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CABINET AFFAIRS STAFFING MEMORANDUM

Date: 7/10/84 Number: 169029CA Due By: _____

Subject: Cabinet Council on Commerce and Trade - July 12, 1984

2:00 p.m. - Room 208 OEOB

ALL CABINET MEMBERS	Action	FYI		Action	FYI
Vice President	<input checked="" type="checkbox"/>	<input type="checkbox"/>	CEA	<input checked="" type="checkbox"/>	<input type="checkbox"/>
State	<input checked="" type="checkbox"/>	<input type="checkbox"/>	CEQ	<input type="checkbox"/>	<input type="checkbox"/>
Treasury	<input checked="" type="checkbox"/>	<input type="checkbox"/>	OSTP	<input type="checkbox"/>	<input type="checkbox"/>
Defense	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	_____	<input type="checkbox"/>	<input type="checkbox"/>
Attorney General	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____	<input type="checkbox"/>	<input type="checkbox"/>
Interior	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Baker	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Agriculture	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Deaver	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Commerce	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Darman (For WH Staffing)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Labor	<input checked="" type="checkbox"/>	<input type="checkbox"/>	McFarlane	<input type="checkbox"/>	<input checked="" type="checkbox"/>
HHS	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Svahn	<input checked="" type="checkbox"/>	<input type="checkbox"/>
HUD	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Chapman	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Transportation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____	<input type="checkbox"/>	<input type="checkbox"/>
Energy	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____	<input type="checkbox"/>	<input type="checkbox"/>
Education	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	_____	<input type="checkbox"/>	<input type="checkbox"/>
Counsellor	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____	<input type="checkbox"/>	<input type="checkbox"/>
OMB	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____	<input type="checkbox"/>	<input type="checkbox"/>
CIA	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Executive Secretary for:		
UN	<input type="checkbox"/>	<input checked="" type="checkbox"/>	CCCT	<input checked="" type="checkbox"/>	<input type="checkbox"/>
USTR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	CCEA	<input type="checkbox"/>	<input type="checkbox"/>
GSA	<input type="checkbox"/>	<input type="checkbox"/>	CCFA	<input type="checkbox"/>	<input type="checkbox"/>
EPA	<input type="checkbox"/>	<input type="checkbox"/>	CCHR	<input type="checkbox"/>	<input type="checkbox"/>
NASA	<input type="checkbox"/>	<input type="checkbox"/>	CCLP	<input type="checkbox"/>	<input type="checkbox"/>
OPM	<input type="checkbox"/>	<input type="checkbox"/>	CCMA	<input type="checkbox"/>	<input type="checkbox"/>
VA	<input type="checkbox"/>	<input type="checkbox"/>	CCNRE	<input type="checkbox"/>	<input type="checkbox"/>
SBA	<input type="checkbox"/>	<input type="checkbox"/>			

REMARKS:

There will be a Cabinet Council on Commerce and Trade planning meeting on Thursday, July 12, 1984, at 2:00 p.m. in Room 208 OEOB.

The agenda and background papers are attached.

RETURN TO:

Craig L. Fuller
Assistant to the President
for Cabinet Affairs
456-2823 (White House)

Don Clary
 Tom Gibson
 Larry Herbolzheimer

Associate Director
Office of Cabinet Affairs

Room 208 (Room 129, OEOB)



7-3000

THE WHITE HOUSE

WASHINGTON

July 10, 1984

MEMORANDUM FOR THE CABINET COUNCIL ON COMMERCE AND TRADE

FROM: ROGER B. PORTER *RBP*

SUBJECT: Agenda and Papers for the July 12 Meeting

The agenda and papers for the July 12 meeting of the Cabinet Council on Commerce and Trade are attached. The meeting is scheduled for 2:00 p.m. in Room 208 of the Old Executive Office Building.

The Council will consider three agenda items. The first is the recommendations of the President's Commission on Industrial Competitiveness. The Commission has completed work on fourteen recommendations on a wide variety of issues. The first eight of these recommendations were briefly discussed at the Cabinet Council's March 7 meeting. The other recommendations were submitted to the Cabinet Council in June.

The Cabinet Council Working Group on Industrial Competitiveness has met and reviewed each of these recommendations. A brief memorandum from the Working Group and papers supporting each of these recommendations prepared by the Commission are attached.

The second agenda item is a report from the Working Group on Intellectual Property on amendments to the Freedom of Information Act dealing with exemption from the Act to protect legitimate confidentiality interests of private firms. A memorandum prepared by the Working Group on this issue is attached.

The third agenda item concerns ratification of the Brussels Satellite Convention. A memorandum from the Working Group on Intellectual Property on this issue recommending that the Administration promptly transmit this Convention to the Senate for ratification is also attached.

Attachments

11 July 1984

NOTE FOR: DCI ✓
DDCI

FROM: SA/DCI/IA

There is a Cabinet Council meeting scheduled for tomorrow at 2:00 p.m.

It does not appear from the agenda that the issues are of direct interest. (Item 2, however, does deal with FOIA as it might apply to "intellectual properties"--specifically, with Justice's attempt to amend FOIA so as to protect private firms from efforts by competitors to use the act for industrial espionage purposes.)

In short, I don't think there is a real need for you to attend this session.



STAT

THE WHITE HOUSE
WASHINGTON

CABINET COUNCIL ON COMMERCE AND TRADE

July 12, 1984

2:00 p.m.

208 EOB

AGENDA

1. Recommendations of the President's Commission on Industrial Competitiveness (CM #462)
2. Report of the Working Group on Intellectual Property: Amendments to the Freedom of Information Act (CM #387)
3. Report of the Working Group on Intellectual Property: Ratification of the Brussels Satellite Convention (CM #387)

THE WHITE HOUSE

WASHINGTON

July 6, 1984

MEMORANDUM FOR THE CABINET COUNCIL ON COMMERCE AND TRADE

FROM: ROGER B. PORTER *RBP*

SUBJECT: Recommendations of the President's Commission on Industrial Competitiveness

The President's Commission on Industrial Competitiveness has completed work leading to fourteen recommendations on a wide variety of issues ranging from our patent and antitrust laws to our trade laws and the Export Administration Act. The first eight of these recommendations were briefly discussed at the Cabinet Council's March 7 meeting. The other recommendations were submitted to the Cabinet Council in June.

The Cabinet Council Working Group on Industrial Competitiveness, including representatives from the Departments of Commerce, the Treasury, Labor, Justice, and Education, the Office of Management and Budget, the Office of the U.S. Trade Representative, the Office of Policy Development, and the Council on Economic Advisers, has met and reviewed each of these recommendations.

Papers supporting each of these recommendations prepared by the Commission are attached at Tab A. The fourteen recommendations cover the following:

1. Modify the antitrust laws to permit procompetitive joint research and development ventures.

This recommendation is consistent with the Administration's proposed legislation that is pending floor action in the Senate and is similar to a bill passed in the House of Representatives.

2. Make permanent the incremental tax credit for research and experimentation (R&E); broaden the definition of R&E to make it consistent with generally accepted accounting principles; and adopt other measures to encourage industry investment in university research.

