During much of the early 60's, machine tool consumption in America was on the uphill climb. Then, in 1967, we began a frantic trip downhill into the depths of a 1971 machine tool depression. Since that time, American machine tool consumption has been climbing at an ever faster rate. Consumption in 1975 ran to an estimated 2.2 billion dollars.

We have attained a dizzying altitude, but the precipice is now in full view. New orders were down in 1975, and we have been working off our backlogs at a rapid pace.

These wild fluctuations in machine tool demand are damaging. When demand falls too low, it takes years to rebuild the work force and recover revenues which are lost.

HEAVY BACKLOGS CAUSE HEAVY IMPORTS OF MACHINE TOOLS

The growth in backlogs brought on by sudden demand creates a serious problem—the loss of another portion of our domestic market to foreign competitors. As backlogs grow and our deliveries stretch but, more and more of our domestic customers begin looking overseas to meet their immediate machine tool needs.[4] Thus, as machine tool backlogs rise, machine tool imports follow just as surely as night follows day. To be sure, the *dollar* value of imports decreases as backlogs decline. But the imports hold onto their freshly captured *market share*, leaving a smaller piece of a smaller pie for the American machine tool industry.

Chart 6 illustrates the point. In the mid-60's when business was on the upswing, our overseas competitors, cashed in with a 165% increase in their share of the American market. Then the foreigners held on to their recently gained market share until the next surge in business. In 1974, when our backlogs were at all time highs, our foreign competitors increased their market penetration by another 32%. *Now, they are taking one out of every seven machine tool dollars spent in the United States.*

It would mean economic disaster to try to equip our plants to meet domestic demand peaks just so that we can keep imports out of the country. The only

[1] See chart 1 on p. 155.
[2] See chart 2 on p. 156.
[3] See chart 3 on p. 157.
[4] See chart 5 on p. 159.

way we can afford to gear our industry for the peaks is by eliminating the deep valleys, so that we have a stable, growing market for our products—one that would not be subject to the violent ups and downs for which the American machine tool industry is so famous.

INCREASED EXPORTS ARE VITAL TO A HEALTHY U.S. MACHINE TOOL INDUSTRY

However, the world machine tool market has been growing steadily and is almost unaffected by the ups and downs of individual national machine tool demand cycles.[5] It is simply the result of the counter-cyclical effect of combined markets. The $13 billion world machine tool market is an answer to our industry's problems. *If* the American machine tool industry would really market its products on a global scale, it could become almost immune to the vagaries of the domestic business cycle. As a result, our industry could better absorb sudden domestic demand peaks and meet our customers' immediate machine tool needs.

The dollar value of our exports has been rising,[6] but this is not the whole story. The dollar volume of exports does not take into account the effects of inflation and world market growth. To get the real picture of where the American machine tool industry stands in the world market, we must look at *our share* of that market.

Just ten years ago, in the mid-60's, we still had a major part of the global machine tool market. About one-third of the world's machine tool output was made right here in America. Today, that portion has fallen to 19 per cent. In short, over the past decade, our share of the world market has declined nearly 40 per cent.

Chart 9 shows that Japan almost doubled its share of the world's total machine tool business from 6% to 11%. West Germany's world market share has grown from 15% to slightly more than 20%, while the remainder of the European Economic Community (EEC) suffered a slight decline in total market share.

Our industry's 40% drop in world market share is attributable first to a declining share in the U.S. market.[7] Today, fully one out of every seven dollars spent on machine tools in the United States is spent on a machine tool produced in a foreign country by foreign workers and at a profit to foreign businessmen.

Chart 11 shows that in the export arena we have taken a worse drubbing than at home. When we look at the dollar value of our exports, the results seem encouraging. But if we look at American exports as a percentage of all of the machine tool exports in the world, the results are indeed discouraging. In 1964, twenty-one percent of the world's machine tool exports were produced by the United States. Today that percentage has fallen to nine percent. That represents a 60 percent loss in America's share of world export markets in just ten years, but even more significant is the substantial gain for our major foreign competitors.

West Germany, after expanding its market share by 30 percent over the past decade, now holds 38 percent of the export market. Today the other EEC countries divide up 18 percent of the market, while Japan has captured nearly four percent.

Why is this so? Why have we lost such a large portion of the markets that once relied on American machines?

Chart 12 shows that part of the answer lies in our four traditional export markets—West Europe, Japan, Canada, and Mexico. Ten years ago the American machine tool industry still dominated those markets and they accounted for 70 percent of our exports, but today they account for just over half our exports.

Chart 13 shows that just a decade ago, more than 35 percent of all the machine tools imported by the EEC, Japan, Canada, and Mexico were made in America. But over the decade, our foreign competitors have turned into strong adversaries, so that today only fifteen percent of these once-lucrative markets are served by American machine tools—a drop of more than 50 percent in market share in just ten years!

In the middle 1960's, NMTBA's International Trade Committee, after careful study, selected seven nations that had potential for export growth. These

[5] See chart 7 on p. 161.
[6] See chart 8 on p. 162.
[7] See chart 10 on p. 164.

nations fall into three market areas—Brazil, the Soviet Union, and the rest of Eastern Europe. Since that time, NMTBA and its members have conducted a modest program aimed at developing these markets. *Chart 14* shows that today, after only a few years, our share of the world exports to these market areas has increased 1000 percent. With the exception of Korea (where there are special government considerations), these are the *only* known machine tool market areas anywhere in the world where America's market share has increased in the last ten years. This export growth has strengthened our total exports significantly. In the mid-60's these markets accounted for only 1.2 percent of our national machine tool exports. By 1974, this figure had grown to 25 percent of all U.S. machine tool exports. The lion's share of the growth has occurred in Brazil and the Soviet Union, while growth in the other East European markets so far has been modest. There are signs that our market share in East Europe will be accelerating over the next few years.

However, Brazil has become less attractive in recent months. Both tariff and non-tariff barriers imposed by the government of Brazil have made it virtually impossible for our members to market their products in Brazil without locating plants there. Thus, this important market will apparently be foreclosed to most American machine tool builders, at least, for the foreseeable future.

REDUCING EXPORTS TO THE SOCIALIST COUNTRIES WILL HARM THE MACHINE TOOL INDUSTRY

All of this brings us to the inescapable conclusion that the health of the American machine tool industry—and the National Security which depends upon it—is heavily conditioned upon our industry's ability to expand its global markets.

The largest, most dynamic markets available to our industry (given the EEC's growing inter-reliance upon the West European machine tool industry) lie in the U.S.S.R., in Eastern Europe and in the People's Republic of China, to which sixteen of our members travelled on an IOGA Trade Mission last November.

However, our ability to compete with our Japanese and West European trading partners in the vast socialist marketplace is severely restricted, among other things, by the misapplication and maladministration of the various export control regulations of COCOM and the *Export Administration Act*. As we shall show later in this statement, our Japanese and West European trading partners are less hampered by export controls than are U.S. machine tool companies.

As a result, countless dollars for research and development (to maintain our ever-shrinking technological superiority) and countless jobs are being lost to Japanese and West European machine tool builders, thus enabling them to increase their ability to compete for *American* business in the *American* marketplace. And the U.S. machine tool industry's ability to provide stable employment and its capacity to stand ready to produce what is needed for a national emergency are sorely diminished.

We have already shown that, over the last ten years, our share of the American market has declined by ten per cent. At the same time, our share of the world export market has declined 60 per cent. As a result, our share of the world's total machine tool output has declined nearly 40 per cent in ten years.

The principal significant increase in U.S. machine tool exports has been to the Soviet Union. Since 1970, U.S. machine tool exports to the U.S.S.R. have increased from less than 1% to approximately 16%, or from $6 million in 1970 to nearly $90 million in 1975. This translates into over 2,500 jobs. However, in the same period, our foreign machine tool competitors' export sales to the Soviet Union have increased from $140 million to an estimated $400 million.

A substantial share of these foreign machine tool sales would have been made by United States companies, were it not for the fact that lack of competitive financing and overly-stringent enforcement of export controls, have made our industry an unrealiable trading partner vis-a-vis the socialist countries.

Permit me to give you a recent example. An NMTBA member company had consummated a deal with the Soviet Union to supply a pilot order for 5 machines valued at about three million dollars to a Soviet factory. The Office of Export Administration (OEA) in the Commerce Department had the license application under consideration for nine months, despite the fact that the numerical controls on the machines were outdated by U.S. standards and were not under COCOM control. Our member had also demonstrated that compara-

bly accurate machines were available from a non-COCOM source. In February of this year, the Soviets finally became tired of waiting for our government to make up its mind whether to grant this license. They cancelled the order with our member company and replaced the order with a West German machine tool builder for machines equipped with far more sophisticated numerical controls, which are clearly on the COCOM restricted list.

Now can anyone tell me how the National Security was served by this sequence of events? Our member lost a three million dollar sale. Three million dollars worth of jobs were lost to American workers. The West German machine tool industry increased its ability to overcome American technological superiority. And the Soviets got a machine with far more sophisticated controls than they would have been able to buy in the United States.

CONGRESS SHOULD REQUIRE THAT EXPORT LICENSES MUST BE ISSUED IN A TIMELY FASHION

In March, 1972, Nicholaas A. Leyds, who was then President of the Bryant Grinder Corporation, testified before the Senate Banking Subcommittee on International Finance in behalf of NMTBA. At one point in his testimony, Mr. Leyds said "The thing that at this moment concerns us most with respect to customers is the time it takes to have those export licenses handled . . . If you have a plan to build a factory somewhere you have a schedule in order to do it. You go around to your suppliers and you lay out by the critical path method what machines you want and when.

"If we have a customer who says, 'we want a number of machines from you,' we say, 'well, we will think it over and let you know in half a year.' He will leave our office fast and go to a competitor. "This is much stricter in countries that have an economy that is completely directed like in the Eastern European countries and in the U.S.S.R. They must conclude the plan in a certain time. If they have any doubts about the length of time it will take us to get an export license, whether or not we will get it, they simply say, 'we are not going through this agony—we are going to Japan.'"

The problem, which Mr. Leyds described in 1972—four years ago—is still with us today. The Government Accounting Office (GAO) said in the summary statement of its February 4, 1976 *Report on the Government's Role in East West Trade—Problems & Issues* on page 46:

"Commerce, OEA, and ACEP procedures are slow and awkward and needlessly dependent on unaccountable practices, unanimity rules, limited OEA discretion, arbitrary agendas, and unlimited discussion of exception requests.

"Defense wants to examine the military potential of each exception request. This examination is heavily dependent upon *highly subjective appraisals* of the potential exports' *possible impact* on Communist military and economic capabilities. Underlying assumptions contained in these appraisals are seldom critically examined. Defense insists on post-shipment safeguards which are neither effective nor feasible as conditions for approving such exceptions."

The GAO report indicates that this same failure to provide timely answers has severely strained relations with our COCOM trading partners in cases where the Economic Defense Advisory Committee (EDAC) has been asked to grant COCOM exceptions.

Therefore, NMTBA calls upon this Subcommittee to provide the following legislative and/or oversight guidelines in order to facilitate timely disposition of license requests, whether originated by U.S. companies or by COCOM. Many of these guidelines are contained in the GAO report in the form of recommendations to the appropriate Executive Branch Agencies. NMTBA believes that these GAO recommendations need the *legislative mandate*, which only the Congress can provide, if they are to be promptly adopted.

OEA and the Advisory Committee on Export Policy (ACEP) should be required to process license requests from U.S. Companies and exception requests within 60 days of their receipt.[8]

If additional personnel and computerized data bases are required to promptly process license and exception requests, the necessary funds should be authorized in this legislation and should be appropriated by the Congress.

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[8] However, the OEA should not be permitted to say to American exporters, "If you want an answer within the 60 day time period, the answer is "no". If you will give us an extension we may work things out for you." There is no reason why an adequately staffed OEA cannot process license applications in a timely and expeditious fashion.

The unanimity rule in ACEP deliberations should be eliminated. If the ultimate authority lies with OEA—and ACEP's role is merely advisory—then a unanimity rule is not only unnecessary—it is too time-consuming.

The EDAC review structure for COCOM exception cases should be transferred to ACEP.

The current technical criteria used by the Defense Department and others in determining a response to license applications and exception requests should be narrowed to *probable* rather than *possible* military uses and detrimental effects on U.S. security.

Permit me to illustrate this point. The chair upon which I am sitting could *possibly* be used as the backseat of an automobile. However, it is certainly less than *probable* that it would be used for that purpose. The cost of remaking this chair into the backseat of an automobile (as well as the time it would take to accomplish it) would be simply prohibitive. And when I finished the job of conversion, this chair probably wouldn't function very well as the backseat of an automobile.

I and other NMTBA staff members have been involved in inter-agency meetings dealing with license applications when Defense Department and other personnel have asked, "is it *possible* that this machine could be used for this or that military purpose." Our response has been, "yes, it is *possible*—but it is highly *improbable*, because the entire machine would have to be rebuilt to do the type of work you have described." And if the Soviets (or anyone else) had the technological capability to rebuild the machine or to add the necessary controls, they could and would build their *own* machine for the *specific* application and which would be *far* more efficient.

"Well," our friends from Defense or OEA reply, "then we will have to deny this license, because the *possibility* exists that this machine could be used for a military or strategic purpose."

This type of mentality has cost our industry and its workers millions of dollars and thousands of jobs. Congress should make clear its intent that *probability* of proscribed end use be the criteria for denying an export license, rather than mere *possibility*.

SOCIALIST COUNTRIES ARE ABLE TO IMPORT NUMERICALLY CONTROLLED MACHINE TOOLS, DESPITE COCOM REGULATIONS

Prior to 1973 virtually all machine tools, regardless of their technological degree of sophistication, required validated licenses for shipment to the Socialist countries and some machines had to be licensed for export to "friendly" countries as well. In 1973 the standard, general-purpose machines were removed from the controlled list through the efforts of the NMTBA working with the Department of Commerce.

However, our major products of interest to the rest of the world are the more highly automated and sophisticated types of machines. These include most of the numerically controlled machines, which are still covered by COCOM agreements and are thus subject to validated license requirements, which are very difficult to obtain. Although one branch of the Department of Commerce expends considerable effort and money on the promotion of overseas trade, other sections, acting in concert with ACEP and EDAP, deny licenses for the shipment of the equipment most desired by foreigners.

A major problem is that there has not been a uniform interpretation of the existing COCOM regulations by all of the participating nations. As a result, it has been the American machine tool industry that has been hit hardest by COCOM controls.

In an analysis called "Hokum COCOM" the authoritative British journal "Economist" of March 8, 1975, said that "(Cocom and Chincom are) pretty toothless bodies, whose instructions were honoured more in the breach than in observance . . . some Western analysts estimate that only 5% of Soviet defense and investment resources were affected." The "Economist" continues that "the strategic embargo policy has been a constant bone of contention among Western powers for years, with the Americans normally in the role of virtuous practitioners embittered by their partners' faithlessness." Our "virtuous" practice (I prefer to call it self-flagellation) keeps us from selling more to the Socialist countries, while our NATO partners prosper by taking away the lucrative business we are still not allowed to handle. The machine tool industries of other nations reap the profits, which are in turn plowed into research and development to further close the technological lead the U.S. once enjoyed.

Anyone who believes that the COCOM regulations have resulted in withholding advanced equipment and technology from the Socialist countries has been seriously misled. However, we have found it difficult to obtain specific documentation. Obviously the companies in COCOM will not admit violation of the regulations for fear of losing sales opportunities. Nor are the Socialist countries going to admit specific purchases for fear of drying up their lines of supply. But they privately admit that they have no problem obtaining COCOM-listed machines and controls.

Aggravating the situation is the fact that a number of machine tool producing nations are not members of COCOM and so are able to ship to the Socialist countries without restraint. These include Austria, Brazil, India, Spain, Sweden and Switzerland. Sweden and Switzerland are capable of producing the most sophisticated equipment and it is known that they have shipped numerically controlled machine tools to the Socialist countries.

THE TECHNICAL ADVISORY COMMITTEES ARE NOT WORKING AS WELL AS THEY SHOULD

The *Equal Export Opportunity Act of 1972* made provision for the appointment of technical advisory committees, comprised of industry and government representatives, to advise the Secretary of Commerce on problems with commodities which the Secretary determines are difficult to evaluate for export control purposes. A Numerically Controlled Machine Tool Technical Advisory Committee was established in 1973. It thoroughly reviewed the problems of NC machines and submitted a report and recommendations to the Secretary.

The recommendations of the committee was presumably to have been given to the delegates to the COCOM meetings starting in October 1974. Here, however, the mechanism for government-industry cooperation apparently breaks down. The committee was not informed as to what instructions were given to the COCOM delegates. Furthermore, after the first COCOM meeting the technical advisory committee was not told of the results of the COCOM meeting or any of the details of the COCOM discussions. This was all considered to be "confidential" information although the committee members all had security clearance.

This points out a recurring problem that industry has faced in obtaining information from the U.S. Government. During the 1972 COCOM discussions, little word was given to the machine tool industry as to the events occurring at the meeting. While the competing machine tool industries of Western Europe and Japan knew earlier, the first positive information obtained by the American industry was learned from the British publication "Trade and Industry" dated October 12, 1972. This magazine paraphrased the COCOM regulations as then approved. It was not until January 29, 1973, that the U.S. Department of Commerce released an Export Control Bulletin which listed their version of the COCOM regulations. Considerable valuable time was lost during which the American industry could have been competing for the business on decontrolled machinery. This is another example of the failure of the U.S. Government to recognize the impact of the commodity controls on American business.

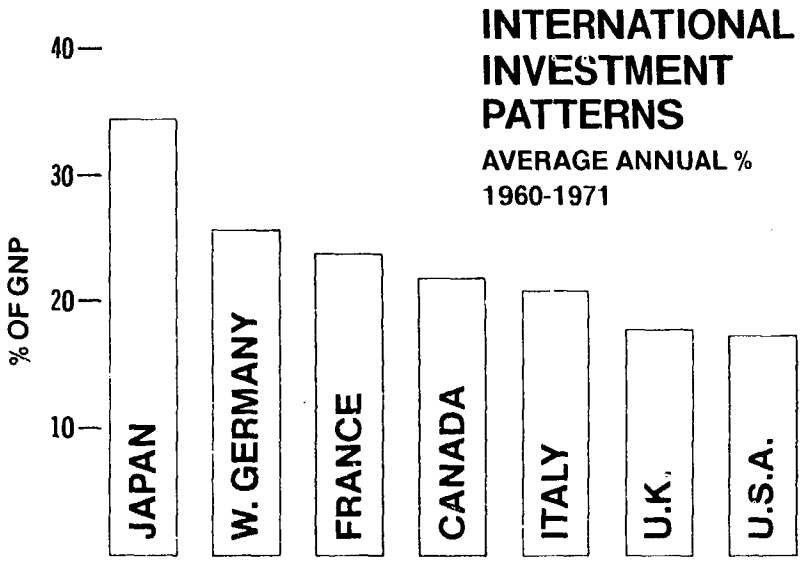
SUMMARY

Throughout this testimony, we have been talking about the sale of equipment for the manufacture of *non-strategic* products. In no way does our industry suggest that machines for the production of armament be decontrolled regardless of its destination.

While the U.S. export control policies have placed the U.S. machine tool industry at a disadvantage, they have not truly served the purpose for which they were intended. They have *not* prevented the Socialist countries from acquiring the equipment they want from other countries. They *have* fostered the development of advanced technology in the Socialist countries. The policies *have* resulted in the loss of many jobs in the United States, and the loss of profits on the sales has meant that less money was available for research and development so necessary to maintain a technological lead.

We are not asking for special treatment, we *are* asking for fair competition with other COCOM signatories.

We are also asking this Subcommittee to seriously consider whether the machine tool industry's inability to compete on an equal footing with foreign companies in the non-market countries does not, in fact, work *against* our national security.



SOURCE: INTERNATIONAL ECONOMIC REPORT OF THE PRESIDENT, MARCH 1975

CHART 1

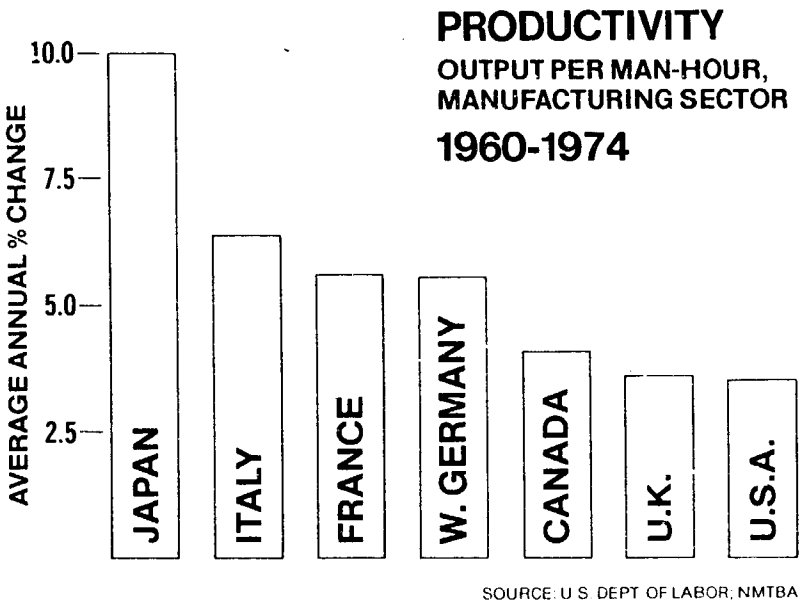
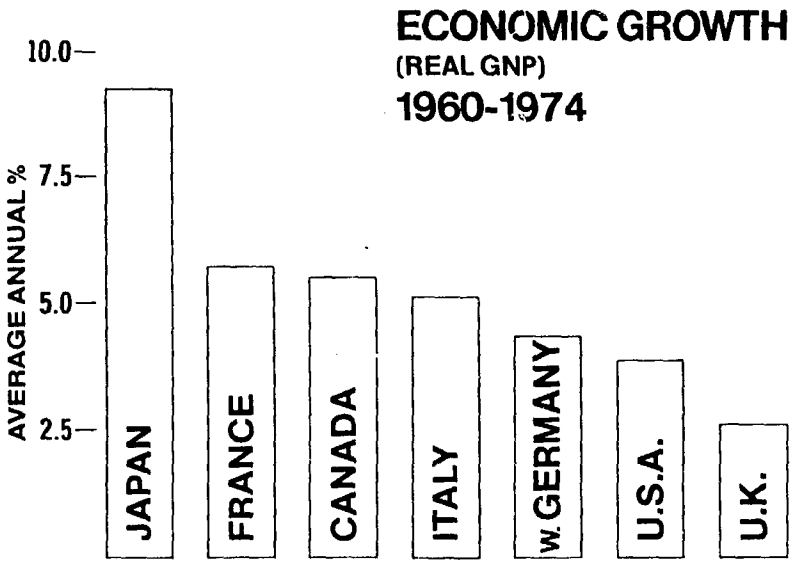

PRODUCTIVITY
OUTPUT PER MAN-HOUR,
MANUFACTURING SECTOR
1960-1974
AVERAGE ANNUAL % CHANGE
10.0
7.5
5.0
2.5
JAPAN
ITALY
FRANCE
W. GERMANY
CANADA
U.K.
U.S.A.
SOURCE: U S DEPT OF LABOR; NMTBA

CHART 2



SOURCE: INTERNATIONAL ECONOMIC REPORT OF THE PRESIDENT, MARCH 1975

CHART 3

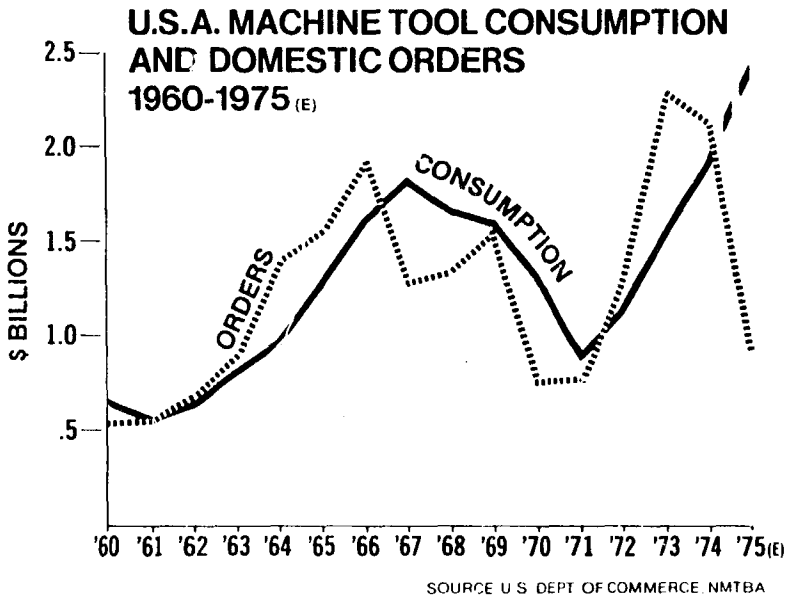

U.S.A. MACHINE TOOL CONSUMPTION
AND DOMESTIC ORDERS
1960-1975 (E)
$ BILLIONS
2.5
2.0
1.5
1.0
.5
ORDERS
CONSUMPTION
'60 '61 '62 '63 '64 '65 '66 '67 '68 '69 '70 '71 '72 '73 '74 '75(E)
SOURCE U S DEPT OF COMMERCE NMTBA

CHART 4

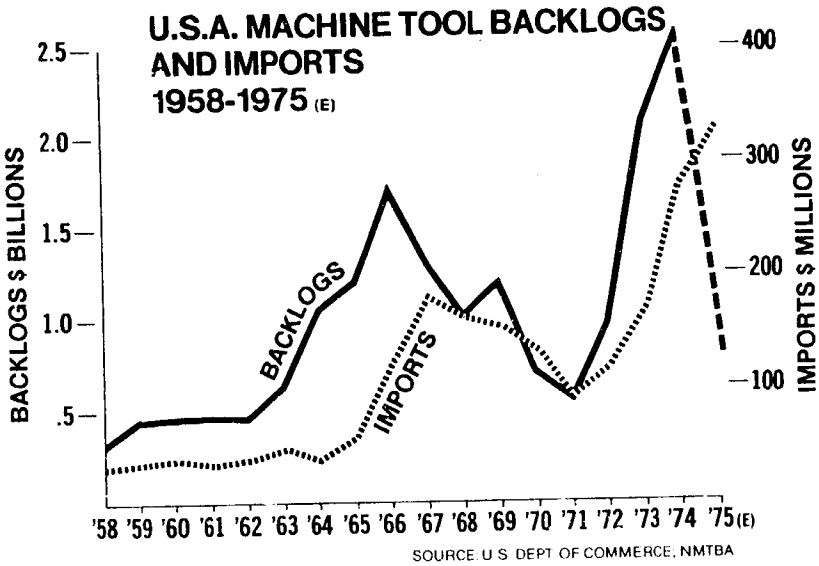

U.S.A. MACHINE TOOL BACKLOGS
AND IMPORTS
1958-1975 (E)
BACKLOGS $ BILLIONS
2.5
2.0
1.5
1.0
.5
IMPORTS $ MILLIONS
400
300
200
100
BACKLOGS
IMPORTS
'58 '59 '60 '61 '62 '63 '64 '65 '66 '67 '68 '69 '70 '71 '72 '73 '74 '75(E)
SOURCE: U S DEPT OF COMMERCE; NMTBA

CHART 5

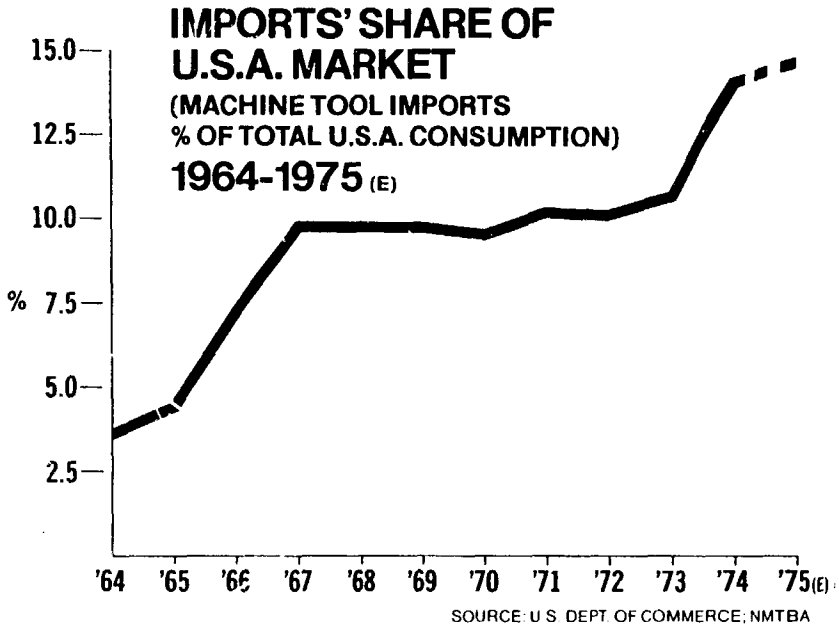

IMPORTS' SHARE OF
U.S.A. MARKET
(MACHINE TOOL IMPORTS
% OF TOTAL U.S.A. CONSUMPTION)
1964-1975 (E)
15.0
12.5
10.0
% 7.5
5.0
2.5
'64
'65
'66
'67
'68
'69
'70
'71
'72
'73
'74
'75(E)
SOURCE: U S DEPT OF COMMERCE; NMTBA

CHART 6

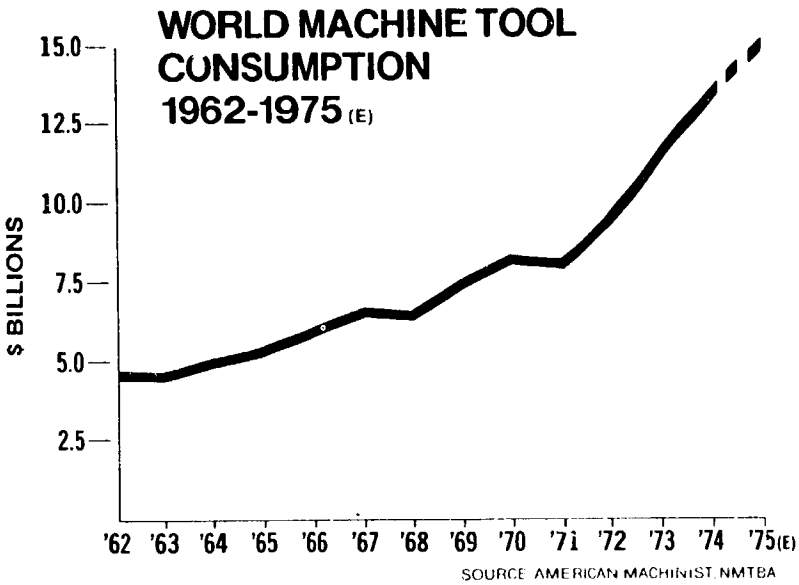

WORLD MACHINE TOOL
CONSUMPTION
1962-1975 (E)
$ BILLIONS
15.0
12.5
10.0
7.5
5.0
2.5
'62 '63 '64 '65 '66 '67 '68 '69 '70 '71 '72 '73 '74 '75(E)
SOURCE AMERICAN MACHINIST, NMTBA

CHART 7

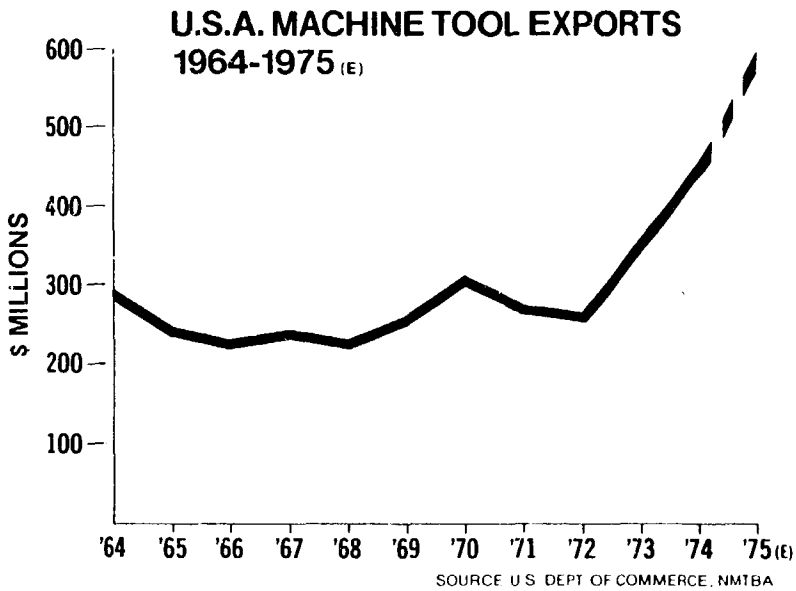

U.S.A. MACHINE TOOL EXPORTS
1964-1975 (E)
$ MILLIONS
600
500
400
300
200
100
'64
'65
'66
'67
'68
'69
'70
'71
'72
'73
'74
'75 (E)
SOURCE U S DEPT OF COMMERCE, NMTBA

CHART 8

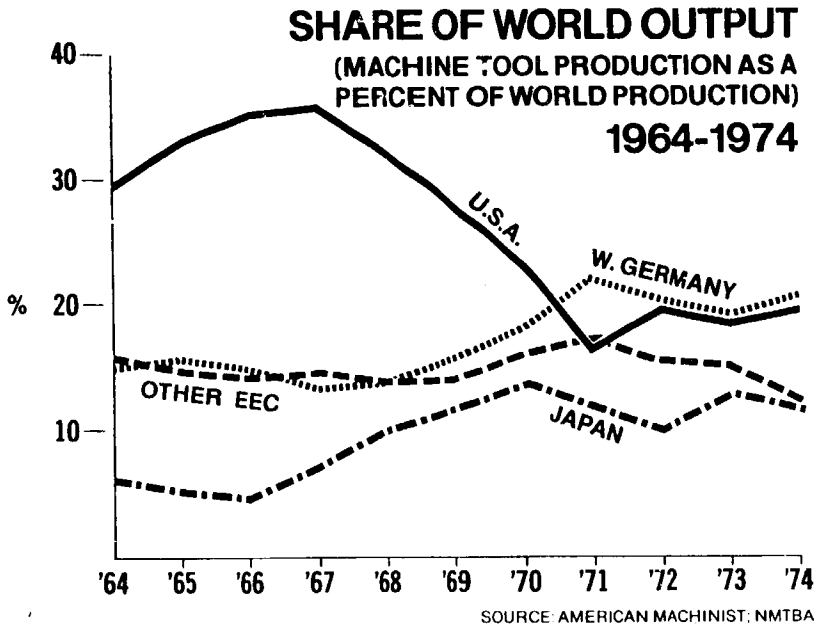

SHARE OF WORLD OUTPUT
(MACHINE TOOL PRODUCTION AS A PERCENT OF WORLD PRODUCTION)
1964-1974
40
30
20
10
%
U.S.A.
W. GERMANY
OTHER EEC
JAPAN
'64
'65
'66
'67
'68
'69
'70
'71
'72
'73
'74
SOURCE: AMERICAN MACHINIST; NMTBA

CHART 9

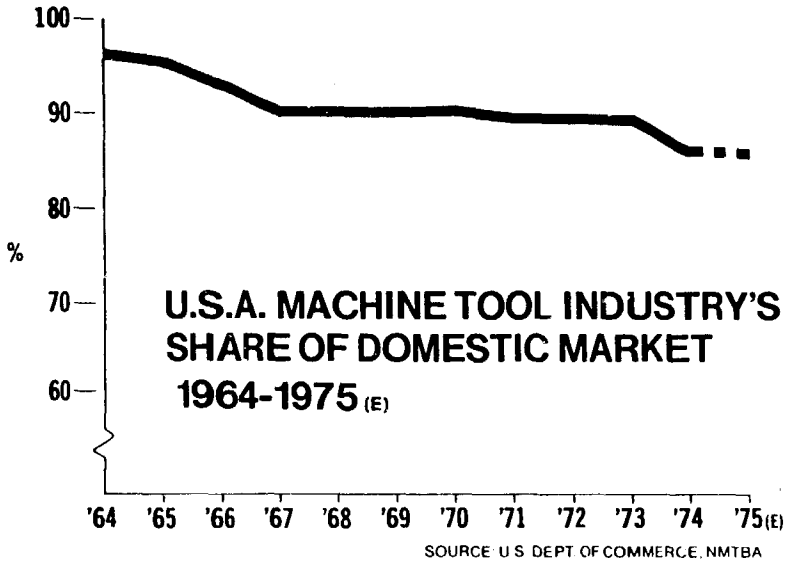

100
90
80
%
70
60
U.S.A. MACHINE TOOL INDUSTRY'S
SHARE OF DOMESTIC MARKET
1964-1975 (E)
'64
'65
'66
'67
'68
'69
'70
'71
'72
'73
'74
'75(E)
SOURCE: U S DEPT OF COMMERCE, NMTBA

CHART 10

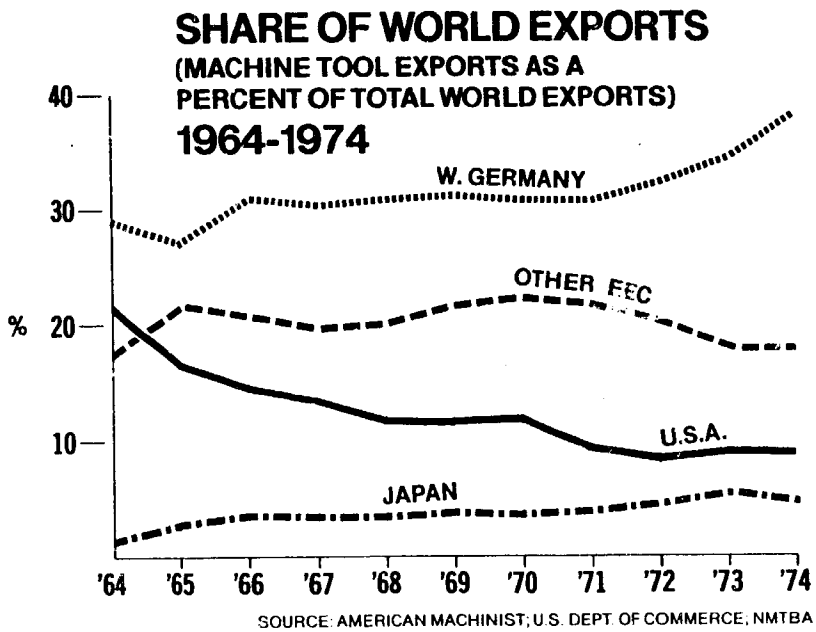


CHART 11

71-157 O - 76 - 12

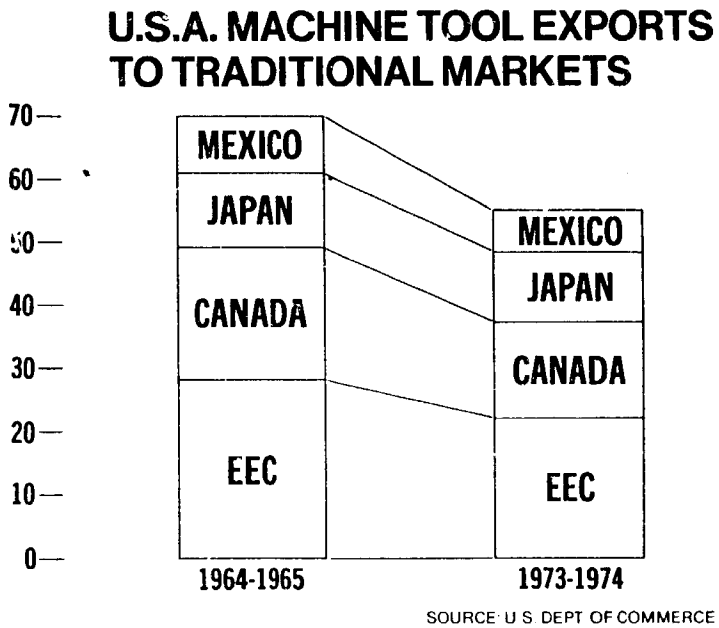

U.S.A. MACHINE TOOL EXPORTS
TO TRADITIONAL MARKETS
70
60
50
40
30
20
10
0
MEXICO
JAPAN
CANADA
EEC
MEXICO
JAPAN
CANADA
EEC
1964-1965
1973-1974
SOURCE U S DEPT OF COMMERCE

CHART 12

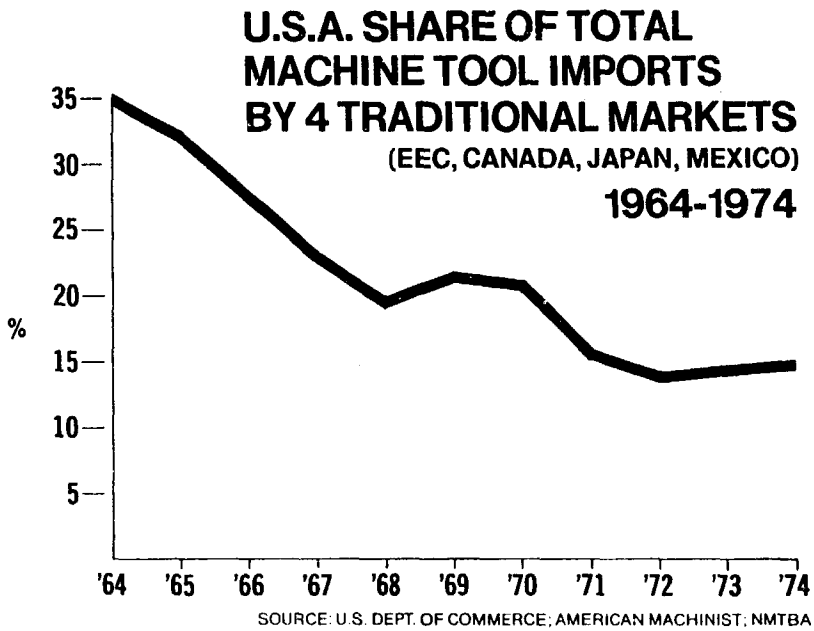

U.S.A. SHARE OF TOTAL
MACHINE TOOL IMPORTS
BY 4 TRADITIONAL MARKETS
(EEC, CANADA, JAPAN, MEXICO)
1964-1974
%
35
30
25
20
15
10
5
'64
'65
'66
'67
'68
'69
'70
'71
'72
'73
'74
SOURCE: U.S. DEPT. OF COMMERCE; AMERICAN MACHINIST; NMTBA

CHART 13

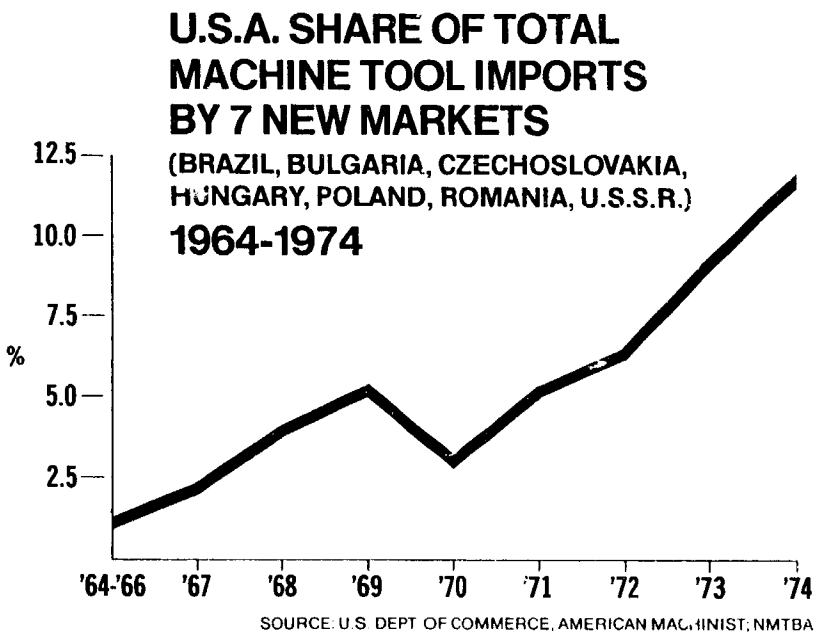

U.S.A. SHARE OF TOTAL
MACHINE TOOL IMPORTS
BY 7 NEW MARKETS
(BRAZIL, BULGARIA, CZECHOSLOVAKIA,
HUNGARY, POLAND, ROMANIA, U.S.S.R.)
1964-1974
12.5
10.0
7.5
%
5.0
2.5
'64-'66
'67
'68
'69
'70
'71
'72
'73
'74
SOURCE: U.S. DEPT OF COMMERCE, AMERICAN MACHINIST; NMTBA

CHART 14

Mr. BINGHAM. Thank you very much, Mr. Gray.
Mr. McCloskey.