The Administration has supported a five-year extension of the current R&E incremental tax credit and has developed other changes in the credit to refine the definition of research and experimentation.

3. Make counterfeiting trademarks a criminal offense and implement an international anti-counterfeiting code.

The Working Group on Intellectual Property has reviewed this recommendation and supports the Administration endorsing it. The Working Group's analysis of this recommendation is attached at Tab B.

4. Amend the Freedom of Information Act (FOIA) to protect the rights of private firms to maintain the confidentiality of commercially sensitive information.

The Working Group on Intellectual Property recommends that the Administration continue to support passage of the comprehensive FOIA reform package embodied in S.774, including the procedural amendments for submitters of confidential information. Substantive amendments to a FOIA exemption regarding trade secrets and confidential commercial and financial information should be sought at a future date. However, since prompt reform of FOIA is essential, the Working Group recommends against seeking such amendments at this time. A memorandum prepared by the Working Group on this issue is included in the materials for the July 12 meeting.

5. Restore patent life lost during the government regulatory review process.

The Administration strongly supports enactment of the Patent Term Restoration Act of 1983 (H.R.3502 and S.1306) which would restore to patentees a part of the effective patent term which has been eroded by Federal premarket regulatory review. An analysis prepared by the Working Group on Intellectual Property is attached at Tab B.

6. Streamline a variety of patent laws and procedures to encourage more investment in research and innovation.

The Working Group on Intellectual Property recommends that the Administration support these technical changes, which include: providing process patent protection, streamlining foreign licensing procedures, eliminating unpublished information from the definition of "prior art," permitting patent interference arbitration, restoring the balance between the rights of the licensor and licensee, and relaxing technical requirements in patent application for joint inventions. The Administration has testified in support of legislation that would make these changes. The Working Group's analysis of these recommendations is attached at Tab B.

7. Examine the feasibility of establishing a central government data bank for providing market information to help small- and medium-sized U.S. firms identify market opportunities abroad.

The Department of Commerce has agreed to study the feasibility of establishing a data bank and will report its

findings by September 1, 1984.

8. Make clear that the Congress, in reauthorizing the Export Administration Act (EAA), should weigh carefully the need to maintain industrial competitiveness, as well as national security.

A Conference Committee is currently reconciling the House and Senate versions of EAA reauthorization. The Administration has strongly and consistently urged that the EAA legislation enhance the international competitiveness of U.S. industry while protecting our national security interests.

9. Replace the Domestic Sales Corporation tax incentive with the Foreign Sales Corporation (FSC) incentive.

The Congress has basically adopted the Administration's FSC proposal in the Deficit Reduction Act of 1984, which is expected to be signed by the President.

10. Make several technical changes in the trade law dealing with countervailing duty and antidumping investigations.

The Working Group on Industrial Competitiveness supports trade law revisions that would enable parallel countervailing duty (CVD) and antidumping (AD) investigations dealing with the same product to be carried out concurrently; permitting joint petitioners to have standing to file CVD and AD requests for investigations so that a coalition of firms, unions, and trade associations may file together; and seeking more clearly to define "threat of injury."

11. Encourage cooperative efforts by labor and management that increase trust, open communication, and worker participation.

The Working Group supports this recommendation.

12. Improve engineering education through creating or expanding programs for providing stipends to graduate students, funding research equipment and instrumentation, and developing engineering research centers.

The Working Group supports the National Science Foundation's (NSF) current efforts to provide a program of stipends for graduate engineering students, the Presidential Young Investigators Awards Program. It also supports the Administration's proposed FY1985 budget increase in funding for engineering research and the emphasis on equipment and instrumentation as well as the NSF's new program to develop on-campus, cross-disciplinary, engineering research centers.

13. Encourage Federal Government and private sector partnerships to provide integrated services to high schools for reducing the high dropout rate.

The Working Group supports this recommendation. On June 15, the Department of Education announced that it will establish a Task Force to implement the partnerships. The Department of Justice has agreed to provide \$1 million of matching funds for this program using money allocated under the Juvenile Delinquency Prevention Act Allocation Fund.

14. Facilitate the use of effective software in elementary and secondary education by supporting software research and teacher training in computers.

The Working Group supports this recommendation. The Department of Education currently has a number of programs supporting computer literacy.

Attachments



July 9, 1984

MEMORANDUM FOR THE CABINET COUNCIL ON COMMERCE AND TRADE

Subject: The Working Group on Intellectual Property's
Comments on a Recommendation to Amend the
Freedom of Information Act

The President's Commission on Industrial Competitiveness (PCIC) transmitted four recommendations on intellectual property to the CCCT on March 7, 1984. The CCCT referred them to the Working Group on Intellectual Property for comment. The Working Group's comments on three of the recommendations were transmitted to the Chairman of the CCCT on April 24, 1984. This memorandum contains the Working Group's comments on the fourth recommendation concerning amendment of the Freedom of Information Act.

Background

The Freedom of Information Act (FOIA), enacted in 1966, was designed to provide citizens with a tool to learn more about Federal Government activities. To protect and promote legitimate Government and individual interests, Congress exempted some categories of information from the obligations in the Act to make information available to the public. The fourth recommendation of the PCIC concerns strengthening Exemption 4 of the Act--the exemption designed to protect legitimate confidentiality interests of the private sector by exempting trade secrets and confidential commercial or financial information from the mandatory disclosure requirements of the Act. ☆

Judicial decisions have eroded the substantive protections Congress sought in enacting Exemption 4 by disallowing use of the exemption more frequently than in the past, by imposing a difficult burden on submitters seeking to demonstrate that disclosure of information is likely to cause them "substantial competitive harm," and by narrowly construing the scope of protection provided by the trade secrets portion of the exemption. Moreover, submitters do not have any specific procedural rights to notice or an opportunity to oppose agency release of their information at the administrative level, nor is there a specified procedure available for submitters to challenge in court agency decisions to release business information.

Many people believe that the FOIA is not providing the protection it was designed to for legitimate confidentiality interests of the private sector and Government. Extensive Congressional hearings in the last few years have made it clear that some submitters of confidential business information are fearful of

losing valuable trade secrets as a result of FOIA releases to competitors. Some in industry state that a large percentage of the many FOIA requests are motivated by competitors using the Act for industrial espionage purposes.

The President's Commission on Industrial Competitiveness (PCIC), at its February 3, 1984 meeting, recommended that Exemption 4 of the Freedom of Information Act be amended to protect better the rights of private firms to maintain the confidentiality of information of potential commercial application which those firms are required to submit to the Government. The PCIC believes that lack of such protection has had an unintended, harmful effect on the development, commercialization, and competitiveness of innovative technology, and that it has harmed domestic firms in relation to their foreign competitors.

Administration Proposals for Increased Protection for Confidential Information

In 1981, based on a thorough review of the operation of the FOIA, the Department of Justice proposed, on behalf of the Administration, a comprehensive set of revisions to the FOIA. Much of the legislative package addressed the concerns of the Department of Justice and other agencies with law enforcement responsibilities over the shortcomings of the FOIA with respect to investigatory information. However, a prominent part of that package contained provisions for substantive reform of Exemption 4, as well as for procedural protections for submitters of confidential information.

The proposed substantive amendments to Exemption 4 would have significantly modified the standard of harm to be shown by submitters of confidential business information, thus easing the burden of submitters in justifying nondisclosure. The substantive revisions would also have made Exemption 4 mandatory unless nondisclosure would injure an overriding public interest.

In addition, the package contained procedural reforms for submitters of business information which would require agencies to provide notice and an opportunity to oppose disclosure of confidential business information. Another provision would provide submitters with the opportunity to obtain de novo judicial review of agency decisions to release confidential information.

Current Legislative Status of FOIA Reform

During the past few years, the Senate Judiciary Committee has held extensive hearings on the FOIA with the goal of drafting a bill to fix the perceived weaknesses of the Act while maintaining its strengths. S.774, a comprehensive FOIA reform bill, is the result of that effort and contains many of the revisions proposed by the Administration, including procedural protections for submitters of confidential information. However, there proved to

be insufficient support in the Senate for the substantive reforms of Exemption 4 sought by the Administration and, consequently, those changes were not included in S.774. As acknowledged by former Assistant Attorney General Jonathan C. Rose during testimony given on April 18, 1983, although the Administration still believes that Congress should consider the issue at some future date, the conflicts over substantive changes to Exemption 4 and the need to proceed cautiously on FOIA reform have led to the decision not to include substantive reform in the compromise legislation.

On February 27, 1984, the Senate approved S.774 without dissent, and the House Committee on Government Operations is currently holding hearings on the measure. The measure faces significant opposition in the House due to the strongly held belief of some Members that amendments to the FOIA might restrict the availability of Government information to the public.

The Working Group believes that procedural amendments to the FOIA, as contained in S.774, are essential to increase protection for confidential business information. Though further, substantive reform of Exemption 4 along the lines proposed in the original package of reforms introduced by the Department of Justice would improve protection of confidential business information, such reform is unlikely at the moment. In addition, attempting substantive reform at this time is likely to slow down consideration of the total FOIA reform package. *

Recommendation

The Working Group on Intellectual Property recommends that the Administration continue to support passage of the comprehensive FOIA reform package embodied in S.774, including the procedural amendments for submitters of confidential information. Substantive amendments to Exemption 4 should be sought at a future date, but because prompt reform of the FOIA is essential, the Working Group recommends against seeking such amendments at this time. *



Secretary of Commerce

THE SECRETARY OF COMMERCE
Washington, D.C. 20230

July 9, 1984

MEMORANDUM FOR THE CABINET COUNCIL ON COMMERCE AND TRADE

Subject: The CCCT Working Group on Intellectual Property
Recommendation on the Ratification of the
Brussels Satellite Convention

Background

Unauthorized and uncompensated interception and distribution of television programs carried by communications satellites (i.e., "signal piracy" or "signal poaching") has been going on for well over a decade. Signal piracy--affecting U.S. motion picture, program supply, and broadcasting industries-- has greatly increased over the last two years and continues to grow.

The area covered by a satellite signal "footprint" is invariably larger than the area intended or authorized to be serviced. Signals from U.S. domestic satellites can often be received with usable strength beyond our borders, including a good deal of the Caribbean, Latin America, Mexico and Canada. During the past few years the Department of State has been informed about the unauthorized interception of satellite television programs in a number of Caribbean countries. Though signal piracy is now an essentially regional problem, as more powerful satellites come into service, it undoubtedly will become global in scope.

Leaving aside the ethical considerations, international signal poaching has direct economic effects on all of the various contributors to films and TV programs--authors, performers, producers, sports promoters, and so forth. When a foreign broadcaster or cable facility commercially exploits a U.S. satellite television signal without authorization, it does not pay any share of the overall costs of that signal. This in turn affects all segments of the television industry. Further, international signal poaching reduces foreign market opportunities for American program suppliers and broadcasters, thereby adversely affecting our balance of trade.

In the late 1960's, the United States was a leading proponent of an international agreement for protection of satellite TV signals because the use of satellites for program transmission was expected to increase considerably and existing treaties (the International Telecommunications Convention and the Universal Copyright Convention) did not provide effective and widely acceptable international protection. Two UN organizations--the World Intellectual Property Organization and Unesco--sponsored development of an international agreement which in 1974

culminated in the "Convention Relating to the Distribution of Programme-Carrying Signals Transmitted by Satellite," usually referred to as the Brussels Satellite Convention.

Obligations Under the Convention

States party to the Convention pledge to take "adequate measures to prevent the distribution on or from its territory of any programme-carrying signal by a distributor for whom the signal emitted to or passing through the satellite is not intended." As the Convention contains no practical limits upon the means states may choose to suppress local signal piracy, this obligation may be carried out by civil, commercial, or regulatory means. The Convention contains special provisions for developing countries on educational or informational use of parts of programs carried ("fair use"). Another article permits a reservation for cable television, depending upon the state of the national law. The Convention excludes satellite signals intended for direct reception by the general public.

The Brussels Satellite Convention entered into force on August 25, 1979. As of March 1, 1984, eight countries were parties to the Convention: Austria, Federal Republic of Germany, Italy, Kenya, Mexico, Morocco, Nicaragua, and Yugoslavia.

Private Sector Views

United States adherence to the Brussels Satellite Convention has been under consideration periodically since the conclusion of the Convention in 1974. Until recently, however, domestic private sector support for U.S. ratification has been meager for several reasons. First, national program producers and distributors believed that the obligations of the member states under the Convention were weak and could be circumvented through provisions of the Convention relating to fair use, use by developing countries for educational purposes, and cable distribution. Producers and distributors hoped for creation of a new Convention with stronger provisions. Second, during the early years following the negotiation of the Convention, there was little use of satellites for the delivery of programming and limited availability of satellite reception earth stations. Finally, educational groups within the United States believed that the limitations on protection were not broad enough.

During the last two years, the Copyright Committee of the National Association of Broadcasters, various regional broadcasting unions in their Fourth World Conference, a subcommittee of the American Bar Association's Patent, Trademark and Copyright Law Section, the Motion Picture Association of America and other representatives of the program supply and broadcast industries, and educational groups have expressed near

unanimous support for the U.S. ratification of the Brussels Satellite Convention for several reasons:

- (1) increased use of satellites for the delivery of programming;
- (2) low cost of satellite reception earth stations;
- (3) widespread unauthorized international interception of U.S. program-carrying satellite signals; and
- (4) realization that a new, stronger Convention would not be created in the foreseeable future.

The only recent concern regarding ratification of the Brussels Convention has so far come from SPACE, the Society for Private and Commercial Earth Stations. Its concern is that the Convention may cloud the legal situation governing home reception of satellite signals. In the view of the State Department and other agencies, the Convention should not affect this subject. The Brussels Convention is directed against unauthorized interception and distribution. Purely passive reception of a non-public variety should not be affected by U.S. ratification.