STATEMENT OF PETER F. McCLOSKEY, PRESIDENT, COMPUTER AND BUSINESS EQUIPMENT MANUFACTURERS ASSOCIATION (CBEMA)

Peter F. McCloskey is president of the Computer and Business Equipment Manufacturers Association. Originally organized as a trade association in 1916 to represent the office machines industry, the association has been a vital force in the development of the office equipment and computer industry.

Before joining the association in February, 1973, Mr. McCloskey was a partner in the Washington law firm of Hughes and McCloskey. He came to the association with twelve years of experience in the computer and business equipment industry. After holding both technical and executive management posts with IBM, Mr. McCloskey rose to the position of president and chairman of the board of Farrington Manufacturing Company.

He received his degree in physics from Holy Cross College and a Juris Doctor degree from Fordham School of Law. He is a member of the bars of New York State, Virginia and the District of Columbia. Mr. McCloskey served three years as a lieutenant in the United States Marine Corps.

Mr. McCLOSKEY. Mr. Chairman, Mr. Whalen, I am Pete McCloskey, president of the Computer and Business Equipment Manufacturers Association [CBEMA].

We represent the leading manufacturers of computer and business equipment, media, and supplies. Last year, the combined revenues of CBEMA member companies rose to $32.7 billion, of which $13.8 billion were derived from foreign sales.

Our member companies employ a total of 621,000 people in the United States. Typically, they receive from 30 to 50 percent of their revenues from foreign operations, our member companies.

CLEAR POLICY GUIDANCE IS NEEDED

We believe the Congress was right in turning toward export encouragement in the Export Administration Act of 1969. However, the amendments to the Defense Appropriations Authorization Act in 1974, the subsequent Export Administration Amendments of 1974, and adoption of section 411 of the Trade Act of 1974 have apparently been interpreted by some as signals to turn the clock back to before the policy initiated in 1969.

We support the policy set forth in the 1974 act to restrict exports which would make a significant contribution to the military potential of other nations.

While it is not difficult to understand national security implications of computer exports when they are indeed truly significant, it is not easy to grasp the broader national interest implications of section 3(1)(a) of the Export Administration Act and section 411 of the Trade Act, which established the East-West Trade Board.

The executive branch states widely that trade and export policy concessions go hand-in-hand with security, political, and military concessions from Communist countries. This is not the basis upon which we can build expanding commercial relations in keeping with the policy pronouncements of the Export Administration Act of 1974. Sound commercial relationships cannot exist when every contract is subject to the political or other exigencies of the moment.

The Communist countries are deeply interested in trade with the United States in computers, and the only realistic criterion that should apply to the denial of export licenses is national security. That is, those exports which would make a significant contribution to the military potential of other nations.

Therefore, CBEMA strongly recommends that the basis for issuance of individual licenses be limited to short supplies and national security and that "national interest" determinations of the President continue to be directed to whether any trade will be conducted with given countries.

If such clear policy guidance is enacted, it will not only enable license procedures to be expedited, but also will supply a clear guideline against which licensing decisions can be judged.

CONCERNS REGARDING EXPORT ADMINISTRATION PROCESS

Obtaining a license decision for our members frequently involves a processing time of anywhere from 6 months to 30 months. There are several reasons for this. Today there are insufficient numbers of technically qualified people in the right places to adequately weigh the technical characteristics of products to be exported.

Although the Office of Export Administration is planning an increase in personnel, and its management is addressing its administrative difficulties, these efforts alone will not solve the problem.

To date, although a sizable amount of the delay can be attributed to the bottleneck in that office, another bottleneck exists at the next level: the Interagency Operating Committee. This committee meets only once a week to advise the Commerce Department on individual licensing matters. Its members, who participate in this function in addition to other duties, are not technically qualified and must continually seek instructions from their agencies.

The committee operates on the basis of unanimity, which effectively allows any member to veto any license application. It is our impression that Operating Committee members often endorse a single member's dissent in order to avoid involvement in further consideration of controversial cases at higher levels within their own agencies.

The Export Administration Act must be amended to provide an effective substitute for the Operating Committee. We recommend either:

That the Operating Committee be disbanded and that those agencies most concerned with the national security aspects of export administration provide permanent liaison offices to the Department of Commerce.

These offices must be manned 5 days a week with adequately qualified personnel to technically evaluate export license applications from the viewpoint of their individual agency's national security interests.

Other agencies should be consulted separately by the Department of Commerce as appropriate.

Alternately, a smaller version of the present Operating Committee, permanently manned on a full-time basis from such agencies as the DOD, ERDA, CIA, could be established, but without veto

power, to advise and consult as required in the present act with the Department of Commerce, again on matters pertaining to national security.

Other agencies could be consulted, as appropriate, on an ad hoc basis.

After receiving advice from concerned agencies, the final decision must be made by the Department of Commerce. The current rule of unanimity must be replaced.

SYSTEM FOR APPEAL

With respect to appeal, the current system effectively allows only for review of the procedural aspects that were followed leading up to export license denial. Substantive matters of the particular export applications are not considered.

When a license is denied, the applicant must have the right to require a comprehensive debriefing on the reasons for denial. We recommend that the current Export Administration Act be amended to provide for complete procedural and substantive appeal to at least one level higher than that at which the decision was made.

ROLE OF TECHNICAL ADVISORY COMMITTEES

CBEMA and individual CBEMA members who recommended the establishment of Technical Advisory Committees envisioned that these committees would ensure industry representation, not in the decision making processes of Government to be sure, but in the policy formulation phase that leads to the ultimate decision. Our members do not perceive that they have provided effective input.

We believe that, in adopting our recommendations, Congress had the same intent, and, therefore, recommend that the wording of the law be made more specific in this area.

Other deficiencies exist in the operation of the Technical Advisory Committees. Industry members participate as individuals, not as representatives of industry, and, although most of the input to committee deliberation comes from industry, individual members cannot report to their parent companies anything that transpires in committee executive sessions, although government members of the committees communicate freely with their parent agencies. In fact, minutes of these executive sessions are classified and thus not available to industry.

Furthermore, committee reports, when completed, disappear into the labyrinth of Government with no feedback to the industry members involved in the preparation of these reports. I am certain that this one-way street version of dialog between Government and industry was not the intent of Congress.

Thus, we recommend revision of the statute to insure that: (1) advice on policy be made part of the TAC's role; (2) that members be authorized specifically to communicate with their parent companies and others in the industry; (3) that the Government be required to furnish committee members reports on actions taken pursuant to their recommendations; and (4) that the 2-year limitation on membership be eliminated.

NEGOTIATIONS IN COCOM

A matter of serious concern to U.S. industry is the secretive manner in which negotiations in COCOM are conducted by our Government.

We recommend that the current Export Administration Act be amended to require the use of U.S. industry technical support in preparation for and during COCOM negotiations. To require that at least the commercial interests of the Department of Commerce be represented on the negotiating team; and that the commercial policy role now exercised by the Economic Defense Advisory Committee in the Department of State be transferred to Commerce.

SIGNIFICANCE OF U.S. COMPUTER EXPORTS TO U.S.S.R.

Sales of computers have constituted the focus of criticism of current United States East/West trade policy. Let us examine the significance of U.S. computer exports to the U.S.S.R. up to this time.

Approximately 122,000 general purpose computers of U.S. manufacture are in use in the world today. Approximately 72,000 general purpose computers are in use in the United States of America. Our Government currently uses some 8,000 general purpose computer systems.

Currently, the U.S.S.R. has a grand total of seven general purpose computers of U.S. manufacture. All of these U.S. computers fall within the agreed guidelines of COCOM. Two computer systems, which were installed in 1971 by the British firm, ICL, exceed the guidelines prescribed by COCOM, and one U.S. system, on order and licensed for export, but not yet installed, exceeds the COCOM guidelines. It is apparent that no significant military contribution has accrued to the U.S.S.R.

Allowing a reasonable volume of trade will provide benefits to the United States. (1) The prospective customers will not turn to our Western competitors to fill an existing and perhaps interim need; and (2) a reasonable volume of trade discourages the recipient countries from developing comparable technology on their own. We are already aware of examples where, by denial of reasonable flow of U.S. computers, we have forced Communist nations to develop highly sophisticated technology, thus closing that portion of the market to U.S. firms and defeating the basic objective of U.S. export controls. This should not be allowed to continue.

Thank you for your attention. I will be pleased to answer any questions.

[Mr. McCloskey's prepared statement follows:]

PREPARED STATEMENT OF PETER F. MCCLOSKEY, COMPUTER AND BUSINESS EQUIPMENT MANUFACTURERS ASSOCIATION (CBEMA)

Mr. Chairman and members of the Subcommittee, I am Peter F. McCloskey, President of the Computer and Business Equipment Manufacturers Association (CBEMA). With me today is Mr. Earle L. Lerette of Control Data Corporation, who is the chairman of CBEMA's Foreign Trade Committee, and Mr. Oliver R. Smoot, Vice President of CBEMA.

CBEMA represents the leading manufacturers of computer and business equipment, media and supplies. Last year the combined revenues of CBEMA member companies rose to 32.7 billion dollars, of which 13.8 billion dollars

were derived from foreign sales. Our member companies employ a total of 621,000 people in the United States. Typically our members receive from 30 percent to over 50 percent of the revenues from foreign operations, and they seek not only to maintain their share of current foreign markets vis-a-vis their foreign competitors, but also to gain a foothold in new markets early in their development to ensure the viability of the U.S. Computer and Business Equipment Industry. CBEMA and its members were concerned about, and therefore, participated actively in the review and revision of the Export Control Act in 1969 which led to the passage of the Export Administration Act. We participated also in the 1972 and 1974 extensions and amendments of that Act. We are pleased to appear before the Subcommittee on International Trade and Commerce to relate our concerns about the implementation of current law and to suggest areas of change for the Subcommittee's consideration.

We believe the Congress was right in turning towards export encouragement in the Export Administration Act of 1969. However, the amendments to the Defense Appropriations Authorization Act in 1974, the subsequent "Export Administration Amendments of 1974" and adoption of Section 411 of the Trade Act of 1974 have been interpreted by some as signals to turn the clock back on the policy initiated in 1969.

CLEAR POLICY GUIDANCE IS NEEDED TODAY

The lack of clear statutory guidance, the resultant dispersion of authority and the differing departmental positions toward East-West trade have resulted in a process which is financially punitive to the exporter without accomplishing the purpose of encouraging trade while protecting the national security of the United States.

CBEMA supports the policy set forth in the 1974 Act to restrict exports which would make a significant contribution (and I would stress the term "significant"), to the military potential of other nations. While it is not difficult to understand national security implications of computer exports when they are truly significant, it is not easy to grasp the broader *national interest* implications of Section 3(1)(A) of the Export Administration Act and Section 411 of the Trade Act which established the East-West Foreign Trade Board.

The factors constituting "national interest" have been variously described by administration spokesmen as embracing considerations such as national security, the domestic and world economic situation, politics, the status of domestic employment/unemployment, and unspecified sociological and psychological factors. It is difficult for U.S. industry to evaluate the interrelationships between politics, economics and military considerations with respect to East-West commercial relations. Economic relationships are usually spelled out in well publicized international trade agreements, whereas political and military arrangements—SALT II, for example—are developed in secret. We are concerned with the term "national interest" because this concept is being used increasingly as the reason to deny specific license applications.

The East-West Foreign Trade Board seems to have been established as a by-product and afterthought of the development of the Trade Act rather than for the purpose of providing overall coordination and rationalization of east-west trade policy. Its operative paragraph requires the Board "to monitor trade * * * to insure that such trade will be in the national interest. * * *" The vague and unascertainable dimensions of this section are in marked contrast to the policy findings set forth in Section 3(2) of the Export Administration Act on which export controls were based for the previous four years. Subsequent to the establishment of the Board, license denials have been brought to our attention where such denials are based on the grounds that they are "not in the national interest." This summary reason for denial of an application can be based upon any of the factors cited earlier. Sound commercial relationships cannot exist when every contract is subject to the political or other exigencies of the moment.

The Executive Branch states widely that trade and export policy concessions go hand-in-hand with security, political and military concessions from communist countries. This is not the basis upon which we can build expanding commercial relations in keeping with the policy pronouncements of the Export Administration Act of 1974. The communist countries are deeply interested in trade with the U.S. in computers and the only realistic criterion that should

apply to the denial of export licenses is national security—that is, those exports which would make a *significant* contribution to the military potential of other nations. Therefore, CBEMA strongly recommends that the basis for issuance of individual licenses be limited to short supplies and national security and that "national interest" determinations of the President continue to be directed to whether trade will be conducted with given countries. If such clear policy guidance is enacted, it will not only enable license procedures to be expedited, but also will supply a clear guideline against which licensing decisions can be judged.

CBEMA HAS SPECIFIC CONCERNS REGARDING THE EXPORT ADMINISTRATION PROCESS

Obtaining a license decision for our members' products frequently involves a processing time of anywhere from six months to thirty months in one case of recent record. There are several reasons for this. Today there are insufficient numbers of technically-qualified people, in the right places, to adequately weigh the technical characteristics of products to be exported. Although the Office of Export Administration is planning an increase in personnel and its management is addressing its administrative difficulties, these efforts alone will not solve the problem. To date, although a sizeable amount of the delay can be attributed to the bottleneck in that office, another bottleneck exists at the next level—the Interagency Operating Committee. This committee meets only once a week to advise the Commerce Department on individual licensing matters. Its members, who participate in this function in addition to other duties, are not technically qualified and must continually seek instructions from their agencies. The Committee operates on the basis of unanimity which effectively allows any member to veto any license application. Theoretically the Operating Committee reports to the Advisory Committee on Export Policy (ACEP) composed of the Assistant Secretaries of the concerned agencies. In our opinion, Operating Committee members often endorse a single member's dissent in order to avoid involvement in further consideration of controversial cases at higher levels within their own agencies. This is borne out by the notation in the recent General Accounting Office report, "The Government's Role in East-West Trade Problems and Issues," where it is stated that the Advisory Committee on Export Policy almost never meets, its working being carried out by the Operating Committee.

The Export Administration Act must be amended to provide an effective substitute for the Operating Committee. We recommend either:

That the Operating Committee be disbanded and that those agencies most concerned with the national security aspects of export administration provide permanent liaison offices to the Department of Commerce. These offices must be manned five days a week with adequately qualified personnel to technically evaluate export license applications from the viewpoint of their individual agency's national security interests. Other agencies should be consulted separately by the Department of Commerce, as appropriate.

Alternatively, a smaller version of the present Operating Committee, permanently manned on a full-time basis from such agencies as the Department of Defense, the Energy Research and Development Administration and the Central Intelligence Agency could be established, without veto power, to "advise and consult" as required in the present Act with the Department of Commerce—again, on matters pertaining to national security. Other agencies could be consulted, as appropriate, on an ad hoc basis.

After receiving advice from concerned agencies, the final decision must be made by the Department of Commerce. The current rule of unanimity must be replaced. With respect to appeal, the current system effectively allows only for review of the procedural aspects that were followed leading up to export license denial. Substantive matters of the particular export application are not considered. When a license is denied, the applicant must have the right to require a comprehensive debriefing on the reasons for denial. We recommend that the current Export Administration Act be amended to provide for complete procedural and substantive appeal to at least one level higher than that at which the decision was made.

THE TECHNICAL ADVISORY COMMITTEE PROCESS NEEDS IMPROVEMENT

The Act provides for the establishment of Technical Advisory Committees manned by members from government and industry, appointed by the Secre-

tary of Commerce for specific industry sectors when he might have difficulty in evaluating export controls. I quote from the 1974 Act: "* * * because of questions concerning technical matters, worldwide availability and actual utilization of production and technology, or licensing procedures." The Act further specifies that, among other things, "* * * it shall be the duty and function of the Technical Advisory Committees established under paragraph (1) to advise and assist the Secretary of Commerce, or any other department, agency or official of the government to which the President has delegated power, authority and discretion under section 4(d) with respect to actions designed to carry out the *policy* set forth in section 3 of this Act."

Under these provisions industry has devoted significant time and money to participate in the Technical Advisory Committees. A cooperative effort with technically qualified government representatives. However, the Department of Commerce has restricted their activities to technical matters such as foreign availability. CBEMA, and individual CBEMA members, who recommended the establishment of Technical Advisory Committees envisaged that these committees would ensure industry representation, not in the decision-making processes of government, but in the policy formulation phase that leads to the ultimate decision. We believe that in adopting our recommendations, Congress had the same intent, and, therefore, recommend that the wording of the law be made more specific in this area.

Other deficiencies exist in the operation of the Technical Advisory Committees. Industry members participate as individuals, not as representatives of industry; and, although most of the input to committee deliberation comes from industry, individual members cannot report to their parent companies anything that transpires in committee executive sessions, although government members of the committees communicate freely with their parent agencies. In fact, minutes of these executive sessions are classified, and thus not available to industry. Furthermore, committee reports when completed, disappear into the labyrinth of government with no feedback to the industry members involved in the preparation of these reports. I am certain that this one-way street version of dialogue between government and industry was not the intent of Congress.

Thus, we recommend revision of the statute to insure that: One, advice on policy be made part of the TAC's role; Two, that members be authorized to communicate with their parent companies and others in the industry; Three, that the Government be required to furnish Committee members reports on actions taken pursuant to their recommendations; and Four, that the two-year limitation on membership be eliminated.

U.S. REPRESENTATION IN COCOM IS INADEQUATE

A matter of serious concern to U.S. industry is the secretive manner in which negotiations in COCOM are conducted by our government. As is the case with the Technical Advisory Committees which were discussed earlier, U.S. industry would welcome the opportunity to participate in policy formulation as it applies to COCOM. This should involve a continuing dialogue and two-way exchange of information between industry and government. We have observed that, in the computer field at least, the U.S. COCOM delegate in Paris is given technological support by a representative of a non-profit organization under contract to the Department of Defense. In the same COCOM negotions, the British delegate has the direct support of the British computer firm, International Computers, Ltd. (ICL), which enjoys ten percent British government ownership, and the French delegate is directly supported by a representative of the subsidized French computer firm known as CII (Compagnie Internationale pour l'Informatique).

CBEMA recommends that the current Export Administration Act be amended to require the use of U.S. industry technical support in preparation for, and during, COCOM negotiations. To require that at least the commercial interests of the Department of Commerce be represented on the negotiating team; and, that the commercial policy role now exercised by the Economic Defense Advisory Committee in the Department of State be transferred to Commerce.

The "national interest" issue stated earlier relates also to COCOM. When an export license for any production on the COCOM list of embargoed items is

granted, it is referred to COCOM for review in light of overall mutual security interests. However, when the U.S. denies an export license for national *interest*, as opposed to national *security* considerations, it automatically opens the door for our foreign competition to make a comparable sale without reference to COCOM since COCOM's embargo responsibility centers on mutual *security* which equates to our national security. This is another strong reason to limit export controls to national security grounds.

THE QUESTION OF EAST-WEST TRADE IN COMPUTER EQUIPMENT

Sales of computers have constituted the focus of criticism of current U.S. East-West Trade policy. This criticism is unfounded.

The U.S.S.R. has demonstrated its capability to support its military and space efforts. It is not realistic to assume that the U.S.S.R. or any other nation will depend upon a potential enemy to supply its computerized military computer needs that include servicing, spare parts, etc. Furthermore, computers would have to be exported in considerable quantity and be of the very latest state-of-the-art in order to be a significant contribution to a potential enemy. Certainly U.S. policies as they pertain to the export of computers are not consistent when we deny moderately advanced computers to the U.S.S.R., Eastern Europe, and the People's Republic of China, and at the same time, export weapons systems containing highly sophisticated computers to nations whose long-term allegiance to the U.S. is questionable, and where such technology is highly susceptible to uncontrolled leakage to what we term as "hostile nations."

Let's examine the significance of U.S. computer exports to the U.S.S.R. up to this time. Approximately, 122,000 general purpose computers of U.S. manufacture are in use in the world.[1] Approximately 72,000 general purpose computers are in use in the U.S.[1] The United States government currently uses some 8,000 general purpose computer systems. Currently, the U.S.S.R. has a grand total of seven general purpose computers of U.S. manufacture. All of these U.S. computers fall within the agreed guidelines of COCOM. Two computer systems, which were installed in 1971 by the British firm, ICL, exceed the guidelines prescribed by COCOM, and one U.S. system, on order and licensed for export, but not yet installed, exceeds the COCOM guidelines. It is apparent that no significant military contribution has accrued to the U.S.S.R.

The markets of Eastern Europe, the U.S.S.R. and the People's Republic of China are unique, and have a significant potential for new business in computers. Substantial benefits can accrue to the U.S. if its industry is allowed to compete in this market, but not under current restrictions applied to computer exports. Further, smaller corporations have been excluded from the market because of the high entry costs.

Allowing a reasonable volume of trade will provide benefits to the U.S. First, the prospective customers will not turn to our Western competitors to fill an existing, and perhaps, interim need. Second, a reasonable volume of trade discourages the recipient countries from developing comparable technology on their own. Not generally recognized is the fact that Western European computer technology has, in the past, lagged behind that of the U.S., because from the onset those nations depended upon the availability of U.S. technology, and, consequently, were late in building a comparable technological base of their own. By denying computer products to Eastern nations, we are encouraging the reverse of this situation. There already are examples in the computer field where Eastern nations have been forced to develop highly sophisticated technology, thus closing that portion of the market to U.S. firms and defeating the basic objective of U.S. export controls. This should not be allowed to continue.

Mr. Chairman and members of the Subcommittee, thank you for your attention. I will be pleased to receive your questions.

Mr. BINGHAM. Thank you, Mr. McCloskey.

I appreciate the speedy fashion in which all three of you presented your views.

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[1] Source: International Data Corp., through December, 1975.

TRADE EMBARGOES

Mr. McCloskey, I am not sure I understand the recommendation you make at the bottom of page 3. It seems to me that you are saying there that, where necessary, we should impose complete trade embargoes on certain countries. Is that what you are saying?

Mr. McCloskey. Well, I think what I am saying is that our industry seems to be singled out under this question of national interest for considerations that are apparently not of national security, and it is a tough criterion for business judgments to be made against. How much investment to make to develop a market and then to find that, although normal criteria would allow you to make your normal sales, matters of national interest, of which we have no specific knowledge, mitigate against you and force denial of a license.

Mr. Bingham. I understand your feeling on that, but it hardly strikes me as the answer to that problem to suggest that, if you are going to use that type of criterion, that the President would have to choose between allowing total trade or no trade.

Mr. McCloskey. I guess we would feel adversely affected if trade with Cuba were allowed again, except for the computer industry. That is the kind of thing that we feel is happening on a selective basis.

EXTENSION OF CONTROLS

Mr. Bingham. Let me ask all three of you the question I asked the previous witnesses. Do you favor extension of basically the controls that are embodied in this legislation?

Mr. McCloskey. Yes.

Mr. Bingham. Or would you prefer to see termination of these controls altogether?

Mr. McCloskey. We favor the extension of the controls.

Mr. Stimpson. I don't have any problem with extension of the act. I think some of the recommendations that have been made about the Technical Advisory Committees and others are excellent. Overall yes, I think the act serves a good purpose.

Mr. Gray. As we said in our statement, except for the sales of machines that are specially designed for the production of armaments, we favor the relaxation of controls on the particular types of machines that we manufacture because there is availability of supply from other COCOM signatories and from countries which are not members of COCOM.

Mr. Bingham. I would again like to ask each of you, if you are able to do so, to submit to the subcommittee any specific recommendations that you may have with respect to the wording of the legislation.

The Committee on International Relations, as you know, has the responsibility of acting on this law within the next few months.

LACK OF UNDERSTANDING OF COMPUTER SALES

One final question, Mr. McCloskey. On page 9, you say, "Sales of computers have constituted the focus of criticism of current U.S. East-West trade policy. This criticism is unfounded."

I am not sure I know what you mean there. Do you mean people are criticizing that policy on the ground that it is too lax?

Mr. McCloskey. I think they are generally criticizing based on lack of knowledge about what is actually happening. There have been a number of speeches by Members of Congress or others that have taken to task the industry, but I don't think anybody realized that there were only seven systems installed in the U.S.S.R. when they said that. I don't think they realized the safeguards and the other requirements that the Commerce Department puts on the companies before they are allowed to do that.

Mr. Bingham. In other words, this is the kind of criticism you refer to, criticism of people who perhaps were acting in a reckless fashion? It is not the kind of criticism that the industry representatives have been presenting here today?

Mr. McCloskey. That is right.

Mr. Bingham. Mr. Whalen?

FAIR COMPETITION WITH OTHER COCOM COUNTRIES

Mr. Whalen. Mr. Gray, I think you said it all on page 21. I quote: "We are not asking for special treatment. We are asking for fair competition with other COCOM signatories."

Now, all of the witnesses have indicated, "yes, we think this act should be extended," but I think all the witnesses have also indicated that the agreements are not being observed in many instances by other COCOM nations.

You quoted from the article which you cite in your statement, I think from the British Economist, in which the author of that particular article states that Great Britain is certainly not abiding by it.

Now, how can we assure that this equal treatment will be achieved if we have no authority over the policing of what Britain and other members of the COCOM do?

Mr. Gray. That is a difficult problem because we have had any number of examples of abuses—for example, right now France and Norway have made an arrangement to supply 80 machines with very sophisticated controls. The machines are coming from France. The controls are coming from Norway. Norway shipped one control to France for the runout of the machines. I understand the other 80 are being married in the Soviet Union.

I don't know how we police the COCOM countries, except to lean on them. But I do know, from my discussions with some of my counterparts in foreign machine tool trade associations, that they look upon the COCOM regulations as one of the greatest competitive assets they have in international trade.

Mr. Whalen. Because it bars the United States, but not them?

Mr. Gray. Because effectively it is a restraint on competition from American companies. The long delays in obtaining a license adds to our costs because not only are the preparation of quotations expensive when you are talking about a $500,000 piece of machinery, but personnel time is expensive. The kind of men who have to come down here and shepherd a license through channels is expensive. It all adds to the cost of the equipment.

Consequently the current administration of the export control regulations is, in effect, a nontariff barrier.

Mr. McCLOSKEY. I think there is a perception that our thresholds of approval are higher here or lower here than they are in COCOM, so our biggest problem is not getting it through COCOM as getting it through here, although there are delays here.

Also, the other nations, since they had industry representatives participate in some of the COCOM deliberations, are in tune better than we are with the State Department's committee which is responsible for handling the applications.

We have had a couple of incidents that I am aware of where we have had informal advice from the Government that we should proceed in a particular area. One was in a printed circuitboard plant in Minsk. So companies didn't even bother to apply for license to be able to do that. Well, CIT in France was awarded that contract.

There was another incident where apparently Prime Minister Heath talked to President Nixon, and we had turned down in the United States an order for computers for the high energy physics lab in Serpukhov. It was awarded to ICL, and it was approved by COCOM, although our own people here wouldn't have approved it in the Commerce Department and the Interagency Committee.

Mr. GRAY. I think there is another comment I would like to make. It seems to us that there is an effort, consciously or unconsciously, to delay as long as possible the issuance of the license, and they do it in this way:

We had a case where there was a jig grinder misclassified as an internal grinder. Now, the difference means that the speed of the head on that machine is 120,000 revolutions per minute, which I believe is the cutoff figure.

The speed determines the category that the machine is placed in—whether or not it has to go to COCOM. That is why we say that the company involved ought to have the right to review the documentation that goes to COCOM when it is being considered. Our foreign trading partners are going to find any excuse they can to turn down that license, because it becomes a piece of business that they can then go after.

I think one answer to this problem might be that there be a uniform interpretation of these regulations so that our government interprets them the same way as our foreign competitors. That is not the case today.

Mr. WHALEN. I would suggest to all of you that that you provide the subcommittee with as many documented cases as possible. I think, Mr. Chairman, this might be helpful to us in our deliberations. This, it would seem to me, goes to the heart of the problem. If it were just our own country and we had all of the technology, it wouldn't be a problem.

Mr. GRAY. It is very difficult to get our competitors in Western Europe to tell us; and it is very difficult to get the people in the Socialist countries to tell us what they are getting, because they may close off their source of supply.

Next week, beginning the 30th of March, there will be a West German machine tool show in Moscow. The Germans will show the most

sophisticated equipment that they have. They aren't going to go to the expense of exhibiting that equipment in Moscow—and, believe me, it is very expensive to hold an exhibition in Moscow—they aren't going to exhibit that equipment unless they plan to sell it. And they will sell it.

Mr. STIMPSON. In our business also, we are seeing increasing international competition, and much of this competition, of course, is financed by governments abroad. It is getting tougher and tougher in this international marketplace every year.

RECOMMENDATIONS

Mr. WHALEN. Mr. Stimpson, you indicated on page 5 that your association has made a number of recommendation to the Department of Commerce and other agencies. I wonder if you could elaborate just a little bit as to what these are.

Mr. STIMPSON. Yes. Basically these involve allowing us to export under general licenses to friendly countries. They involve immediately changing interpretation 20, which is the interpretation under which aircraft and aircraft parts are exported under COCOM arrangements. They also involve the establishment of a Technical Advisory Committee which we don't have in general aviation, working with the Department of Commerce, truly a communicative basis of advising them what is new technology and what is old technology and trying to update their regulations and offer our assistance to make the system work.

This is basically what we have recommended.

SECURITY VERSUS EXPORT PROMOTION

Mr. WHALEN. One final question, Mr. Chairman, and I address it to Mr. McCloskey. On page 5 of your principal recommendations, this follows—and I quote: "After receiving advice from concerned agencies, this final decision must be made by the Department of Commerce," which probably will help in terms of promoting exports.

However, this recommendation does give me some concern. I realize that the Department of Defense, being involved in the decisionmaking process and in effect having a veto, is often overly protective.

On the other hand, if one of the objectives of the act is to provide for our own security, it would seem to me that the decisionmaking must rest at least in part with the Department of Defense.

Mr. MCCLOSKEY. I think we envision when we say that there would be the normal appeal process, and, if that decision were to be made, somebody has to make a business decision somewhere. That includes all of the interests. It isn't being made.

All that is happening is that everyone is nonconcurring, and they say: "Well, if they are nonconcurring, let us turn it down." Somebody is not making any judgmental——

Mr. WHALEN. What I am saying—certainly the Department of Commerce would make their decision from a business perspective—but what I am trying to point out here is the ambivalence of the act.

That is, we are seeking two objectives, which, in some instances, may be incompatible: security on the one hand, export promotion

on the other. I can see where those in the business community would be anxious that Commerce have the authority to make the final decision. However, the Congress may raise some questions on that score, inasmuch as part of the objective of the act is security.

Mr. STIMPSON. I think the other consideration: Let us make sure there is a security question involved too. In some of these cases, the Department of Defense has informally told us: "We don't know why we get these things." Just let us make sure there is a security consideration and not just a delay process.

Mr. WHALEN. I am still trying to find the author of the statement: "When in doubt, punt," and I think all too often the agencies do that. "Well, it may just be harmful to our security. Let us——"

Mr. McCLOSKEY. Somewhere an overall value judgment should be made by someone not at the working level. I can understand. If I were he, I would make the same recommendation. It has some impact on national security.

Mr. WHALEN. Not sure, but——

Mr. STIMPSON. Or foreign policy considerations, "so we had better send it to State." These things keep running around town.

Mr. WHALEN. OK. No further questions.

THE BRYANT GRINDER SALE

Mr. BINGHAM. Mr. Gray, I understand that you can shed some light or may have some report on an article in the Washington Post, February 26, about the sale of a certain type of machine tool which allegedly, according to the story, made it possible for the Soviets to produce the kind of miniature ball bearings used in the guidance systems of multiple warhead missiles and thereby enable them to produce MIRV missiles.

Mr. GRAY. That is a statement by General Graham of DIA. If General Graham knew that those bearings were made on Bryant Centalign machines, he should also have said that the Bryant machines must have been located outside the Soviet Union because the machines were ordered and the license was granted in 1972. Then they had to be built and transported: they were delivered in late 1973 and early 1974. The Soviet MIRV was in production in the middle of 1973 and was deployed in 1974.

The Soviets could have imported the bearings themselves from Switzerland or Sweden. What is more likely is that they were manufactured on grinders manufactured by Seiko Seiki in Japan, Mingranti in Italy, Voumard in Switzerland, and Overbeck in Germany.

We know that between 1960 and 1970 the Soviets imported over 500 machines from those suppliers.

Subsequent to that article, Mr. Costick wrote a letter to the Washington Post in which he said that manufacturers of these machines from other countries were only suitable for laboratory and testing purposes. That just isn't so, and there are bearing manufacturers all over the world, including the United States, that have machines from these companies, and they are not laboratory machines. They are production machines and they are comparable machines.

So that is the answer to the story.

Mr. BINGHAM. Without objection, the story referred to and the letter from Mr. Costick will be included in the hearing record at this point.

[The documents referred to follow:]

[From the Washington Post, Thurs., Feb. 26, 1976]

U.S. REPORTEDLY SOLD SOVIETS MEANS TO MAKE MIRV PART

(By Dan Morgan, Washington Post Staff Writer)

Since 1972, the United States has sold the Soviet Union 164 precision machines that can produce the miniature ball bearings used in guidance systems of multiple warhead missiles, a former top intelligence official charged yesterday.

Retired Gen. Daniel Graham, former head of the Defense Intelligence Agency said the Soviets "couldn't have gone into production" of the multiple warhead weapon, called MIRV, without the machines.

A Pentagon spokesman said the Defense Department had not opposed the sale, which was authorized in 1972 after an investigation of the ball bearing technology sold by other western countries. However, the spokesman said the Pentagon had no comment on the question of whether the bearings were subsequently used in Soviet MIRVs.

Jim Halverson, general manager of Bryant Chucking Grinding Co. of Springfield, Vt., confirmed yesterday that the firm had sold the machines to the Soviets "after a lot of discussion" in Washington.

"We don't know the end use of the product of this equipment," he said, adding that tiny ball bearings are components of modern household appliances and many kinds of precision instruments.

In announcing the first Soviet purchase of bearings in the United States in 1972, Machine Tool Industry Minister Anatoliy I. Kostousov said, "We are using more and more instruments of all kinds and our need for bearings is very great."

Ball bearings have been mentioned from time to time as part of the continuing controversy over detente and trade with Soviet Union.

Critics of detente say that Russia is using the increased U.S. trade mainly to plug strategic gaps in its military and industrial technology.

However, other analysts of the Soviet systems say that the Russians are skilled at copying Western technology even when they can't purchase it. They add that it is difficult to safeguard industrial processes, because many American firms operate European or Japanese manufacturing plants where Communist workers are employed.

Although the United States relaxed restrictions on trade with the Kremlin after 1972, it still embargoes 68 items that this country's NATO allies and Japan allow to be exported to the Communist World.

Graham's remarks on the ball bearing sales came at a Capitol Hill breakfast, hosted by several members of Congress, in honor of a new book by Miles M. Costick, "The Economics of Détente."

Graham noted that Costick's book contained a lengthy reference to the ball bearing case. He claimed the Pentagon had objected to the sale and "should have been successful."

The equipment in question is the Bryant company's Centalign B grinding machines, which are so sophisticated they can manufacture miniature ball bearings to tolerances of a 25-millionth of an inch Costick said that a large part of bearing output from Centalign machines is for military use.