Implementation of the Brussels Satellite Convention

As a general principle, the Department of State has not regarded international agreements in the intellectual property field (copyrights and industrial property) as being self-executing. Consequently, even though the Senate may give its advice and consent to ratification or accession, the Department does not send forward an instrument of ratification or accession until implementing legislation has been enacted, or it has been determined that existing legislation is adequate to meet the Government's obligation under a particular treaty.

With the exception of the Federal Communications Commission's (FCC) specific concern that ratification of the satellite convention not conflict with its policy of earth station deregulation, no Federal agency has raised a question on the merits of U.S. ratification of the Brussels Convention. The Department of State, the National Telecommunications and Information Administration (NTIA) in the Department of Commerce, and the U.S. Copyright Office in the Library of Congress have supported ratification.

The State Department, NTIA, the Department of Justice, and the U.S. Copyright Office believe that existing law (the Federal Communications Act of 1934 and the 1976 Copyright Act) provides a sound legal basis for implementation of the Brussels Satellite Convention, without the need for further amendments to U.S. laws or regulations.

U.S. Benefits Under the Convention

The Convention will be more effective against satellite signal piracy if other countries follow our example and accept the obligations under the Brussels Convention. The precedent of the United States, as the leading producer of television programming and broadcasting, in ratifying this Convention, coupled with our encouragement of other countries to ratify, would likely result in widespread adherence of other countries. Worldwide implementation of the Brussels Convention by enactment of either copyright or communications measures to protect satellite signals would certainly diminish the signal poaching problem abroad. U.S. ratification of the Brussels Satellite Convention should not prejudice any future action in the United States regarding signal piracy.

Recommendation

The Administration should promptly transmit to the Senate for advice and consent to ratification the "Convention Relating to the Distribution of Programme-Carrying Signals Transmitted by Satellite."



Secretary of Commerce

TAB A



PRESIDENT'S COMMISSION ON Industrial Competitiveness

John A. Young
Chairman

February 24, 1984

MEMORANDUM FOR THE CABINET COUNCIL ON COMMERCE AND TRADE

FROM:

JOHN YOUNG

*Em for
TAY*

SUBJECT:

ANTITRUST BARRIERS TO JOINT R&D

Attached is Recommendation No. 1 approved by the President's Commission on Industrial Competitiveness on February 3, 1984. This recommendation supports legislation aimed at removing antitrust barriers to joint R&D by U.S. industry. The Commission approved this recommendation after extensive discussion by the R&D and Manufacturing Committee, and by the full Commission.

Also included is an issue paper that summarizes the background and arguments that justify the recommendation.

Attachment

PRESIDENT'S COMMISSION ON INDUSTRIAL COMPETITIVENESS

ISSUE PAPER

RECOMMENDATION #1 - REMOVE ANTITRUST BARRIERS TO JOINT R&D

Recommendation

The President's Commission on Industrial Competitiveness approved the following recommendations at its February 3, 1984 meeting.

JOINT R&D MAY BE HELPFUL IN MAINTAINING THE COMPETITIVE POSITION OF U.S. FIRMS IN WORLD MARKETS. THE ANTITRUST LAWS, BY WHICH THE LEGALITY OF JOINT R&D ARRANGEMENTS ARE JUDGED, SHOULD BE MODIFIED BY:

1. REQUIRING THAT THEIR LEGALITY BE JUDGED BY A "RULE OF REASON" TEST WHICH ASSESSES WHETHER ANY POSSIBLE ANTI-COMPETITIVE EFFECTS OUTWEIGH ANY POTENTIAL PRO-COMPETITIVE EFFECTS, AND
2. LIMITING THE DAMAGES WHICH A PRIVATE LITIGANT CAN RECOVER IN AN ANTITRUST SUIT TO DAMAGES ACTUALLY INCURRED.

THIS RECOMMENDATION WILL CHANGE POLICY FROM ONE OF DISCOURAGING JOINT R&D TO ONE OF PERMITTING SUCH COOPERATION. THE IMPLEMENTING LEGISLATION SHOULD MINIMIZE REGULATORY INVOLVEMENT.

Issue

Should current antitrust laws be amended to permit joint research by U.S. companies and, if so, in what ways? Would the competitiveness of U.S. firms in world markets be enhanced by allowing those firms to conduct cooperative R&D on a scale comparable to foreign firms?

Analysis

Because of fear of violating antitrust laws, U.S. firms are not conducting cooperative R&D on a scale comparable with that of companies of our major trading partners. Consequently, the U.S. is handicapped in maintaining its technological advantage.

In 1890, when the Sherman Act became law, technological problems were neither so large nor so complex as to require technical collaboration among firms. Essentially, our current antitrust law still adheres to this view. Our major trading partners, however, have tailored their policies and antitrust laws to recognize that the ability to solve modern technical problems, and to compete successfully in international markets, would be furthered through cooperative efforts. In contrast, the U.S.

antitrust laws governing cooperative research have not been amended since 1914.

There is mounting evidence that the ability of United States firms to compete with their foreign counterparts is eroding. This decline in competitiveness has no single cause but is rather the result of a number of forces operating together. Prominent among these forces is the policy of foreign governments to target individual industries, where the U.S. has a technological lead. Among the governments targeting specific industries are those of France, Japan and, to a lesser degree, West Germany.

A factor in these trends is undoubtedly the governmental policies of other nations, which encourage collaborative research and development among large national companies. The policies of the United States, by contrast, inhibit such efforts. Japan, for example, has actively sought collaborative research efforts by the various firms in certain industries, for the express purpose of improving their international competitiveness. MITI has brokered the establishment of these cooperative efforts, and in some cases has subsidized them with direct funding. The United States, on the other hand, takes no role in the formation of cooperative ventures, and, for all practical purposes, discourages them on antitrust grounds.

U.S. firms are vulnerable under both the Sherman Act and the Clayton Act, should a cooperative venture be deemed anticompetitive. Spokesmen for recent administrations have stated that firms desiring to conduct joint research are overreacting to antitrust concerns. Guidelines have been issued by the Department of Justice, the most recent entitled "Antitrust Guide Concerning Research Joint Ventures" in 1980, in an attempt to alleviate such concerns. These guidelines, however, depend on market definition without stating clearly whether global or national market tests will be applied. They also depend heavily on the portion of the research spectrum in which the work lies, i.e., basic or applied. However, the nature of research may change abruptly and, as perceived by hindsight, a piece of research which was basic in the researcher may later be judged applied in a court of the mind of law, particularly if the work was quickly appropriated for commercial application.

Although a business review process is available from the Department of Justice, there is no assurance that a clean bill of health from the DOJ will prevent the recovery of treble damages in a suit by private litigants. Also, in such a suit, the court may well apply a "per se" rule of illegality. Per se rules are attractive to courts since they simplify trials. The court in such a case would merely determine that the parties to the joint activity are competitors and, between them, had significant market share. It would then rule that these facts alone (per se) required a finding of antitrust violation and would not permit the defendant to make a showing that the activity was in fact reasonable in the light of all the circumstances.

Meanwhile, the practice in other countries is to encourage the development of marketable products through cooperative research and development. The \$400 million joint research effort in microelectronics begun in the late 1970's by the Japanese government, and the more recent program in electronic data processing and telecommunications equipment initiated by the French government, are examples of projects of this nature. Thus, the cooperative research and development activities least likely to receive favorable antitrust sanction in the United States are exactly those most likely to be exposed to increasing international competition.

European countries are now moving to exempt joint research efforts between high-technology firms in Europe from the stiff antimonopoly rules contained in the Treaty of Rome (which sets out the code of economic behavior for the European Economic Community). Although some ad hoc exemptions have been previously allowed, a blanket exemption would be granted for joint research efforts by a draft regulation which is expected to be adopted by the Council of Ministers within the next few months. It goes further than U.S. proposals by proposing that the exemptions be extended to cover the joint production of new technological products arising from the research.

Remedies for the problem in the U.S. have been suggested.

In 1982, H.R. 6262 was introduced in Congress. The bill would have authorized the Attorney General to issue a certificate of review of proposed joint research programs which would limit the statutory remedies for antitrust violations arising from conduct specified in the certificate. It would preclude criminal and treble damage liability as well as private suits for injunctions, thus permitting only suits for actual damages and Government suits for injunctions.

The Department of Justice objected to the provisions of H.R. 6262, which assigned it a regulatory role in issuing certificates, on the grounds that they imposed an undue administrative burden. Industry also objected to the Department of Justice having a regulatory role since this could lead to arbitrary definitions/standards for permissible market share. The Department of Justice suggested, as an alternative, non-regulatory legislation which would not require a certificate, but which would eliminate the treble damage provisions of the antitrust laws for non-criminal actions involving joint research ventures that were openly disclosed.

About a dozen bills on this topic have been introduced in the current session of Congress. The Administration argues the non-regulatory approach suggested by Department of Justice is desirable, since the elimination of certification would substantially lessen the regulatory burden on industry and Government. However, more specific actions are needed to allow United States companies to conduct cooperative R&D on a scale comparable to foreign companies. One way to accomplish this is

to have amending legislation provide, with respect to joint research activities only, for the elimination of treble damages. Accordingly, only suits for actual damages would be permitted.

Working together, the Departments of Justice, Commerce and OMB, developed legislation incorporating these principles. The outcome was legislation submitted by the Administration in September, 1983 as the National Productivity and Innovation Act of 1983 (S.1841, H.R. 3878). The objective of this effort was to modify the legal climate with minimum change to the fundamental principles of the antitrust laws. Alternatives considered, but not adopted, include: (a) immunity of all publicly disclosed joint research efforts from antitrust suits, (b) mandatory licensing of results, and (c) evaluation and advance certification of disclosed joint R&D ventures by the Department of Justice. The goal was to support procompetitive joint R&D, while preventing anticompetitive joint R&D.

The Commission believes that an approach similar to that proposed in the National Productivity and Innovation Act of 1983 is preferred. First, it reduces the antitrust hurdle without removing the applicability of the antitrust laws.

Suits could still be brought for antitrust violations either by the Government or by injured firms. However, the court in such a suit, under the recommended approach, must judge the legality of the joint research activity by looking at all of the circumstances. This is known as applying a rule of reason test and would permit the accused firm to show, for example, the reasonableness of such activity in the face of foreign competition.

Also, the recommended approach would not create a bureaucratic process to predetermine the legality of joint research activity. By reducing the regulatory role, the process will be accelerated, costs will be reduced and politicization of the process will be avoided. Finally, the patent laws will be left in place to stimulate innovation by not imposing compulsory licensing obligations on joint research participants.

The Commission is not prepared to encourage joint research. It may well be that competitive research by individual firms is the best for the U.S. at least in some industry segments. However, it believes that experience with joint research activity will be useful and thus supports this proposal for a modest relaxation of the antitrust laws. This will permit application of the principle in areas where firms on their own initiative decide that joint research will help them be more competitive.



PRESIDENT'S COMMISSION ON Industrial Competitiveness

John A. Young
Chairman

February 21, 1984

MEMORANDUM FOR THE CABINET COUNCIL ON COMMERCE AND TRADE

FROM: JOHN YOUNG

SUBJECT: TAX INCENTIVES FOR R&D

Attached is Recommendation No. 2 approved by the President's Commission on Industrial Competitiveness on February 3, 1984. The Commission approved this recommendation after extensive discussion by the R&D and Manufacturing Committee, and by the full Commission.

The remaining set of recommendations approved by the Commission will be forwarded this Friday along with issue papers that summarize the background and arguments that justify each recommendation.

PRESIDENT'S COMMISSION ON INDUSTRIAL COMPETITIVENESS

ISSUE PAPER

RECOMMENDATION #2 - INCREASE TAX INCENTIVES FOR R&D

Recommendation

On February 3, 1984, the President's Commission on Industrial Competitiveness adopted the following recommendation.

TAX CREDITS ARE AN IMPORTANT INCENTIVE FOR R&D. THE COMMISSION FAVORS PROMPT ENACTMENT OF LEGISLATION TO MAKE THE CURRENT INCREMENTAL TAX CREDIT PERMANENT. IN SUCH LEGISLATION, THE DEFINITION OF R&D ELIGIBLE FOR THE CREDIT SHOULD ENCOMPASS ALL ACTIVITIES TRADITIONALLY ACCEPTED BY STANDARD ACCOUNTING PRINCIPLES AS R&D. THE DESIRABILITY OF CONVERTING TO A CREDIT BASED ON TOTAL R&D SHOULD BE INVESTIGATED. IMPEDIMENTS TO TAX CREDIT ELIGIBILITY BY START-UP FIRMS AND JOINT VENTURES SHOULD BE REMOVED.

THE TEMPORARY MORATORIUM AGAINST IMPLEMENTATION OF A REGULATION REQUIRING ALLOCATION OF DOMESTIC R&D EXPENDITURES TO FOREIGN SOURCE INCOME (IRS REGULATION SEC. 1.861-8) SHOULD ALSO BE MADE PERMANENT.

THE PUBLIC BENEFITS WHICH COME FROM RESEARCH IN UNIVERSITIES WOULD BE INCREASED BY ADDITIONAL INDUSTRY INVOLVEMENT WITH SUCH RESEARCH. THE COMMISSION THEREFORE FAVORS LEGISLATION CREATING A PREFERENTIAL TAX CREDIT TO ENCOURAGE INDUSTRY INVESTMENT IN UNIVERSITY RESEARCH.

Analysis & Background

Investment in R&D is critically important in stimulating technological innovation in products and processes, which in turn is a key factor in maintaining competitiveness. The lack of sufficient quantity and quality of R&D has been an important factor in the slowdown in U.S. productivity and competitiveness in recent years.

Investing in R&D has significant risk and uncertainty. More importantly, the individual firm's or investor's eventual return on R&D investment usually does not capture all of the benefits resulting from that investment, i.e., there are significant spillover benefits to society. In the current situation, the U.S. must find ways of increasing the incentive for private firms to undertake R&D that leads to innovative products, processes and services.

In 1981, Congress enacted a 25% tax credit for R&D expenditures greater than a specific, rolling, base level. The credit is scheduled to expire in 1985. While it is too early to

quantify with certainty the effect of the credit on incremental R&D spending, industry claims that it has had a direct impact on R&D decisions. The credit may have been a critical factor in preventing firms from cutting back on R&D spending during the recession.