"Until the Soviets were able to obtain Centalign B machines, they were unable to produce the guidance missile essential for MIRVing of their missiles," Costick wrote.

MIRVS—multiple independently targetable re-entry vehicles—have posed a major new problem for Soviet and American strategic arms negotiators. At Vladivostok in November, 1974, each of the two countries agreed to limit their strategic arsenals to 1,320 multiple warhead rockets.

In 1960, the Bryant company sought a license to export machines to Russia but was turned down after a lengthy internal debate in Washington.

A Pentagon spokesman said that a Commerce Department team learned in 1972 that Switzerland and Italy possessed similar ballbearing technology and

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the Bryant company's renewed application was approved because denying it "would only have prevented a U.S. firm from selling equipment already available from competitors abroad."

[From the Washington Post, Mar. 21, 1976]

HELPING THE SOVIETS BUILD THEIR MISSILES

In his article "U.S. Reportedly Sold Soviets Means To Make MIRV Part", published in the February 26 Post issue, Dan Morgan reported about the Bryant Chucking Grinder Co. sale of 164 precision grinding machines to the Soviet Union with approval of the United States government.

In the same article, Mr. Morgan reports about my recent book "The Economics of Detente" and the congressional briefing during which former director of Defense Intelligence Agency Gen. Daniel Graham shared the panel with me and quoting my book as a source charged that without Centalign B machines the Soviets "couldn't have one into production" of the multiple independently targetable re-entry vehicles with nuclear warheads, known as MIRV.

I am compelled to take issue with several statements made to Mr. Morgan by the administrative spokesmen as well as the statement made to him by James Halverson, general manager of the Bryant Chucking Grinder Co. of Springfield, Vt.

The administration's spokesman claimed that the export license for sale of machines to the Soviet Union was issued after "a Commerce Department team learned in 1972 that Switzerland and Italy possessed similar ball-bearing technology." I would like to ascertain that this is a distortion of the real issue in order to cover a failure of the Commerce Department and other elements of the U.S. Government to enforce an effective export control of strategic goods. In the first place Centalign B is unique in its field and the only machine suitable for mass production of precision miniature ball bearings. The analogous Swiss, Italian, Swedish and Japanese machines are only substitutes suitable for laboratory and testing purposes but not for mass production.

If the Soviets had been able to purchase the same machines and technology somewhere else, why did they wait for a full 12 years to buy them from the United States? Anatoliy I. Kostousov, Minister of the Soviet Machine Tool Industry was quoted by the press as saying that they had waited 12 years for these machines.

Second, the administration could have prevented foreign countries from selling similar machines by intervention with the respectable governments either directly or through COCOM (Coordinating Committee for the Western Allies Trade Embargo) of which they are members.

Third, Mr. Halverson's statement that Bryant Chucking Grinder Co. "doesn't know the end use of the product of this equipment" is incorrect. Since a congressional subcommittee investigated the matter and found out that "at least 85% of the bearings manufactured with the help of the Bryant machine are used by defense industries." The report was made available to Mr. Halverson's company well in advance of sales of the U.S.S.R.

In short, the sale of 164 Centalign B machines to the Soviets gave them the capacity to mass produce guidance mechanisms for MIRVs and MARVs and consequently excellerated Soviet military threat to the United States and the rest of the free world.

MILES M. COSTICK,
Consultant on Foreign Affairs and Commerce,
The Heritage Foundation.

Burke, Va.

Mr. BINGHAM. If that is all, thank you very much.

Mr. GRAY. May I just ask one question? You asked for documentation on violations of the regulations. Are you planning to wait for the Senate bill to come over or are you going to start marking up a bill now?

Mr. BINGHAM. We haven't gotten to that point.

Mr. GRAY. I was trying to get an idea of the time frame.

Mr. WHALEN. I don't think it is imminent, is it, Mr. Chairman?

Mr. BINGHAM. No.

Mr. GRAY. Thank you.

Mr. BINGHAM. Mr. Frederick Van Veen, representing Teradyne of Boston; and Mr. Albert Maria, representing Wang Laboratories. I understand Mr. Maria is accompanied by Mr. Dana Robinson.

Mr. Van Veen?

STATEMENT OF FREDERICK T. VAN VEEN, TERADYNE, INC.

Mr. Van Veen has been professionally involved in the electronics test and measurement industry for 21 years, the first 13 of these with General Radio Company, the last 8 with Teradyne, Inc. where he presently serves as Assistant to the President. From 1972 to 1974 he served as a member of the Commerce Department's Technical Advisory Committee on Semiconductor Manufacturing and Test Equipment and as Chairman of the Subcommittee on Test Equipment. He is also a Director of the Semiconductor Equipment and Materials Institute, a trade organization of companies supplying capital equipment to the semiconductor industry.

Mr. Van Veen has also long been active in the Institute of Electrical and Electronics Engineers. He is a Senior Member of that organization and was Chairman of its 1975 International Convention. He is also an Associate Fellow of the Society for Technical Communication. He has written extensively on matters relating to electronic test and measurement and served for six years as the Editor of the IEEE *Transactions on Audio and Electroacoustics.*

Mr. VAN VEEN. Good afternoon, gentlemen. I want to thank the subcommittee for giving me the opportunity to testify and appear here today. I would like to begin by telling you a little bit about our company and about my own experience in the industry and my involvement with export controls.

TERADYNE, INC.

Teradyne is a leading manufacturer of automatic test equipment for the electronics industry and for the many other industries now using electronic devices. We are the largest supplier of production test equipment to the semiconductor industry, and I should explain here that testing is an integral part of the manufacture of a semiconductor.

Our production test systems are for the most part computer controlled and priced in the $100,000 area. We also produce smaller testers which are sold to users of semiconductors, who must verify the quality of the devices they buy before they build them into computers, television receivers, calculators, and so forth.

The product line also includes a number of other test systems for various electronic devices, ranging from digital watch components to automotive solid-state ignition modules to circuit boards used in copying machines.

My company employs about 1,100 people and our headquarters and main plant are in an eight-story building in downtown Boston. Over a third of our sales are to Europe and Japan.

My own involvement in the electronics test and measurement industry goes back more than 20 years. I recently served a 2-year term as a member of the Commerce Department Technical Advisory Committee on Semiconductor Manufacturing and Test Equipment and was chairman of its Subcommittee on Test Equipment.

I am also a director of the Semiconductor Equipment and Materials Institute, a trade organization of companies that supply capital equipment to the semiconductor industry.

The rationale for our present system of export controls has been stated and restated in previous testimony as the preservation of our advantage in high technology over the Communist countries, particularly with respect to production equipment.

SEMICONDUCTOR PRODUCTION EQUIPMENT IS TIGHTLY CONTROLLED

If we accept this premise, semiconductor production equipment is seen as especially sensitive, and indeed this area has been one of the most tightly controlled. To date, my company has not been allowed to sell even its most obsolete products into the Communist bloc, and the door is so tightly closed that we do not actively pursue business in Eastern Europe. In short, we can live with or without Communist bloc business, and, if the law says it is to be without, so be it.

We cannot live without our free world business, however, and, if I have one point to make today, it is that our legitimate export business not be sacrificed for the sake of tighter export control.

Companies in our industry typically derive a third or more of their business from export sales, and it is not an overstatement to say that the technological lead we all want to protect depends on our ability to maintain this level of exports.

Our domestic business simply does not give us the critical mass we need to support our technology, and a loss of our export markets might well give this critical mass to some other country.

GENERAL DISTRIBUTION LICENSE

Our export business, like any other business, depends on our ability to have the right product in the right place at the right time, and, in our case, with such a heavy product flow into Western Europe and Japan, we can deliver in a timely manner only through the use of a general distribution license, which spares us the necessity of subjecting every spare part to the review process.

Now, it is understandable that those who worry about the possible diversion of technology from the free world into the Communist world should regard the general distribution license as offering less than perfect surveillance of outgoing technology, but the fact is that, after 10 years of heavy export business, we have heard no evidence to suggest that our equipment has been diverted in any significant amount. Using this yardstick, we would have to say that the present system works. But I must repeat that a free, unencumbered free world export business is vital to our industry, and that any interference with that trade could so seriously weaken our industry as to cost us our lead in technology.

Now, although I am in general agreement with the objectives of the export control program and believe it to be conscientiously administered, I understand the purpose of these hearings is to give a thorough airing to the various issues surrounding export controls, and it is in this context that I offer the following observations.

EXPORT CONTROLS DO NOT ACCOUNT FOR U.S. TECHNOLOGY LEAD

Observation No. 1 goes back to the heart of the question you asked earlier, Mr. Whalen. It involves the argument that our present controls program is a success because it has achieved its purpose, which is to delay, rather than prevent, progress in high technology by our potential adversaries.

Mr. Shields of Defense summed up this argument as follows: "Thus delay is the measure of success. So viewed, our security trade controls have proved to be highly effective, particularly in the area of production capabilities."

Now, this line of reasoning is based on a rhetorical device known as "post hoc, ergo propter hoc," which means that, because one circumstance follows another, it is believed to be caused by it.

We have export controls. The Soviets lag us greatly in production capability. Therefore, the lag is caused by the controls. But the Soviets are way behind us in the capability to produce almost anything you can name, from wheat to automobiles to light bulbs, whether or not the production technology is embargoed.

With all due respect to the controls program, we far outdistanced the Communist countries in production capability long before the Battle Act and Export Administration Act, and the reasons apparently have to do with the advantages inherent in the capitalistic system.

Those who believe that our security depends on our ability to maintain our lead in semiconductor production technology, for instance, might take a closer look at the factors that gave us that lead. If they do, they will find small groups of individuals, backed by venture capital, motivated by the opportunity to achieve wealth, and rising to success on free market demand for their products. The efficient prosper; the inefficient go bankrupt. The same applies to nations, as we see on every side of us today.

Consider the ability of various countries to produce high-technology items in volume—Japan, Great Britain, Italy, the Soviets, the United States, Taiwan, Singapore, China. If you lined them all up on the political spectrum from left to right, you find the leaders on the right, the laggards on the left.

Now, what is it that has placed our potential adversaries in the role of laggards? Their political systems or the Office of Export Administration?

I make the point not to undermine controls, which are certainly necessary, but to place them in their proper perspective as a guardian of our technology.

U.S. EXPORT CONTROL POSTURE HAS NOT SOFTENED

Observation No. 2 is that our current export control posture has not softened in recent years, as some would suggest, but that it is actually very restrictive. I have already mentioned the fact that we have been completely shut off from the Communist market, in terms of my company. The effect goes well beyond what is suggested by a tabulation of license approvals and rejections.

The export controls program dissuades most manufacturers of embargoed items from even pursuing business in Eastern Europe, and

any honest assessment of the severity of the program must take that into account.

LICENSING DELAYS

Observation No. 3 is that license applications, at least in our area, are processed very slowly. And we are not impressed by statistics that state x percent of all applications are processed within y days.

Our applications for export to Communist countries are very few, for reasons I have already mentioned, and the sampling may not be particularly meaningful, but we rarely receive a decision in less than 6 months, and applications made last August and September are still open.

LACK OF INDUSTRY CONSULTATION

Observation No. 4 is that, in the implementation of the controls program, the Government does not consult extensively with industry, as has been claimed. The existence of the technical advisory committees is offered as evidence of a willingness to take advantage of industry's expertise on areas of controlled technology.

My own view, after having served for 2 years as a member of one of these committees, is that industry is consulted only to the extent necessary to appear to satisfy the 1972 modifications to the Export Administration Act.

Since the submission of our committee's final report well over a year ago, the members of my technical advisory committee have never received any indication of the report's acceptability or nonacceptability, nor have we been asked for any clarification, nor have we any indication of the extent to which our recommendations were used in revising COCOM list.

The Government is, of course, not obligated to keep us posted, but the silence in this instance certainly does not suggest extensive consultation with industry.

As for general consultation, my company may have received three or four phone calls in the past 3 years, even though we are the largest manufacturer of semiconductor test equipment, allegedly one of the most controversial of the controlled items.

U.S. INDUSTRY COMPETITION

Observation No. 5 is that one should not be too quick to assume that the granting of export licenses always represents a benefit for industry and that the denial of licenses represents an economic penalty. Things are not that simple. If strict export controls can hurt some companies, they can favor others.

Mr. Glitman of the State Department has already alluded to the possible use of COCOM by other countries wishing to inhibit the United States as a competitor in the world market. But he failed to extend the point to the United States itself.

If you are a leading exporter of widgets to the world markets, for example, what better way of warding off potential competition than to prevent the export of widget-making machinery?

I am not suggesting that the system has in fact been corrupted in this manner, but I am saying that the picture some paint of American industry desperately trying to export its technology at the ex-

pense of national security is inaccurate, for the controls program has its beneficiaries in U.S. industry, as well as its victims.

SMALL BUSINESS IS AT A DISADVANTAGE

Observation No. 6 is that the high volume of exceptions for COCOM items—782 by the United States last year—loads the deck in favor of companies able to lobby their case in Washington and raises a valid question as to whether the program is equitable in its implementation.

Small business—and I will define small as less than $100 million a year in sales—simply cannot afford to spend the large sums necessary to develop the Communist market and to press their case for exception through the Washington bureaucracy.

Thus, while a company of the size of Teradyne loses the Eastern European market for, say, transistor testers of 1963 vintage, fully instrumented Boeing 707's are sold to China.

We in the industry may agree or disagree on the merits of the COCOM list, but at least it is there for all to see, and it is the law. The exceptions, on the other hand, are deliberated behind closed doors, the criteria are hidden, and the whole process breeds distrust.

The idea that exceptions are allowed as a concession to the economic needs of American business is a further misconception. American business in toto probably spends more money chasing around Moscow, Peking, and Washington than the return justifies. The possibility of an exception is the great tantalizer that keeps companies from totally turning away in disgust—that that, incidentally, keeps a good part of the Government bureaucracy in business.

Let us have one list that applies to all companies—those who can afford to go prospecting in Moscow and those who can't—and let us have an end to the exceptions.

SUMMARY

In summary, the notion that a controls program is necessary to protect our advantage in production technology is debatable. We enjoyed that advantage without benefit of controls. The fact is that two generations ago Henry Ford gave the Soviets the technology and equipment for automobile production, yet today the Soviet Union is still a world laggard in automobile production. Which was more important? The technology that Ford exported or the economic system that he did not?

It is an interesting question, worthy of thoughtful discussion by those who shape this country's trading policies. If those who are entrusted with this responsibility decide that our products must be controlled in the interest of national security, we will not only support that decision, but we will continue to cooperate in any way we can with those who administer the program.

We ask only that those administrators operate in a fair and expeditious manner and, above all, that they avoid any action that would disrupt our legitimate free world trade. If we lose that trade, our technological lead will evaporate, no matter how stringent the export controls.

Thank you.

Mr. BINGHAM. Thank you, Mr. Van Veen.

I think if you will go ahead, Mr. Maria, then we can ask questions of both of you.

STATEMENT OF ALBERT MARIA, CHAIRMAN, TECHNOLOGY EXPORT GROUP, THE INTERNATIONAL CENTER OF NEW ENGLAND, INC.

Member, District Export Council for New England, Chairman of the Districts Sub-Committee on Export Administration.

Member, Industry Sector Advisory Committee No. 16, Office and Computing Equipment, Commerce/STR Industry Consultations for Multilateral Trade Negotiations.

Member, International Center of New England, Inc., Boston, Massachusetts.

Formerly International Trade Specialist, Boston Field Office, U.S. Department of Commerce. Assistant to the Export Manager, American Bosch Arma Corporation, Springfield, Massachusetts.

Mr. MARIA. I would like to enter into this testimony these letters that I refer to in my statement, letters of January 23, which are the resolution on export controls by the Boston or New England District Export Council; the October 7, 1975, letter from the International Center of New England to the Secretary of Commerce Morton, and a copy of the letter that the Special Subcommittee from the International Center's Subcommittee on Export Controls submitted to—which was attached to the October 7 letter, copies of which were sent to the Chamber of Commerce of the United States and the New England Congressional Caucus; and the reply that was received on November 14, 1975, to the October 7 letter; and finally my part as the export manager of Wang Laboratories. I am referring to the special licensing procedure, part 373 of the Export Administration regulation, for which I would believe acceptance should be made by COCOM countries.[1]

EFFECT OF FOREIGN LAW ON U.S. DISTRIBUTION EXPORT LICENSE

We have been in the international business since 1967, and, under the new procedure, we have now obtained a distribution license which allows us to export licensed commodities, which are computer peripherals that are used with our electronic calculators which are not licensed. This procedure enables us to maintain free flow of goods from the United States through the distribution license for which we have now 49 approved consignees throughout the world. It allows us to move our goods from the United States into the European countries and COCOM group, for instance, but the problem that has come up is: What effect does foreign law from these countries have on this distribution license?

So, in accordance with section 374.9 of the Export Administration regulations, which is called "Effect of Foreign Laws," "Re-export or distribution authority granted by the Office of Export Administration does not relieve any person from complying with foreign laws."

Early this year, I went to one COCOM country to discuss this foreign law with the ministry that controlled the exports in that country,

[1] Mr. Maria's statement and attached letters appear on p. 190.

and I represented the case for our subsidiary, asking them if they would honor and waive their control of these goods, which are being redistributed from their particular country. This is because of the distribution license which we have which would allow us to move our goods from Germany to France or to Belgium without obtaining approval from the U.S. Government; which they admitted that they were aware of the procedure. However, under the COCOM regulations, no waiver of complying with individual export licenses for reexports from their country could be made at that time.

So, after spending a week visiting these various government offices within this one country, everybody sympathized with us, but they didn't know what they could do for us.

So, when I returned to the United States, I discussed this matter with the Director of Export Administration, Mr. Rauer Meyer, and he told me to write him a letter, which I did, and I pointed out to him what I had done and who I had visited, and I asked him: Would it be possible for your office to give a letter to my company which would assist the Export Administration Offices in NATO countries to accept the U.S. distribution export license procedure without the necessity of the approved consignees having to obtain export licenses in that particular country? Now, this is in accordance with section 373.3i(1) of the Export Administration regulations, which says: "Except re-exports to any of the U.S. exporters' other consignees who have been approved under the Distribution License Procedure." Which relates to the authority for us to move our goods within these countries.

As of now I have not had a reply. I have discussed this recently with Mr. Meyer and I have discussed the situation with our people in the COCOM country, and now I am interested in knowing if it is possible that U.S. negotiations involved in COCOM should consider in their negotiations, whenever they have special licensing procedures of this particular type, that acceptance be made by the COCOM countries and Switzerland, which happens to be one of the countries which also has to have reapproval for re-export, of the "Special Licensing procedure" of the U.S. Department of Commerce Export Administration Regulations under part 373.

This would assist not only our company, but over 200 American firms who are now possibly violating a law which they think they are not violating, because this is a foreign law that they are working with.

The rest of the reference to these letters that I mentioned previously—I would like to have Mr. Dana Robinson present his part, which is his portion of the testimony.

[Mr. Maria's prepared statement and attachments follow:]

PREPARED STATEMENT OF ALBERT MARIA, CHAIRMAN OF TECHNOLOGY EXPORT GROUP FROM THE INTERNATIONAL CENTER OF NEW ENGLAND, INC., BOSTON, MASS.

Mr. Chairman, I appreciate the opportunity to provide this Subcommittee with comments on various legislative and administrative problems related to the export and transfer of technology. On behalf of the technological industries of New England and Wang Laboratories, in particular, I would like to provide a brief summary of the type of problem faced by a U.S. manufacturer seeking to comply initially with U.S. export regulations and then operating a marketing program within another country. Following this, I would like to have Dana Robinson present the more general comments of our Technology Export Group and briefly explain the following attachments to our statement:

January 23, 1975.—(Boston) New England District Export Council; Resolution on Export Controls.

October 7, 1975.—Letter from International Center of New England to Secretary of Commerce Rogers C. B. Morton.

November 14, 1975.—Reply from Commerce Department (Bureau of East-West Trade) to the International Center of New England.

Special Licensing Procedure Part 373, Export Administration Regulation, and acceptance by COCOM countries.

January 23, 1975.

BOSTON DISTRICT EXPORT COUNCIL RESOLUTION ON EXPORT CONTROLS

PROBLEM STATEMENT

A major impediment to exporting is U.S. policy on export controls. We believe this problem deserves the immediate attention of the Executive Branch of Government in order to stimulate the economy of New England through increased exports.

1. The impediment of export controls is of special significance in high-technology industries. This problem is aggravated by relatively low growth potential for these industries in domestic markets, as estimated by the Department of Commerce. On the other hand, Commerce Department statistics suggest significant growth potential for the same high-technology products is available in foreign markets.

2. Business engaged in high-technology industries are not provided with adequate guidelines on what items do or do not require export licenses.

3. Prompt delivery has become a key element in the sale of products for U.S. companies. Given the great advances in foreign technology made in recent years, foreign customers tend to look to countries outside of the United States where they can obtain better delivery on comparable products.

4. The complications of the process of obtaining export licenses are costly to both government and industry in terms of paperwork. At the same time the cost of delays in meeting established delivery schedules is inestimable. The process discourages many companies from entering foreign markets and results in many lost orders.

5. U.S. companies are at a competitive disadvantage because of the lack of conformity of U.S. controls and procedures on exporting to controls and procedures of other COCOM countries.

SUGGESTED ACTION

The following recommendations of the Boston District Export Council are made to the President and Secretary of Commerce. These recommendations can be implemented by administrative decision of the President and Cabinet without international consultation or additional congressional action.

1. A directive from the President to all departments of government is needed to clearly define national objectives on foreign trade. If national policy is to encourage foreign trade on all products which do not have significant military potential to the detriment of national security as called for in the recent renewal of the Export Administration Act, then this position must be clearly established and carried out.

2. Government/Industry Advisory Committees should be restructured to include Defense Department representatives to deal with the following specific problems *on a continuing basis:*

A. Definition of specific U.S. products and technology which would be of significant military potential.

B. Definition and determination of foreign availability of high-technology products. Better liason with COCOM countries is especially required.

C. Procedures and systems for improved Government/Industry cooperation in submitting license applications for high-technology products.

3. The President, through the Secretary of Commerce, should eliminate or significantly reduce the requirements for Validated Export Licenses to all Free World countries of all products and technology which are internationally controlled.

4. The requirements for Statements of Use, Import Certificates, etc. should be reduced.

THE INTERNATIONAL CENTER OF NEW ENGLAND, INC.,
Boston, Mass., October 7, 1975.

Hon. ROGERS C. B. MORTON,
Secretary of Commerce,
Department of Commerce, Washington, D.C.

DEAR SECRETARY MORTON: The International Center is a private non-profit organization of companies involved in international business. Our objective is to help our members expand their international business and its profitability. We have about 400 company members, and communicate directly with 1,000 individuals in these firms, which include manufacturers, exporters, importers, banks and other financial institutions, insurance agencies, the transportation and communications industries, engineering firms, accountants, lawyers, consultants, and graduate business schools.

Representatives of a group of our high technology companies met recently to discuss the administration of export controls. Recognizing the demands of national security, they all felt that there has been an undesirable drift away from the relaxation of controls begun some years ago. As this significantly affects their sales, and hence both employment and the balance of trade, they put together the enclosed list of considerations and suggestions.

We cannot put a figure to the increase in sales and hence improvement in our balance of trade, nor to the number of new jobs that would be created if the sugestions are adopted, but we are convinced that both will be substantial here in New England alone. Conversely, we fear a decline in jobs and in sales and balance of trade if the trend is not reversed. We also believe that we are not denying the Socialist countries any technology; we are merely shifting their purchases to our competitors in Japan and Western Europe. We consider the potential of these suggestions to be so great that we request your personal interest in examining and adopting them. They are not to be construed as criticism of Mr. Rauer Meyer whom we all know and respect, and whose responsiveness to individual company's problems has been most commendable.

If we can be helpful in exploring these comments and suggestions please call upon us.

Sincerely,

HARRY HULL, *Executive Director.*

THE INTERNATIONAL CENTER OF NEW ENGLAND, INC.

MINUTES: EXPORT ADMINISTRATION SUBCOMMITTEE

Discussion among the participants centered on the following:

1. Recognition of the necessity for export controls of technology determined to be of significant importance to the national security.

2. Enumeration of various cases of "red tape" encountered in processing application for individual licenses to country groups Q, W, and Y.

3. The role of the Departments of Commerce and Defense in the administration of export control, including:

A. The problem of backlogs in both departments of applications for licenses to all country groups.

B. The problem of lack of communication from government to industry in regard to the status of individual license applications.

4. The problem posed for industry by the requirement to provide full and accurate end-use information in support of license applications to country groups Q, W, and Y.

5. The problem posed for industry in attempting to comply with export administration regulations concerning direct exports and reexports of high technology products to country groups Q, W, and Y.

6. The need for government departments to relate delays in granting export licenses to loss of export business to overseas competition and consequent loss of jobs.

The following actions were proposed as means of improving the administration of export controls, all of which can be accomplished under authority presently held by The Department of Commerce without need for added legislation:

1. Process license applications for country groups Q, W, and Y within 90 days. Presently such processing requires from three to nine months.

Specific suggestions:

A. For any exhibition sponsored by the United States anywhere in the world eliminate the need for an export license when products are shipped to United States firms exhibiting in care of the United States Government exhibition site.

B. Eliminate the requirements for single or multiple transaction statements.

C. Relax licensing requirements for high technology products. (For example mini-computers, peripherals, related parts or accessories classified under 714 (3)A and 714(4)A in the Commodity Control List. This would allow a relaxation of licensing requirements for machinery and equipment controlled by such mini-computers.)

Consider eliminating entirely licensing requirements for products such as those described above for export to country groups T and V, and possibly also Q and W, in view of U.S. efforts to promote trade with these countries.

D. Communicate changes in policy promptly by letter to all firms with pending license applications affected by such changes. Provide to each applicant monthly a report on the status of all his pending license applications.

E. Decentralize the authority for approval of export license applications by authorizing Department of Commerce Field Offices in major ports of export to fully process applications for country groups T and V.

U.S. DEPARTMENT OF COMMERCE,
THE ASSISTANT SECRETARY FOR DOMESTIC
AND INTERNATIONAL BUSINESS,
Washington, D.C., November 14, 1975.

Admiral HARRY HULL,
Executive Director, The International Center of New England, Inc., Boston, Mass.

DEAR ADMIRAL HULL: Secretary Morton has asked me to comment on your letter of October 7 forwarding the minutes of the Export Administration Subcommittee of the International Center of New England, Inc. You characterize this subcommittee as composed of representatives of a group of high technology companies and indicate they fear there has been "an undesirable drift away from the relaxation of controls begun some years ago."

I believe there should be a differentiation between the relaxation of controls that began some years ago and our export control policy with regard to high technology products. In 1972, the Office of Export Administration began a review of its controls over commodities that were not similarly controlled by the other governments with which the United States cooperates within the COCOM structure. The result was the elimination of validated license controls for U.S.S.R., Eastern Europe, and the People's Republic of China for virtually all commodities not also controlled by our COCOM partners. What remained under control was a small segment of our national product; mostly high technology commodities that had both strategic and civilian uses.

Our export control policy toward the licensing of these high technology products did not and has not changed significantly. There has been no "drifting away" from our policy of approving transactions involving such goods when we are reasonably sure they would be used by a civilian end user for a civilian use. Congressional concern over the export of such products, however, was manifested by the amendment to the Military Procurement Act last year that required the Secretary of Defense to review all applications to export to the U.S.S.R., Eastern Europe, and the People's Republic of China. A similar requirement, expanded to include Yugoslavia, was subsequently included in the Export Administration Amendments of 1974. While this referral procedure has had the effect of increasing the processing time for certain types of commodities, it has not changed our policy of approving high technology products for civilian end uses.

You also mentioned that our export control program is "not denying the Socialist countries any technology; we are merely shifting their purchases to our competitors in Japan and Western Europe." I cannot agree with this assessment. Inasmuch as the high technology products we control are also controlled by the COCOM countries, i.e., Japan and all of Western Europe except Switzerland and Sweden, U.S. exporters should be on an equal footing with their competitors in those countries. We urge firms to cite specific instances where

goods comparable to theirs are being exported freely to the Communist destinations, and I can assure you we will look into such allegations.

With regard to the specific actions recommended by the Subcommittee, I am providing detailed comments in an enclosure.

Sincerely,

ARTHUR T. DOWNEY,
Deputy Assistant Secretary
for East-West Trade.

Enclosure.

P.S.—If you have questions or further comments on our response please let me know. We don't wish to close off any valid discussion.

COMMENTS OF SUBCOMMITTEE SUGGESTIONS

Suggestion

Process license applications for country groups Q, W, and Y within 90 days. Presently such processsing requires from three to nine months.

Comment

While not all applications to export to Country Groups Q, W, and Y take more than 90 days to process, a significant number do. The Department is as distressed over this as industry is and is taking steps to reduce the processing time. However, given the increasingly complex nature of the commodities proposed for export, the need to consult widely with other government agencies, and the shortage of technically-qualified personnel, the Department does not foresee the time when *all* applications will be processed within 90 days. There is, of course, an easy way out: deny those applications that cannot be processed within this time frame. Such procedure would, however, result in the denial of a number of transactions that, given for proper analysis and documentation and review by the various a ory agencies, would be found to be approvable. This would run counter to the statement of policy in the Export Administration Act of 1969 that calls for trade to be encouraged if it is not contrary to national security and foreign policy objectives. Thus simple solutions are not solutions. The Department must be sure of its grounds before either approving or denying a proposed transaction. A decision to approve, arrived at in haste, runs the risk of authorizing an action that would adversely affect the national security of the United States. A decision to deny, arrived at in haste, runs the risk of needlessly restricting U.S. business.

Suggestion

For any exhibition sponsored by the United States anywhere in the world eliminate the need for an export license when products are shipped to United States firms exhibiting in care of the United States Government exhibition site.

Comment

The Department has a long-standing policy of not permitting the exhibit of commodities in Q, W, or Y destinations, even as part of a U.S. Government sponsored exhibition, if it is not prepared to authorize the sale of the commodities at the conclusion of the exhibition. Until fairly recently, the Development did not require the exhibitor to obtain a validated export license if the goods were shown under U.S.-Government auspices. Instead, approval for exhibit, under the above-mentioned guidelines, was sought by the sponsoring agency. However, it was found that direct communication between the exhibiting firm and the Office of Export Administration was desirable because technical matters often had to be resolved before a licensing decision, even for exhibit, could be reached. This procedural change, in effect, eliminates the middleman, and it has worked well. It has served to expedite, rather than impede, the processing of exhibition requests.

Suggestion

Eliminate the requirements for single or multiple transaction statements.

Comment

The Subgroup minutes mention "the problem posed for industry by the requirement to provide full and accurate end-use information in support of license applications to country groups Q, W, and Y." Practically all applications to ex-

port U.S. goods to Q, W, and Y destinations involve commodities that are under international (COCOM) control. In most instances, these commodities have significant strategic as well as civilian uses. Proposed transactions involving such dual-use commodities can be approved only when the Department is reasonably certain they will be used by a civilian end user for a civilian end use. That test is also used by COCOM. Information as to the intended end use and end user comes from various sources. An important source is, of course, the ultimate consignee. Information from him is obtained via the single or multiple transaction statement. By requiring this document to be obtained by the exporter and submitted with his export license application, much time is saved, because otherwise the Department would, in most cases, have to request the end use data *after* the application was filed.

Suggestion

Relax licensing requirements for high technology products. (For example mini-computers, peripherals, related parts or accessories classified under 714 (3)A and 714(4)A in the Commodity Control List. This would allow a relaxation of licensing requirements for machinery and equipment controlled by such mini-computers.)

Comment

All; or practically all, high technology products that are controlled by the Department also are controlled by other governments participating with the United States in the international (COCOM) structure. It takes unanimous agrement by all participating governments to place a commodity under international (COCOM) control or to remove it from such control. The agreed list is reviewed periodically and commodities are added or deleted to reflect current assessment of their strategic potential. The first results of the current COCOM list review have just been announced (Export Administration Bulletin No. 148, dated October 28, 1975.) The negotiations are continuing on other items and more changes can be expected. Whether these changes will affect the level of controls over computers and related equipment has not, as of this writing, been determined. If there are changes, they will be announced in an Export Administration Bulletin.

Suggestion

Consider eliminating entirely licensing requirements for products such as those described above for export to country groups T and V, and possibly also Q and W, in view of U.S. efforts to promote trade with these countries.

Comment

It would be contrary to the basic international (COCOM) agreement to eliminate the licensing requirements for products such as those described above for export to any country group, whether it be T, V, Q or W. The Department has, however, sought to minimize the licensing burden with regard to Free World exports by developing Special Licensing Procedures, such as the Distribution License. The latter permits qualified exporters to ship to approved distributors abroad without prior transaction-by-transaction review by the Department.

Suggestion

Communicate changes in policy promptly by letter to all firms with pending license applications affected by such changes. Provide to each applicant monthly a report on the status of all his pending license applications.

Comment

Basic changes in policy occur rather infrequently. In addition to an announcement in our Export Administration Bulletins such changes usually receive wide publicity in the news media. Examples are the revisions in controls over exports to the People's Republic of China and the embargo placed on exports to South Vietnam and Cambodia. Other changes, which might not receive this type of publicity, are announced in Export Administration Bulletins. Because of staffing reasons, it is not practicable to supplement this official announcement with individual letters to firms. However, if as a result of a policy change, a validated export license is no longer required for a transaction covered by a pending license application, the application is returned immediately with a notice that the shipment may be made under general license. The

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suggestion that each applicant be advised monthly of the status of all his pending license applications also could not be implemented with the existing staffing resources of the Office of Export Administration.

Suggestion

Decentralize the authority for approval of export license applications for country groups T and V.

Comment

The suggestion that the Commerce District Offices be authorized to fully process applications for Country Groups T and V has been consider many times in the past, and it has always been rejected, basically for two reasons: the District Offices do not have personnel technically competent in the commodities under control; and they do not have ready access to the Department's consignee information. The latter is particularly important because national security and foreign policy controls are exercised over exports to Free World destinations in order to prevent the unauthorized diversion of the goods to other, more sensitive, destinations. A major element in our processing of such cases is a review of the bona fides of the consignee. This frequently includes a check of the Department's commercial intelligence files. If the District Offices were to be authorized to process applications, there would be extensive delays while they communicate with Washington to obtain this consignee information.

SPECIAL LICENSING PROCEDURE PART 373, EXPORT ADMINISTRATION REGULATION, ACCEPTANCE BY COCOM COUNTRIES

At the present time, our company has been approved under the "Distribution license" procedure, Section 373.3 of the Export Administration Regulations. In addition we have been able to have most of our subsidiaries and representatives (distributors) in the Free World approved to receive licensed commodities, without applying for individual export licenses.

This Distribution license procedure has been very beneficial to us, however, in accordance with section 374.9 "*Effect on Foreign Laws*—Re-export or distribution authority granted by the Office of Export Administration does not relieve any person from complying with foreign laws."

Because of this section, personal contact was made with the administrators of export regulations in a COCOM country, to determine if they would honor the "Distribution License" procedure. They admitted that they were aware of this procedure; however, under the COCOM regulations, no waiver of complying with individual export licenses for re-exports from their country could be made by them, at the present time.

After spending a week, visiting various government offices, in this COCOM country, everyone was in sympathy with our problem, however, no one seemed to be able to provide an immediate solution.

Upon return to the U.S.A., I discussed the matter with the Director, Office of Export Administration, Mr. Rauer H. Meyer, who suggested that I write to his office explaining what I was trying to accomplish.

On February 18, 1976 I wrote to him and wish to quote from this letter as follows:

"After discussing this matter with you last Thursday, February 12, at the International Center of New England's meeting in Boston, it would certainly be appreciated by Wang and its European subsidiary if a letter from your office could be made available to Wang that would assist the various Export Administration offices in NATO countries to accept the U.S. Distribution Export License procedure without the necessity of the approved consignees having to obtain export licenses. This would relate to Section 373.3i(1) 'Except re-exports to any of the U.S. exporters' other consignees who have been approved under the Distribution License procedure'."

It will probably take sometime to set up some procedure between the USA and the COCOM countries, to accept this type special licensing procedure: therefore, it would be appreciated that the U.S. negotiators involved in COCOM should consider in their negotiations:

"Acceptance, by COCOM countries and Switzerland, of U.S. Department of Commerce 'Special Licensing procedure', Part 373, of the Export Administration Regulations."

There should be no need for any U.S. firm to have to check within another country to determine if the U.S. Export regulations will be accepted.

Having been involved with U.S. export regulations since the Export Control Act of 1949, I can say that there is more assistance and information available to U.S. industry from the U.S. Department of Commerce, than there is in the COCOM countries.

Mr. BINGHAM. Very well. Please proceed, Mr. Robinson.

STATEMENT OF DANA I. ROBINSON, TECHNOLOGY EXPORT GROUP, THE INTERNATIONAL CENTER OF NEW ENGLAND, INC.

Mr. Robinson is International Marketing Consultant to various U.S. manufacturers and exporters of computer-operated instruments and machines, computers, electronic components, and technological production and test equipment.

He also serves as a member of the Executive Reserve of the Commerce Department, Bureau of East-West Trade and a member of the International Center of New England.

Formerly, he served as the International Sales Manager-Components of Raytheon Company, the Export Manager of Transitron Electronic Corporations, and the Far East Representative of Dage Corporation.

Mr. ROBINSON. Thank you, Mr. Maria. Mr. Bingham, I just want to cover a few of the highlights of what we in New England would like to bring to your attention and particularly the work we are trying to do for the smaller companies. I would like to sort of skip over and deal with just a portion of the report which Secretary Morton made last year, on page 3, and how it relates to this whole question of our other COCOM countries cheating and who is catching them and so forth.

INTERPRETATION OF NATIONAL SECURITY

There are two particular sets of figures I think would be important: (1) If the United States has only a 15 percent share of the Socialist country imports of high-technology products and yet the United States presents about 50 percent of the COCOM exception cases, obviously the other 85 percent of the business is being done in some simple manner not through COCOM.

I think I, along with others, could provide you with sufficient, shall we say, not legally proven cases, but substantiated indications that this is a continuing process, but mostly to point out that, as Mr. Glitman said, they do not consider it a violation.

So it isn't that they are cheating, but their interpretation of their national security is different, and I think the crux of a lot of these things will be brought out as more of us can view the Defense Science Board report which finally says that technological products at this stage need to be separated out from the know-how, technology, and design.

So that really what has been happening—and I think State would be the one guilty—is to say the other countries have begun to make unilateral decisions on technology product exports because they couldn't get a quick response from us. In a sense they have just jumped the gun, and we are just around now to realizing that the market we are talking about is $20 billion and U.S. arms sales are $10 billion, so it is a very significant area of policy problem.

As Mr. Van Veen pointed out, the hundreds of little companies whose exports are 30 or 40 percent—if they are a $1 million company—they might have one girl who is a traffic manager. She gets an order even for Western Europe, and there are these two God-awful books, the schedule B. She doesn't know what to do with it, so she will go to a freight forwarder, and the time is urgent, so they will find a section and ship it out to the free world. A year later she will get a notice of violation, and this goes on and on and on. It is a constant battle, because the rules are so complex and because really the cost to small companies of even getting an answer is totally impossible to manage.

LACK OF CLEAR GUIDELINES

I think it would be helpful, if the committee could pursue this whole area. Most of the problems today that have been brought out are basically a lack of really clear guidelines of separating technology from products available from other countries. The highlight of our attachment here is the Boston resolution. We urge the creation of an industry-Government advisory group, but in a totally different mechanism. You meet. You make decisions. And then you go about it, and you don't keep it secret.

The trouble with the present Technical Advisory Committee process is that they won't tell industry what was decided until the other 14 COCOM members vote on it. Well, that is neither technically sound nor is it legal.

FOREIGN AVAILABILITY

The process of what is foreign availability is another major problem. Defense has little input related to free world foreign technology availability. CIA does not collect it. But the law says they are supposed to judge it.

These areas are the ones we think are probably administrative, but maybe there needs to be some clarification of which law applies: The Battle Act, the Mutual Assistance Act, the Export Act; and to pick one of them and tidy it up.