Recent research shows that the knowledge-intensive high technology sector has not been helped by current business tax policy so much as the capital-intensive smokestack industries. This is because accelerated depreciation allowances and investment tax credits have been the primary tax policy methods used for many years; the fast growing high-technology firms put much of their investments in research rather than long-lived capital assets. Also, new firms and joint ventures, many of which are in the high technology sector, have not benefited from the tax credit because they are negligible as the law is presently written.

The analyses of specific recommended actions to increase investment in R&D activities are as follows:

Item 1 Make the R&D Tax Credit Permanent

The long-term benefits stemming from increased R&D expenditures will become a reality only if the credit now set to expire in 1985 is made permanent. Short term "lumpy" incentives lead to short term "lumpy" investments that do not reap the intended benefits. The President's Commission on Industrial Competitiveness concluded that the tax credit is still an important need and should be made permanent if the original objective is to be achieved. It is also important to do this during the current Congressional session so that corporate decisions are not distorted by the 1985 "sunset" provisions. The Treasury Department favors a non-permanent extension like 3 or 5 years. R&D of this type normally requires 5-8 years to reach the market; uncertain coverage of tax credits weakens the incentives drastically.

Item 2 Use Standard Accounting Definitions for R&D

The definitions for eligible R&D used by IRS for tax purposes are different from definitions used for some other purposes, often leading to considerable confusion and uncertainty. At the same time, standard definitions [Financial Accounting Standards Board definition (FASB-2)] are used by the financial accounting community, reviewed by outside auditors, and accepted for SEC financial reporting purposes. The Commission concluded that, whatever the faults of these standards might be, the tax credit should be based on these known and tested rules.

Even though there are many differences across industries of the content of R&D conducted, these accounting rules and the accompanying auditing procedures have evolved into established practices. It is likely the arguments about coverage, abuses, and the resulting adversarial relationships would be eased by

legislation based upon standard practices. Even if experiences with the present credit indicates that certain costs be expressly excluded to contain abuse, and certain other costs be expressly included to insure eligibility, it is better to start with generally accepted accounting principles. As an example, the recently developed Danforth/Shannon Bill takes the FASB-2 definition as a starting point. It then clarifies the inclusion of certain types of expenditures such as for R&D manufacturing processes and computer software.

Item 3 Study the Desirability of Applying Credit to Total R&D.

The present tax credit is only applicable on incremental increases above a rolling base of past R&D expenditures for each specific firm. It has been suggested that incentives would be more effective if the full amount of a firm's R&D expenditures were used as the basis for the credit. The Commission recommends that desirability of this change be studied.

The competitiveness of U.S. industry would be furthered by the leverage on R&D which would be encouraged by a credit on a firm's total R&D spending. Based upon the strong correlation of R&D with gains in GNP shown by historical data, it is likely in the long run that such a tax credit on total R&D would more than pay for itself and yield positive returns to society, as well as to private firms.

Item 4 Extend Eligibility to New Firms

Because of the requirement to "be carrying on business" already, new start-up firms and new joint ventures between established firms are presently not eligible for the R&D tax credit. The Commission recommends that such restrictions on eligibility be removed.

The objective of the credit is to stimulate expanded R&D so that innovative products and services that enhance competitiveness will be produced. New technologies have often originated in such start-up situations and the nation is likely to benefit from their inclusion. While the tax revenue impact is not likely to be high, the benefit might be very high. The same recommendation can be justified on the basis of equity.

Item 5 Make Permanent the Moratorium on Treasury Regulation 1.861-8

Section 861 of the Internal Revenue Code, as originally enacted in 1921, was designed to prevent foreign corporations and individuals from deducting unrelated foreign expenses in calculating their taxes on U.S. income. Treasury Regulation Sect. 1.861-8 (interpreting Section 861 of the Code) structurally favors the reduction of R&D performed in this country and the relocation of research and development to the foreign countries where these expenditures are fully deductible. This displacement of R&D overseas transfers the inherent benefits of R&D activities

more readily to other economies and accentuates our shortage of technically trained personnel by eliminating scientific career opportunities.

The Regulation requires that U.S. corporations allocate a portion of all R&D expenditures to non-U.S. income for the purpose of calculating the limitation on foreign tax credits. For example, should 10% of a multinational's worldwide "activity" be deemed to have occurred overseas, 10% of all R&D expenses incurred by domestic companies, would be artificially "allocated" to those non-U.S. sources regardless of where the R&D was actually performed. The foreign tax credit limitation would thus be reduced by an amount equal to the allocated portion multiplied by the U.S. corporate tax rate. Should the multinational perform all R&D in the U.S., the effect could in certain instances be the same as if the corporation were denied a business expense deduction for the allocated portion of R&D expenses. Other countries generally do not recognize this fictional allocation for tax purposes, and consequently, the allocated R&D expenses have not been recognized as a business expense for foreign tax purposes.

The Congress took an important first step to rectify the problems created by the R&D portion of Section 861 in the context of the Economic Recovery Tax Act of 1981. Included was a two-year moratorium on applicability of the R&D portions of Sect. 1.861-8 of the Income Tax Regulations through tax year 1983. There is currently considerable bipartisan sentiment in both the U.S. House of Representatives and the Senate for a continuation of the moratorium. While the Reagan Administration has not embraced a permanent moratorium, the Department of Treasury has expressed support for a two-year extension beyond tax year 1983. The President's Commission believes this disincentive to R&D should be removed permanently. Since industry decisions on location of R&D are long-term decisions, a short extension would not remove the uncertainty barriers.

Item 6 Special Support for University-based Research

University research plays an important role in the welfare of the U.S. in general, and in the competitiveness of U.S. industry in particular. Such research is important, not only for its own sake, but also for the contribution it makes to the education of scientists and engineers. Although the government must continue to be the predominant funder of university research, the Commission believes it highly desirable that industry increase its role as funder of such work. Increased industry funding will not only provide additional revenue, but also help bring industry into a closer relationship with university researchers. Industry will then be in a better position to utilize research results for commercial applications.

For these reasons, the Commission concluded that broad incentives for industry investment in university research should be maintained and, if possible, increased. It believes even

greater tax credits for such investments than for industry-based research are justified and should be implemented through legislation. One mechanism (not the only way) for creating such a preferential tax credit is contained in the Danforth/Shannon Bill now being considered on Capitol Hill. That Bill provides for a 25% tax credit on the payments for basic research a firm makes in universities greater than its investment in a fixed base period (1981 through 1983). In contrast, the tax credit on in-house research covers R&D expenditures that exceed the rolling average of the three previous years. Since it is likely R&D will increase over time, future tax credits for in-house R&D will likely be smaller.