But we would be glad, as we said in the beginning, to come back and work with the committee on particular problems and make specific recommendations.

Thank you very much.

[Mr. Robinson's prepared statement follows:]

PREPARED STATEMENT OF DANA I. ROBINSON, MEMBER OF TECHNOLOGY EXPORT GROUP FROM THE INTERNATIONAL CENTER OF NEW ENGLAND, INC., BOSTON, MASS.

Mr. Chairman, I appreciate this opportunity to join with Albert Maria in presenting this Subcommittee with some comments on policies and problems related to the export and transfer of technology, but particularly as they unnecessarily inhibit New England's exports of technological products. In the efforts of the United States to restrict or deny certain technological products to the Soviet Union we may have neither improved our own military or economic security nor significantly reduce Soviet military capabilities. In this single appearance it is only possible to suggest items of particular importance and to assure this Subcommittee that further specific technical or international trade issues could be addressed by individual members at a later date.

Most of the existing legislation and related procedures affecting the export of technological products and know-how are based upon conditions which

pertained immediately after World War II, when the United States had a clear technological superiority. Through the association with NATO members and Japan in COCOM, the United States has sought to restrict or deny technology which would enhance the military capability of any country able to threaten the security of the United States and our Allies. The world of 1976, however, is a very different one than even that of 1969, when the substantial revisions were made by Congress to confine trade controls to only military implications rather than both military and economic.

We understand that the present concern of the House Subcommittee is to obtain some helpful background of existing problems and suggestions for possible legislative action. While there never can be total agreement between the public and private sectors, it is increasingly clear that the time has come for a major review of what are the policies and objectives of the United States as they affect international trade in technological products and related know-how—to all foreign countries. Within the past few months a number of reports have concluded there exists an absence of clear policy guidelines and rational technological decisions as they affect national security. The primary ones are those of the Murphy Commission, the Government Accounting Office, the Defense Science Board and the August 1975 Report by the Commerce Department on East-West Trade.

1. *The Murphy Commission*, created by Congress in 1972, dealt with the need for the Government to be organized more effectively to deal with constantly changing international situations. You have already heard from Professor Allison of Harvard with his broad view of the problems and specific recommendations. Many New England companies would welcome any moves by the Federal Government to consider these recommendations for both legislative and administrative action.

2. *The Government Accounting Office* study of East-West Trade Problems included a number of comments about technology and export controls. While the report was not as complete or precise as many would have hoped for and only briefly touched on technology transfer problems, it did highlight the need by the Administration and Congress to clear up the present conflicts between the Mutual Defense Assistance Act of 1951 (the Battle Act) and the Export Administration Act. This Report also urged clarification of policy on technology transfer through the East-West Foreign Trade Board, which was created by the 1974 Trade Bill. It is not adequate to deal with technology as if applying exclusively to East-West Trade. The further suggestion of the Government Accounting Office to encourage a broader study of the basic rationale for any export controls by the Council for International Economic Policy deserves further consideration.

3. *The Defense Science Board Task Force* on "Export of U.S. Technology" made public its final report to the Secretary of Defense, whose actions are not yet known. From our initial impression this appears to be a most welcome analysis by the Defense Department of the changes which have taken place in the technological relationships between the United States, other Western countries, the Soviet Union and the countries of Eastern Europe. We urge the Subcommittee to study the report and hope the Defense Department will implement many of the Task Force recommendations in the near future to clarify their guidelines for technological products—even if more restrictive for the related know-how.

4. *The Commerce Department* report by Secretary Morton last August on East-West Trade Problems and Prospects contained some very distressing trade statistics. Total sales of manufactured goods from Western countries to the Socialist countries in 1974 amounted to nearly 20 billion dollars. (Last year's Arms Sales by the United States to all foreign countries totaled about 10 billion dollars!) The share of sales directly by U.S. firms was *less than 4 percent*. If we select out of this total only the products incorporating high technology, Western sales were about 4 billion dollars. Now the U.S. share increased to *14 percent*, but for these same high technology products our share of *Free World markets is about 50 percent*. We can only conclude that the Socialist countries are buying an increasing volume of technological products from other Western countries, thus providing our Allies with the greater profits and volume to further close the technological gap once enjoyed by the United States. To quote from Secretary Morton:

"East-West Trade is going to be a significant factor in world commerce. While the U.S. role in this trade has been small, it has been controversial in this country. Unless this controversy and the policies that grew out of it can be resolved, *our role will probably become even smaller* and very significant trading opportunities and markets for U.S. goods may be lost."

As technology has spread into more consumer and industrial products—such as watches, electronic ovens, games, automotive electronics and medical electronics—the rising economies of many foreign countries have expanded their purchasing power. New England manufacturers and businessmen have become keenly aware of the increasing importance of export trade to our basic economy. For many New England companies the *export volume is now greater than domestic.* In the absence of agriculture exports, an automotive industry and the mainframe aircraft industry, the New England region is dependent upon the productive skills of its workers in the scientific and technological industries to compete effectively in world-wide markets. Our only objective in pursuing these present deliberations in Congress is to be certain that any exports of technological products and even know-how to any foreign country—*including the Socialist markets*—is not really harmful to U.S. military or economic security. We are attaching copies of correspondence generated by the International Center of New England, Inc., to demonstrate the efforts we have taken in the past to resolve our problems through established channels of communication, with—I might add—little success to date.

1. In January 1975 the Boston District Export Council (most of whose members are also members of the International Center) forwarded to the President's Export Council a number of carefully chosen suggestions dealing with substantive policy matters. *None of them were selected* for presentation to the May 1975 meeting with the Secretary of Commerce for forwarding to the President. The fact that these same Boston Resolutions have been incorporated by the Murphy Commission as its major recommendations for specific action on export controls certainly proves that they were worthy of more serious attention. Even the Defense Science Board Task Force from its very different perspective touched on the same issues outlined in the Boston Resolutions.

2. In August 1975 the International Center of New England forwarded to the Secretary of Commerce some specific administrative suggestions, put together by this same "Technology Export Group". The response from the Commerce Department was more lengthy than usefully affirmative.

3. The products of Wang Laboratories, like those of most New England manufacturers of high technology products, require a Validated Export License. The particular problem described by Mr. Maria is only typical of many others experienced by firms who seek to comply with U.S. regulations as they export and then regulations of other foreign countries upon arrival overseas. If we are seeking to encourage some uniformity of policies and control procedures among the COCOM or other cooperating countries, then we should place greater reliance upon national sovereignty and less upon seeking to impose unilateral U.S. policies on foreign customers.

What can or should Congress do about providing a legislative or policy framework within which the export of U.S. technological products and related know-how could proceed without adversely affecting *either our military or economic security?* We can only suggest a few areas which should be considered for possible revision:

A. The 1917 Trading With the Enemy Act is probably a useful process to have available as the ultimate means for the President to prohibit and prevent both imports and exports from taking place with any country he declares as "Enemy".

B. The "Battle Act" of 1951 is the legislative basis for the Munitions List, the International List of COCOM and the authority for the Secretary of State to negotiate with other countries to embargo both military and technological products as a condition of foreign economic, military, and financial aid. The roles of the Commerce and Defense Departments are mentioned in the legislation, but certain words and phrases are probably not useful any longer nor applicable to U.S. policy looking towards 1980.

C. The Export Administration Act, revised substantially in 1969 and again in 1974, does not make any reference to the Battle Act nor to the obvious initial requirement for the Defense Department to identify in relatively precise technological terms those commercial products and technologies of direct and significant military concern.

As was pointed out in portions of the Murphy Commission report, the world is becoming more complex and increasingly greater importance is imposed upon our domestic economy of international developments. This is particularly true with technology, which is no longer as dependent upon substantial military investments for basic research and development. With rising labor costs in Japan, West Germany and most other Western countries—and with the revaluation of various currencies—it is increasingly important for U.S. manufacturers to gain greater shares of foreign markets for their products *from their U.S. facilities.* Only by increased sales volumes to world-wide markets can manufacturers generate the profits needed to maintain and expand their basic research into new fields of technology and application. Our policies and procedures, therefore, should be directed at protecting and expanding the maximum profitable growth of U.S. technological industries within the United States—with less concern for possible contribution to Soviet military capabilities, which Secretary Rumsfeld recently acknowledged are roughly now comparable to those of the United States. Encouraging and facilitating the export of technological products to all destinations will reduce the pressure or incentive for exporting our know-how. As is pointed out in the Defense Science Board Task Force Report, we do have a few areas of technology advantage for which the design and manufacturing know-how is vital to *protect and control to all foreign destinations.* Most of the tighter and improved control procedures which are probably required for a few technological products involve administrative and documentation action, but some changes are certainly needed at least in the Battle Act and the relationship to the Export Administration Act.

We noted with concern the statements on March 15th from Commerce and Defense Department representatives to your committee that no changes were required in the legislation and that everything was going to be better "next month" with just a few more people and a little bit more money. These latter may not be necessary if the basic policies and product guidelines are more clearly defined and understood by Government and Industry alike. The observation from the State Department that we might review the fundamental rules and rationale of COCOM to see whether a better set of premises would allow a more streamlined list should certainly be followed up for action—particularly along the lines proposed by the Defense Science Board.

We commend the members of this Subcommittee for their efforts to explore this most complex and always controversial area of international trade. The world is no longer a bi-polar one and we should not seek to impose our technologies or policies on other nations—especially as our own economic survival becomes increasingly dependent upon other nations for either raw materials or markets for manufactured products. New England's high technology companies will be glad to assist this Subcommittee and other units of the Federal Government in their efforts to resolve these matters, which we feel are unecessarily inhibiting sales and manufacturing employment. Please call upon us individually or through the International Center of New England, 470 Atlantic Avenue, Boston, Massachusetts, 02210. Our phone is Area 617-542-0426.

Thank you very much for your patience and attention.

Mr. BINGHAM. Thank you, Mr. Robinson. I must say that I knew this was a complicated field and we have had testimony that was difficult to follow, but it has reached a new high with these witnesses. [Laughter.]

And I don't mean that in any critical fashion but it is just very, very hard to follow exactly what it is that you are saying, and we would like to have you work with our committee staff with the particular suggestions that you may have.

Again, I am a little puzzled by the fact that all the witnesses today have said: "Yes, we need controls. We are in favor of extension of the act." But then it seems to me almost they come down on the other side when you reach the bottom line. The kind of controls that they would like to see would really not be much of any controls, and we might as well junk the whole system.

Would you care to comment on that?

LIMITED CONTROL LIST

Mr. ROBINSON. Well, I think that by taking the suggestions of the GAO, something better might still be useful. A very limited control list, clearly separating products from know-how and design information could be started. If that could be put into effect, we could then work out a new approach with the COCOM countries and perhaps not limiting it to COCOM, I mean, why should Turkey and Greece be involved in technology and Israel not? Simultaneously, there has been under consideration from time to time the question: Do any controls of product make any difference? I think this is also an important part of the GAO study. Let us take another look at the whole concept. But to at least give it another try along the lines of Defense Science Board and take a realistic appraisal of what few commercial products we might have a lead over the Soviets and for which it is the know-how we are worried about. We should also clarify that the listing of products is not an embargo list, but a controlling list.

REPRODUCTION OF EXPORTED PRODUCT

Mr. BINGHAM. When you speak in those terms, are you saying that the product, the export of the product, doesn't enable the importer to reproduce the product?

Mr. ROBINSON. Not unless they already are able to do something pretty close to it anyway.

Mr. VAN VEEN. That is generally correct, Mr. Chairman. In our case, if it were that easy, certainly all of our competitors would long ago have seized our market share. There is a great deal to it that is not extractable.

Mr. MARIA. I would like to comment on that. We happen to have sold a machine which we call our programmable calculator that was sold in 1967, and our Israeli agent informed us that a company in Israel was now building a similar machine. Through the State Department and Commerce, we received a report and all the information and literature regarding something that looked like our machine. It happened that, when I showed it to Dr. Wang, he just looked at it and walked away. He said: "Forget it." We haven't had any competition in that particular market.

Mr. ROBINSON. That is to Israel, too.

DEFINING NATIONAL SECURITY

Mr. VAN VEEN. If I may, Mr. Chairman, you have pointed out the apparent dichotomy of our criticisms of the controls program on the one hand and then our support of continuation of the act on the other.

It really is, practically speaking, next to impossible for anyone to sit here and attack the essence of the controls program.

In the play "Guys and Dolls", a character named Big Julie comes in to shoot craps, and he shoots with blank dice. The victim says: "But there are no spots on the dice." Big Julie answers: "But I remember where they were." In this case, the Defense Department is the only one who knows where the spots are on the dice. We don't have intelligence apparatus.

If the defense organization says: "This product is critical to the national security," we obviously cannot oppose that, so I think that is the deadlock here.

Mr. BINGHAM. Would you explain to me, Mr. Van Veen, what semiconductors are?

EXPLANATION OF SEMICONDUCTORS

Mr. VAN VEEN. At their most basic level, they are diodes and transistors. They are electronic switching and amplifying devices that are made in the solid, rather than the gaseous, state, as a vacuum tube would be, for instance, and they are the guts, if you will, of your transistor radio, your pocket calculators—and they are proliferating. Something like 13 billion semiconductors will be made in 1976. The most advanced forms are integrated circuits, including semiconductor memories used in vast quantities in computers, which, of course, is the primary concern of the military, but simiconductors are also used in cameras, in calculators, and in the new digital watches.

So there are a great many consumer applications—peaceful, nonstrategic consumer applications. And that is why semiconductor production technology has become such a controversial issue. Many countries in Eastern Europe would like to develop a calculator business, a digital watch business. The production technology to make those semiconductors in large part, however, is the same production technology used to make the more strategic type of integrated circuit, and that is why it is a very difficult area. It is a sensitive area and it is tightly controlled.

Basically, semiconductors are the electronic works, if you will, of almost anything that is made today, and they will show up in washing machine timers, point-of-sale terminals, electronic cash registers. The term most often used is "pervasive" and they are pervading.

IMPORTANCE OF TESTING EQUIPMENT

Mr. BINGHAM. And you referred to the testers for these as being an important part of the process?

Mr. VAN VEEN. Yes. Unlike many other manufacturing processes where testing is arbitrary or discretionary, in the manufacture of semiconductors you don't know what you have until you test it. It is literally tested into being. You start with a lot of little pieces of silicon, and, until you test them—first as a small die, then as a packaged device—you don't know what you have. The testing of 1 semiconductor might involve 10,000 or 20,000 individual tests or more, so it is a highly complex process.

Only when the test results are read out of the computer—and this is done very rapidly—can you determine whether you have a good or bad integrated circuit. Those who buy integrated circuits must also test them because a 1-percent reject rate is typical for even common integrated circuits.

So testing equipment becomes a very critical area, and, if you look at some of the Defense Science Board testimony, you will see that the witnesses there also regard it as such, and we acknowledge that.

However, I would like to make one final point before I conclude that particular line of thought. Within the phrase "semiconductor test equipment," there is a broad spectrum that ranges from highly advanced computer operated systems to what we would today consider primitive bench-top, go-no go testers, testers that have the ability to tell only whether a device is good or bad, without supporting data. Those testers are controlled as tightly as the most advanced.

One of the license applications I mentioned from my company entered last July or August was for one of those $5,000 bench-top integrated circuit testers. That, as I said, we regard as quite obsolescent.

Mr. ROBINSON. Just supporting his point—and giving you one example of a very small company which makes what it calls an integrated circuit test equipment—a $900 little black box. Poland wanted to buy one. We are now in the process of getting approval but I have been working on it, as a moral issue. It has taken 7 months and we now have gotten it into the Interagency Operating Committee. They finally made the decision that this $900 test equipment is different than the Teradyne model worth $100,000. Then it must still go to COCOM and they debate again. And this is called national security.

COCOM PROCEDURES

Mr. BINGHAM. Now, Mr. Maria, you have described a situation where you have obtained a distribution license, and the problem appears here to be not so much with U.S. procedures as with the procedures applicable in the COCOM countries. Is that correct?

Mr. MARIA. That is true.

Mr. BINGHAM. This type of situation hasn't been raised before this subcommittee before that I am aware of, and yet I would think it might be a fairly common type of situation.

Mr. MARIA. It is. Would you like to listen to a little story? In a sense, I have been with the regulation since 1949. I happen to be also with the Commerce Department, teaching throughout New England on regulations. There are foreign laws in here, and I refer to section 374.9, which says that in effect foreign law is predominant. So, in this case, our subsidiary in this country has been after me to come over and help him out, to discuss the problem with their export administration office. They will allow us to continue to move our goods in accordance with the U.S. law, but at any time they will say an internal customs man can question that that licensed commodity has not been licensed by his own country to be reexported, so we can move it from Germany. However, in Germany, seeing that—I will give you the numbers that they use: BTN 84.53 is considered automatic data processing machines. They are not called digital computers. They are not called analog computers. They are called digital machines in accordance with the Brussels tariff. When your product moves from one country—we enter into Belgium, we will say, as BTN 84.53. It is classified automatically as a licensed commodity. When it goes out of the country, to say Germany, it is now a licensed commodity from Belgium to Germany. In order for our subsidiary to reexport that American product which is licensed for free movement within these countries, they have to apply for an export license from the Belgian Government. The Belgian Government requires an import certificate and delivery verification for any of what are called the "A" commodities which are on the COCOM list. When that certificate is brought

in, our office will apply for an export license. License will be maybe 3 weeks. Then they will have the authority to reexport into Germany. The Germans now have to provide a delivery verification to the Belgian subsidiary to present that to the Belgian Ministry of Economic Affairs to show that the goods were received in accordance with the regulations. If the Germans now want to send that piece of equipment to another country, the German subsidiary would now have to apply for an export license from the German Ministry in the same manner. Now, if that equipment is going to France, they have to get an import certificate and submit it to the German people. The German subsidiary would now apply for the export license, ship it into France, and for that same piece of equipment they would require delivery verification to go back.

This is actually what the foreign law covers. There are many companies that are not doing this procedure, because the Germans or the Belgians or the French do not publicize that there is such a thing as regulations.

If you—I will ask you the question like I used to ask everybody, and it is one of my basic things in discussing export controls. We live in a free country, but everything we do or ship out of this country is licensed. You stop and think about it, and that is what the regulations are. You have a general license to move the goods and you have a validated export license. It is the same thing in any of these countries. There is no publicity given about this type of control.

If you go into a freight forwarder, let us say in Belgium, and you say: "What is the problem in shipping this product to this other country? Just ship it out." Classification by the Brussels tariff number. In the United States, we have a classification by schedule B.

Many of the freight forwarders are doing all the work for the small companies who don't want to get involved with regulations.

If the person who picks up the—let us say the shipment from the port of Boston, as a freight forwarder he will classify the equipment as he sees fit. If it requires a license, he says: "Well, maybe"—It is questionable, so he will take the easiest way—which is to ship it under a general license and give it a schedule B number, which does not require a license. And this is done all over the European area too.

U.S. PROCEDURES MORE PRACTICAL THAN EUROPEAN PROCEDURES

Mr. BINGHAM. It seems to me that what you are saying and unlike what we have heard from most of the other witnesses is that the U.S. procedures are rather more practical than some of the European procedures.

Mr. MARIA. Definitely. In my last paragraph, as an export manager, as an ex-Department of Commerce international trade specialist, and being in industry before the regulations started, we have—it used to be called the comprehensive export schedule, which is now the Export Administration regulations. This book is available in this country. There is no publicity about it, other than a list of publications available from the Department of Commerce.

In a foreign country, you do not get a book. You get a strategic list, if you ask for it. The British Board of Trade, they mentioned. I happen to subscribe to it. I have been getting it for years. It does

list publicly what the security controls are for COCOM in English with their numbers.

Now, I have this up-to-date, but, when you go into Belgium or you go into Germany or you go into France, you do not get this information unless you ask for it. There is no public information available.

In this country, we have the regulations available. You have the offices to help you out in the Department of Commerce. Not just building it up, but there is information available. We have programs. We have workshops here, and we discuss these things.

INTERNATIONAL COMPETITION

Mr. BINGHAM. But the result is in many cases, as we have been told again and again, that the American companies are penalized because so much of the same kind of equipment for which they cannot get licensed is exported by their European competitors or Japanese competitors.

Mr. MARIA. The honest American companies. The ones that try to comply with the law who are aware of the law. You ought to try listening to a telephone conversation between a foreign country—between an American—not an American, but a distributor-representative of American products which are completely controlled—and I am not trying to say they are doing anything illegally, but the thing is: "How do you get these microcircuits into the bloc countries?" It is the simple question. He said: "Oh, no. We don't do that. It is a violation of the U.S. Department of Commerce regulations to ship them in there."

DESTINATION CONTROL STATEMENT

Now, they understand that at one time we used to have what we called destination control statement. It used to be put on secondary invoices when we shipped to our subsidiary. Our subsidiary in that foreign country would turn around and stamp it: "U.S. law prohibits the distribution of these goods or diversion, etc." Now, that was a few years ago. So that means we will go only as far as our subsidiary. Thereafter, our subsidiary can turn around to sell the licensed products without our control or knowledge to any of these countries without applying for a license. They could say: "We don't know." Somebody could buy it right from them. Somebody could buy—Fred talks about semiconductors, integrated circuits, microcircuits. You can buy them anyplace, any shop, Radio Shack, here. You can buy them in the European area the same way. Nobody is going to tell you that it is a violation to ship that from France into Russia because it is contrary to U.S. law because the salesman doesn't know that there is such a law. He is just selling the goods.

Mr. WHALEN. Are you telling us that American firms which have subsidiaries abroad can ship prohibited items to those subsidiaries? These subsidiaries in turn then have no restrictions on them?

Mr. MARIA. No, I am not saying that. I am saying that anybody who handles, as a representative or distributor of an American product, could do it, because they are not required now to put a statement on the sales invoice to an individual that this is contrary to U.S. law to resell these goods or to reship it out of this country.

Mr. ROBINSON. The other countries really do have some regulations. We have easier procedures, but they basically don't even have the

control laws. The fact that they aren't even aware of our procedures is an indication that they haven't even gotten seriously interested. They go through a little bit of a process, but, having worked both with a French and a Japanese company, it is just virtually nonexistent.

Mr. WHALEN. Are you suggesting, then, that one way for an American company to get around the law is to have a distributor in France or in one of the other European countries? Ship to the distributor——

Mr. MARIA. No. No American—no honest company would do that.

Mr. ROBINSON. The countries over there—once it gets into the German economy one or two transactions later, it is made into a finished product. They then look at it from a German point of view. This is where American companies get into difficulty, with the accusation that you purposely started out to try to do it, and we say: "Well, how far can you go in refusing sales?"

RELOCATION OF TECHNOLOGY KNOWHOW

Mr. VAN VEEN. This doesn't represent the major conduit, as I see it. In the case of semiconductor production equipment, the far more likely danger is that people who have the semiconductor production knowledge and know how to build the machinery to make semiconductors can simply relocate physically into an Ireland or a Lichtenstein or a Switzerland, a non-COCOM country, where they are then completely uncontrolled, and they just set up their little plant—and most of the companies that produce this kind of equipment tend to be very small—to make diffusion furnaces and so forth. We see shadows of that coming.

Mr. MARIA. One thing that was brought up before was—Dana mentioned it to me before, about some problem he had. We happened to purchase in our European subsidiary a product which is licensed by the U.S. Government. That product which is bought from a bloc country comes to the United States. It requires an export license for us to reexport it back.

Now, this COCOM country was asked a question. We bought this machine from the bloc country. "What is the regulation regarding it? It is considered a licensed commodity in the United States. Is it considered a licensed commodity in your country?" They said: "Well, we don't know what to tell you. You can do whatever you want."

The point is that the United States is more explicit than most of the countries over there—it is based on what they call the strategic list or the consolidated list of security controls, what they call the COCOM list.

But we have a broader—well, we will say we have a more generalized listing, whereas they give a little more detail, for you to consider whether an item should be either not licensed or licensed.

POLITICAL RESTRICTIONS

Mr. WHALEN. I just will make one comment for Mr. Robinson. You cited figures which indicated that, despite our technological lead in our country, we do have a disproportionate share of the Eastern European market. We did discuss this issue last week, and I would reiterate that there are other restrictions, what I would call

political restrictions, which are almost as onerous as the security ones. Would you agree to that? That they inhibit our exports to the Eastern bloc?

Mr. ROBINSON. I think one of the things that companies are concerned about is that, with the present time frame and policies and problems, there is a substantial additional volume that we don't even have the free choice to plan to go after. As Fred said, at least we should be given the decision: How much is it going to cost and is it worth going after? And it is a substantial area, when we have only one-third of our market share that we would have in other countries. Now, maybe if we had licenses, we would find other problems: Payment problems, political considerations; but right now there is just no way of knowing how to go after it.

SUMMARY

Mr. WHALEN. Mr. Chairman, there has been sort of a common thread among all the witnesses. I wonder if I might summarize and ask the last three witnesses if they agree with this summary.

First: The charge has been made that there is old technology or dated technology on the list. Second: There is technology on the list which really doesn't have any substantial security impact. Third: There is a lack of producer input, both domestically in the decision-making process as well as at COCOM. Fourth: There is an undue delay in the decisions made domestically. And, fifth: There is unequal enforcement by other COCOM countries, to the detriment of the U.S. firms.

Does that sort of summarize the presentations that have been made here? Perhaps there are some additional points that I missed.

Mr. ROBINSON. I think that is basically it. On the question——

Mr. WHALEN. I might interrupt, that everybody is for the bill. [Laughter.]

Mr. ROBINSON. It is for the extension of something.

Mr. WHALEN. I think you are empathetic with us. This is motherhood. How can one be against it?

Mr. MARIA. What was there before the Export Control Act of 1949?

Mr. WHALEN. 1948.

Mr. BINGHAM. There was COCOM though. There was COCOM.

Mr. MARIA. We used to license all our commodities going to every country of the world. The company I worked for at that time made automotive products such as voltage regulators for automobiles, windshield washers and those were all licensed.

And that was because of a reason. Then later on, they relaxed, and then the only thing—somebody mentioned ball bearings. There were ball bearings licensed by diameter and what they were made of, which our company got involved with, but as you go into this thing as it has progressed, and working with all the people on export control—you get to see the changes. We agree on export control of some kind or so much, you know, but, to drag out a license application for months, that is not necessary.

Mr. BINGHAM. Well, thank you very much, gentlemen. We appreciate your coming down and giving us the benefit of your views.

The subcommittee stands adjourned.

[Whereupon, at 4:30 p.m., the subcommittee adjourned, subject to the call of the Chair.]

EXPORT LICENSING OF ADVANCED TECHNOLOGY: A REVIEW

TUESDAY, MARCH 30, 1976

HOUSE OF REPRESENTATIVES,
COMMITTEE ON INTERNATIONAL RELATIONS,
SUBCOMMITTEE ON INTERNATIONAL TRADE AND COMMERCE,
Washington, D.C.

The subcommittee met at 2:25 p.m. in room 2255, Rayburn House Office Building, Hon. Jonathan B. Bingham (chairman of the subcommittee) presiding.

Mr. BINGHAM. The Subcommittee on International Trade and Commerce will be in order.

I would like to apologize to our witnesses for the delay, but, as you can see, we just had a vote.

We are continuing hearings today on the export licensing of advanced technology. This afternoon we want to give the "technical people" involved in the process a chance to be heard.

Throughout our hearings, we have heard frequent reference to the report of the Defense Science Board as a major breakthrough on the problem of identifying what technology should be controlled for export. The study is entitled, "An Analysis of Export Control of U.S. Technology—a DOD Perspective." We are pleased to have three considerations which gave rise to the study.

Mr. J. Fred Bucy, executive vice president of Texas Instruments, Inc., who I understand will shortly be appointed president of that company, is our principal witness. Mr. Bucy served as Chairman of the Defense Science Board Task Force which conducted the study.

Mr. Bucy, we congratulate you on your work and your promotion, and we welcome you to present the findings of the Task Force to the subcommittee.

The study was prepared at the request of Dr. Malcolm Currie, Director of Defense Research and Engineering, with cosponsorship by the Assistant Secretary of Defense for International Security Affairs.

Representing Dr. Currie, we are pleased to have Mr. Robert N. Parker, Principal Deputy Director of Defense Research and Engineering, who will precede Mr. Bucy with a brief statement of the considerations which gave rise to the study.

Mr. Parker is accompanied by Maurice J. Mountain, Director of Strategic Trade and Disclosure, International Security Affairs, and by Mr. Albert L. LeBlanc, staff specialist, International Programs, Office of the Director, Defense Research and Engineering.

We are glad to have as our third witness, Dr. Betsy Ancker-Johnson, Assistant Secretary of Commerce for Science and Technology,

appearing before us today in her capacity as a member of the Defense Science Board Task Force.

It is my understanding that Dr. Ancker-Johnson does not have a prepared statement, but is prepared to answer questions from the subcommittee.

We welcome all of you to the subcommittee. Mr. Parker, if you will proceed please.

STATEMENT OF ROBERT N. PARKER, PRINCIPAL DEPUTY DIRECTOR, DEFENSE RESEARCH AND ENGINEERING, DEPARTMENT OF DEFENSE

Robert N. Parker assumed his duty as Principal Deputy Director of Defense Research and Engineering at the Pentagon on August 27, 1973.

Mr. Parker has been Vice President and General Manager, NAVCOM Systems Division, Hoffman Electronics Corporation, El Monte, California, since 1971. Prior to serving in that position, he was Deputy Assistant Secretary, System Development and Technology, United States Department of Transportation, 1970–1971.

From 1967 to 1970, Mr. Parker was Chief Engineer, Autonetics Division, North American Rockwell, and from 1954 to 1967 he held various positions with the Hughes Aircraft Corporation. He was Assistant Professor at the U.S. Naval Post-Graduate School, 1961–1962.

Mr. Parker was born September 2, 1928, at Fremont, Nebraska. He graduated from the University of California at Los Angeles where he received Bachelor of Science and Master of Science degrees in Engineering in 1954 and 1956, respectively.

He served in the United States Air Force from 1946–1949 and 1951–1953.

Mr. PARKER. Mr. Chairman and distinguished members of the subcommittee, Dr. Currie and I and the rest of the technologists wish to thank you for the opportunity to speak to you today on a subject of paramount importance to defense R. & D. managers: The export of U.S. technology to Communist countries.

FLOW OF TECHNOLOGY NEEDS TO BE CONTROLLED

If we are to continue to reap the return of the comparative military advantage for billions of dollars which this Nation is investing in defense research and development, we will need to carefully control the flow of advanced technology and commercial systems which will aid our military adversaries in further narrowing this techno-military gap.

Our failure to do so will: (1) Negate United States and allied comparative military advantage in qualitatively superior technology or weaponry; (2) unduly erode the U.S. technology/industrial base which is vital to national defense and economic health; and (3) require larger R. & D. investments to keep pace with the expanding Soviet technology structure and its increasing proficiency in designing and producing advanced weaponry.

OBJECTIVES OF DEFENSE SCIENCE BOARD TASK FORCE

As a result of the large increase in the number of export cases and the magnitude of the technology involved- for example, "turnkey" factories, aircraft, jet engines, electronic devices, computers, and manufacturing machinery—it was important that the Defense Science Board be requested to form a task force to assess the implica-

tions to U.S. defense of current and impending export of U.S. technology.

The objective of this assessment was to provide a basis for the determination of Defense Department policy in matters pertaining to: (1) approval of U.S. contractor arrangements for technology export to foreign contractors or government agencies; (2) coordination with other U.S. Government departments regarding technology export or exchanges with foreign entities; and (3) security classification controls over technological data significant to the U.S. defense position.

The formation of the task force was established by Dr. Currie on July 10, 1974, with the cosponsorship of the Assistant Secretary of Defense, International Security Affairs.

Mr. J. Fred Bucy, executive vice president of Texas Instruments, was asked to chair the task force. Since Mr. Bucy will brief you on the task force and its findings and recommendations, I would like to comment on the Department of Defense's implementation plans.

We believe the Bucy task force has done this country a great service in addressing a very complex problem and in providing a set of criteria and recommendations which will aid Defense, State, Commerce, Treasury, and the Congress in assessing export control of U.S. technology.

Both Secretary Clements and Dr. Currie have generally accepted the report and directed its implemention. This does not necessarily imply, however, that all of the detailed recommendations have already been accepted by the Department of Defense or that they will all be implemented by the executive branch.

Defense is forming an ad hoc defense steering group and working group to initiate an implementation plan for the report. The steering group will be chaired by Mr. Robert A. Basil of my International Programs Office. Each recommendation will be assessed by the steering group and a preliminary implementation action determined. This plan will establish a point of departure for interagency discussions toward improving the existing system of strategic trade controls.

DEFENSE DEPARTMENT RESPONSIBILITY IN EXPORT CONTROLS

As you know, the primary responsibility for strategic trade controls are the responsibility of State, Commerce, and Treasury. Within Defense, the Assistant Secretary of Defense, International Security Affairs, has the primary responsibility for administering strategic trade and disclosure matters.

The Office of Defense Research and Engineering role will be to initiate implementation action to more actively involve the technical community in the export control of U.S. technology.

Our primary emphasis will be to identify highly leveraged technologies and products which would adversely impact national security and to enable trade in products of no real strategic consequence and insure that the techno-military aspects of significant export cases are properly assessed by the technical community. It is our firm intention that we harvest the full fruits of the task force's effort.

There appears to be considerable agreement within the executive branch—and, I believe, also in the Congress and industry—that East-

West trade needs to be pursued within the bounds of national security. On this basis, we believe that as the Department most immediately concerned with the impact of technology transfers, we must take the initiative to implement the task force's report. We feel that other executive branch agencies will sup. .t our efforts to improve the effectiveness and efficiency of strategic export controls through proper emphasis on key technologies in protecting the national interest in a manner which is not unduly punitive to U.S. industry.

Thank you, Mr. Chairman.

Mr. BINGHAM. Thank you, Mr. Parker.

Now we will hear from Mr. Bucy.

STATEMENT OF J. FRED BUCY, EXECUTIVE VICE PRESIDENT, TEXAS INSTRUMENTS, INC., CHAIRMAN, TASK FORCE ON EXPORT OF U.S. TECHNOLOGY, DEFENSE SCIENCE BOARD

J. Fred Bucy, Jr., received his degree in Physics in 1951 from Texas Tech University in Lubbock, Texas. He worked as an associate research physicist in the Defense Research Laboratories of the University of Texas in Austin where he later received a Masters Degree in Physics.

Upon completion of studies at the University, Bucy joined Texas Instruments and was assigned to the Central Research Laboratories in Dallas where he did research in instrumentation for oil exploration. Next, TI assigned Bucy the task of developing the first solid state, asynchronous 10 MC digital computer and a digital field system and high fidelity seismic amplifier for oil exploration. This program was highly successful with the first systems operating in the field in 1960. He holds three patents.

In 1963, Bucy was promoted to Corporate Vice President and assumed responsibility for TI's Government Products including radar, infrared, sonar, missile and space systems and instrumentation equipment.

In 1967 he was given the responsibility for the Semiconductor Components Division, including its international manufacturing operations. Later the same year he was assigned worldwide responsibility for TI's Components Group.

In May 1972, he was elected Executive Vice President of Texas Instruments, with responsibility for the Semiconductor Group, Solid State Products Division, European Semiconductor Group, and Materials and Electrical Products Group. These organizations include direct responsibility for 49 plants in 19 countries, covering technologies from semiconductors through calculators and metallurgical materials.

In October 1974, he was elected a Director and added to the Board of Directors at Texas Instruments. In February 1975, he was named Chief Operating Officer, making him responsible for all operations of Texas Instruments Incorporated.

He holds the grade of Fellow in the IEEE, is a member of the USAC Advisory Committee of the IEEE, member of the Cosmos Club of Washington, D.C., and is a member of the Defense Science Board of the Department of Defense. He served on the Commerce Department's Technical Advisory Committee on Semiconductors and on the Technical Advisory Committee for Semiconductor Manufacturing and Test Equipment. He was Chairman of the DSB Task Force on Design-to-Cost, and is chairing the DSB Task Force on the Export of U.S. Technology, and is also a member of the DSB Management Panel. He is a member of the Technology Assessment Advisory Council of the Office of Technology Assessment of the Congress of the United States. He is an executive member of the American Institute of Management, and a member of the National Academy of Engineering.

He is a Board member of Metro Dallas United Way, a former trustee of St. Mark's School of Texas, member of the Development Board of The University of Texas at Dallas, Board of Directors of Southern Methodist University's Dad's Club. He received the Distinguished Engineers Award from Texas Tech in April 1972, and in 1973 was appointed by Governor Dolph Briscoe to serve on the Texas Tech University Board of Regents. He is a lifetime member of the Navy League. He is a member of Sigma Pi Sigma and Tau Beta P

Bucy is married to Odetta Greer Bucy and they have three children.

Mr. BUCY. Thank you, Mr. Chairman. I am here this afternoon in my capacity as chairman of the Task Force on Export of U.S. Technology of the Defense Science Board.

The entire text of my testimony is contained in the document entitled "Highlights of the Final Report on Export of U.S. Technology."

If it meets your approval, I request that this document be placed in the record.

Mr. BINGHAM. Yes. Without objection, it will be so ordered.[1]

Mr. BUCY. Since it would take about 45 minutes to present it, I propose to summarize it as background for your deliberations.

Mr. BINGHAM. We would appreciate that.

DISTINCTION BETWEEN "SCIENCE" AND "TECHNOLOGY"

Mr. BUCY. Before discussing the export of technology, however, we must clearly distinguish between "science" and "technology". "Science" is simply knowledge of the physical world and its phenomena. "Technology", on the other hand, is the application of science to the manufacture of useful products.

As an oversimplified example, science—and obviously Einstein—said" "E equals MC squared." Technology in the form of a nuclear powerplant converts scientific knowledge to practice, and that is technology.

"KNOW-HOW"

We must also distinguish between "know-how" and "products" of that know how. "Know-how" in its pure sense is information and practical skills. Specifically, it is detailed information about how to do things. For the most part, it is expressed on paper, in words and numbers and pictures. On the other hand, "products" are useful physical articles that result from the application of design and manufacturing know-how.

Ordinarily, products that do not help to design or manufacture things do not transfer technology.

I would like to use a simple analogy on this. There is an old folk-saying about this application. It says that, to give a man a fish, you have given him a meal. If you teach him how to fish, you have fed him for life.

The obvious analogy here is that a fish is a product and teaching a man how to fish is a skill or the transferring of know-how. In making that distinction, it is fundamental to what we are recommending here.

Now, ordinarily, in the realm of technology, the task force was most concerned about the export of design and manufacturing technology. It is this detailed knowledge of how to do things that is most vital to our economic and military well-being.

It is mastery of design and manufacturing know-how that increases a nation's capability. It is in this area that the United States maintains and must maintain its technological leadership.

If the United States were somehow forced to sell all of its basic science to any nation that wanted it, it would recover. If we were forced to sell all of the products that we have available in the United

[1] The document referred to appears on p. 220.

States, high technology all the way to the lowest technology, we would recover from that.

But, if we were forced to divulge all of our design and manufacturing know-how to any nation that wanted it, we would not recover from that blow.

Four subcommittees of the task force initially worked independently, each in a high-technology area where their members had expertise. These areas were airframes, aircraft jet engines, instrumentation, and solid-state devices.

Although the terminology in each industry was different, the subcommittees arrived at the same central finding. It is that the transfer of design and manufacturing know-how is of overwhelming importance to our national security.

EXPORT CATEGORIES

The next step then was to determine which categories of exports transfer that know-how most effectively. Three categories are felt to be most hazardous.

The first category covers exports of arrays of design and manufacturing information, plus significant teaching assistance. Such exports provide technical capability to design, optimize, and produce a broad spectrum of products in a technical field. This is the highest and most effective level of technology transfer.

The second category is the export of manufacturing equipment required to produce, inspect, or test strategically related products. This category is slightly less effective, since it does not transfer the overall design and manufacturing background and rationale. In this category, "keystone" equipment is particularly critical. "Keystone" equipment completes a process line and allows it to be fully utilized.

Let me give you an example. A keystone piece of equipment in the aircraft jet engine industry is provided by titanium forging equipment. Most of the machine tools used in working titanium rotor and stator blades are conventional multipurpose machine tools. But the forging equipment essential to forging titanium is materially different from equipment used to forge steel. Hence, titanium forging equipment is the keystone to producing modern high-performance jet engines.

The strategic importance of keystone equipment derives from its uniqueness. There is no substitute for it. If all the other equipment on a production line is general or multipurpose and the keystone equipment is the only unique equipment needed, then its significance is obvious. If you don't have that piece of equipment, the rest of it is of no avail.

The third category of experts that transfer technology effectively covers exports of products that carry technological know-how with them. This know-how is often supplied in the form of extensive operating information or application information or sophisticated maintenance procedures.

ACTIVE AND PASSIVE MECHANISMS

To put it another way, the many mechanisms for transferring know-how between countries may be arranged in a spectrum. At the

high end of the spectrum are the most active mechanisms. An active mechanism is one in which the donor company actively transfers design and manufacturing know-how. For example, by establishing a turnkey factory in the receiving country.

At the low end of the spectrum are the most passive mechanisms. In these passive cases, the donor company's objective does not include transferring design and manufacturing know-how. For example, a trade exhibit is not aimed at teaching visitors how to design or make the product.

ACTIVE MECHANISMS

Active relationships are characterized by an intensive teaching effort by the donor company, and they involve frequent and specific communications between donor and receiver. These communications typically transfer proprietary or restricted information. They are directed toward the specific goal of improving the technical capability of the receiving nation.

The process of teaching and communication is normally continued for several years, until the receiver is able to demonstrate the desired level of technical capability on its own.

A list of 17 typical transfer mechanisms was submitted to four subcommittees. They were asked to work independently and rank the mechanisms according to their effectiveness.

The rankings——

Mr. BINGHAM. Excuse me, Mr. Bucy. That chart is very difficult to read. Is that reproduced in one of the documents?

Mr. BUCY. Yes, sir; it is—in the main report here on page 6. I am sorry.

Mr. BINGHAM. All right. We are with you.

Mr. BUCY. The rankings differed very little from subcommittee to subcommittee. The consensus is that effective transfer of know-how depends upon the active teaching participation of the donor company.

RECOMMENDATIONS

Two principal recommendations arise from these findings: First, the task force recommends tight control of the more active mechanisms for transferring design and manufacturing know-how, to prevent transfer of strategic capabilities.

Second, since sales of products do not usually transfer a current design and manufacturing know-how, unless they are accompanied by extensive operations and maintenance data, the export of products should be evaluated according to the capability the products themselves transfer.

And we quickly point out that this intrinsic utility of the product is a much more important criterion for the approval or denial of an export license than is the end-use statement of the receiving country.

ASSESSING STRATEGIC U.S. LEADTIME

Another task force finding develops recommendations for accurately assessing strategic U.S. leadtime. Leadtime must be determined by two comparisons. One is by comparing the position of the United States in the specific technology against the receiving country's current manufacturing practice.

The other is to compare the position of the United States against the receiving country's velocity of advance in the technology. Such determinations should be made by individuals from both Government and industry who are currently involved in the practice of the art, supplemented by the entire intelligence community.

There are three typical velocities of technology advance, as shown on this chart. It is duplicated in the report on page 10 with related charts on the following pages. I will walk through those charts.

There are three typical velocities of technology advance, as shown on the first chart.

A teaching path velocity is typical of a nation which has adequate industries to support the technology and a reasonable technological base, enjoying the benefits of active transfer mechanisms. Since such nation is learning proven current design and manufacturing know-how, its velocity of advance is very rapid.

Nominal gain path velocity is typical of what a nation with adequate supporting industries and a reasonable technological base can maintain without importing technology.

Slow advance path velocity is typical of a nation with very limited supporting industries and a limited technological base, enjoying little or no active technology transfer from highly developed countries.

EVOLUTIONARY AND REVOLUTIONARY ADVANCES

Now, knowledgeable evaluators can judge the velocity of advance in technology and determine whether advances have been evolutionary or revolutionary. Evolutionary advances are small incremental improvements made in the course of normal daily practice of the technology. On the other hand, revolutionary advances are the quantum jumps that are based on conceptual departure from current practice.

Let me give you a very straightforward example of this. The progression from a DC-3 airplane up to the DC-7, all prop-driven, were evolutionary. But then the jet, when it came in, which made the 707 possible and the DC-8—that was a revolutionary jump. That is the distinction between evolutionary and revolutionary, which I am trying to make very clear.

As the second chart suggests, the overall velocity of a technology is the summation of evolutionary and revolutionary advances. Each revolutionary advance jumps the nation's capability to a new higher level that may not have been attained by evolutionary advances even after a number of years. You might say, if ever.

Technological leadtime is extremely perishable. It dissipates quickly as the basic concepts and know-how become widely known and exploited.

A lagging country can narrow the gap even without benefit of active transfer mechanisms. This happens because the leading country must work its way up the incremental track without outside help, while the lagging country advances both by its own incremental efforts and by the general diffusion of technology.

Each revolutionary advance affords the nation that achieves it the opportunity to maximize leadtime. A revolutionary gain is easier to protect from this diffusion of technology. The initial number of practitioners is small and the breakthrough is consciously recognized as valuable and proprietary. Therefore, it is held closer.

U.S. TECHNOLOGY COMPARED TO THAT OF ANOTHER NATION

When U.S. technology is compared to that of another nation, one of two pictures typically emerges. Either both countries are on the same evolutionary track or the United States had made revolutionary gains and is on a higher track. The two situations demand different approaches to export control if leadtime is to be maximized.

For the situation where both countries are on the same evolutionary track, the application of controls demands continual compromise between: waiting until the strategic gap narrows to the point B–C in the center of the final chart,[1] where transfer is of minimal value to the receiving country; or, on the other hand, the premature transfer of accumulated evolutionary technology so far advanced—in this case, on the final chart from A to B or from B to D—that is effectively produces a step advance similar to that of a revolutionary gain to the receiving country.

In the situation where the United States has a revolutionary gain, from B to E on the final chart, then export controls should clearly deny any transfer of the key technical elements that made this step advance possible, in order to maximize strategic leadtime.

Briefly then, the task force recommends that export policy might permit transfer if the know-how represents merely an evolutionary gain to the receiving nation, but must deny any transfer that represents a revolutionary gain.

PROTECTING LEADTIMES OF STRATEGIC TECHNOLOGIES

Our analysis of the importance of leadtime to technology transfer led us to our fourth finding:

Current U.S. export control laws and the COCOM agreement provide a continuing means of protecting leadtimes of strategic technologies.

U.S. export control regulations are considered effective, but, in their administration, the emphasis appears to be misdirected.

The number of items on the commodity control list has been reduced over the past 3 years, but it is still too long. U.S. companies still encounter frustration in trying to obtain validated licenses for high-technology product shipments to Communist countries. Industry's consensus is that the U.S. Government's processing of licenses is stricter and slower than that of our allies.

The administration of export control appears to place equal emphasis on all requests, whether for product sales or the more active mechanisms of know-how transfer. Since the significant transfers take place through active mechanisms, it appears that present emphasis is inverse to the need. An inordinate amount of time is focused on passive mechanisms, leaving only limited time for attention to active mechanisms.

SCREENING APPROACH FOR LICENSE APPLICATIONS

The task force members believe that a screening approach based on capability as contained in a product's intrinsic utility would provide simplified criteria that could be applied rapidly to classes of

[1] The charts referred to appear on pp. 223–24.

license applications. This approach should also lend itself to the application of data processing for initial screening.

The pragmatic posture suggested by the task force is to focus attention and administrative resources on critical areas outlined in the report. The task force believes that most commercial product sales are not highly critical, and that those transactions should be quickly approved by the controlling government agencies.

Products of technology not directly of significance to the Department of Defense should be eliminated from control, to enable more effective control of significant items. Some undesirable technology flow may occur. But the task force believes that the overall effectiveness of our export controls would be greatly improved by such priorities.

We recognize that there has been some undesired flow of strategic technology from other Western countries to Communist nations. These exceptions and leaks do compromise U.S. strategic leadtimes. Nevertheless, effective controls can only be achieved if Western nations cooperate in enforcing common export restrictions.

The Coordinating Committee of the Consultative Group of Nations, known as COCOM, is the only linkage among the United States and its allies that defines strategic products and technologies and restricts their export to Communist nations. COCOM must be maintained as a viable agreement.

EMPHASIS SHOULD BE ON ACTIVE TRANSFER MECHANISMS

We recommend then that U.S. export control activity should focus primary emphasis on control of the active transfer mechanisms. The recommended tradeoff is to devote less time scrutinizing product sales having low strategic impact and to shorten drastically the commodity list, for the sake of devoting more scrutiny to requests that would transfer vital design and manufacturing know-how and to critical products of direct military significance.

Control of product sales should emphasize performance capabilities, what the product enables the user to do, rather than commercial specifications and end-use statements as at present.

Simplified criteria should be developed in order to expedite the majority of license requests. They could be applied quickly and, in some instances, could be applied to entire classes of cases.

The United States should pursue actions and decisions to strengthen the COCOM network of export controls.

ABSENCE OF ESTABLISHED CRITERIA FOR EVALUATING TECHNOLOGY TRANSFERS

The final task force finding was that the absence of established criteria for evaluating technology transfers reinforces the cumbersome case-by-case analysis of all export applications.

The environment surrounding the flow of products and technology to Communist nations has changed dramatically since 1970.

Despite these profound changes, the emphasis and approach of U.S. technology control has not noticeably changed. It continues to emphasize detailed analysis of every application and control of a vast list of products. There are no established criteria for evaluating technology transfers.

This approach is cumbersome. It results in delays and ambiguities and fails to give guidance to firms interested in developing Communist markets. Policies for the control of strategic know-how should be developed in advance of case-by-case requirements, so that U.S. objectives are defined and broadly understood by U.S. agencies, industrial firms, and the COCOM members.

The initiative for the development of policy objectives and strategies for the protection of key strategic technologies lies with the Department of Defense. Knowledgeable individuals from both Government and the private sector could contribute to the development of this information on an ongoing basis.

Once developed, it will serve as a basis for establishing policy objectives for controlling critical technological know-how and decontrolling noncritical products. Specific strategies should be defined, stating what may be accomplished over some time horizon.

Recommendations proceeding from our final finding are these:

The Department of Defense should develop policy objectives and strategies for control of key high-technology fields. These objectives should include sufficient information to identify key elements of the technology, including critical processes and key manufacturing equipments.

Technology exchange opportunities should be identified by citing technologies in which the United States lags the Communist world, so that subsequent claims of a quid pro quo exchange are not used as a means to circumvent the control of a strategic technology.

Policy objectives should be communicated broadly to interested U.S. agencies, private firms, and the COCOM nations, to obtain a wider base of cooperation in effecting controls.

Although not part of its charter, the task force felt the need to spell out the specific steps necessary to begin the implementation of its recommendations. These are contained in the report and summary submitted to you.

In addition, the Department of Defense should make a comprehensive study of active mechanisms for transfering know-how that are beyond the normal scrutiny of export control administration. The Department of Defense should then make recommendations for monitoring and controlling them.

Such mechanisms include: Government-to-government scientific exchanges; the use of U.S. citizens as consultants for key know-how by Communist countries; the participation of U.S. citizens who are principals in firms established outside the United States and engaged in transferring embargoed technology and products to Communist countries; the training of citizens from Communist countries at the more significant laboratories of U.S. technical institutes and universities; and the review of the criteria used for evaluating know-how transferred as part of weapons sales.

The task force urges the Government to take action to implement the recommendations contained in this report. Only in this way can we hope to protect the design and manufacturing know-how that are critical to America's military security and economic health.

We believe the adoption of the recommendations of the task force will yield three important benefits:

First: The United States will have improved—that is, tighter—control over the diffusion of critical know-how.

Second: There can be faster approval of the vast majority of export requests.

Third: There will be an increase in the exports of products from the United States to help us improve our balance of trade.

Thank you, Mr. Chairman.

[Mr. Bucy's prepared statement follows:]

PREPARED STATEMENT OF J. FRED BUCY, TEXAS INSTRUMENTS, INC.; CHAIRMAN, TASK FORCE ON EXPORT OF U.S. TECHNOLOGY, DEFENSE SCIENCE BOARD

HIGHLIGHTS OF THE FINAL REPORT ON EXPORT OF U.S. TECHNOLOGY

(As presented to the Defense Science Board on February 27, 1976)

The honor of presenting the final report of the Task Force on Export of U.S. Technology has fallen to me,[1] as Task Force Chairman.

The report summarizes months of study by more than thirty-seven distinguished and experienced representatives of government and industry.[2]

The Task Force charter requested that we specify all technology areas in which maximum feasible protection is highly desirable. Such a comprehensive study was not pursued. Instead, four areas of high technology were selected in the expectations both of developing information on these crucial technologies and possibly of constructing models for the Department of Defense to use for the development of similar information for other technology sectors. Results of these studies are contained in the subcommittee reports which were submitted to the Defense Science Board in August, 1975. The Task Force believes studies of other technologies would not alter its basic findings and recommendations. They would help in identifying those few technology products that should be controlled because of their critical military significance.

The mechanisms of transfer studied were limited to those encountered by industrial firms in transferring technology. The issues and implications of technology transfer occurring under the auspices of the U.S.-U.S.S.R. Joint Commissions were noted as areas of concern but were not studied.

The implications of technology transfer to Western allies and non-COMECON[3] nations is considered only from the standpoint of potential re-transfer of strategic know-how through them to Communist nations. This is a narrower viewpoint than that defined in the Charter. Again, the principal issue was determined to be Communist countries, and the Task Force focused almost exclusively on them.

Also, the subject of technology exchange, the "quid pro quo" type of agreement, was noted by the subcommittees. But there appears to be so little potential for exchange in the four technology fields studied, that the subject was not pursued.

Task Force Subcommittees.—Airframe, Aircraft Jet Engines, Instrumentation, and Solid-State Devices.

The four subcommittees were unanimous in emphasizing that control of design and manufacturing know-how is absolutely vital to the maintenance of U.S. technological superiority. Compared to this, all other considerations are secondary.

Accordingly, the Task Force placed primary emphasis on design and manufacturing know-how, and control of mechanisms that transfer it to Communist countries. Technology contained in applied research or development may be of significance in selected areas, but overall, it is design and manufacturing know-how that impacts a nation's capability.

The recommendations and their implications focus on the Department of Defense and its role in the control of U.S. export of technology. Defense does not have the primary responsibility for control of technology export. But the Task Force believes the initiative for developing policy objectives and strategies for controlling specific technologies is their responsibility.

In the long perspective, beyond the limitations of current laws, regulations, and practice, a new approach to controlling technology exports is overdue. This

[1] J. Fred Bucy, Texas Instruments Incorporated.
[2] Task Force and Subcommittee members are listed in the appendix on p. 229.
[3] COMECON nations are listed in the appendix on p. 230.

perspective should focus wholly on know-how, and not on end products of know-how—except for critical items of direct military significance.

Finding I.—Design and manufacturing know-how are the principal elements of strategic technology control.

Now let me discuss the findings and recommendations in some detail.

The subcommittees examined the entire technology spectrum from basic research through maintenance of the finished product. They concurred that the transfer of design and manufacturing know-how is of overwhelming importance to our national security. It is mastery of design and manufacturing that increases a nation's capability. And it is in this area that the United States maintains its technological leadership.

Finding I Recommendations.—Three categories of export should receive primary emphasis in control efforts:

Arrays of design and manufacturing information that include detailed "How To" instructions.

"Keystone" manufacturing, inspection, or automatic test equipment.

Products accompanied by sophisticated information on operation, application, or maintenance.

Three export categories transfer know-how most effectively, and therefore must be given closest scrutiny:

The first category covers exports of arrays of design and manufacturing information plus significant teaching assistance. Such exports provide technical capability to design, optimize, and produce a broad spectrum of products in a technical field.

This is the highest and most effective level of technology transfer. It effects virtually total transfer of current U.S. practice in a relatively short time. Moreover, it provides a basis on which the receiving nation can build further advances in technology.

The second category covers exports of manufacturing equipment required to produce, inspect, or test strategically related products, with only the necessary "point design" information. In this category, none of the design and manufacturing background, rationale, or alternatives is transferred.

This export category provides incremental gains to a national capability, by improving existing manufacturing capabilities or supporting infrastructure.

"Keystone" equipment that completes a process line and allows it to be fully utilized is especially critical. The strategic significance of keystone equipment derives from its uniqueness, when compared to the other process and test equipment required to produce a strategic product. If it is the only unique equipment required, and all the remaining equipment is general or multipurpose, then its significance is evident. In this regard, computer-controlled process, inspection, and test equipment is often "keystone" equipment. It provides not only the capability of high throughput and improved precision. It also provides great flexibility in fulfilling unique and multiproduct manufacturing requirements. Moreover, it provides a growth capability on which advanced new production skills can be built.

The third category covers exports of products with technological know-how, supplied in the form of extensive operating information, application information, or sophisticated maintenance procedures.

Elements of design or manufacturing know-how are embodied in this type of information. It is often included in sales of such complex high-technology products as electronic computers and jet engines. However, this know-how is usually well behind the state of the art, since it was new during the product's development and design-time period. The significance of older technology is discussed in a subsequent finding.

Each of the industries studied has a different "technology profile." The critical portion of jet engine technology lies in the design and development phase of a program's life. Fundamental jet-engine science and used know-how are largely in the public domain. On the other hand, the semiconductor industry emphasizes manufacturing know-how as uniquely central to their technology.

Yet among these diverse industries, there is unanimous agreement that the detail of how to do things is the essence of the technologies. This body of detail is hard earned and hard learned. It is not likely to be transferred inadvertently. But it can be taught and learned. It warrants close study and control.

Finding II.—The more active the transfer relationship, the more effective the transfer mechanism.

The many mechanisms for transferring technology may be arranged in a spectrum. At one end are the most active mechanisms, in which the donor actively transfers design and manufacturing know-how; for example, by establishing a "turnkey" factory. At the other end are the most passive, in which the donor's objective does not include know-how transfer; for example, a trade exhibit.

"Active" relationships involve frequent and specific communications between donor and receiver. These usually transfer proprietary or restricted information. They are directed toward a specific goal of improving the technical capability of the receiving nation. Typically, this is an iterative process: the receiver requests specific information, applies it, develops new findings, and then requests further information. This process is normally continued for several years, until the receiver demonstrates the desired capability.

Highly effective transfer mechanisms.—Turnkey factories; joint ventures; training in high-technology areas; licenses with extensive teaching; technical exchange with ongoing contact; and processing equipment, with know-how.

Of the seventeen mechanisms ranked independently by each of the subcommittees, these six were ranked as highly effective.

The complete ranking confirms the subcommittees' findings that effective technology transfer depends upon the active participation of the donor organization. The vernacular of each of these high-technology industries differs from the others. Yet each subcommittee, in its own language, reached the conclusion that "turnkey factories," "sale of manufacturing know-how," "licenses accompanied by major teaching," and other such active mechanisms are highly effective in transferring key technologies.

Effective transfer mechanisms.—Engineering documents and technical data; consulting; and licenses with know-how.

Ranking next in effectiveness are these mechanisms.

They are ranked less than highly effective chiefly because typically fewer people are involved, for a shorter time, with less ongoing contact.

Less effective transfer mechanisms.—Proposals with documentation; processing equipment, without know-how; and commercial visits.

Ranking lower in effectiveness are such "moderate-activity" mechanisms as documented proposals, and commercial visits. Although such exchanges do not convey comprehensive information, they may prove useful in filling specific gaps in the receiving country's technological knowledge. Donor companies must exercise caution to prevent inadvertent transfer through such mechanisms.

Least effective transfer mechanisms.—Licenses without know-how; sale of products without maintenance and operations data; proposals without documentation; commercial literature; and trade exhibits.

These mechanisms are ranked least effective. You will note that they are passive. "Passive" relationships, from the viewpoint of transferring know-how, imply the transfer of information or products that the donor has already made widely available to the public. Passive mechanisms do little to transfer know-how. Commercial literature, trade shows, product sales, and the like rarely communicate enough know-how to transfer the essence of the design and manufacturing know-how involved.

The subcommittees find that "reverse engineering" of products, through engineering analysis, is rarely an effective technique for discovering current design and manufacturing details. Therefore, the decision whether or not to export a finished product that is not design or manufacturing equipment, can be based solely on the capability conferred by that product's intrinsic utility. This characteristic should be the primary consideration, rather than the receiving country's statement of intended end use.

Government-to-government scientific exchanges are fairly recent additions to the mechanisms for transfer of know-how. Although not ranked among the mechanisms, such exchanges obviously have the potential to transfer technology very actively. As such, these mechanisms need to be monitored most carefully.

Finding II recommendations.—Active mechanisms demand tight control; product sales without extensive data transfer little know-how; companies must avoid inadvertent transfers; and government-to-government exchanges should be monitored.

By way of summary, the recommenations arising out of this finding are:

First, the the more active mechanisms for transferring design and manufacturing know-how must be tightly controlled to prevent transfer of strategic capabilities.

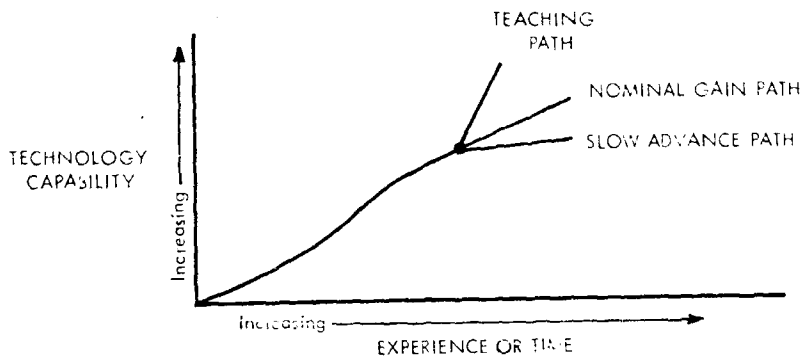
Second, product sales, without extensive operations and maintenance data, do not usually transfer current design and manufacturing know-how. Their export should be evaluated as to the capability conferred by the product's intrinsic utility. This is a more important criterion than the receiving country's end-use statement.

Third, companies with strategic technologies must exercise caution to avoid inadvertent transfers of valuable know-how through visits and proposals.

And fourth, government-to-government scientific exchanges should be monitored to ensure consistency with restrictions on export of strategic U.S. design and manufacturing know-how.

Finding III.—To preserve strategic U.S. lead time, export should be denied if a technology represents a revolutionary advance to the receiving nation, but could be approved if it represents only an evolutionary advance.

The objective of applying export controls to strategic design and manufacturing know-how is to protect the lead time of the U.S. as compared to Comecon nations and the People's Republic of China. Lead time should be determined by comparing the position of the United States in the technology, against both the receiving country's current manufacturing practice, and their velocity of advance in that technology. Such a determination should be made by individuals from both government and industry who are currently involved in the practice of the art, supplemented by the entire intelligence community.

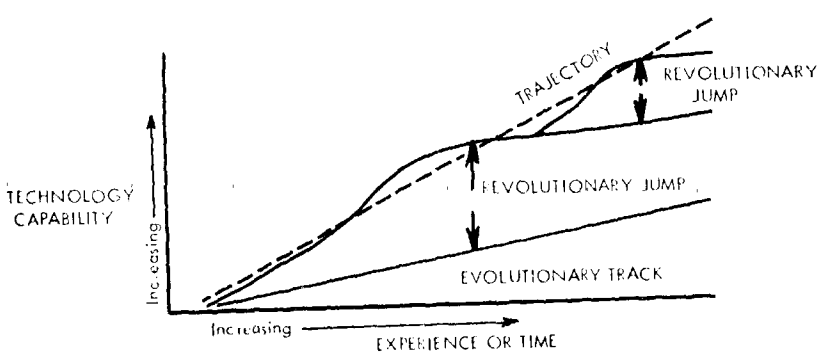


The three typical "velocities of technology advance" are shown here.

"Teaching path" velocity is typical of a nation with adequate infrastructure and a reasonable technological base, enjoying the benefits of active transfer mechanisms through which they learn current design and manufacturing know-how.

"Nominal gain path" velocity is typical of what a nation with adequate infrastructure and a reasonable technology base, plus R&D support comparable to that of the United States, can maintain without imported technology.

"Slow advance path" velocity is typical of a nation with limited infrastructure, technology base, and R&D support, in the absence of active transfer mechanisms from highly developed countries.

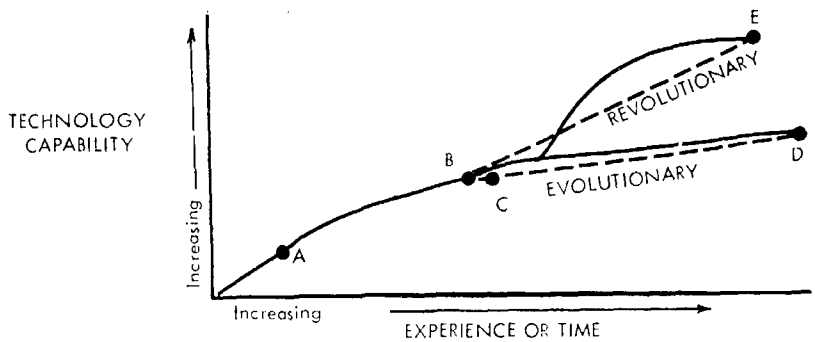


The velocity of advance in technology can be judged by evaluating recent progress to determine whether advances have been evolutionary or revolutionary. Evolutionary advances are small incremental improvements that are made in the course of normal daily practice of the technology. Revolutionary advances, on the other hand, are the "quantum jumps" that are based on conceptual departures from current practice.

As suggested by the figure, the overall velocity of a technology is the summation of evolutionary and revolutionary advances. Each revolutionary advance jumps a nation's capability to a new higher level that may not have been attained by evolutionary advances even after a number of years.

Technological lead time is extremely perishable. It dissipates quickly as the basic concepts and know-how become widely known and exploited. A "lagging" country can narrow the gap even without benefit of active transfer mechanisms. This happens because the leading country must work its way up the incremental track without outside help, while the "lagging" country advances both by its own incremental efforts and by the general diffusion of technology.

Each revolutionary advance affords the nation that achieves it the opportunity to maximize lead time. A revolutionary gain is easier to protect from diffusion of technology. The initial number of practitioners is small. And the breakthrough is consciously recognized as valuable and proprietary.



When U.S. technology is compared to that of another nation, one of two pictures typically emerges. Either both countries are on the same evolutionary track, or the United States has made revolutionary gains and is on a higher track. The two situations demand different approaches to export control if lead time is to be maximized.

The application of controls demands continual compromise between: waiting until the strategic gap narrows to the point (B–C) where transfer is of minimal value to the receiving country; and the premature transfer of accumulated evolutionary technology so far advanced (A to B, or B to D) that it effectively produces a step advance similar to that of a revolutionary gain to the receiving country.

On the other hand, in the situation where the United States has a revolutionary gain, (B to E), then export controls should clearly deny any transfer of the key technical elements that made this step advance possible, in order to maximize strategic lead time.

U.S. companies engaged in intensively competitive industries have long recognized the distinction between the short-term effectiveness of controlling the dissemination of know-how on an evolutionary track, and the longer effectiveness of protecting key elements of revolutionary gains.

Carefully chosen and applied export controls can aid in the maintenance and, at times, maximize the lead time of U.S. strategic technologies as compared to other nations. But equally important to the development of strategic lead time is a vigorous R&D activity that will create both evolutionary and revolutionary technological advances.

Finding III recommendations.—Export policy must maximize lead time:

If receiver is on same evolutionary track, transfer may be considered.

If receiver would obtain revolutionary gain, transfer must be denied.

Vigorous R&D activity is crucial to maintaining strategic lead.

Briefly, then, the Task Force recommends that export policy might permit transfer if the know-how represents merely an evolutionary gain to the receiving nation, but must deny any transfer that represents a revolution gain. And the Task Force reminds both industry and government that creating new technology is as important as protecting what we have.

Finding IV.—Current U.S. export control laws and the COCOM[4] agreement provide a continuing means of protecting the lead times of strategic technologies.

The principal means of controlling the transfer of strategically important know-how to Communist nations are summarized in the report. They are also ranked in order of decreasing effectiveness as reflected in the experience of individual subcommittee members.

Control mechanisms.—U.S. classified weapons system; U.S. export control regulations; company protection of proprietary know-how; COCOM agreement; and export control: non-COMECON/non-COCOM nations

The U.S. Classified Weapons System is felt to be a very effective mechanism for controlling the technology embodied in the systems. The knowledge is limited to a small group of practitioners who are clearly identified and the movement of this technology is largely controlled by DoD.

U.S. Export Control Regulations are considered effective, but in their administration, the emphasis appears to be misdirected.

The number of items on the Commodity Control List has been reduced over the past three years, but it is still too long. U.S. companies still encounter frustration in trying to obtain validated licenses for high-technology product shipments to Communist countries. Though it may be more illusion than fact, industry's consensus is that the U.S. Government's processing of licenses is stricter and slower than that of our allies.

The Office of Export Control reports that they receive more than two hundred requests for validated licenses each day. Of special concern is that there does not appear to be any selective screening of the various classes of technology export. The administration of export control appears to place equal emphasis on all requests, whether for product sales or the more active mechanisms of know-how transfer. Since the significant transfers take place through active mechanisms, it appears that present emphasis is inverse to the need. An inordinate amount of time is focused on passive mechanisms, leaving only limited time for attention to active mechanisms.

The Task Force members believe that a screening approach based on capability as contained in a product's intrinsic utility would provide simplified criteria that could be applied rapidly to classes of license cases. This approach should also lend itself to the application of data processing for initial screening.

The Task Force suggests a pragmatic posture toward export controls—one which recognizes that the objective should be to limit the flow in key areas. It would maximize the benefit/cost ratio for the U.S. and its COCOM partners in the growing flow of high-technology trade with Communist countries.

The pragmatic posture suggested is to focus attention and administrative resources on critical areas outlined in the report. The Task Force believes that most commercial product sales are not highly critical, and that those transactions should be quickly approved by the controlling government agencies. Products of technology not directly of significance to the Department of Defense should be eliminated from control, to enable more effective control of significant items. That some undesirable technology flow would occur is acknowledged. But the Task Force believes that the overall effectiveness of our export controls would be greatly improved by such priorities.

The COCOM Agreement could be made an effective means of control. COCOM maintains a list of strategic products similar to the U.S. Control list. Under the informal COCOM agreement, member nations follow similar control regulations that govern the export of strategic items to Communist countries.

In this decade, some COCOM members have perceived less need to maintain strict controls. At the same time, the opportunity for individual gain through the sale of technology to Communist countries has increased.

As a result, strategic technology has been transferred to Communist nations. These exceptions and leaks do compromise U.S. strategic lead times in certain technologies. Nevertheless, effective controls can only be achieved if Western nations cooperate in enforcing common export restrictions. COCOM is the only linkage among the U.S. and its allies that defines strategic technologies and

[4] "COCOM" member nations are listed in the appendix on p. 230.

restricts their export to Communist nations. COCOM must be maintained as a viable agreement.

Non-COMECON nations present a difficult case. Many non-COMECON nations are building technology bases that make them potential pipelines for the transfer of high technology to Communist nations. Of particular concern is the acquisition of high-technology know-how by nations of the Middle East. Also of concern is the assimilation of know-how by nations of Western Europe that are not members of COCOM—principally Switzerland, Sweden, and Austria.

U.S. export control law applies to reexportation of strategic goods and technical data of U.S. origin to a third country by the receiving firm. Since receiving nations often consider the control of reexportation as involving them in the implementation of U.S. policy objectives, the degree of enforcement is thought to be slight. Consequently, this is considered to be an ineffective deterrent except in large or highly visible cases.

The natural reluctance of U.S. companies to share proprietary know-how with competing U.S. companies is sometimes cited as an effective deterrent to sharing know-how with foreign industrial organizations. However, this mechanism was found to be ineffective in three of the four industry segments studied by the subcommittees.

Recent history shows a consistent pattern of some companies selling know-how that other companies in the same industry consider proprietary. These selling companies seem to be swayed by the allure of exclusive access to state-controlled markets, or large cash payments important in meeting the capital needs of the particular companies, or both.

Finding IV recommendations.—Focus export control emphasis on active mechanisms; control product sales on performance capabilities; develop criteria to handle cases methodically; release to non-COMECON/non-COCOM nations only what we would release to communist nations; strengthen COCOM export controls; impose sanctions on offending COCOM members.

These six recommendations arise from Finding IV:

U.S. export control activity should focus primary emphasis on control of the active transfer mechanisms. The recommended trade-off is to devote less scrutiny to product sales having low strategic impact, and to shorten drastically the COCOM list, for the sake of devoting thorough scrutiny to requests that would transfer vital design and manufacturing know-how, and to critical items of direct military significance.

Control of product sales should emphasize performance capabilities—what the product enables the user to do—rather than commercial specifications and end-use statements as at present.

Simplified criteria should be developed in order to expedite the majority of license requests. They could be applied quickly, and in some instances could be applied to entire classes of cases.

The United States should release to non-COMECOM/non-COCOM countries only the know-how we would be willing to transfer to Communist countries directly. This rule should extend to such technology embodied in weapon sales.

The United States should pursue actions and decisions to strengthen the COCOM network of export controls.

Key elements of technology that constitute revolutionary gains should not be released, except to certain COCOM nations. Any COCOM nation that allows such technology to be passed on to any Communist country should be prohibited from receiving further strategic know-how.

Finding V.—"Deterrents" meant to discourage diversion of products to military applications are not a meaningful control mechanism when applied to design and manufacturing know-how.

"Deterrents" as used in export control regulations are legal conditions under which the export of otherwise restricted or embargoed products or technology is permitted. However, such deterrents do not provide positive assurance against diversion.

End-use statements are deterrents required by the U.S. and COCOM members because many high-technology products have multiple applications. In such cases, neither the product's specifications nor its actual performance capability confines it to non-strategic use. Product sales are approved when the "intended end-use" is clearly non-military. A better basis for such approval would be determination of the intrinsic utility of the equipment, rather than relying on a stated end use.

Safeguard are deterrents that stem from provisions developed for the transfer of nuclear materials. To date, use of such safeguards has been limited to computers and inertial navigation equipment. Safeguards used thus far have been tailored to specific situations. In cases covering small- and medium-scale computers, safeguards have amounted to no more than an occasional visit by a seller's representative. In the case of large computers, on the other hand, provisions have included requirements that the seller maintain on-site personnel, and that detailed monthly accounting of machine utilization be submitted.

Given the great versatility of computers, it is clearly possible that commercial computers may be diverted to design or management purposes significant to the exploitation of advanced technology. Although safeguards may deter such uses, detection of such diversions cannot be assured.

In all safeguard arrangements, the seller is responsible for reporting his purchaser's violations. This creates sufficient conflict of interest by the seller that it is considered unlikely that such safeguards are rigorously enforced.

Insofar as the focus of this Task Force is concerned, deterrents are not relevant mechanisms for the control of design and manufacturing know-how. They do not protect the export of technology. The transfer of know-how is irreversible. Once released, it cannot be taken back, contained, or controlled.

Finding V recommendations.—"Deterrents" should not be used:

To control know-how.

To prevent diversion of manufacturing equipment.

To control product use, unless enforcible in practice.

When a high degree of certainty is required.

The following recommendations flow from this Finding:

Deterrents such as end-use statements and safeguards should not be used to control applications of design and manufacturing know-how.

Deterrents should not be relied upon to prevent manufacturing from being used for military purposes.

Deterrents attached to product sales may have some face value, but they should be supplemented by vehicles for enforcement against violations.

Deterrents should not be used when a high degree of certainty is required that diversions to military applications will not occur.

Finding VI.—The absence of established criteria for evaluating technology transfers reinforces the cumbersome case-by-case analysis of all export applications.

The environment surrounding export controls regulating the flow of products and technology to Communist nations has changed dramatically since 1970.

Despite these profound changes, the emphasis and approach of U.S. technology export control has not noticeably changed. It continues to emphasize detailed analysis of every application and control of a vast list of products. There are no established criteria for evaluating technology transfers. This approach is cumbersome. It results in delays and ambiguities, and fails to give guidance to firms interested in developing Communist markets. Policies for the control of strategic know-how should be developed in advance of case-by-case requirements, so that U.S. objectives are defined and broadly understood by U.S. agencies, industrial firms, and COCOM members.

The initiative for the development of policy objectives and strategies for the protection of key strategic technologies lies with the Department of Defense. Knowledgeable individuals from both government and the private sector should contribute to the development of this information on an ongoing basis. Once developed, it will serve as a basis for establishing policy objectives for controlling critical technological know-how and decontrolling non-critical products. Specific strategies should be defined, stating what may be accomplished over some time horizon.

In addition, the strategy should define the events that would lead to a decision to move to a fall-back position.

The policy objectives should also provide specific information that will facilitate effective imposition of control. For example, they should list key technologies and products, stressing control on the basis of the capabilities they confer, rather than on the basis of commercial specification. The shortened control list should list critical processes and key manufacturing equipments and specify the few critical products of direct military significance. And they should define "quid pro quo" opportunities (if any)—identifying technologies in which the U.S. lags other countries, especially the Communist world.

Such policy objectives, if sufficiently specific, would provide clear enough guidelines that critical products remaining on the control list could be sorted into appropriate classifications. The lowest classification would require only quick assessment, but the highest classification would require thorough analysis. It is felt that the review process, if carefully defined, could consign the routine processing of many license requests to data processing techniques.

There would be a further result from clearly defining objectives for controlling technology transfers. It should improve the ability of the DoD to persuade other U.S. agencies and the COCOM nations to control the more significant technologies effectively. The improved response time, defined objectives, and the implicit liberalism of this approach toward commercial East-West trade should prove an important asset in this connection.

The development of this information will require reallocating resources to export control by the DOD. The importance of protecting strategic technologies versus the resources required, is a trade-off that merits reevaluation. The Task Force believes that the current resources are insufficient. However, after these initial studies have been developed and control emphasis has been shifted from case-by-case analysis, to scrutiny of critical technology issues, the ongoing resources may be comparable to the present level.

The report includes charts that describe a general flow of information gathering and the key decision points in the evaluation of a technology transfer case. They suggest how definitive policy objectives and strategies can be applied to develop timely and consistent recommendations.

Finding VI recommendations.—DOD should develop high-technology policy objectives; objectives should identify critical processes and key equipment; technology exchange opportunities should be identified; policy objectives should be communicated broadly; advisory committees should recommend policy and strategy; DOD should increase resources to implement these studies.

Recommendations proceeding from the sixth and final Finding are these:

The Department of Defense should develop policy objectives and strategies for the control of key high-technology fields.

These objectives should include sufficient information to identify key elements of the technology, including critical processes and key manufacturing equipments.

Technology exchange opportunities should be identified by citing technologies in which the U.S. lags the Communist world, so that subsequent claims of a "quid pro quo" exchange are not used as a means to circumvent the control of a strategic technology.

Policy objectives should be communicated broadly to interested U.S. agencies, private firms, and COCOM nations, to obtain a wider base of cooperation in effecting controls.

Advisory committees consisting of individuals from government and private sectors should be used to recommend policy objectives and strategies, and to update them continuously.

The Department of Defense should reevaluate and reallocate the resources required to perform and implement these studies.

Implementation.—The DOD should identify key know-how that requires control; develop objectives and strategies in conjunction with other agencies and industry; assign adequate resources; develop objectives quickly and communicate them broadly; and prepare guidelines for private firms.

Although not part of its charter, the Task Force felt the need to spell out the specific steps necessary to begin implementing its recommendations. These steps also serve to summarize this "Highlights" report.

The Department of Defense should identify principal technologies that require export control.

The objectives and strategies for controlling these technologies should be developed by knowledgeable individuals from government and private sectors. In addition, these study groups should identify critical elements of know-how as defined in the report.

Adequate resources should be reallocated to interface with the groups developing this information, to provide a means for implementation of these objectives in assessing technology transfer cases.