PRESIDENT'S COMMISSION ON Industrial Competitiveness

John A. Young
Chairman

February 24, 1984

MEMORANDUM FOR THE CABINET COUNCIL ON COMMERCE AND TRADE

FROM:

JOHN YOUNG *JAY*

SUBJECT:

PROTECTION OF INTELLECTUAL PROPERTY

Attached are Recommendations No. 3, 4, 5 and 6 approved by the President's Commission on Industrial Competitiveness on February 3, 1984. This set of related recommendations is aimed at strengthening protection of intellectual property as one way of increasing U.S. competitiveness. The Commission approved these recommendations after extensive discussion by the R&D and Manufacturing Committee, and by the full Commission.

Also included is an issue paper that summarizes the background and arguments that justify each recommendation.

Attachment

PRESIDENT'S COMMISSION ON INDUSTRIAL COMPETITIVENESS

ISSUE PAPER

RECOMMENDATIONS 3, 4, 5 & 6: STRENGTHEN PROTECTION OF INTELLECTUAL PROPERTY

The President's Commission on Industrial Competitiveness at its February 3, 1984 meeting adopted four recommendations aimed at strengthening protection of intellectual property as one important way of increasing U.S. competitiveness. The Commission believes that changes must be implemented in U.S. public policy and laws in order to remove disincentives to technological advance and to create new incentives to spur innovation. . . If the U.S. doesn't maintain the means and will to rigorously protect intellectual property rights, we will continue to fail to make full use of our enormous investment in basic research. Our national pool of research is at once our greatest resource and the foundation of our comparative advantage in world trade. Moreover, unless we overcome our ambivalence toward protecting intellectual property at home, these rights will continue to be eroded abroad.

The four approved recommendations cover:

- o Deterring Product Counterfeiting (Recommendation 3)
- o Amending the Freedom of Information Act (Recommendation 4)
- o Restoring Lost Patent Term (Recommendation 5)
- o Streamlining Patent Laws and Procedures (Recommendation 6)

The full text of each recommendation and the justifying arguments are described in the following four sections.

RECOMMENDATION #3 - DETER PRODUCT COUNTERFEITING

Recommendation

There has been a dramatic increase in recent years in commercial counterfeiting, i.e., the fraudulent practice of affixing someone else's trademark to a product which is superficially indistinguishable from its legitimate counterpart. The Commission urges the Administration to attack this problem by:

1. Domestically, supporting legislation to make the trafficking in counterfeit trademarks with intent to deceive or defraud a criminal offense; and
2. Internationally, supporting efforts to implement an anti-counterfeiting code.

Issue

Commercial counterfeiting is the fraudulent practice of affixing someone else's trademark to a product, which then appears superficially indistinguishable from its legitimate counterpart. Ten years ago, counterfeiting was a phenomenon which impacted a handful of luxury industries. Today, however, it has become a major international problem affecting a wide range of industrial and agricultural sectors with implications for sales, return on investment and the concomitant decline in resources available for research and new product development, employment, and consumer protection.

Background and Analysis

a. Introduction

Counterfeiters dupe consumers into purchasing their products under the erroneous belief that they are purchasing the genuine article. Thus, the consumer is defrauded and the owner of the trademark suffers, while the counterfeiter reaps great profit.

The exponential growth of counterfeiting can be explained by low start up costs, residual benefits from the promotional costs incurred by the legitimate manufacturer, and by high returns generated by low production costs and non-payment of taxes, licenses and other fees.

"Knockoff" copies trade on the image, quality and brand recognition that have been developed at great expense by successful manufacturing and marketing companies. At first, counterfeiters concentrated on up-scale consumers with bogus items of prestige manufacturers such as Cartier, Gucci, Louis Vuitton, Apple Computer, Levi Strauss and Izod-Lacoste. However, a report submitted recently by the European Economic Community (EEC) to the GATT concluded that while trademark counterfeiting has long been a concern in the luxury goods sector, counterfeiters have made it apparent that no industrial or agricultural section of trade is immune. Counterfeit trademarks, in fact, are being found in dozens of countries on products as diverse as aircraft and auto parts, chemicals, pharmaceuticals, wines, electrical equipment, machine tools and parts, fungicides, fertilizers, insecticides and infant formula. The U.S. International Trade Commission just released (January 1984) the results of a comprehensive investigation of the effects of foreign product counterfeiting on U.S. industry. It identifies the impacts on specific industries and describes how counterfeiting has been increasing.

In recent years, commercial counterfeiting operating on an international scale has reached epidemic proportions. The cost to trademark-holding manufacturers worldwide is several billion dollars a year. Counterfeiting has become so pervasive, however,

that its harmful effects extend far beyond its direct economic impact on legitimate manufacturers and into the areas of physical endangerment and the impairment of our national defense. Examples abound, including: heart pacemakers with counterfeit components, counterfeit jeans dyed with carcinogenic substances, counterfeit fire detection systems for aircraft engines, counterfeit medicines with no active ingredients, and counterfeit tiles that were discovered on the U.S. space shuttle.

Although information on counterfeiting is difficult to obtain, it has become increasingly evident that it flourishes largely because effective domestic and international controls do not exist. Once counterfeit products hit the market the damage is done and markets are lost. The problem of enforcement is further complicated by the fact that manufacturers who find that their goods are being counterfeited are often reluctant to publicize their losses because any suspicion of counterfeiting deters potential customers from making purchases, and this has a corresponding impact on sales, profits and employment. (In the United States, a loss of 14,000 jobs can be attributed to counterfeiting in the auto industry alone.) Moreover, counterfeit products can also result in product liability suits against legitimate manufacturers if products carrying their trademark harms a consumer.

b. The U.S. Domestic Approach

In the United States, the basic federal trademark protection act -- the Lanham Act -- imposes only limited civil sanctions for those found guilty of even the most egregious trademark infringements and imposes no criminal sanctions. There is, in fact, no criminal law outlawing commercial counterfeiting per se. While under certain circumstances other federal penal statutes can be invoked to reach particular commercial counterfeiting situations, in actual practice federal prosecutors have rarely utilized these provisions to prosecute alleged offenders.

Given the scope of the problem and the ineffectiveness to date of efforts to deal with it, new legislation providing both criminal and financial penalties for commercial counterfeiting is critical to the protection of American business and its consumers.

In 1982, legislation was introduced by Senator Charles Mathias (R-MD) and Congressman Peter Rodino (D-NJ) to criminalize trafficking in counterfeit products and services and impose stringent civil sanctions on commercial counterfeiters. A slightly revised version of the 1982 bill, the Trademark Counterfeiting Act of 1983 (S.875 and H.R. 2447) was reintroduced in early 1983 by the same sponsors.

Specifically, the bill mandates the greater of treble claimant's damages or defendant's profits. Furthermore, S.875 would empower federal district courts to have all counterfeit marks and goods delivered to the court at the onset of an action, and that upon conviction the court may order the destruction of marks and the

disposal of the goods.

The Senate Judiciary Subcommittee on Patents, Copyrights and Trademark has approved S.875. During the subcommittee's markup, the bill was modified to make it more acceptable to its principal opponent, the Associated General Merchandise Chains, of which K-Mart is the most influential member. This group's opposition is based on the view that the legislation places too great an onus on those stores that sell trademarked goods that are not available to them through distribution channels approved by the manufacturers.