These objectives and strategies should be developed as quickly as possible, and communicated to other U.S. agencies and COCOM member nations.

Specific guidelines for these technologies should be prepared and released to private firms.

The Commerce Department should emphasize control of active transfer mechanisms; develop and apply screening list; develop and apply simplified criteria for product sales; set goals for fast response to license requests; and develop computer-aided screening.

The Commerce Department should emphasize the scrutiny and control of the more active mechanisms that transfer know-how.

A screening list as described in the report, to identify the active mechanisms quickly, should be developed and applied.

Simplified criteria for evaluating product sales should be developed and applied to classes of products. It should emphasize intrinsic utility rather than commercial specifications and intended end use.

Aggressive goals should be established for the time required to respond to license requests. For example, 90% of all requests would be answered within 10 days, and another 8% within two months. Studies should be undertaken to find solutions and alternates that would allow these goals to be realized.

Development of a "decision-tree" analysis that would lend itself to computer-aided screening of license applications should be undertaken. Experienced consultants in this field, or computer systems specialists in the Commerce Department, could be used to develop these methods.

The DOD should study possible hazards involved in government-to-government scientific exchanges; U.S. citizens consulting in Communist countries; U.S. citizens in non-U.S. firms transferring technology to Communist countries; Communist-country citizens studying high technology in United States; and present criteria applied to weapons sales.

The DOD should make a comprehensive study of active mechanisms for transferring technology that are beyond the normal scrutiny of export control administration. DOD should then make recommendations for monitoring and controlling them.

Such mechanisms include:

Government-to-government scientific exchanges.

The use of U.S. citizens as consultants for key technologies by Communist countries.

The participation of U.S. citizens as principals in firms established outside the United States and engaged in transferring embargoed technology and products to Communist nations.

The training of citizens from Communist countries at the more significant laboratories of U.S. technical institutes and universities.

And the review of the criteria used for evaluating know-how transferred as part of weapons sales.

The task force urges the government to take action to implement the recommendations contained in this report. Only in this way, can we hope to protect the design and manufacturing know-how that are critical to America's military security and economic health.

Appendix

MEMBERSHIP

TASK FORCE ON EXPORT OF U.S. TECHNOLOGY

Mr. J. Fred Bucy, Chairman, Executive Vice President, Texas Instruments Incorporated.

Dr. John Allen, Deputy Director, Research and Advance Technology, ODDR&E, Department of Defense.

Dr. Betsy Ancker-Johnson, Assistant Secretary, Science and Technology, Department of Commerce.

Mr. Howard Ellsworth, OASD, I&L—Department of Defense.

Dr. George Heilmeier, Director, Defense Advanced Research Agency.

Mr. Robert L. Johnson, President, McDonnell Douglas Astronautics Company.

Mr. Fred O. MacFee, Jr., Vice President Strategic Planning, Aircraft Engine Group, General Electric Company.

Dr. Maurice Mountain, Director, Strategic Trade and Disclosure, Office of the Secretary of Defense.

Mr. Horace G. McDonell, Senior Vice President, Instrument Group, Perkin-Elmer Corporation.

Mr. Charles Phipps, Manager, Strategic Planning, Corporate Development, Texas Instruments Incorporated.

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Dr. Don Steininger, Xerox Corporation.
Dr. Sayre Stevens, CIA.
Mr. Gus Weiss, Council on International Economic Policy, The White House.
Mr. Edwin N. Myers, Task Force Secretary, Office of Electronics Systems, ODDR&E, Department of Defense.

SUBCOMMITTEES

Airframe

R. L. Johnson, Chairman, President, McDonnell Douglas Astronautics Company.
Grant L. Hansen, Vice President and General Manager, Convair Division, General Dynamics Corporation.
Willis M. Hawkins, Senior Technical Advisor, Lockheed Aircraft Corporation.
Dr. D. A. Hicks, Senior Vice President—Technical, Northrop Corporation.
W. A. Kuhrt, Vice President Technology, United Aircraft Corporation.
H. W. Withington, Vice President and Chief Engineer, Boeing Commercial Aircraft Company.
Bartley Osborne, ODDR&E, Department of Defense.

Jet Engine

Fred O. MacFee, Jr., Chairman, Vice President, Strategic Planning, Aircraft Engine Group, General Electric Company.
Richard J. Coar, Vice President, Engineering, Pratt and Whitney Division, United Aircraft Corporation.
Gordon E. Holbrook, Director, Engineering, Aerospace, Detroit Diesel Allison Division, General Motors Corporation.
Frank Roberts, Director, Engineering, Airsearch Manufacturing Company of Arizona, The Garrett Corporation.
Ray M. Sandahar, Staff Specialist for Propulsion, ODDR&E, Department of Defense.

Solid-State

Charles H. Phipps, Chairman, Manager, Strategic Planning, Corporate Development, Texas Instruments Incorporated.
Stanley Czerwinski, General Manager, Semiconductor Division, TRW.
Dr. James Early, Director, R&D, Integrated Circuit Group, Fairchild Camera and Instrument Corp.
George Heilmeier, Director, Defense Advanced Research Agency.
Robert C. Johnson, President, Kasper Instruments Incorporated.
Dr. Gordon Moore, Executive Vice President, Intel Corporation.
Dr. Morgan Sparks, President, Sandia Corporation.
Dr. Klaus Bowers, Vice President, Components Div., Sandia Corporation.
Dr. Alden Stevenson,[1] Formerly Director of Engineering, Semiconductor Products, Motorola, Inc.
James Terrell, Special Assistant to Deputy Director, Research and Advanced Technology, ODDR&E, DOD.

Instrumentation

Horace McDonell, Chairman, Senior Vice President, Instrument Group, Perkins-Elmer Corporation.
D. T. Kimball, President and Chief Executive Officer, Leeds and Northrup Company.
William R. Thurston, President, General Radio Company.
Herbert M. Dwight, Jr., President, Spectra-Physics, Inc.
John M. Dempsey, Jr., President, Baird-Atomic, Inc.
N. E. Porter, Vice President, Hewlett-Packard Company.
E. N. Myers, ODDR&E, Department of Defense.

"COCOM" is the Coordinating Committee of the Consultative Group of Nations, whose members are the NATO Nations (less Iceland) plus Japan: Canada, United States, United Kingdom, Belgium, Netherlands, Luxembourg, France, West Germany, Italy, Norway, Denmark, Portugal, Greece, Turkey, Japan.

"COMECON" is the Council for Mutual Economic Assistance of the Communist Nations. Its members are Bulgaria, Czechoslovakia, East Germany, Hungary,

[1] Served June, 1974, through October, 1974.

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Poland, Romania, and the Soviet Union. By extension, the term is also used in this study to cover non-COMECON Communist nations; Yugoslavia, Albania, People's Republic of China, North Korea, North Vietnam, etc.

Mr. BINGHAM. Thank you very much, Mr. Bucy.

Would you care to add anything at this point, Dr. Ancker-Johnson?

STATEMENT OF HON. BETSY ANCKER-JOHNSON, ASSISTANT SECRETARY FOR SCIENCE AND TECHNOLOGY, DEPARTMENT OF COMMERCE

Dr. Betsy Ancker-Johnson was appointed Assistant Secretary for Science and Technology, U.S. Department of Commerce, in April, 1973.

Dr. Ancker-Johnson is a solid-state and plasma physicist with experience as a research scientist and engineer, as an industrial and government executive, and as a university professor.

She received a B.A. degree in physics with high honors from Wellesley in 1949 and a Ph.D. degree, magna cum laude, also in physics, from Tuebingen University, Germany, in 1953.

Dr. Ancker-Johnson's research career began in 1953 at the Minerals Research Laboratory at the University of California in Berkeley and continued in the R&D laboratories at Sylvania, RCA, and Boeing. Concurrently, she was a member of the faculties of the University of California at Berkeley and the University of Washington. Before entering management at Boeing, she produced over 70 papers and several patents. Her executive positions included manager of advanced energy systems and supervisor of electronic sciences.

As Assistant Secretary of Commerce for Science and Technology, she serves as the chief advisor on science and technology for the Secretary of Commerce and she is responsible for the 7,000 employees and $230 million budget of the Patent and Trademark Office, National Bureau of Standards, National Technical Information Service, Office of Telecommunications, Office of Environmental Affairs, and the Office of Product Standards.

She is a member of the Federal Council on Science and Technology and chairman of its Committee on Government Patent Policy. She is chairman of the Commerce Technical Advisory Board as well. As a member of the Joint U.S./U.S.S.R. Commission on Science and Technology, she headed the U.S. group responsible for the Intellectual Property Agreement signed in Moscow in December, 1973. She also headed the U.S. Patent Management and Licensing Delegation under the U.S./U.S.S.R. Agreement on Exchange. She is a member of both the Joint U.S./Japan and the Joint U.S./U.S.S.R. Commissions on Energy as well as the Board of Governors of the U.S./Israel Industrial R&D Foundation.

Dr. Ancker-Johnson is married to Professor Harold H. Johnson. They have four children and live in Reston, Virginia.

Ms. ANCKER-JOHNSON. No, sir; I am very happy to answer questions, but I won't offer a statement.

AMOUNT OF AGREEMENT BETWEEN GOVERNMENT AND INDUSTRY WITNESSES

Mr. BINGHAM. Thank you. I have just been looking at the list of your task force, Mr. Bucy. I notice it was about evenly divided as between industry and Government representatives. In the testimony we have had here up to now, I think that we have had really quite a sharp contrast between the testimony presented by industry representatives and those representing the Government, those from industry being generally quite critical of the program's operation, delays, what appear to be absurdities like a denial of license to a product that had previously been approved to the same destination for the same end use, and so on. Those criticisms are generally re-

jected by the Government representatives. They have emphasized the high percentage of cases that were rapidly approved and so on, that minimize the delays and the problems. The industry representatives have quite naturally concentrated on the delays and the problems.

My question to you is this—and I would like to say I think your report is a most interesting one, and I think generally it coincides with the type of recommendations that we have heard from the industry representatives.

Was there a general agreement within your group or did you find a tendency to divide as between industry and Government?

Mr. BUCY. Well, I think there are two parts to the question. One, I think it is of interest to note the number of people that we did get to participate in this study. These committees were uninstructed, I would say. They were given the charter and told that this is the problem we want to solve, but they were not instructed as to how to go about making the study. We did talk with them after we had heard what the four subcommittees thought were important criteria in the transfer of technology, and asked them to rank these criteria. We did have that kind of interchange between them and what I call the central group of the task force, and I think that there was good agreement among the task force members.

There is always some industry member who would have a slightly different twist, or he wouldn't quite agree with the way something was being written, so a lot of time was spent until agreement was reached as to the way things were worded.

I found the same thing on the central or the core group. You can see the various members there, industry people and government people.

There was a great deal of interchange there until, I think, there was finally pretty good agreement.

Now, I think that you can take a sentence out of context and you can get a different interpretation on that particular sentence from different members, but, keeping it in the context of the report, I think there was agreement.

Ms. ANCKER-JOHNSON. Mr. Chairman, if I may comment on that, you heard from Mr. Bucy the industry viewpoint. As a government executive, I think one of the things that is so important about this report is that you would have been unable—anyone would have been unable—to predict ahead of time that the report would come out the way it has.

There was certainly not unanimity as we went into the task force effort, and I think no one would have guessed that the kind of results would have emerged which have. Indeed, I would call it a breakthrough, because the recommendations of this report are so different from current practice as to constitute a genuine breakthrough.

The fact that the results could not have been predicted ahead of time and that there is such agreement among the task force members is impressive. There is no minority report, as you noticed, and that is a fairly rare thing in the circles of Washington, as you very well know, sir. I think an idea of the potential impact of this report is seen by the facts that there was unanimity and that it could not have been predicted ahead of time that such a breakthrough would occur.

OPERATION OF TASK FORCE SUBCOMMITTEES

Mr. BINGHAM. Knowing something of the way groups of this kind operate, I am curious to know how these subcommittees and how your board operated in practice. Specifically, whom did you rely on for staff, to do the real spade work?

Mr. BUCY. I think that the person doing the spade work varied with each subcommittee. It depended upon the interest of the individual and the amount of time that was available, but generally this was done by both industry and government people—I don't think I could shade it one way or the other. I think there was great cooperation on both sides.

There were some areas where the industry had no competence, such as in the intelligence area, and in other areas where all the competence, you might say, or almost all of it was in the hands of industry, so they worked that side of the problem.

In the central or core group, I think assignments were handed out. The way that it worked was that if there was a particular area in which we felt one individual had more competence than another, he was asked to come back with more input. After each meeting though, one of the fellows who worked with me, Mr. Charley Phipps, who is right behind me and who was chairman of the solid state devices subcommittee, would write up what he thought everyone had said and agreed on.

This would be distributed to all members. At the next meeting, we would thrash out whether Charles got the sense of what everyone was trying to say for that particular part.

This report took a long time to get out, over 2 years, because of the recycling, the reiteration, and I think it took the dedication of a lot of people to have a meaningful report.

Now, as you can imagine, the biggest part of the problem was how to tackle the problem.

Mr. BINGHAM. I notice that on each subcommittee the last name is the representative of the Office of Defense Research and Engineering. Would it be fair to say that that person acted as a kind of staff assistant to the——

Mr. BUCY. They were of a great deal of assistance, but they were in the sense of—you know, we needed a room. We needed facilities. We needed this. We needed that. That does not mean that they did not contribute, but they are in no sense the people who wrote the report. The report was written by the industry members and the Government people were working with us to be sure that we didn't have any misconceptions.

MAINTAINING U.S. TECHNOLOGY/INDUSTRIAL LEAD

Mr. BINGHAM. Let me ask just a couple of quick questions of you, Mr. Parker. In your statement on page 1, third paragraph, you say that among the results of a failure to maintain adequate control is that it would "unduly erode the U.S. technology/industrial base which is vital to national defense and economic health."

Frankly, I don't follow your reasoning there. I follow it as to 1 and 3, but I don't follow it as to 2.

Mr. PARKER. Well, sir; one of the key things that I believe this country has in terms of maintaining both its military and economic balance with the rest of the world is its technology and industrial base.

Mr. BINGHAM. Yes, but how does transfer of that out erode it? It may erode an advantage that we have, but it doesn't erode it.

Mr. PARKER. No sir. It erodes the relative position. It really advances the other. I am sorry. The term, I think, properly defined is as you say.

RESPONSIBILITY FOR STRATEGIC TRADE CONTROLS

Mr. BINGHAM. In the middle of page 3, you say the primary responsibility for strategic trade controls are the responsibility of State, Commerce, and Treasury. Was it unintentional to leave out Defense there?

Mr. PARKER. No, sir. I think—you know, these are the statutory responsibilities that exist. The Department, you know, has a responsibility to pass on our advice to the State Department and to Commerce in cases that are appropriate. We do advise on the security matters.

Mr. BINGHAM. Do you mean to say that Treasury, for example, has a greater degree of primary responsibility for this program than Defense?

Mr. PARKER. No, sir.

Mr. BINGHAM. I don't understand that.

Mr. PARKER. Not Treasury, but, in the case of the State Department and the Department of Commerce, they are the organizations that primarily handle the cases. As I say, this does not mean that we are not consulted or do not have a role. However, the primary responsibility, is as indicated.

HIGHLY LEVERAGED TECHNOLOGIES

Mr. BINGHAM. Down a little further on, you refer to highly leveraged technologies. What does that term mean? I am not familiar with the term.

Mr. PARKER. Highly leveraged technologies are those that give a particular advantage to a product. "Microprocessor" is a term which is—or is a product which is currently kind of a revolutionary product in our industry. It gi[illegible] great deal of capability in a very small size and cost which allow[illegible] you to do significantly different tasks than you could do before because of technological and cost constraints.

Mr. BINGHAM. Is that another way of saying that you are talking about a revolutionary change?

Mr. PARKER. Yes, sir. It is related to a revolutionary change. It is those things which tend to be revolutionary in the ability of a product.

Mr. Chairman, I might, if you would, go back to this role of the Department of Defense. We do have a veto role in this, so it is not insignificant, and I didn't mean to leave the impression that we were a passive bystander in the process.

Mr. BINGHAM. Mr. Bucy, where would the computers fit into your subcommittee structure?

Mr. BUCY. OK. I think—and that is one thing that I skimmed over here. It is in the main report. It is my firm conviction that adding additional subgroups looking into other areas of technology such as computers would not have had an impact of any magnitude on our recommendations.

I think that what came out of this, the recommendations, would have been, I would say, practically identical. Now, we did start out with the intent of having a subcommittee on computers. The timing—when we started this, was unfortunate. There were several requests for computer exports pending at that time, and no one wanted to take that particular chair, so I filled it in an informal sense—and I am speaking now as an individual from industry and not the task force here. Texas Instruments builds the world's largest computer and we also build the world's smallest computer, so I think that I have some basis for saying that the recommendations that we have made here would fit right within what has been made.

ENFORCEMENT AMONG COCOM MEMBERS

Mr. BINGHAM. In your presentation, you haven't discussed much of the problem that was emphasized quite a bit by our industry witnesses, and that is the difference in policy and the difference in enforcement among the different COCOM members.

Mr. BUCY. Yes.

Mr. BINGHAM. Did you have recommendations with respect to that?

Mr. BUCY. I think—and this is opinion, because it is yet to be proven, obviously—that, if we can implement what is being recommended here, it will help pull COCOM together. The report gives a clear guideline as to what the COCOM nations are trying to accomplish, and it should shorten the list of the things that are being embargoed. Further, it puts us in a role, I think, of leadership, of cooperating with the people in trying to increase trade rather than being a dog in a manger type of role, being in a reactive role of saying: "No, don't do that," every time they want to export things. I think the biggest danger to COCOM right now is that the members are going to go their individual ways because things are too restrictive, whereas, if we will focus on controlling the know-how and turn loose of the product, except in those very key items that are vital and have military significance, it will pull the members together rather than drive them apart.

At present, I think there is danger of members drifting apart.

LEGISLATIVE CHANGES?

Mr. BINGHAM. Do you feel that your recommendations can all be implemented administratively, or do you see any area in which a change in the law would be helpful?

Mr. BUCY. Well, I anticipated you might ask that question, so let me go back to what I think my answer should be. The Defense Science Board study was primarily concerned with administrative changes which should make the present system of export control work better. They did not address legislative changes, so I have no recommendations on behalf of DSB.

My own personal feeling is that the existing system of legislation and regulation is probably adequate if the DSB recommendations are adopted by the executive branch of our Government.

I believe that the Dpeartment of Commerce has done a good job, given the fact that clear guidelines such as those in our report have not been promulgated. The Office of Export Administration has good people who can do the job if they are given clear policies to implement.

If Congress wants to emphasize the distinction between the export of technology products and the export of technology know-how, I think it might be helpful. You might, for example, consider directing a review of the present export control list with high priority given to removing items which do not transfer high technology know-how of strategic importance and adding those that design and process equipment which does.

That is my opinion.

Mr. BINGHAM. Thank you.

Dr. Ancker-Johnson.

Ms. ANCKER-JOHNSON. I think, Mr. Chairman, the laws which have been enacted in general give the President a great deal of authority and leeway in the field of export control, so that with perhaps some very minor matters which we might return to you with after implementation plans have been worked out in the administration—except for some rather minor matters, I think that Congress has already given adequate authority to the President.

I quite agree with Mr. Bucy that either through a report of your own or some expression of your wishes, it would be very helpful if you were to endorse this idea which I spoke of, the "breakthrough" that this report has brought, namely that what is really important to control is technology and know-how. We have been emphasizing far too much what isn't important, namely products.

If the Congress agrees with that, I think you would do a great service in encouraging the administration to drop the old system. I think we all know there is an awful lot of inertia in a big bureaucracy, and it will be difficult to make such a radical change, but I believe also with Mr. Bucy that this would greatly strengthen COCOM and greatly strengthen the possibility for compliance, which is now widely lacking.

You are perhaps aware of the fact that the Office of Export Administration spends now about 99 percent of its time on products and only about 1 percent on technology per se, or technical data. It is a clear example, according to this task force report, of the emphasis being on the wrong syllable.

IMPLEMENTATION OF TASK FORCE REPORT

Mr. BINGHAM. Mr. Parker, how long do you anticipate it will be before the implementation of this task force report can be effected to the extent to which you will effect it?

Mr. PARKER. I think within the next couple of months, Mr. Chairman we can get a plan of attack established and identify the key activities that will occur. I believe it will take, you know, a year or so in order to——

Mr. BINGHAM. Years?

Mr. PARKER. A year or so in order to get through all of the recommendations that are going to come out of this. As you noticed, it has been a fairly long study, because it is a very complex problem. We have a very long history of our current system which is going to have to be examined. We are going to have to do a very careful job of examining and identifying these critical key technologies, and we also have to set up some sort of mechanism by which we will understand this concept of where the other countries are in their technology and what their rate of advance is in technology, because a judgmental matter is going to be there, but I believe that within a couple of months we can report back to the Congress on the plan for implementation of these recommendations as the plan that we would intend to proceed with.

Mr. BINGHAM. Of course, in terms of any legislative change, we will be working on essentially the Export Administration Act in the coming weeks and the immediate months, so that we obviously won't be able to wait for implementation, at least full implementation, of the plan.

May I just say that I am very much impressed by what I have heard, and I think certainly it sounds extremely sensible to me and should go a long way toward meeting the problems that we have heard about.

I can see that it may be a lot easier to state the principles to be applied than to put them into practice.

Mr. BUCY. Mr. Chairman, so are the Ten Commandments.

[Laughter.]

Mr. BINGHAM. Fair enough. Mr. Whalen?

IDENTIFYING STRATEGIC TECHNOLOGY

Mr. WHALEN. Thank you, Mr. Chairman. Let me follow up on that observation. Dr. Ancker-Johnson, suppose that our committee took your recommendation and we proposed to change the law by indicating that we should pay less attention to the transfer of products and make the criteria based on transfer of technology.

Could you write a speech for me for the House floor? How would I explain this to my colleagues? You know, we can feel and see products, but technology isn't quite that easy.

Ms. ANCKER-JOHNSON. Perhaps, Mr. Whalen, I could address myself to a current practice which may not be familiar to you that would give you some ideas about how technology control could be instituted.

In the Patent and Trademark Office, one of my responsibilities, we exercise the following practice. Every application which is submitted to the Office first goes through a screening process for the purpose of culling out those applications which appear to have military or strategic or national security implications. Those applications are then shown in secret to the appropriate defense or security agencies, for them to decide which among that culled list should indeed have a secrecy order placed upon them and be, therefore, not granted a patent.

After those are selected, the inventors are informed that these inventions are to be disclosed to no one.

Mr. WHALEN. Dr. Ancker-Johnson, aren't we talking here about a product, however?

Ms. ANCKER-JOHNSON. Not necessarily, because, as you are, I am sure, aware, Mr. Whalen, an application for a patent does not necessarily describe something that has been reduced to practice. This is why I am mentioning the secrecy order process in this context, because this is a very early-on way of identifying technology which indeed does have strategic importance, but is not yet well-known. Indeed, the technology is known to very, very few at the time the application is made.

So I just suggest that it is possible to identify, by various means new technology of great importance that deserves to have its leadtime, as Mr. Bucy was saying, protected, as opposed to identifying products that really have no strategic importance.

REVOLUTIONARY AND EVOLUTIONARY TECHNOLOGY

Mr. WHALEN. You are talking not only, then, about technology—are you saying also that it is easy to identify revolutionary technology over the evolutionary technology?

Ms. ANCKER-JOHNSON. Yes, sir. I could certainly make some examples of that for your proposed speech. For example, if I were to hear today, tomorrow, or the next day about a method of transmission under water, which far exceeded our present very poor capabilities, that I would see instantly as revolutionary.

Take something from the past. When advances were made in electronic vacuum tubes, to higher power, or to higher frequencies, those were evolutionary in their implications, but, when the transistor was invented, which could do the things an electronic tube could but in a solid-state device, that was clearly revolutionary. And we could pick out dozens of such examples.

It is, generally speaking, possible by those familiar with the art to determine whether a particular piece of technology is indeed revolutionary or simply evolutionary.

DETERMINING STATUS OF COMMUNIST COUNTRIES' TECHNOLOGICAL DEVELOPMENT

Mr. WHALEN. Aren't there two elements in the equation, however, the other one being the know-how, the technology, that exists in, let us say, the Eastern European bloc? How can we be sure that they don't have this?

Ms. ANCKER-JOHNSON. You have raised a very important question, Mr. Whalen, something that has been inadequately cranked into our thinking in the administering of export controls, and the report clearly recommends that this is something we need to do. I believe to a large extent we have such information, but it has never been adequately collated.

It may exist in this or that agency in the government in pieces, but it has never been sufficiently pulled together to aid in the deciding of what technology is significant and should be kept at home and what technology is really well-known and so is ridiculous to continue to guard.

Mr. PARKER. Mr. Whalen, I might comment on that. Many of the deliberations in the Department of Defense on our heartburn issues

and particular technologies or products do relate to that particular issue of where are the Soviets in this case in their technological development, and we do attempt to assess, by virtue of looking at their products, their literature, and this sort of thing, but it is, you know, in very specialized cases.

I believe the point being made by the report is that we are going to need to do that on a broader scale and in a lot more organized way.

In this particular case now, we will focus on a specific request and say: "What is the technology there and what will this do for them?" Then answer the request for a license, but we will not necessarily implement across the board this assessment of technology, so I think it is really unorganized in our approach, and making that an inherent part of our consideration that it is important.

INDUSTRY COMPLAINTS

Mr. WHALEN. Mr. Chairman, I have another question or two. Maybe we can break then for the rollcall.

Last week I listed, as I recall, about five complaints which seemed to be the consensus of the business witnesses whom we heard: (1) They indicated that many items on the list were dated technology—in one instance, I think they cited something that went back 30 years; (2) the list includes technology which has no real security relevance; (3) there is a significant delay in the processing of applications; (4) there is failure to consult adequately with business; and (5) other COCOM nations fail to enforce restrictions.

It would seem to me, in reading your statement, Mr. Bucy, and your report, that many of these complaints have been verified by your findings. Is that a fair statement?

Mr. BUCY. I think that is correct.

Mr. WHALEN. On the last one, I think——

Mr. BUCY. I think the 30-year one is probably extreme. I would be interested in that.

POLICING OF COCOM

Mr. WHALEN. Yes, unusual. The witnesses also seemed to think that perhaps the key to the whole problem was the last point that I mentioned, the failure of COCOM nations to enforce restrictions.

You have pointed this out on pages 19 and 20. I was interested in your recommendation on the top of page 20—and I quote:

> The United States should impose a sanction upon any COCOM country who fails to control specific technology by restricting the flow of know-how in that technology to the offending country.

Aren't you biting off a lot here? Isn't this another example of something easier said than done?

Mr. BUCY. Well, it is certainly easier said than done. I do not think it is impossible. I do think we have had clear cases where the COCOM relationship was just tossed completely out the window, and did nothing about it whatsoever, so they feel that they can act without any fear of retribution of any sort, and I don't think that things should remain in that condition.

Mr. WHALEN. Of course, here again we are dealing with the private sector, the economies both here and with our COCOM partners.

Mr. BUCY. That is right. That is correct.

Ms. ANCKER-JOHNSON. Actually, if the recommendations of the report are carried out, I agree with Mr. Bucy and my fellow members of the task force that COCOM is much more apt to be strengthened than weakened because it will be in everyone's self-interest to cut down the paperwork and constraints involved in the approach we are currently using that says: "Look at products." If we are looking rather at the goose that lays those golden eggs, that is, if we are trying to protect know-how, we will be acting in all of COCOM's interest. It is certainly in everyone's economic interest to have less constraint on trade of products.

So I think that innately the recommendations of the task force are going to be acceptable to the rest of COCOM and possibly even something they would embrace enthusiastically.

Mr. WHALEN. Have any representatives of our COCOM colleagues been contacted about this, about the contents of the report?

Ms. ANCKER-JOHNSON. That is a matter for our State Department to handle, and I think you haven't anyone here today to answer that question, but they certainly can, of course.

Mr. BINGHAM. I would like to ask a few more questions, if you don't mind remaining. We will recess for a few minutes.

[A short recess was taken.]

EFFECTS OF TASK FORCE REPORT ON EAST-WEST TRADE

Mr. BINGHAM. The subcommittee will resume its session. Broadly speaking, would you say that the recommendations of the task force, if carried out, will result in more or less trade with Eastern Europe?

Mr. BUCY. I think, for the product, it will increase it. For technology, obviously, the sale of know-how—it will reduce it substantially. I cannot quantify that, but I am sure that that would be the direction that it would go.

Mr. BINGHAM. Do you mean that—go ahead.

Ms. ANCKER-JOHNSON. I would like to add to that. I think there would be more product sales and less transfer of advanced technology. Since products account for much more in terms of sales than does technology, our balance of trade would benefit. Our current sales (1975 estimate) of technology abroad amount to $2.7 billion, whereas our product sales amounted to $107 billion in 1976. If less technology were transferred and controls on products were loosened, our product sales would be greater, I think.

So we stand to gain economic benefit of considerable magnitude by giving the opportunity for more sales of products, because much more in terms of economic gain is thus to be obtained.

Mr. BINGHAM. But you do visualize that in the area of technology as such there would be a tightening of applications which might previously have been granted under your recommendations?

NEW GROUND RULES

Ms. ANCKER-JOHNSON. No, sir, I wouldn't say that. I would not say that applications which previously had been granted would not be. But we would have different ground rules than we do now.

For example, one of the ground rules currently is that any information which has been published can be exported under a general license without any reference to Department of Commerce controls.

Now, clearly, if I have in mind that I absolutely want to sell something by way of know-how, I can publish it in some way. I could publish it in one library and not the MIT Library, for example, some local library where I could assume hardly anyone would find it, and that would cover me. It would be legal then to sell that technology abroad. I can do that under today's law.

We would propose, Mr. Chairman, a quite different arrangement regarding the circumstances under which technology could be exported in order to avoid the dissipation of the revolutionary, the design, and the manufacturing know-how technology.

Mr. BINGHAM. Could you spell that out?

Ms. ANCKER-JOHNSON. Well, for example, I mentioned how we currently identify in the Patent Office inventions that are of strategic importance. I am now only speculating. I am not trying to second-guess what we might come up with in the study on how to implement the task force recommendations, but there are ways beyond the one I just mentioned which we are currently using for identifying technology that is of a revolutionary character.

We could for example, have companies identified as producing revolutionary technology register, and, when they wish to enter into technological agreements abroad, have that fact brought to the Office of Export Administration. This Office would review it according to guidelines that would have to be developed as recommended in the report.

I don't view this as an impossible task at all. I do view it as one that has to be very carefully worked out.

Mr. BUCY. Mr. Chairman, I would like to make one request. This is an area where there are a lot of fuzzy discussions and thinking. When you speak of technology, I really think you have to concentrate on the distinction between the products of technology and know-how. Otherwise, the discussion gets very obscure. Generally, when people speak of technology, they include everything from basic research all the way through to the end product.

FREEDOM OF SCIENTIFIC EXCHANGE

Mr. BINGHAM. I think you have made that distinction very clear, Mr. Bucy, and I believe I understand it. Is there a problem in the kind of thing that you were just talking about, Dr. Ancker-Johnson? Is there a problem of impairing the traditional freedom of scientific exchange?

Ms. ANCKER-JOHNSON. No, sir. I don't think so. We, in our task force, in no way recommended anything that would inhibit the exchange of knowledge, scientific knowledge, as we do exchange it today. I am a very firm believer in that system and would support it absolutely to the hilt. We are addressing here that kind of knowledge, that know-how, which is very applied, namely for products or processes.

All of the current scientific exchange that we have, international conferences, the publication of papers in scientific journals, would continue precisely as it has, unabated. We are only focusing in on that kind of know-how—and I use that term as Mr. Bucy has

just suggested—that kind of know-how which issues in design and manufacturing.

INTERNAL CONTROL MECHANISM

Mr. BINGHAM. Do you have to have some kind of internal control mechanism to enforce that?

Ms. ANCKER-JOHNSON. Yes, sir. The Office of Export Administration would have to have guidelines to determine: Is this evolutionary technology and, therefore—or perhaps I misunderstood you.

Mr. BINGHAM. I think you did. I meant internal within the country, within the United States.

Ms. ANCKER-JOHNSON. I am afraid I still don't quite understand.

Mr. BINGHAM. Well, it seems to me that you might have a problem, let us say, of effectively—of having leaks of the know-how that would come not directly from the company that is, let us say, making the application, but that might move from that company to another American company. I am not sure if that is a problem.

Ms. ANCKER-JOHNSON. Perhaps that is an area, Mr. Chairman, where legislation would be required. It might be necessary for Congress to impose sanctions which would empower the Department of Commerce to prosecute in order to enforce compliance, but I do not think that that is any more difficult than is the policing, if you like, of export control when the emphasis is on products rather than on know-how itself.

It appears somewhat more difficult because, clearly, technology or know-how can be transmitted even in conversation, and that appears to be a lot harder to police and to observe than is the transfer of a black box of some sort.

However, you know, black boxes can be well hidden, so both product and know-how transfers pose problems. However, I don't think either one is insurmountable.

IMPLEMENTING THE NEW PROPOSALS

Mr. BINGHAM. Will there possibly be a problem in implementing these proposals in the degree of specialized knowledge required of those administering the controls? Your task force and your committees have all had a degree of technical knowledge which may not be available to those who will be charged with the administration of the control program.

Do you see this as a problem or will there perhaps be a transfer of responsibility from one type of specialist to another?

Ms. ANCKER-JOHNSON. I don't see it as a problem, Mr. Chairman, in that I feel certain that those who currently administer the export controls in the Department of Commerce can either gain the technical knowledge necessary through a learning process or perhaps there would be some acquiring of technical people, but fundamentally that is the sort of administrative problem that I think can be easily handled.

Mr. PARKER. Mr. Chairman, I might comment from the Defense point of view. We do have a large number of various specialized people in these areas of technology, both in the services and in the OSD, and these people are drawn upon at this time to look at the

technologies and/or the products. Because we have been looking at the military implications of the products and the technology embodied in them. I think, from our point of view, that we are going to have to increase our focus on "know-how"; resources are available as a normal part of our managing of a fairly large research and development budget in the Department of Defense.

Mr. BINGHAM. Well, I want to thank you all for your time and thought, and again my compliments on the work of the task force.

The subcommittee stands adjourned.

[Whereupon, at 3:50 p.m., the subcommittee adjourned, subject to the call of the Chair.]

APPENDIX

LETTERS FROM HON. JONATHAN B. BINGHAM TO THE DEPARTMENTS OF STATE, COMMERCE, AND DEFENSE, INVITING TESTIMONY FROM EACH FOR THE MARCH 15, 1976 SUBCOMMITTEE HEARING

HOUSE OF REPRESENTATIVES,
COMMITTEE ON INTERNATIONAL RELATIONS,
Washington, D.C., February 10, 1976.

HON. HENRY A. KISSINGER,
Secretary of State,
Department of State, Washington, D.C.

DEAR MR. SECRETARY: The Subcommittee on International Trade and Commerce will begin hearings in March reviewing the process of export licensing of advanced technology under the national security control provisions of the Export Administration Act and related statutes. These hearings will preface and supplement later hearings and legislative action contemplated by the full International Relations Committee in conjunction with the proposed extension of the Export Administration Act.

The Subcommittee hereby invites and requests appearance by you or a responsible State Department official on March 16, 1976, 2:00 p.m. Room 2255 Rayburn House Office Building to testify regarding your Department's role in the export licensing process. The Subcommittee is also inviting representatives of the Departments of Commerce and Defense for similar testimony. The purpose of this review is to establish a detailed record of the goals, procedures, and effects of the export licensing mechanism particularly as it applies to "non-market economy" countries, but also to "free-world" countries. The Subcommittee is especially interested in identifying any problems that may exist in this important process, their causes and possible remedies.

With this in mind, the Department is urged to provide the Subcommittee with relevant data and views. The Department, of course, should feel free to comment in its statement on any aspect of this subject it regards as significant, but we would hope that the Department could go into particular detail regarding United States participation in COCOM. For example, the statement might address the following:

1. *Legal basis.* Reference is made to my letter dated February 2, 1976, to Mr. Robert B. Wright, Director of the Office of East-West Trade, regarding the legal basis of COCOM and of American obligations thereto. The Subcommittee will expect such legal documentation to be included in the Department's testimony if it is not submitted separately beforehand.

2. *Decision-making.* Describe in detail how the decisions are made regarding which items will appear on the COCOM list, and regarding requests for exceptions to the list. What criteria are used? How were these criteria developed? How does the Department, in its participation in COCOM, assure that adequate consideration is given to technological and commercial considerations, in addition to diplomatic considerations?

3. *Data.* How many items remain on the COCOM list, and how does this compare with previous lists? What is the volume of exception requests, by country? Why does the United States request more exceptions than the other COCOM members? How many of the time required to process export license applications is taken up by the COCOM procedure?

4. *Rationale.* What would happen if there were were no COCOM? Why is it necessary to have two separate diplomatic processes—one to create and maintain the list, and one to gain exceptions to it? Why is it not possible to shorten the list and then stick to it? Is the provision in the Battle Act for cutting off aid to countries which violate the COCOM list obsolete?

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5. *Protection of U.S. commercial interests.* Considering that all decisions for exceptions to the COCOM list must be unanimous, how do we protect ourselves from efforts by our competitors to use their veto power to prevent us from exploiting our technological superiority?

6. *Problems.* What are some problems occasioned by American participation in COCOM which the Department wishes to bring to the Subcommittee's attention? What recommendations does the Department have for changes in COCOM and the United States relation to it?

The Subcommittee would benefit as well from the Department's comments on (a) its participation in the various interdepartmental coordinating committees involved in the high technology export licensing process, the functioning of these committees, and problems involved in their operation; and (b) any other problems the Department has in carrying out its export control responsibilities in the high technology area, steps being taken to resolve those problems, and legislative recommendations.

In view of the rather technical nature of this matter, the Subcommittee will be particularly strict in adhering to its requirement that fifty (50) copies of your statement be received no less than 48 hours prior to the hearing so that Members and staff will have adequate opportunity to study it. The Subcommittee staff may be reached at 225-3246 to work out any problems you may encounter or details you may require.

The Subcommittee looks forward to your prompt designation of a witness, and to entering into a constructive dialogue with the Department on these issues.

Sincerely,

JONATHAN B. BINGHAM,
Chairman, Subcommittee on International Trade and Commerce.

HOUSE OF REPRESENTATIVES,
COMMITTEE ON INTERNATIONAL RELATIONS,
Washington, D.C., February 10, 1976.

HON. ELLIOT L. RICHARDSON,
Secretary of Commerce,
Department of Commerce, Washington, D.C.

DEAR MR. SECRETARY: The Subcommittee on International Trade and Commerce will begin hearings in March reviewing the process of export licensing of advanced technology under the national security control provisions of the Export Administration Act and related statutes. These hearings will preface and supplement later hearings and legislative action contemplated by the full International Relations Committee in conjunction with the proposed extension of the Export Administration Act.

The Subcommittee hereby invites and requests appearance by you or a responsible Commerce Department official on March 16, 2:00 p.m., Room 2255 Rayburn House Office Building to testify regarding your Department's role in the export licensing process. The Subcommittee is also inviting representatives of the Departments of State and Defense for similar testimony. The purpose of this review is to establish a detailed record of the goals, procedures, and effects of the export licensing mechanism particularly as it applies to "non-market economy" countries, but also to "free-world" countries. The Subcommittee is especially interested in identifying any problems that may exist in this important process, their causes and possible remedies.

With this in mind, the Department is urged to provide the Subcommittee with relevant data and views. The Department, of course, should feel free to comment in its statement on any aspect of this subject it regards as significant. The statement might address, for example, the following aspects which are central to the Subcommittee's interests:

1. *Description of the licensing process.* Describe in detail all the stages through which an application for a license for a high technology item might go from its receipt by the Office of Export Administration to the final decision, including the considerations which determine whether a decision is reached at any one stage or the application moves on to a higher stage. Include as well a description of the appeals process for rejections. A flow chart depicting the process and showing all the agencies involved would be helpful.

2. *Data on the disposition of applications,* including, for example, the following: (a) high technology applications received per year, in absolute terms and

as a percentage of total applications received; (b) numbers or percentages approved and rejected, both in total and at each stage of the process; (c) time required for licensing decisions to be reached; (d) ratio of applications received to applications decided, by year; (e) trends in the backlog of applications awaiting decision; (f) areas of technology or product lines which are particularly troublesome or difficult in reaching licensing decisions.

3. *Details on the Department's interactions with the various interdepartmental coordinating committees and advisory groups* involved in the high technology licensing process, the functioning of these groups, and problems involved in their operation. Go into particular detail regarding:

(a) the Department's interaction with the Department of Defense pursuant to Section 4(h) of the Export Administration Act. How is it decided which applications are submitted to Defense for approval? What percentage are so submitted, what percentage of those approved and rejected, and how long do those decisions take?

(b) the role and impact of the Technical Advisory Commitees.

4. *The criteria employed* in making licensing decisions, and how these criteria were developed, including: (a) how tradeoffs are made among national security, foreign policy and economic considerations; and (b) how estimates are made of the potential impact of technology transfer on the military capability of other countries.

5. *The effects of the controls.* Have the controls had the effect of sustaining a technology gap between the United States and other countries? If so, has the maintenance of technology gap had the effect of limiting the military capabilities of our adversaries?

6. *Problems.* What problems does the Department have in carrying out its export control responsibilities in the high technology area? What steps are anticipated or being taken to resolve these problems, particularly in view of the Department's recent high-level review of the process? Does the Department wish to make any legislative recommendations to the Subcommittee for subsequent consideration by the full Committee? What budgetary resources does the Department anticipate will be necessary to carry out its export control responsibilities?

In view of the rather technical nature of this matter, the Subcommittee will be particularly strict in adhering to its requirement that fifty (50) copies of your statement be received no less than 48 hours prior to the hearing so that Members and staff will have adequate opportunity to study it. The Subcommittee staff may be reached at 225-3246 to work out any problems you may encounter or details you may require.

The Subcommittee looks forward to your prompt designation of witness, and to entering into a constructive dialogue with the Department on these issues.

Sincerely,

JONATHAN B. BINGHAM,
Chairman, Subcommittee on International Trade and Commerce.

HOUSE OF REPRESENTATIVES,
COMMITTEE ON INTERNATIONAL RELATIONS,
Washington, D.C., February 10, 1976.

Hon. DONALD H. RUMSFELD,
Secretary of Defense, The Pentagon,
Washington, D.C.

DEAR MR. SECRETARY: The Subcommittee on International Trade and Commerce will begin hearings in March reviewing the process of export licensing of advanced technology under the national security control provisions of the Export Administration Act and related statutes. These hearings will preface and supplement later hearings and legislative action contemplated by the full International Relations Committee in conjunction with the proposed extension of the Export Administration Act.

The Subcommittee hereby invites and requests appearance by you or a responsible Defense Department official on March 16, 1976, 2:00 p.m. Room 2255 Rayburn House Office Building to testify regarding your Department's role in the export licensing process. The Subcommittee is also inviting representatives of the Departments of Commerce and State for similar testimony. The purpose of this review is to establish a detailed record of the goals, procedures, and

effects of the export licensing mechanism particularly as it applies to "non-market economy" countries, but also to "free-world" countries. The Subcommittee is especially interested in identifying any problems that may exist in this important process, their causes and possible remedies.

With this in mind, the Department is urged to provide the Subcommittee with relevant data and views. The Department, of course, should feel free to comment in its statement on any aspect of this subject it regards as significant. The statement might address, for example, the following aspects which are central to the Subcommittee's interests.

1. Detail regarding the Department's participation in export licensing decisions pursuant to Section 4(h) of the Export Administration Act. How is it decided which applications are submitted to the Department for approval? How many are so submitted? What percentage of those are recommended for approval, and what percentage for rejection? How long does the Department take to process these submissions? What problems has the Department encountered in carrying out its responsibilities in this area, what steps are being taken to resolve those problems, and what legislative recommendations, if any, does the Department wish to submit to the Subcommittee for the subsequent consideration of the full Committee?

2. The criteria employed by the Department in making licensing recommendations, and how those criteria were developed. Considering that any export will strengthen the recipient, and that most products have both military and civilian uses, how is it decided whether or not an export will significantly increase a country's military capability? How are estimates made of the potential impact of technology transfer on a country's military capability?

3. The effects of the controls. Have the controls had the effect of sustaining a technology gap between the United States and other countries? If so, has the maintenance of a technology gap had the effect of limiting the military capabilities of our adversaries?

4. Detail regarding the Department's participation in the various interdepartmental coordinating committees involved in the high technology licensing process, the functioning of these committees, and problems involved in their operation.

5. Any other problems involved in carrying out its export control responsibilities in the high technology area which the Department wishes to bring to the Subcommittee's attention.

In view of the rather technical nature of this matter, the Subcommittee will be particularly strict in adhering to its requirement that fifty (50) copies of your statement be received no less than 48 hours prior to the hearing so that Members and staff will have adequate opportunity to study it. The Subcommittee staff may be reached at 225-3246 to work out any problems you may encounter or details you may require.

The Subcommittee looks forward to your prompt designation of a witness, and to entering into a constructive dialogue with the Department on these issues.

Sincerely,

JONATHAN B. BINGHAM,
Chairman, Subcommittee on International Trade and Commerce.

Letter to Victor C. Johnson, Research Assistant, Subcommittee on International Trade and Commerce, From Paul Cherecwich, Jr., The Foxboro Co.

The Foxboro Company,
Foxboro, Mass., April 26, 1976.

Mr. Victor Johnson,
Subcommittee on International Trade and Commerce, House of Representatives, Washington, D.C.

Dear Mr. Johnson: Your recent appearance before the SAMA Government Affairs Committee was very much appreciated. Your insights regarding the Export Administration Act were most helpful.

It was inferred during our meeting that the 90 day notices did not specify the point at which an application was delayed, nor why it was being delayed. As the enclosed letter shows, that inference was not entirely accurate since Foxboro is told, in the enclosed letter, that the application is being processed by the Department of Defense. Foxboro is not, however, told whether or not there is a problem with its application, nor is Foxboro told how it can convey to the Department of Defense, or COCOM, information as to the commercial impact of any processing delays. Perhaps the new Export Administration Act could address these problems.

Another problem faced by exporters is the need to file repetitive applications for the export of the same products to a country. The Distribution and Service Supply license procedure is adequate if an exporter has facilities (either his own or under contract) in another country, but if not repetitive license applications are required. Perhaps the new Export Administration Act could call for a "blanket" licensing procedure that did not require an exporter to have facilities in the foreign country to which product shipments are made.

A third area of concern is the tendency to treat all digital-based technology as "computers". There are many products with limited, or negligible war-making potential that are nonetheless controlled for export purposes because such products incorporate digital technology. Perhaps the new Export Administration Act could call for the removal of products from the controlled commodity list whenever it can be shown that the digital portion of a product is not useable other than in conjunction with the product.

We will be pleased to assist you in developing further information on the problems of exports under the Export Administration Act. Please do not hesitate to call upon us.

Sincerely,

Paul Cherecwich, Jr.,
Treasurer's Staff.

Enclosure.

U.S. Department of Commerce,
Domestic and International Business Administration,
Washington, D.C., September 18, 1975.

Foxboro Co.,
38 Neponset Ave.
Foxboro, Mass.

Gentlemen: This is to advise you that the Office of Export Administration has not been able to process the license application cited above within the 90 days specified by section 4(G) of the Export Administration Act of 1969, as amended. The circumstances requiring additional time, and an estimate of when the licensing decision will be made, are indicated below:

As required by the 1974 amendments to the Export Administration Act (Section 4(h)), your case is now under review by the Department of Defense to determine whether the export would significantly increase the military capa-

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bility of the country of destination. If, following this review, it is considered that approval is the appropriate action, we must seek the concurrence of the other countries that participate in the international strategic control organization (COCOM). Unless unforeseen circumstances arise, we expect to complete action in 2 months.

ARTHUR T. DAVIS,
Office of Export Administration.

LETTER TO HON. JONATHAN B. BINGHAM FROM J. FRED BUCY, JR., CHAIRMAN, DEFENSE SCIENCE BOARD TASK FORCE

DALLAS, TEX., *May 3, 1976.*

Representative JONATHAN B. BINGHAM,
Chairman, Subcommittee on International Trade and Commerce,
Rayburn House Office Building,
Washington, D.C.

DEAR MR. CHAIRMAN: During the question and answer period following my statement before the Subcommittee on International Trade and Commerce on March 30, 1976 on the subject of the export of technology, you asked whether I felt the Defense Science Board task force recommendations could be implemented administratively or, in the alternative, whether a change in existing law would be helpful. My answer was that the DSB study was primarily concerned with administrative changes which could make the present system of export controls work better and did not address itself to legislative proposals. I therefore had no recommendations on behalf of the DSB.

After considerable reflection, I think my answer should be amplified. My strong feeling is that the subcommittee will be able to judge whether new legislation is necessary after it has had an opportunity to review the specific plans of the Department of Defense for implementing the DSB recommendations. This review could analyze concrete action plans rather than conceptual approaches and thereby determine whether existing law is sufficient to bring about implementation of the report recommendations. Indeed, the practicality of the recommendations themselves would be easier to judge in the light of specific implementation proposals.

Fortunately, such a review need not significantly delay your consideration of the Export Administration Act extension. As you recall, your subcommittee asked asked Mr. Parker of the DOD when he anticipated implementing those DSB recommendations which the DOD planned to implement, and he replied that he felt the DOD could have its implementation plan, along with the identification of specific key activities necessary for implementation, ready within a couple of months. That implementation plan should be ready for you, then, soon.

In summary, it is my recommendation that the Subcommittee consider the need for any new legislation in light of the Department of Defense's implementation plans. I believe an expression of your interest in reviewing these plans, as well as any which the Department of Commerce may have, would make them forthcoming in time for inclusion in your deliberations on the Export Administration Act.

Please do not hesitate to call upon me if I can be of assistance to you in any way.

Sincerely,

J. FRED BUCY.

Statement of the Aerospace Industries Association of America, Inc., Concerning Licensing of High Technology Exports

This statement is submitted on behalf of the Aerospace Industries Association of America, Inc., representing the nation's major manufacturers of aircraft, spacecraft, engines and other high technology products in demand throughout the world. In 1976, for example, exports by our industry totalled $7.8 billion or 7.4 percent of all U.S. exports.

As a member of the Joint High-Technology Industries' Group on Export Administration, we concur with the testimony offered to this Subcommittee by Mr. Alan B. Spurney on March 24, 1976. However, we would like to take this opportunity to augment and emphasize certain points concerning the export licensing of commercial aerospace products. In general we believe there are at least three basic points with respect to the Export Administration Act that are fundamental to a successful U.S. trade policy. The emphasis of U.S. technology export control is not changing. In-depth analysis of every application and the maintenance of a lengthy Commodity Control list continue to be stressed. Due to the absence of well established criteria for evaluating technology transfers, this system is cumbersome, results in delays and does not provide guidance for U.S. firms interested in developing foreign markets. While the Act itself, as written, is not seriously deficient from the standpoint of our industry, its implementation to date has revealed the need for the following:

(1) A clear, coherent policy framework within which U.S. industry can operate with confidence;

(2) Efficient, expeditious and consistent implementation of both the procedures required by the Congress and the executive regulations which subsequently evolve;

(3) A single focal point for developing and administering U.S. policy.

In the remainder of the statement, we will discuss the numerous problems which result from these three deficiencies in the present export control system.

NEED FOR CLEAR POLICY FRAMEWORK

In theory, U.S. policy concerning technology transfer could lie somewhere along a spectrum bounded, on one end, by the notion that all technology and technological know-how is unique, non-reproducible, and should not be transferred to anyone, under any conditions. On the other end of the spectrum might be the idea that the United States is so superior in its technological development and expertise that we would always be ahead of the game, no matter what we sold to other countries or when we did so. Obviously, prudence in what remains a chancy and unpredictable world would dictate that U.S. policy lie somewhere between those two extremes. The United States can neither stop the world, nor take total responsibility for bringing others into the technological age. We in the aerospace industry are in total agreement with the concept of responsible policies, resulting in well thought out limits.

What we must decide is the degree to which we can most fully utilize (i.e., sell) our technology as a replaceable national resource, thereby benefitting the nation's balance of payments and employment prospects, while staying within the limitations of total national interest.

We are presented with two, slightly differing opinions on this subject in the form of the Defense Science Board's report entitled, "An Analysis of Export Control of U.S. Technology—A DOD Perspective" and the General Accounting Office's report entitled, "The Government's Role in East-West Trade—Problems and Issues." While the GAO report found that the Government needs to establish rules and procedures to protect U.S. interests with respect to trade with communist countries, it also noted that such rules and procedures should *promote* overall U.S. interests. The Defense Science Board's treatise emphasizes *control* of many forms of non-strategic transfers. This is quite proper, in that theirs was a Department of Defense perspective, as noted in the title.

The Defense Science Board study included findings and recommendations concerning technology transfer in the following areas of high technology: (1) airframes; (2) aircraft jet engines; (3) instrumentation; and (4) solid state devices. Inasmuch as these areas cover a large part of aerospace technology and the 43 individuals who wrote this analysis represent some of the nation's most sophisticated and talented technology experts in both the private sector and Government, we believe that the study deserves careful attention. Its recommendations address technology transfer from a defense/security position, but many of the recommendations deal with specifics concerning the export or transfer of civilian aerospace products. It is in the latter area that AIA wishes to stress, and to endorse as pertinent, points and procedures which should be adopted by the U.S. Department of Commerce. The Department of Commerce, of course, has both the obligation and the authority under the Export Administration Act to control the export of civilian or commercial aerospace products throughout the world. Therefore, AIA would emphasize the following recommendations from the Defense Science Board study and urge that they be used as specific guidelines in the Export Administration Act:

(1) A new approach to controlling technology export is overdue;

(2) The objectives and strategies for controlling these technologies should be developed by knowledgeable individuals from Government and private sectors. In addition, these study groups should identify critical elements of each technology as defined in the report;

(3) Adequate resources should be assigned to interface with the groups developing this information, to provide a means for implementation of these objectives in assessing technology transfer cases;

(4) These objectives and strategies should be developed as quickly as possible, and communicated to other U.S. agencies and COCOM member nations;

(5) Specific guidelines for these technologies should be prepared and released to private firms;

(6) Simplified criteria for evaluating product sales, emphasizing intrinsic utility rather than commercial specifications and intended end use, should be developed and applied to classes of products;

(7) Aggressive goals should be established for the time required to respond to license requests; e.g., 90 percent of all requests should be answered within 10 days and 8 percent within two months. Studies should then be undertaken to find solutions and alternates that would allow these goals to be realized.

(8) Development of a "decision-tree" analysis that would lend itself to computer-aided screening of license applications should be undertaken. Experienced groups such as consultants in this field or computer systems specialists in the Commerce Department could be used to develop these methods.

In further support of this study, AIA stresses the point that the absence of established criteria for evaluating technology transfers reinforces the cumbersome case-by-case analysis of all export applications. Government-to-government scientific exchanges should be monitored to ensure consistency with restrictions on export of strategic U.S. technology. Carefully chosen export controls can aid in the maintenance of, and at times maximize, the lead time of U.S. strategic technologies as compared with other nations. Equally important to lead time is a vigorous R&D activity, creating new technological advances.

The problem is that while we might concur with parts of this Defense Department policy, there is also a Department of Commerce perspective and a Department of State perspective. Industry also has a view of the strategic or non-strategic potential of its products.

Within this broadly decentralized structure there have arisen other considerations, which might be described as "national interest," as opposed to "national security," problems. While no one would dispute that U.S. business activities should be in the national interest, there has been an increasing, and we believe misplaced, effort to attach to their delicate structure various sociological and diplomatic burdens which might better be handled in some other manner.

Added to this complicated situation is the COCOM agreement. While the basic concept of COCOM is worthwhile and certainly evolved out of a situation which called for decisive management, in our view it has, in its present form, largely served its purpose as a control mechanism and should be reviewed and updated if it is to constitute a workable, realistic response to old problems which still exist, as well as to new ones which have arisen. The administration of COCOM is slow and unwieldy. U.S. officials should constantly reassess world conditions and technological advances within and outside the communist sphere.

For instance, we would strongly recommend that under U.S. Government sponsorship, a careful analysis be made of the state of the art in aerospace technology in the industrial nations. This would provide a partial basis for updating and modernizing the COCOM system.

In short, there is an urgent need to reevaluate our entire technology export policy. Whether this should be done by the Congress or the Executive Branch or by both *in concert with industry*, it is not within our purview as a user of the system to say. Naturally we would prefer the latter approach. Nevertheless, we urge the Government to address some of these problem areas in a spirit of realism, pragmatism and with confidence in the judgment and self-renewing properties of American high technology industry.

IMPROVEMENT OF LICENSE APPLICATION PROCEDURES

On a more mundane and less philosophical level, we turn to the second major failing of the present system, the need for more efficient licensing procedures.

Under the present export licensing system, as administered by the Commerce Department, there does not appear to be a well organized priority system for handling license applications and screening the various categories and classes of technology exports. We believe much can be accomplished in this area by assessing technology rather than commercial products, listing key technologies and products, stressing export control on the basis of capability rather than commercial specifications. Sorting products into appropriate classifications, the lowest classification requiring only a quick evaluation and the highest requiring a thorough review, would also be beneficial. Such a system, if carefully developed, could convert the routine processing of many export license applications to a computerized operation.

Assuming that a cohesive technology export policy could be evolved and assuming that its implementation could be consolidated or centralized in some way, we would urge the Congress to place legislative *deadlines* on the actual licensing process. We would suggest if the license had not been approved within 60 days, that it be issued automatically or placed in a special category. This would place an effective constraint on bureaucratic procrastination and would have no adverse effect on the necessary technical study and analysis which accompanies license actions.

We further recommend that the Department of Commerce or other concerned agencies be required to keep companies informed of the status of their applications. As the segment of industry requiring the longest processing time, high technology industries face difficult marketing problems in keeping their customers encouraged and informed about the status of their intended purchases.

It would also benefit both the Government and the petitioning companies if the reasons for license denial could be spelled out in detail. All too often "national security reasons" is stamped in automatically. This enables the agencies to camouflage diplomatic or sociological reasons, thus making an accurate analysis of the licensing process and how it works virtually impossible. It also denies to industry information crucial for appeal or adjustment prior to reapplication. In the end, more time is wasted, because industry has no way of knowing whether or not a similar license will be denied and thus submits it and starts the process anew.

NEED FOR A FOCAL POINT

Somewhat related to a coherent policy framework is our third point, the need for a more localized, accessible and manageable focus of U.S. export policy and export policy administration. At the moment, high technology exporters are being unnecessarily segmented. The Department of Defense, reasonably enough, examines subject licenses from a rather broad-gauge national security standpoint. The Department of State views such exports from a diplomatic standpoint. While mandated to consider certain business implications of such exports, the Commerce Department, by virtue of being the lead agency in license applications, has frustrated many segments of business because of the slowness of its license procedures. We would recommend that these three agencies collectively reexamine their control procedures and lists in order to see where and why there is overlap and what can be done to streamline the entire export licensing process. We believe the idea should be explored of getting cognizant officials of the three controlling agencies together, in one room, on a periodic basis to review a set caseload of troublesome applications and complete action

on them. The present system does not keep up with the workload and wastes Government time as well as ours.

At the moment, the burden of proof is on the manufacturer. He is required to prove that his product can never be used in opposition to the security interests of the United States. When in doubt, say no, seems to be the policy. We believe that development of a centralized source of policy and authority, backed up by extensive engineering knowledge of the state of the art in the United States and the recipient countries, will make these findings more rational and more acceptable. We urge the Congress to work with the Executive Branch and with industry to develop such a system.

CONCLUSION

We urge that both Congress and the Executive Branch recognize that the delays involved in the export licensing process place an undue burden on U.S. manufacturers in their efforts to compete in the international marketplace. No one disputes the right—indeed, the obligation—of the United States Government to monitor and control the movement of sophisticated technology around the world.

However, we would like to remove the adversary aspect from the technology transfer process here at home. We have a legitimate, informed and responsible desire to sell our products and in some cases, our knowledge, abroad. We do so knowing that we must constantly update and expand that knowledge or else suffer our own economic reversals. The Government, on the other hand, has a recognized obligation to protect the interests of the country. We see no contradiction there. We can work together to evolve sensible and realistic ways of accommodating, within the realm of reasonable compromise, both objectives and we would welcome the opportunity to do so.

"Overview of the Export Control Program," Submitted by the Department of Commerce

LEGISLATION

Export controls have been in operation continuously since July 1940. It was expected that they would be terminated as soon as adequate supplies of commodities became available after the end of World War II, but the development of the cold war led to passage of new legislation in 1949 providing for a continuation of controls as a means of combating the spread of Communism. The Export Control Act of 1949 continued in force for twenty years, being extended and amended from time to time. It was replaced January 1, 1970, by the Export Administration Act of 1969, which was amended and extended to June 30, 1974, by the Equal Export Opportunity Act of 1972, and extended again to September 30, 1976, by the Export Administration Amendments of 1974. Although several other Government departments also administer some export controls under other legislation,[1] most commercial exports are under the jurisdiction of the Department of Commerce.

OBJECTIVES

The Export Administration Act of 1969, as amended, calls for the control of exports to the extent necessary for any of three purposes: (1) to exercise necessary vigilance over exports from the standpoint of their significance to national security, (2) to further significantly U.S. foreign policies and aid in fulfilling international responsibilities, and (3) to protect the domestic economy from excessive drain of scarce materials and reduce the serious inflationary impact of abnormal foreign demand. National security controls far outweigh those for the other two purposes.

For most of the period following the end of the Korean War there were only sporadic, temporary controls for short supply reasons, principally involving copper, cattlehides, and veneer-quality walnut logs. Recently, however, shortages and inflationary pressures have led to short supply controls or export monitoring, for various periods, affecting commodities ranging from soybeans to coal. There are a few controls in effect for reasons of foreign policy or international responsibilities; for example, the Cuban embargo; the virtual embargo over exports to Southern Rhodesia in support of U.N. Security Council Resolutions; control over exports to South Africa of commodities that might be used for military purposes there also in support of a U.N. resolution; and, as part of the implementation of our nuclear test ban commitments, control over exports of commodities related to nuclear weapons and explosive devices.

POLICIES

The Act permits denial of any applications for authority to export commodities or data ". . . to any nation or combination of nations threatening the security of the United States if the President determines that their export would prove detrimental to the national security of the United States, regardless of their availability from nations other than any nation or combination of nations threatening the national security of the United States . . ."

Official policy had been to permit nonstrategic trade with Eastern Europe. With passage of the Export Administration Act of 1969, which specifically encourages trade with all countries with which we have diplomatic or trading relations, except where determined by the President to be against the national

[1] State Department—arms, ammunition, and implements of war; Treasury Department—pennies; Maritime Administration—watercraft; Nuclear Regulatory Commission—certain materials, equipment, and facilities related to atomic energy; Federal Power Commission—natural gas and electrical energy; Department of Agriculture—tobacco seed and plans; Department of Justice—narcotics; Department of Interior—endangered fish and wildlife.

interest, the Department has embarked on a positive program of encouraging peaceful trade with Eastern Europe.

At the present time, a virtual embargo is maintained on exports to North Korea, North Vietnam, South Vietnam, Cambodia, and Cuba. The same kind of embargo was applicable to the People's Republic of China until June 1971, when the regulations were revised to permit exports of a large number of nonstrategic items to the PRC without obtaining a license document. When, in February, 1972, the PRC was placed in the same export control status as the USSR, additional peaceful goods become eligible for export without obtaining a license document.

Exports are permitted to the East European countries and the People's Republic of China if the commodities or data involved will not prove detrimental to the national security of the United States. Yugoslavia, although Communist, has been treated the same as free world countries since it rebelled against Soviet domination in 1948. When Poland took steps to assert a measure of independence from the Soviets (in 1957) controls over exports of commodities to that destination were eased, but they were still considerably more restrictive than those for Yugoslavia. Effective May 1, 1971, controls over exports of commodities to Romania were relaxed to the point where comparability to Yugoslavia was very close. Review and decontrol of unilaterally controlled entries has since tended to equalize the licensing requirements for the various Communist countries, but licensing policy continues to be more liberal for Poland and Romania.

Commerce also exercises licensing controls on exports and reexports to free world countries (generally excepting Canada) of strategic or short supply commodities and a few types of technical data (such as data related to aircraft, maritime nuclear propulsion plants, neutron generators, etc.). Except where there is a short supply situation, most such controls are maintained to assure against transshipment to any destination that would not be approved by Commerce. For the same reason, the regulations require that authorization must be obtained in order to reexport from one foreign country to another any U.S. commodities or data for which a license would be required to make a direct export from the United States to the new destination.

Since passage of the Export Administration Act, the Office of Export Administration has devoted considerable attention to reviewing licensing controls in order to reduce them to the minimum level consistent with the objectives of the Act. The 1972 amendment to the Act required removal of unilateral U.S. controls on items determined to be available abroad in significant quantity and comparable quality, unless there was adequate evidence that the absence of control would prove detrimental to our national security. A Special Report to the President and the Congress was issued on May 29, 1973, reporting that unilaterally controlled entries had been reduced from 500 to 73, and giving the specific reasons for retaining controls on each entry.

If a commodity is in short supply, export controls apply to all countries, generally including Canada. The quantity available for export is distributed as equitably as possible among exporters and countries of destination, usually on the basis of their proportion of total U.S. exports of the commodity during a specified past period in which there was "normal" trade. A portion of each quota is reserved for exporters without a past history.

INTER-AGENCY COOPERATION

The policies under which export controls are administered by Commerce are developed after consultation with other U.S. Government agencies. In addition, specific export license applications that present policy problems are also considered on an inter-agency basis before action is taken. To accomplish this consultation, interested agencies are represented on a formal committee, the Advisory Committee for Export Policy (ACEP).[2] A subcommittee (Operating Committee) of the ACEP meets regularly (about once a week) to discuss problems and applications. The representatives of the agencies serving on the Operating Committee are expected to bring to these discussions whatever relevant

[2] Membership in ACEP includes representatives from the Departments of Agriculture, Commerce, Defense, Interior, State, Transportation, and Treasury; and the Energy Research and Development Administration, National Aeronautics and Space Administration, and others as necessary and appropriate. In addition, there is an observer from the Central Intelligence Agency.

expert knowledge is available in their departments, including intelligence information, technical information about the commodity, etc. If the Operating Committee cannot reach unanimous agreement in a situation where a policy or licensing decision is required, then the question is referred to the major committee (ACEP) and, if necessary, to the Export Administration Review Board.[3]

DEFENSE DEPARTMENT REVIEW

The Department of Commerce has been consulting with the Department of Defense on sensitive cases for many years, both through the Operating Committee and on a bilateral basis. This consultation involved 40–50% of the approximately 400 applications monthly for export to Communist countries. In August of 1974, the Military Procurement Act (PL 93–365) was amended to require review by the Secretary of Defense of virtually all applications to export to Communist countries. This has since been modified by amendment to the Export Administration Act to provide that the Secretary of Defense shall determine, in consultation with the Office of Export Administration, which types of transactions need to be reviewed.

INTERNATIONAL COOPERATION

The United States also cooperates in an international security export control system. Fifteen countries[4] work together through an informal Coordinating Committee ("COCOM") to maintain tight controls over exports to Eastern Europe and Far Eastern Communist countries of commodities mutually agreed to be strategic.

ORGANIZATION AND REGULATIONS

The administration of the control system is based on a licensing procedure and is carried out by a staff of approximately 140. The principal operating unit is the Office of Export Administration in the Bureau of East-West Trade. The regulations are published in the *Federal Register* and in a Commerce publication, *Export Administration Regulations*. They set forth all of the licensing requirements, including a complete list of the commodities under the licensing jurisdiction of the Bureau of East-West Trade and identification of the countries for which export license documents are required for each listed commodity.

LICENSING

(1) *Validated and General Licenses.*—A "validated export license" is a document for which the exporter must make specific application. For every commodity over which the Department of Commerce has export control jurisdiction, the Export Administration Regulations specify those destinations for which a validated license must be obtained before an export shipment is made. Where such requirement is not set forth in the regulations, exports may be made without a license document under the authority of certain provisions in the regulations that are called "general licenses."

During the first 6 months of fiscal 1975, a total of 224 applications were received by OEA per working day.[5] Of these, roughly 8% were for licenses for direct exports to Eastern Europe, 83% for direct exports to other countries, 6% for authority to reexport U.S. commodities from one foreign country to another, and 3% were for extension or amendment of previously issued export or reexport authorizations.

Since the requirement for a license constitutes at least some extra burden and delay for the U.S. exporter that may be a disadvantage in a competitive situation, the OEA makes every effort to process applications as quickly as possible. About 70% of all types of applications for all countries are acted on and on their way back to the applicants within a week after receipt in OEA. Approximately 90% are acted on within two weeks. The remainder represent the difficult cases that require technical research or raise policy issues. The 1974 amendments to the Act require that applications be processed within 90 days,

[3] Membership in the Export Administration Review Board consists of the Secretaries of Commerce (Chairman), State, and Defense.

[4] Belgium, Canada, Denmark, France, Germany, Greece, Italy, Japan, Luxembourg, Netherlands, Norway, Portugal, Turkey, United Kingdom, United States.

[5] Relaxation of controls brought application receipts down from a daily average of 579 in 1969 to 425 in FY 1971, to 314 in FY 1972, and to 256 in FY 1973. The daily average increased slightly in FY 1974 to 263, but decreased in FY 1975 to 224.

and that exporters be notified if processing will take longer, with reasons for the delay and an approximate time frame.

Statistics on exports under general and validated licenses are not recorded separately, but probably less than 10% by value of total U.S. exports go out under validated license.

(2) *Applications for Non-Communist Countries.*—License applications for non-Communist countries are checked against available information about the commodity and the parties to the transaction to see if there is any likelihood that the shipment might be diverted to an unauthorized destination. If not, a license is issued. When there is a short supply situation, of course, it may also be necessary to apply quantitative restrictions not related to security considerations. There are also a few instances of special country policies to be considered, such as the current restrictions applicable for foreign policy reasons.

(3) *Applications for Communist Countries.*—Applications for Communist countries make up the bulk of the difficult cases, because most of the applications now received for these countries present problems that require detailed study before a decision can be made to approve or reject. During the first six months of calendar year 1975 we processed 1,502 applications for the USSR, Eastern Europe (including Poland and Romania), the People's Republic of China, and Cuba, of which 53 were rejected and 1,449 approved.[6]

Involved in the decision to approve or reject an application for Eastern Europe are such considerations as:

a. Is the item designed or intended for military purposes? Does it have significant military use?

b. If the item has both military and civilian uses, will the transaction involve only the latter?

c. Does the item contain advanced or unique technology of significance in terms of the export control program's objectives?

d. Is there a shortage of the item in the area of destination that affects the military potential?

e. For strategically significant non-military items, can non-U.S. sources supply a comparable item or an adequate substitute? What is the normal use here and in the free world, and probable use in the country of destination?

(4) *Rejections.*—If an application is rejected (regardless of destination) the exporter is notified and given the reason therefor. He has the right to appeal to the Assistant Secretary for Domestic and International Business.

EXPORT CLEARANCE

If an application is approved, Commerce sends the exporter a license document that describes the transaction as authorized, including the commodity and consignee. The exporter records each shipment on the reverse of the license, returning it to Commerce when fully utilized or expired. A Shipper's Export Declaration form is submitted to the export carrier at the time of each shipment. A team of Commerce inspectors, assisted by Customs personnel, performs physical inspections of outgoing shipments. Census records of shipments also are matched with OEA's licensing information by computer to pinpoint discrepancies and detect possible violations.

ENFORCEMENT

If a shipment that is not properly licensed is exported, or if an approved shipment is later diverted from the approved destination to one that is not approved, or if any other violation of the regulations takes place, the Department will investigate to develop the facts and take appropriate action, which, depending on the seriousness of the violation, may be a warning letter, a fine, administrative action denying the U.S. or foreign firm the right to participate in any further U.S. export transactions, or referral to the Department of Justice for prosecution through the courts.

Most of the Department's enforcement effort, however, is devoted to preventing violations—thus, the requirement for and careful examination of appli-

[6] The "Processed" figures include original applications for license, requests for reexport authorization, and amendments for increase in total value. They do not include other types of amendments. Total of applications received during the first six months of calendar year 1975 for these destinations was 2,398 including original applications, all amendments, reexport requests, and cases resubmitted after having been returned to the exporter without action by the Office of Export Administration.

cations for license to ship certain commodities or data to free world countries and the use of the services of the Foreign Service to check out the probable disposition of a shipment for which an application is pending with Commerce or actual disposition of a shipment already made. Other means used to prevent violations include the requirement that importers furnish certain documents in support of license applications, giving some information about the transaction and assuring the Department that the importer understands that restrictions are imposed on the distribution of U.S. goods; the requirement that shippers enter prescribed statements on bills of lading and invoices notifying carriers, foreign forwarders, and importers of the destinations in which Commerce has authorized distribution of the shipment; press releases and other publicity on changes in the regulations; meetings of Commerce representatives with business firms, trade associations, etc., to explain controls and the reasons therefor.

PUBLICATIONS

Information about the export control activities of the Department of Commerce is freely available. Each day the Department publishes a list of all licenses issued the preceding day. Following the end of each quarter, a Quarterly Report to Congress and the President is published. This covers all of the activities of the Bureau of East-West Trade, including narrative and statistical reports on export control activities during the quarter. Export control regulations are published—the annual subscription for the full regulations with all amendments issued during the year is $35; a summary of the regulations (not including the list of specific items that require licenses or the full detail of other sections of the regulations) also is available to the public. One kind of information that is not made public, although not classified from a security standpoint, is the name of the exporter or other party involved in a license application. This is treated as confidential business information pursuant to the Export Administration Act.

"Trade Controls of COCOM Countries," Submitted by the Department of State

This is a report to the Congress in accordance with the requirement in Section 302 of the Mutual Defense Assistance Control Act of 1951 (Battle Act) that the Administrator make a continuing study of the administration of export control measures undertaken by foreign governments in accordance with the requirements of that Act and report thereon to the Congress.

The following summary describes the main features of the national control systems of COCOM countries as they stood February 1, 1975.

Security trade controls have been concerned primarily with basic export license and customs control procedures. Controls exercised through these procedures are supplemented by shipping controls, Import Certificate-Delivery Verification (IC/DV) procedures, Transit Authorization Certificate procedures, and transaction or financial controls.

Under the IC/DV system a government, before granting an export license, may require the exporting firm to present an import certificate, executed by the importing firm and certified by *his* government. In this import certificate, the prospective importer gives assurance that he really intends to receive goods of a stated description, quantity, and value, and that they will not be reexported without the approval of his country's authorities. After the goods have been shipped, the exporting country may further require that the exporting firm produce a "delivery verification" in which the importing country verifies that the goods were really delivered to the country for which they were originally licensed. Violators then are subject to the penalties not only of the exporting country but also of the importing country.

The TAC is a system to assure COCOM participating countries, by means of a certificate issued by the originating country, that a shipment destined for a particular communist country has, in fact, been licensed for shipment to that country. This certificate accompanies the shipment and assures its transit through any third country jurisdictions in the course of delivery.

BELGIUM-LUXEMBOURG[1]

License requirements

The legislation which is the basis for import and export controls is contained in a law dated September 11, 1962, modified by a law dated July 19, 1968, concerning the export of weapons. In general terms, this legislation authorizes the regulation of Belgian foreign trade in order to insure the economic stability of the country.

The agreement concluded on May 23, 1935, with the Grand Duchy of Luxembourg amending the Economic Union Agreement of 1921, established the Belgium-Luxembourg Administrative Commission with the function of coordinating the regulations in force in both countries concerning the issue of import and export licenses. Pursuant to the 1935 agreement, any recommendation from one of the two Governments to amend or to extend the regulations governing import and export controls must be discussed with the appropriate authorities of the other Government. If an agreement has been concluded in that respect, the new regulations are submitted to the Commission which then communicates the pertinent instructions to the Belgian Bureau of Licenses and Quotas, and to the Luxembourg Bureau of Licenses. This procedure enables both Governments to carry out the coordination of the import and export license procedures, and thus protect their mutual interests.

The foregoing agreements have been amended by a protocol dated January 29, 1963, approved by a law dated January 26, 1965.

A royal decree dated October 24, 1962, regulating the import, export, and transit of goods, authorized certain ministers to require an import, export, or transit license for merchandise specified by them. The ministers may apply the license system to national goods or to material coming from or destined to such countries as they may determine.

[1] Trade controls current to June 30, 1972.

The control of exports through licenses can be reinforced by special controls effective during the actual shipping of goods covered by licenses. In order to obtain export licenses in such cases, the exporter must agree to comply with these special controls.

These controls are put into effect to determine the nature of the merchandise which is to be exported. The IC/DV system is applied extensively to insure the direct delivery of a specific commodity to the client abroad.

Individuals who make applications for export licenses must specify in a written statement that they are familiar with the pertinent provisions in the regulations concerning the issue of these licenses as well as those concerning foreign exchange operations, and that they agree to comply with them without reservation. They must also acknowledge that they know that licenses are not transferable and that any irregularity in the utilization of these documents will make them liable to prosecution.

Exporters of products, the final destination of which is subject to control, must sign a special commitment specifying that the goods they propose to export will be delivered in accordance with statements supplied to the responsible license bureau.

In addition to this commitment, a statement, either formal or private, is required from the foreign consignee concerning the end-use of the goods in the country of destination.

Transit controls

The royal decree of October 24, 1962, previously referred to, authorizes the Minister of Economic Affairs to require a license for such goods as he may determine. The Minister of Economic Affairs may apply this license procedure to goods originating from or destined to such countries as he may determine.

Thus the ministerial decree of December 31, 1962, specifies that a license is required for the transportation through Belgian territory of transit goods, specifically listed in the decree, which originate from countries which participate in the TAC system, and which are destined to a Communist area. A license, however, is not required when a participating country has issued a statement which guarantees that a transit permit has been issued.

Luxembourg published identical ministerial regulations on January 21, 1963.

Financial controls

Prior authorization must be obtained for any purchase from or sale to foreign countries made by Belgium or Luxembourg residents. The foreign exchange control is carried out by the Belgium-Luxembourg Foreign Exchange Bureau.

Shipping controls

Belgium has adopted measures to prevent Belgian ships from transporting strategic products to the People's Republic of China and North Korea.

Penalties

[1] Infractions of Belgium-Luxembourg regulations controlling the importation and exportation of goods and the passage of goods in transit are punishable under Article 10 of the Act of September 11, 1962. Penalties imposed on judgment vary widely at the discretion of the court but include fines and terms of imprisonment.

CANADA

Authority for the control of exports in Canada is derived from the Export and Import Permits Act, an act of Parliament, which came into effect on June 1, 1954 and which was most recently extended on May 7, 1974 by repeal of Section 27 of that Act which removed the expiration date on the legislation.

Permit requirements

The Canadian approach to export controls is based on two lists: (1) the Export Control List of strategic commodities for which export permits are required for practically all commercial exports to any destination, except the United States, and (2) the Area Control List of countries, the shipment to which of any goods requires an export permit. The Area Control List includes the countries of the Sino and Soviet areas, as well as Rhodesia. General export permits are in effect which enable shipments of a list of nonstrategic items, when of Canadian origin, to be made to countries of the European Soviet area;

shipments of casual gift parcels of trivial value to Communist countries; shipments to Canadian diplomatic missions, etc. Canada participates in the international IC/DV system.

Penalties

Every person who violates any of the provisions of the Export and Import Permits Act is liable, on summary conviction, to a fine not exceeding $5,000 or imprisonment for a term not exceeding 12 months or to both fine and imprisonment, and, on conviction upon indictment, to a fine not exceeding $25,000 or imprisonment for a term not exceeding 5 years or to both fine and imprisonment.

Transaction controls

Under the Act, Canada has enacted a form of transaction control whereby it becomes an offense for a resident of Canada to knowingly cause or assist any shipment of strategic goods to be made from Canada or any other place, to a country included in the Area Control List.

Transit controls

Regulations respecting transit shipments stipulate that no person shall transship or cause or assist in the transshipment to a country included in the Area Control List any goods included in the Export Control List, unless a Transit Authorization Certificate covering such goods and issued by the exporting country, or by the country of residence of the exporter, has been presented to and endorsed by a Canadian collector of customs or, in the absence of such certificate, approval for the transshipment has been given by the Minister of Trade and Commerce, or by a person authorized by him to do so.

An export permit is required for goods of United States origin which are not specifically described in the Export Control List, when tendered for export in the same condition as when imported, without further processing or manufacturing in Canada. An export permit is not required for foreign origin goods which are not described per se on the Export Control List or destined for shipment to a country named in the Area Control List. Goods in transit in bond on a through journey on a billing originating outside of Canada, clearly indicating the ultimate destination of the goods to a third country, do not require a Canadian export permit. With certain exceptions, foreign goods passing through Canada to a third country without a through bill of lading require a Canadian export permit. (If such goods represent U.S. shipments of controlled goods passing through Canada to third countries, they must be covered by a U.S. export permit.) All Canadian goods having an undeclared ultimate destination require export permits. Shipments of U.S. goods through Canada must be accompanied by a copy of the U.S. export declaration certified by the exporter as a true copy.

Export controls are administered by the Export and Import Permits Division, Office of Special Import Policy of the Canadian Department of Industry, Trade and Commerce.

DENMARK

License requirements

Export licenses are required for certain agricultural products and for the goods enumerated in the below mentioned commodity list A and B.

List A of the Danish export regulations consists of items of strategic significance. For most of these items the licensing authority is the Import and Export Licensing Office of the Ministry of Commerce but the Ministry of Justice controls exports of arms munitions military equipment and the machinery for the production thereof export license are required irrespective of country of destination.

List B consists of non-strategic goods. Export licenses for these are issued by the Import and Export Licensing Office. Denmark applies IC/DV procedures.

Transit controls

The export controls apply to merchandise exported from the Copenhagen free port, including exports from transit or bonded warehouses and goods from free ports or private warehouses. They also apply to goods in transit through Denmark, unless these are transiting on a through bill of lading and there is no change in ultimate destination. In addition, Denmark has adopted the TAC

scheme. These control measures thus prevent unauthorized diversion of embargoed goods in transit through Denmark.

All transit transactions financed by Denmark are subject to control by the National Bank of Denmark if the goods in question are forwarded directly between the countries of origin and destination or are transiting on a through bill of landing. In its administration of these provisions the Bank observes the same rules as the export control authorities with which the Bank cooperates closely in this field.

Penalties

Infringements of the Danish regulations concerning the IC/DV system are punishable by fines or imprisonment up to 2 years. In additon, according to the judgment rendered, profits accruing from the said infringements and the objects in regard to which the infringement occurred, or their equivalent value, may be confiscated. In the event of falsification of documents, the prescribed penalty is imprisonment for as much as 8 years, if the documents purport to reproduce a decision emanating from official authorities.

Exchange controls

The National Bank of Denmark exercises controls over all transactions in foreign exchange but has given the authorized exchange dealers a general authorization to perform nearly all current payments. Earnings in foreign currencies must be repatriated and sold to the authorized exchange dealers unless special exceptions are made.

Shipping controls

An informal arrangement has been made by the Danish Government with Danish shipping companies to prevent the carrying in Danish vessels of strategic goods to the People's Republic of China and North Korea. This arrangement is implemented under a voluntary agreement with Danish shipowners.

FRANCE

License requirements

Export licenses are required for approximately 8% of the commodities identified in the French tariff nomenclature. Governmental authority for this control is contained in various decrees, the latest dated November 30, 1944. These decrees permit addition to or removal from the list of controlled commodities merely by publication of a notice in the *Journal Officiel*. The list of strategic commodities subject to export licensing is published periodically in the *Journal Officiel*.

Requests for export licenses are submitted by French exporters to the Ministry of Economy and Finance. This Ministry forwards the requests to the appropriate technical industry. On occasion they are examined by appropriate technical committees and personnel in other agencies, in the case of strategic products, the Ministry of Foreign Affairs. At the time the application for an export license is submitted, the exporter may be instructed by the competent technical ministry to submit a sample, photograph, blueprint, drawing, or other detailed description of the commodity in question. These data are used in determining the advisability of issuing the export license requested. At the port of exit, random samples of actual exports may be extracted by customs officials and these are compared by competent technicians with the original data submitted with the license application. This procedure is designed to assure in as many instances as practical that the commodity exported is identical with the commodity for which the export license is issued.

In the event fraudulent action on the part of the exporter is found and can be legally established, the exporter is subject to confiscation of the goods in question and fines ranging upward to four times the value of the shipment plus penal servitude. The control system in operation in France makes it possible to block or encourage exports to any destination of commodities requiring export licenses.

France employs IC/DV procedures and, when appropriate, conducts end-use checks on exports of strategic goods.

Transit controls

On December 30, 1954, and January 12, 1955, the French Government published new regulations effective respectively on the 1st and 15th of January,

1955, concerning the regulation of imports, exports, and reexports of a certain number of products which enter France under transit status. In essence, these regulations state that the products affected cannot be diverted to certain specified countries (which comprise the Soviet-oriented areas), if the country of origin participates in the TAC scheme unless the country of origin authorizes the change in destination.

Financial controls

The decree of November 24, 1968, regulates foreign financial transactions. All foreign exchange transactions, especially those concerning payment for foreign merchandise, conducted by residents, must be approved by the French Government. Residents must collect and, when payment is received in foreign exchange, sell on the foreign exchange market, the total sum subject to repatriation within a maximum of 1 month from the due date of the payment. In the case of exports, this date must not be later than 180 days after the arrival of the merchandise at its destination unless a further delay is authorized by the Government. In order to permit efficient enforcement of regulations concerning movements of merchandise, importers and exporters must conduct import and export transactions through a bank approved by the Ministry of Economy and Finance.

Shipping controls

In order to avoid the transport on French vessels of strategic products to the People's Republic of China, the French Government asked owners controlling ships serving China not to transport strategic goods unless these are covered by an export license or a document issued by the French Government indicating the People's Republic of China as the final destination.

GREECE

License requirements

Export licenses are required for all strategic commodities and for certain nonstrategic commodities for which export quotas have been established. For nonstrategic shipments, licenses are issued by the Bank of Greece in accordance with directives from the Ministry of Commerce. In the case of countries with which Greece has bilateral trade agreements (which includes the Soviet-oriented countries), such licenses are limited to the quantities specified in the respective agreements. For strategic shipments, including those to the Soviet-oriented countries, licenses must be obtained from the Ministry of Commerce.

Transit controls

Transit shipments of strategic commodities must be licensed by the Ministry of Commerce prior to being reexported or transshipped.

Financial controls

Foreign exchange proceeds must be surrendered to the Bank of Greece.

Shipping controls

In response to a recommendation made on October 1, 1962, by the Greek Government, Greek shipowners began to refuse charters for shipments to and from Cuba. On March 20, 1963, a royal decree became effective which prohibits transport of any cargo to Cuba by Greek-flag vessels, except under charters signed prior to the decree. Another royal decree effective September 27, 1963, extended the prohibition to include the carriage of any cargo from Cuba.

On March 12, 1966, another royal decree became effective which prohibits transport of any cargo to or from North Vietnam by Greek-flag vessels. The ban on transport of strategic items to the People's Republic of China or North Korea which has been introduced in 1953 was waived by Presidential Decree which became effective March 5, 1974.

On September 13, 1968, an emergency law became effective which prohibits transport of any transport of any cargo to or from Rhodesia by Greek-flag vessels.

The Greek foreign investment law (No. 2687 of 1953) provides that foreign vessels transferred to the Greek flag may be resold freely and without prior Greek Government approval only to nationals of legal entities of countries named in the instrument of approval executed at the time of the transfer of

the vessel to the Greek registry. So far, such instruments of approval have not included Soviet-oriented countries. Resale to nationals or legal entities of countries other than those named in the instrument of approval requires the prior approval of the Greek Ministry of Merchant Marine. The sale to nationals and legal entities of foreign countries of Greek-flag ships not coming under the provisions of Law No. 2687 is free. Nevertheless, prior approval of the Greek Ministry of Merchant Marine is required in cases where Soviet oriented countries are involved in such sales.

Ship repairs are subject to export licensing under the procedures covering transit shipments.

Current bunkering controls to require licensing by the Bank of Greece with respect to payment in foreign exchange for the value of fuel and by customs authorities for removal from customs precincts.

Penalties

Violation of trade controls is punishable under the provisions of Legislative Decree No. 480, October 31, 1947, by Maximum imprisonment of 2 years or by a fine of not more than 25% of the value of the commodities involved, or both. The same legislation also provides for the partial or total confiscation by the government of the consignment involved in the violation.

Violation of shipping controls entailed initially (March 1953 through August 9, 1967) maximum penalties of 6 months' imprisonment or $267 fine, or both. On August 10, 1967, Emergency Law No. 92 became effective which increased the maximum penalties to 5 years' imprisonment and $26,667 fine, or both.

ITALY [1]

License requirements

All commodities listed in the Tabella Esport (Export List) effective September 15, 1971, require an export license for all destinations. Export licenses are issued by the Ministry of Finance upon the authorization of the Ministry of Foreign Trade.

All items internationally accepted for embargo are included in the Tabella Esport. Commodities not listed in the Tabella Esport are exempt from license for export to all destinations, Sino and Soviet areas included, with the exception of East Germany. Exports to East Germany are regulated by the National Foreign Trade Institute (ICE).

Licenses are required for exports to Sino and Soviet areas of all commodities listed in the Tabella Esport. Licenses are required for imports from the Sino and Soviet areas of all commodities listed in the Tabella B Import (Import List B) effective January 31, 1964. This list has been liberalized in the last 2 years and in addition certain imports from some countries [2] in the Sino and Soviet areas have been excepted from case-by-case license requirements under bilateral trade arrangements. Tabella B Import (and separate regulations for imports from Japan) nevertheless continue to provide a lower level of liberalization than Tabella A Import (Import List A), effective July 7, 1970, which applies to all other countries.

The formulation of export control policy and the administration of the export licensing are the primary responsibilities of the Ministry of Foreign Trade. This Ministry is advised by a special interministerial committee which screens all export license applications for goods subject to strategic control.

Italy employs IC/DV procedures and, when considered appropriate, carries out end-use checks on exports of strategic goods. Import certificates are issued by the Ministry of Foreign Trade and are granted only to firms cleared by the Ministry for foreign trade activity. Delivery verifications are issued by the Customs Service of the Ministry of Finance. Certain strategic imports and certain raw materials destined for reexport as finished products are kept under special customs supervision until their actual consumption in the manufacturing process.

Transit controls

A transit Authorization Certificate is required for shipments passing in transit through Italy of goods listed in the Tabella Esport coming from countries

[1] Trade controls current to June 30, 1972.
[2] Albania, Bulgaria, China, Czechoslovakia, East Germany, Hungary, Poland, Romania, USSR.

participating in the TAC scheme and destined for any of the Soviet-oriented countries.

Financial controls

Financial control over all export transactions is maintained through the licensing system and through implementation of existing exchange control regulations which require bank validations covering all export shipments of commercial size.

Shipping controls

Control over Italian-flag vessels carrying to the Sino and Soviet areas is exercised through voluntary informal cooperation between the Italian authorities and the shipping companies.

Penalties

Penalties that may be imposed under Italian law for violations of export control regulations include imprisonment up to 3 months, fines up to 200,000 lire, and confiscation of the merchandise involved. Such penalties, in case of currency violations, may be supplemented by fines as high as five times the value of the merchandise. Persons and firms under investigation for illegal export transactions are denied foreign trading privileges.

Irregularities under the customs law may be punished by fines from 2,000 to 20,000 lire, while other infractions may incur the penalties contemplated by the penal code.

JAPAN

License requirements

The existing regulations governing export control in Japan are based on the Foreign Exchange and Foreign Trade Control Law of 1949, as amended. Pursuant to this law, an Export Control Trade Order (Cabinet Order No. 378, December 1, 1949) has been issued. The Export Control Trade Order grants the Ministry of International Trade and Industry (MITI) the authority to license goods for export. The Export Control Trade Order also grants MITI the authority to deny or attach conditions on export licenses when such action is necessary for the maintenance of the balance of international payments and sound development of international trade or national economy. Although there is no specific authority for security trade controls, MITI adheres to COCOM standards. Licenses from MITI are required for exports to specific destinations of any commodity on the Japanese export control lists, which includes all items internationally accepted for embargo control. End-use checks are made on suspicious exports of strategic items. IC/DV procedures have been utilized since April 1, 1953.

Transit controls

Intransit cargo is offloaded under customs supervision and is normally kept in a bonded warehouse or other area under the complete control of customs officials.

Japan applies TAC procedures to certain offloaded intransit cargo destined for Soviet-oriented countries exported from any country cooperating in the TAC scheme, or which was exported from any country if the principal in the transaction is a resident of a COCOM country.

Financial controls

The Japanese Government closely controls the extension of medium- and long-term credits. These controls, however, are not related to security measures.

Shipping controls

Japan has no shipping controls related to security measures.

Penalties

Violations of regulations and orders issued under the Foreign Exchange and Foreign Trade Control Law of 1949, as amended, are punishable by either criminal penalties of up to 3 years penal servitude at hard labor or a fine of 300,000 yen, or both and/or administrative suspension of export privileges of up to 1 year. Where violations, which are covered by provisions of the Criminal Law (of 1907 as amended) occur, that law applies.

THE NETHERLANDS

License requirements

Individual export licenses are required for the export of all strategic goods. These licenses are issued by the *Centrale Dienst voor In- en Uitvoer* (Central Import and Export Office) in Groningen.

The IC/DV system is applied extensively. In cases involving the export of strategic goods to countries not participating in the IC/DV system, the exporter can be obliged, before the license is granted, to prove that the goods will be imported into the country mentioned in the export license as the country of final destination and is often obliged to prove that the goods have been imported into that country.

Finally, when a shipment leaves the country, the customs authorities have the right to satisfy themselves that the goods to be exported are identical with the description given in the export license, and that the direction in which the shipment is being sent is not incompatible with the final destination mentioned in the license.

Transit controls

Pursuant to royal decree regarding the transit control of strategic commodities, strategic goods sent from specifically mentioned countires or shipped on the behalf of residents of some of these countries, which after unloading pass in transit through the Netherlands, are subject to control over their destination.

Financial controls

All financial transactions by Netherlands residents involving payments to or receipts from a party abroad are subject to foreign exchange licenses. Through the means of these licenses, it is possible to control triangular transactions in which a Netherlands resident is involved as a middleman. Within the framework of these controls, the IC/DV system is also applied.

Shipping controls

Voyage controls have been instituted which are aimed at preventing the carriage of certain strategic commodities by Netherlands ships to the People's Republic of China and North Korea except pursuant to special permission. After an appeal was made by the Netherlands Government to the Netherlands shipowners to refrainf from trading with Cuba and North Vietnam, the Netherlands shipowners voluntarily withdrew their ships from the Cuban and North Vietnam trade.

Penalties

Netherlands law distinguishes between unintentional "breaches of trade control laws and regulations" and intentional "offenses." In cases of breaches, there is a maximum fine of 25,000 guilders and/or imprisonment for up to 1 year. In case of offenses, there is a maximum fine of 100,000 guilders and/or imprisonment for up to 6 years. If the amount of the illegal profit due to an offense exceeds 25,000 guilders, the judge may impose a fine up to four times the illegal profit—without maximum limit. Goods involved in offenses may be confiscated.

NORWAY

License requirements

Export licenses are required for the export of all commodities to countries outside the "export free-list area." Sino and Soviet countries are not included in this area, and exports destined for any of these countries are subject to licensing. For shipments to countries in the "export free-list area" certain strategic and other goods produced in Norway require export licenses. The licensing authorities using existing powers can prevent, for security reasons, the export of any controlled item.

Norway applies IC/DV procedures.

Transit controls

Goods which are to pass through the territory of Norway may be reexported without license only if it is clearly stated by their conveying documents that the goods are going straight to the foreign destination. If the reexport does not take place within 90 days, a Norwegian export license must be secured. The destination listed on the original documents must remain the same, and the goods may not be transformed in any way during their stay in the country. The customs authority applies a control to that effect. An export license is re-

quired for all commodities to transit to a Soviet-oriented country even though the reexport takes place within 90 days. There are no free port areas in Norway.

Financial controls

Exchange controls are maintained by the Government through the Bank of Norway. Transfers of capital to and from Norway are subject to license by the Bank of Norway or by the Ministry of Commerce and Shipping. Receipts of foreign exchange as a result of export and/or invisible transactions must be surrended by residents to the Bank of Norway or to authorized foreign exchange banks.

Norway established nonresident kroner convertibility for current transactions on December 29, 1958, and accepted the obligations of currency convertibility expressed in Article VIII of the International Monetary Fund on May 17, 1967.

Shipping controls

The Royal Ministry of Foreign Affairs announced publicly in April 1953 that the Norwegian war risk insurance club had refused to insure Norwegian vessels delivering strategic articles to the People's Republic of China and North Korean ports. The Ministry also announced that Norwegian ships had not violated the U.N. resolution of May 18, 1951, prohibiting the shipment of strategic material to the People's Republic of China and North Korea. Norwegian shipowners have voluntarily withdrawn their ships from the Cuban and North Vietnamese trade.

Penalties

Penalties for violation of export controls include fines or imprisonment of up to 6 months or both if the conduct does not come under more severe penal provisions. Furthermore, an offender may be deprived of his right to carry on commercial activity to such extent as the court decides but not for more than 5 years.

Objects or goods involved in a contravention may be confiscated by a court decision or if they cannot be confiscated their value may be seized from the offender.

PORTUGAL [1]

License requirements

Exports to all foreign destinations are subject to prior registration through obtainment of a "Bulletin" (boletim), which is used for statistical purposes in the case of nonrestricted items and as a type of license for restricted items. Exports to Portugal's overseas provinces have been exempt from the license requirement since August 14, 1962. Export "Bulletins" are not approved for export of strategic materials to Soviet-oriented areas or the Peoples' Republic of China. "Bulletins" for export of strategic materials to other areas are granted only after assurance has been obtained that the goods will be imported into the country mentioned in the export "Bulletins" as the country of final destination. Portugal implements the IC/DV procedures.

Import and export registration activities are exercised by the Division of Foreign Trade of the Ministry of Economy and by other delegated agencies. In the Portuguese overseas provinces imports, exports, and reexports are subject to similar controls by designated agencies of the provincial governments.

Transit controls

Intransit cargo is offloaded under customs supervision and is stored under the complete of customs officials. If the goods are not forwarded within 60 days a Portuguese reexport "Bulletin" must be secured. The destination listed on the original documents must remain the same, and the goods may not be transformed in any way during their stay in the country. A reexport "Bulletin" is required for all commodities in transit to a Communist country even though the reexport takes place within 60 days.

Financial controls

The financial aspects of trade control are coordinated with the Ministry of Finance through the Bank of Portugal. Imports and exports are subject to exchange controls, implemented through the prior registration process.

Shipping controls

Portugal does not exercise voyage licensing, but Portuguese vessels plying between Europe and Macau have been instructed not to accept cargo for Macau unless it is covered by a Macau Import Certificate. There are no Portuguese-flag shipping services to European Communist ports.

[1] Trade controls current to June 30, 1972.

Penalties

The regulations under which export and financial controls are operated provide appropriate penalties for contravention.

TURKEY

License requirements

Regulations governing Turkey's imports and exports are subject to basic revisions every year. The ministry of Commerce has been given a major role in trade management. Turkey regulates exports through a complex system of licenses, registration, foreign exchange, and price controls. Licensing covers exports of grain, flour, bran, molybedeum, wolfram, iron ore, antimony, barite, precious metals and stones, margarine, oil seeds, skins and pelts, fertilizers, hazelnut shells, pulses, sponge, sheep and cattle, meat offal, cheese, anchovy, forest products, wooden utility poles, packing cases for export of vegetables and fresh fruits, synthetic fibers, paper pulp, paper, DDBSA (basic ingredient used in the production of detergents), opium, poppy, cotton yarn, tomato sauce, aniseed, licorice root, malt, galantus flower bulk and sugar. Preliminary price control and registration is now required for all export commodities. The Ministry is authorized to seek, demand, examine, and control all supporting documents in any phase of export transactions.

Turkey applies IC/DV procedures with respect to the shipment of strategic commodities.

Transit controls

Turkey has concluded or is concluding agreements with International Road Transportation Union member countries. Transit of goods is also arranged on an ad hoc basis with Middle East countries who are not members of the International Road Transportation Union. The Turkish Union of Chambers of Commerce and Industry, Ankara, as well as Tuzcuogly, a private Turkish forwarding company, are members of the International Road Transportation Union. The Union issues TIR (Transport International Routier) carnet/manifestos to authorized Turkish forwarding companies.

Turkish customs authorities check registrations and seal the vehicle or container.

Financial controls

Strict exchange controls are maintained by the Government through the Ministry of Finance and the Central Bank. Exporters are required to provide export declarations for examination and endorsement by the Customs Office. Shipping establishments and agencies which are required to draw up bills of lading are obliged to deliver the bills of lading to the authorized bank for forwarding to the purchaser. The bank examines the correctness, not only of these bills of lading, but of invoices, certificates of origin, insurance policies and all other export documents. Regulations stipulate that the countervalue in foreign exchange must be imported within 3 months of the date of acutal export of goods of any kind and must be sold to an authorized bank within 10 days of the date on which it is acquired.

Penalties

Violators of the above regulations are subject to fines from TL1,000 to TL200,000 and imprisonment for from seven months to five years, or they may be barred from trade for the same period.

UNITED KINGDOM

License requirements

The export control system in the United Kingdom is similar to but not identical with that of the United States. It is administered by the Department of Trade and Industry. Although the present system grew out of measures originally promulgated at the start of World War II, its primary purpose now is the restriction of the flow of strategic goods to undesirable destinations. The United Kingdom security trade control program was instituted in 1947.

The United Kingdom export control mechanism operates in the following manner:

Export control orders which detail the items subject to control are Statutory Instruments, and revisions to them are issued through H.M. Stationery Office. The current orders provide that certain specified goods are controlled to all

destinations; certain other specified goods are controlled to all destinations other than the British Commonwealth, the Republic of Ireland, the Republic of South Africa, or the United States of America, and all goods are controlled to Rhodesia.

Strict control is maintained over items whose export areas is prohibited, as, for, instance, aircraft, firearms, ammunition, and atomic materials. The exportation of a range of goods of strategic importance to the Sino and Soviet areas is prohibited.

The United Kingdom has effectively implemented IC/DV procedures.

Transit controls

The United Kingdom has had in effect since November 1951 a system whereby certain items arriving from other countries are subject to transshipment control. Individual licenses are required for all of the items on the licensing list before any of the goods, after being landed in the United Kingdom, can be transshipped to any destination other than the British Commonwealth, Ireland, and the United States. The present control is operated over all goods embargoed to the Sino and Soviet areas. In administering the control, the British authorities normally grant licenses when they satisfied that the goods will not be diverted to the Soviet-oriented areas, the People's Republic of China, etc., contrary to the wishes of the exporting country.

The United Kingdom also cooperates fully in the implementation of the TAC scheme.

Transaction controls

In cases where goods from another COCOM country are consigned to a destination in a third country under a United Kingdom import certificate, without entering a United Kingdom port in transit, the United Kingdom satisfies itself about that destination under IC/DV or equivalent procedures. The United Kingdom reserves the right to withhold the issue of an import certificate if they believe there is a risk of diversion of COCOM listed goods to the Sino or Soviet areas contrary to the wishes of the exporting country.

Penalties

The various Act under which the above controls are operated provide heavy penalties for contraventions including confiscation of goods for attempting to export without a license and fines well in excess of the value of the goods if they have been improperly exported without a license.

FEDERAL REPUBLIC OF GERMANY AND WEST BERLIN

License requirements

Present regulations governing trade controls in the Federal Republic went into effect on September 1, 1961. They are contained in two documents, the Foreign Commerce Ordinance (Aussenwirtschaftsverordnung or AWV) of August 22, 1961, and the Foreign Commerce Licensing Jurisdiction Ordinance (Verordnung zur Regelung von Zustaendigkeiten im Aussenwirtschaftverkehr) of August 7, 1961. These regulations find their legal basis in the Foreign Commerce Law (Aussenwirtschaftsgesetz) of April 28, 1961. Section 7 of this Law, entitled "Protection of Security and of Foreign Interests," provides the specific authority for security trade controls.

Export licenses (Ausfuhrgenehmigrungen) are required for all goods listed on the COCOM Strategic Materials Embargo, Munitions, and Atomic Energy Lists as well as for documentary data required in the production of these goods. Licensing requirements do not apply to goods included in the COCOM lists in valued at DM1000 or less or export to free-world countries. A list of permissible destinations is given in Section II of the Annex to the Foreign Commerce Law.

An application for Export License can be executed only by the exporting person or firm, and when COCOM-controlled commodities are involved, the license application must be accompanied by an International Import Certificate (Internationale Einfuhrbescheinigung) from an other country recognizing COCOM controls or other satisfactory documentation concerning the intended end-use of the commodities when non-COCOM countries are involved in the transaction.

German authorities do not always ask that proof of end-use be obtained following the export from the Federal Republic of a COCOM-controlled commodity.

They are, however, authorized to do so by a special set of rules published in a circular of the Federal Ministry for Economics (Runderlass Aussenwirtschaft No. 52/67). Acceptable proof of end-use consists of either a Delivery Verification (Wareneingangsbescheinigung) from a country recognizing COCOM controls or other satisfactory documentation from non-COCOM countries. The circular also describes in detail the conditions under which the Federal Government will issue its own ICs and DVs for use by other COCOM countries. In general, the request for either of these documents from an American exporter is sufficient to cause their issuance.

Some imports into the Federal Republic or West Berlin from Sino and Soviet areas require licenses. Federal authorities may require a certificate of origin in the case of ostensibly non-Communist imports which they may suspect as being originally from Communist areas.

Transit controls

Goods on COCOM lists which are bound for free-world destinations are not permitted to transit the Federal Republic unless accompanied by an International Import Certificate from a country of destination recognizing COCOM controls or other satisfactory documentation concerning the intended end-use of the goods if bound for a country not recognizing COCOM controls.

COCOM-controlled goods originating in countries adhering to COCOM transit regulations and destined for Communist countries other than Yugoslavia will not be permitted to transit the Federal Republic unless accompanied by Transit Authorization Certificates—TACs (Durchfuhrberechtigungsscheine). COCOM-controlled goods shipped through the Federal Republic to these same destinations from Sweden or Switzerland must be accompanied by a properly authenticated copy of a Swedish or Swiss export permit. TACs and Swedish or Swiss export permits are recognized as valid for transit purposes only for a period of 4 months following the goods' departure from the shipping country.

Financial controls

German residents are prohibited from acting as middlemen in certain types of triangular transactions unless they obtain a Transit License (Transithandelsgenehmigung). The type of triangular deal subject to licensing is that involving Sino and Soviet areas and COCOM—controlled commodities which are not physically located in the Federal Republic or West Berlin. The license is necessary in transactions involving controlled goods either bound for or sold by Communist areas. The Federal Government would not, of course, license a transaction involving COCOM-controlled commodities bound for the Communist areas unless a COCOM exception had been obtained.

Shipping controls

Since October 7, 1962, all German ship chartering involving contracts with Communist areas or Cuba has been subject to licensing. The chartering of Communist ships—and, since March 3, 1965, the chartering of Cuban ships—by persons doing business in Germany is subject to licensing as well.

Penalties

Penalties which may be imposed under the Foreign Commerce Law for willful or negligent violations of export control regulations defined to constitute criminal offenses include: imprisonment up to 3 years, monetary fines up to DM50,000 and the confiscation of the merchandise involved. For irregularities defined to constitute infractions entailing administrative fines (so-called Ordnungswidrigkeiten) penalts up to DM50,000 may be imposed.

Addendum

BELGIUM-LUXEMBOURG

The description of controls which appears in the summary above is current to June 4, 1975 with the exception that no special navigation control measures are in effect concerning the People's Republic of China and North Korea.

ITALY

The summary above is current to March 6, 1975.

MURPHY COMMISSION RECOMMENDATION ON GOVERNMENT ORGANIZATION FOR THE CONDUCT OF EAST-WEST TRADE[1]

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The second area in which a better organizational focus appears necessary includes trade, investment, credits and technology transfers with Communist countries. Economic contacts with nations having a centrally planned economy differ qualitatively from those where market forces predominate. Relatively close government surveillance and regulation of the process appears inevitable and necessary. Especially is this so where national security considerations arise out of the export of high-technology products. But in no other area has the Commission heard mere criticism of the fragmentation of authority within the executive branch, and apparent inability to receive necessary guidance. We believe improvement here is important.

The Commission proposes that the Office of Export Administration in the Commerce Department be designated a central point of contact between the private sector and the government for the licensing and surveillance of trade and investment with Communist countries. Policy guidance for that office should be centralized in the Board of East-West Foreign Trade authorized by the Trade Act of 1974, and consisting of Cabinet-level officials from each of the departments involved in export regulation. The Board should be backed up by a working group of officials from the same agencies.

This Board, now being organized, shall reevaluate existing policies and revise a new, more efficient, and more consistent system of export control management. It shall review proposed transactions with Communist countries in light of economic criteria as well as their potential effects on national security. We believe the broad range of agencies represented on the Board, and its directive to "coordinate the policies and operations of all agencies of the United States which regulate or participate in trade with nonmarket economy countries" will help it supersede the relatively narrow approach traditionally taken toward export control. Strong State Department participation shall also seek that objective.

By itself, however, such a board will not be enough. Also necessary is a working-level staff with wide expertise on all relevant considerations, including a balance between business development interests and those of national security. This staff should be drawn in part from the Office of the Secretary of Defense, the Joint Chiefs of Staff, the CIA's Office of Strategic Research, and the Arms Control and Disarmament Agency—organizations knowledgable about the crucial link between technological capabilities and the enhancement of important military capabilities. In addition, trade specialists and other experts on Soviet political and economic affairs should be drawn from the Departments of State, Commerce, and Treasury, as well as from other government aegncies, in order to integrate more fully these considerations with military ones.

Representatives of the academic and business communities should be formed into technical advisory committees to assist the Board in gauging existing foreign availability of proposed U.S. exports, monitoring new technological developments and establishing procedures for evaluating the success or failure to export control process itself.

Close Congressional contact with the proposed Board of East-West Trade should be maintained to insure the reflection of Congressional views, and help insure Congressional approval of those arrangements which may require legislative action or approval.

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[1] Report of the Commission on the Organization of the Government for the Conduct of Foreign Policy (Washington, D.C.: U.S. Government Printing Office, June 1975), pp. 73–74.

Response of the Department of Commerce to the Recommendation of the Murphy Commission

Summary Report of Murphy Commission Recommendations

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Recommendation 23.—This recommendation can best be examined by disaggregation into the following individual statements.

Murphy Commission.—The Office of Export Administration should be a central point of contact between the private sector and the U.S. Government for licensing and surveillance of trade and investment with the Communist countries.

East-West Foreign Trade Board.—In most instances, the Bureau of East-West Trade should be the central point of contact between the private sector and the U.S. Government for licensing and surveillance of trade and investment with the Communist countries. The Bureau is directly represented on the East-West Foreign Trade Board (EWFTB) Working Group thus ensuring the fullest coordination within the framework of regular EWFTB activities.

Reasons.—If such a "central point" is designated, it would logically be the Bureau of East-West Trade, rather than one of several constitutent offices of the Bureau. The function of OEA is primarily to administer controls over the export of goods and technology. Many goods may be exported from the United States to Communist countries without filing any export license application with OEA. Actual "surveillance of trade and investment with Communist countries" and further contact between the private sector and the U.S. Government is done by other offices within the Bureau which maintain a statistical and analytical coverage of not only all U.S. exports to Communist countries, but also of all U.S. imports from these countries. The Bureau is by far the largest single organization within the Government exclusively concentrating on trade and investment with Communist countries. Therefore, the "central point" envisioned in the Commission recommendation should be the Bureau of East-West Trade.

There is a major question as to exactly what would be meant by designating the Bureau as a "central point" for export licensing. From the standpoint of the business community, and of Government management efficiency, it would clearly be more convenient if all export license applications could be submitted on one basic form to a single Government office. Although the Administration has gone on record as opposing S. 1439—which proposes that most export licensing functions be consolidated in OEA—the designation of a single central point for all licensing functions with the exception of munitions control would appear to merit reconsideration at this time.

Murphy Commission.—Policy guidance for the Office of Export Administration should be centralized in the East-West Foreign Trade Board.

East-West Foreign Trade Board.—Policy guidance for the Office of Export Administration should remain with the Export Administration Review Board (EARB). Closer coordination between the EARB and the EWFTB could be achieved by making the Chairman of the EWFTB an ex officio member of the EARB, or by regularly inviting the Chairman of the EWFTB to participate in meetings of the EARB.

Reasons.—The EWFTB, as presently constituted, has several important limitations in terms of formulating "policy guidance" for the office responsible for export control. The EWFTB is limited in terms of membership. Several of the government agencies most directly concerned with export regulation—including DOD, NRC, ERDA, CIA, and NASA—have no membership on the Board. The Board is also limited in the geographic scope of its purview: export control is world-wide in scope, whereas the EWFTB is limited to issues relating to East-West trade.

For these reasons, it is recommended that the responsibility for providing policy guidance to the Office of Export Administration remain with the Export Adminis-

tration Review Board (EARB). The EARB, which consists of the Secretaries of Commerce (the Chairman), Defense and State, is the Cabinet-level policy body for export control/licensing. The responsibility for administering the Export Administration Act, delegated to the Secretary of Commerce by the President, substantially exceeds concern with exports to Communist countries. In this respect, the responsibilities of the EARB are significantly broader than the geographic interests of the East-West Foreign Trade Board. At the same time the EARB's focus on export control is narrower than the broad interest of the EWFTB which encompasses relatively wide economic/commercial national interest concerns.

While these are sound reasons why the responsibility for export control/licensing policy should remain with the EARB, there is an evident need for close coordination between the EARB and the EWFTB. This coordination has been effectively achieved in practice by inviting the Chairman of the EWFTB's predecessor body (the East-West Trade Policy Committee) to recent EARB meetings. It may then be desirable to formulize the membership on the EARB of the Chairman of the EWFTB by making him an ex officio member.

Murphy Commission.—The Board should consist of Cabinet-level officials from each of the departments engaged in export regulation. It should be backed by a working group of officials from the same agencies.

East-West Foreign Trade Board.—The President has directed that the EWFTB should consist of Cabinet-level officials from those departments most directly responsible for development and implementation of broad East-West trade policies, not merely export regulation. The members are: The Secretaries of the Treasury (Chairman), State, Commerce, and Agriculture; the Special Representative for Trade Negotiations; the Director, Office of Management and Budget; the Executive Director, Council on International Economic Policy; the President, Export Import Bank and the Assistant to the President for Economic Affairs. In addition, by informal agreement the Secretary of Labor may attend meetings of the Board which deal with issues of special interest to that Department.

The EWFTB is backed by a working group of officials from these same agencies, as well as any other relevant agencies on an *ad hoc* basis.

Reasons.—Since the primary responsibility of the EWFHB is the monitoring of economic/commercial relations with the socialist countries, rather than export regulation, it is composed of those agencies most directly related to this task.

Murphy Commission.—The Board should reevaluate existing export control policies and devise a new, more efficient and more consistent system of export control management.

East-West Foreign Trade Board.—For the reasons cited previously, the EARB is the competent organ to reevaluate existing export control policies and, if necessary, to revise the existing system of export control management. With respect to those aspects of the system which affect the development of U.S. commercial relations with the socialist countries, the EWFTB would be competent to make recommendations concerning appropriate practices.

Murphy Commission.—The Board shall review proposed transactions with Communist countries in light of economic criteria as well as their potential effects on national security.

East-West Foreign Trade Board.—As presently constituted, the East-West Foreign Trade Board is directed only to monitor trade between persons and agencies of the United States Government and nonmarket economy countries or instrumentalities of such countries in the national interest: there is no requirement or mechanism by which the Board is informed of all proposed transactions with the Communist countries. Under existing arrangements, significant transactions involving U.S. credits and finance are reported by the Export Import Bank, and those involving export control licenses are reported by Commerce. Although the Board is thus able to maintain an overview of the bulk of the significant transactions in East-West trade, a more systematic analysis of the universe of transactions would be beyond the competence and authority of the Board under existing legislation.

Murphy Commission.—The Board should be supported by a working-level staff with wide expertise including a balance between business development interests and those of national security. The staff is to be drawn from the Office of the Secretary of Defense, the Joint Chiefs of Staff, the CIA's Office of Strategic Research, and the Arms Control and Disarmament Agency, for expertise on the link between technological capabilities and the enhancement of military capabili-

ties, and from the Departments of State, Commerce, and Treasury, as well as other Government agencies, for trade specialists and other experts on Soviet political and economic affairs. These considerations should be integrated more fully with military ones.

East-West Foreign Trade Board.—Although the East-West Foreign Trade Board obviously must have access to expertise in the areas cited, it seems that this can be accomplished without creating its own staff. Current working arrangements with Working Group members and informal relationships with other agencies seem adequate to assure that contributions of various interested agencies are made available to the Board. Beyond this, the creation of yet another East-West trade bureaucracy is insupportable.

Recommendation 24.—This recommendation, which deals with the role of technical advisory committees in the formulation of export control policy, has two major parts:

Murphy Commission.—Representatives of the academic and business communities should be formed into technical advisory committees to assist the Board in the following areas:

(*a*) Gauging existing foreign availability of proposed U.S. exports.

(*b*) Monitoring new technological developments.

(*c*) Establishing procedures for evaluating the success or failure of the export control process itself.

East-West Foreign Trade Board.—Recommendations are made by existing Commerce technical advisory committees on matters relating to new technological developments and the availability without restriction of merchandise and technology from sources outside the United States in significant quantities and comparable in quality to these produced within the United States. Reports of the committees on the subject could be made available to the East-West Foreign Trade Board.

In conducting any review of export control policy or the existing system of export controls, the EARB should employ such *ad hoc* arrangements with business and academic representatives as necessary to supplement established technical advisory committees.

Reasons.—Commerce already has in operation similar committees that counsel it on the first two of the three points named. A number of Technical Advisory Committees, established pursuant to a legislative directive to Commerce in the Export Administration Act of 1969 (as amended in 1972, advise the Secretary on "existing foreign availability" of proposed US exports and new technological developments for purposes of export control. In addition, the Advisory Committee on East-West Trade, created in 1974 by the Secretary of Commerce, provides advice on a wide range of East-West trade matters, including export control. Meetings of the latter group are open to the public.

Both the Technical Advisory Committees and the Advisory Committee on East-West trade have business members, although only the latter also has academic representation. As presently constituted, however, the competence of these committees does not include the entire scope of export control operations, which would be required for any evaluation of the "success or failure" of the export licensing process itself. Any review of this type would more properly be conducted by the EARB.

Murphy Commission.—Close Congressional contact with the East-West Foreign Trade Board should be maintained to ensure Congressional input and support.

East-West Foreign Trade Board.—Close Congressional contact with the East-West Foreign Trade Board—through briefings and other informal channels—should be maintained to ensure Congressional input on major East-West policy issues under review by the EWFTB. Such contacts could be facilitated if a single focal point for matters relating to East-West trade were designated by the Congress. Information on East-West trade activities are communicated to the Congress principally through the Board's *Quarterly Report.*

Reasons.—Although there does not appear to be any basis for disagreement with the basic recommendation as stated by the Commission, there may be some difficulty in defining specific measures for developing greater Congressional participation.

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