Accordingly, many of the following changes agreed to by the subcommittee should diffuse opposition and expedite its passage during the current session of Congress:

- o The contraband which the bill covers is no longer "counterfeit marks," but, instead, "counterfeit goods or services." This term is defined as goods or services bearing a "spurious mark, which is identical to or substantially indistinguishable from a genuine mark." This amendment incorporates a suggestion offered by Commissioner of Patents and Trademarks Gerald J. Mossinghoff.
- o The element of specific intent has been dropped completely and replaced by an affirmative defense of "a good faith claim of right."
- o The definition of "traffic" was expanded to include "to conspire with" others in the prohibited activities.
- o Safe harbor provisions have been added that protect a defendant if he makes certain labeling disclosures and notifies the trademark registrant of his intent to use the mark. This amendment incorporates a recommendation of the Justice Department.
- o The amended bill incorporates all trademark defenses available under the Lanham Act.
- o An amendment specifically authorizes the seizure of goods, marks, means of marking marks, and articles bearing marks, but not business records.
- o Specific requirements for obtaining ex parte seizure orders were added, including requiring the trademark owner to provide security for damages, in the form of lost profits and loss of good will, suffered as a result of a wrongful seizure.
- o Ex parte seizures would be carried out by U.S. marshals or an agent designated by the court and the seizure order must be served on the defendant and U.S. Attorney before it is executed.

- o Finally, a prevailing defendant could recover damages, costs, and attorneys' fees from a bad faith plaintiff.

c. International Initiatives

On the international level, the United States has been campaigning for a GATT anti-counterfeiting code, but its attempts have been resisted by developing countries, which have shown a marked preference to have the issue considered by the World Intellectual Property Organization (WIPO).

The U.S. succeeded in getting the November 1982 GATT Ministerial to request that the GATT Council "examine the question of counterfeit goods with a view to determining the appropriateness of joint action in the GATT framework on the trade aspects of commercial counterfeiting," but giving "full regard to the competence of other international organizations" (i.e., WIPO). The Ministers also instructed the GATT Director-General to hold consultations with WIPO's Director-General "in order to clarify the legal and institutional aspects involved." The proposal, which became a joint U.S.-EEC initiative endorsed by Canada, Japan and Switzerland, has as its purpose to discourage commercial counterfeiting by depriving counterfeiters of economic benefit.

If the proposed Code were adopted it would have a significant impact on international commercial counterfeit traffic. But even then it would not fully prevent trafficking in counterfeit goods once they cleared customs, and would have no jurisdiction over domestically produced counterfeit goods.

With little LDC sympathy for the impact of counterfeiting on multinational corporations and the fact that the country most responsible for trade in counterfeit goods, Taiwan, is not even a member of GATT, it is little wonder that these nations have little enthusiasm for a GATT code. Moreover, there are many other issues, such as "voluntary" restraint agreements, to which LDCs accord a higher priority for GATT action.

The President's Commission recommends the U.S. intensify its international efforts to implement an anti-counterfeiting code.

RECOMMENDATION #4 - AMEND FREEDOM OF INFORMATION ACT

Recommendation

The Commission fully supports the principles of the Freedom of Information Act (FOIA). This Act should, however, be amended to protect the rights of private firms to maintain, with respect to their competitors, the confidentiality of information of potential commercial application which they are required to disclose to the government. In recent years, the release of

commercially sensitive information in response to FOIA requests has disadvantaged domestic firms with respect to their foreign competitors. As a first step in restoring a proper balance, the providers of such information should be given notice that their confidential information is being requested and given an opportunity to show good cause why such information should not be released. Requestors of such information should be required to reveal the identity of their principals on behalf of whom a request is being made.

Issue

The Freedom of Information Act (FOIA), which was passed in 1966, no longer provides adequate protection of proprietary data and other confidential business information. There has been a steady erosion of the Act's principal intention -- to establish a balance between the public's right to information and the equally legitimate rights of owners of intellectual property -- and it is now widely utilized for industrial espionage purposes. FOIA, then, has had an unintended, but nevertheless harmful effect on the development, commercialization and competitiveness of innovative technology. Consequently, new statutory procedures and the strengthening of the (b)(4) exemption, which addresses the protection of confidential business information, are needed.

Background and Analysis

Industry states that a large percentage of the many FOIA requests to some Federal agencies are motivated by competitive reasons, and are often originated by foreign competitors.

Where a legitimate private interest is asserted, federal agencies must be as willing to preserve a company's secrets as they are to safeguard their own information. Unfortunately, however, relatively few companies have challenged requests under FOIA that could be damaging. Moreover, it is often difficult to ascertain when a competitor has acquired information, and firms are also reluctant to make an issue of disclosed information because they would then be alerting additional competitors to its existence.

It is unfortunate, therefore, that public employees are increasingly asserting their right to make disclosures without prior notification, and that the courts, by and large, are not upholding companies' rights in many FOIA requests. Companies, in fact, often do not know of requests for data, or, for that matter, even that they have been injured. Many agencies do voluntarily disclose requests to affected companies -- but not the Food and Drug Administration, which receives more FOIA requests than any other agency - but they are currently under no obligation to do so.

Also, once information is disclosed to a single applicant, it

must be provided to everyone; and, in the exercise of their discretionary powers, government agencies are immune from prosecution or paying compensation to a company if its position is hurt by disclosures. Government employees carrying out those disclosures are therefore also immune from prosecution and civil lawsuits, while an employee of a company could have quite a different sort of accountability.

When Congress passed the FOIA, it recognized the need to establish certain exemptions to public access to certain types of information in government files. One such exception, known as the (b)(4) exemption, specifically recognizes the need to protect private and confidential business information. Presently, this exemption applies to

"trade secrets and commercial or financial information obtained from a person and privileged or confidential."

The (b)(4) exemption was not intended to frustrate the Act's goal of achieving a more open government. However, over the years, the original intention of the (b)(4) exemption to protect private, confidential business information has become the victim of judicial decisions.

These judicial decisions eroded the protection afforded to confidential business information in three ways:

1. The courts have imposed an extremely difficult burden of proof on submitters of confidential business information who seek to prevent release by government agencies of business information in the agencies' possession. Initially, courts applied the exemption to information which "would not customarily be released" or which "might be harmful to the submitter's interests." These tests were consistent with the intent of Congress. However, these criteria were supplanted by a 1974 District of Columbia Court of Appeals decision articulating a new standard. The new interpretation of the word "confidential" in the (b)(4) exemption compels an agency to disclose information unless it can determine that release would likely cause "substantial harm to the competitive position" of the submitter or impair the government's ability to obtain necessary information in the future. Unlike the standard applied previously, which was consistent with Congressional intent, this new standard attempts to measure degrees of harm and allows an agency to disclose the information if the agency finds that the owner will suffer only insubstantial harm from disclosure.

At best, therefore, the current standards of proof of "substantial harm" are amorphous, and it is very costly to defend against such disclosures. Proving substantial harm is particularly difficult for the two

classes of regulated firms with the most to lose: the innovative, new product firm and the small entrepreneurial firm. First, the courts require that the owner demonstrate that a market for the secret information really exists. Second, the owner must demonstrate the firm's competitive position within the market. Finally, the company must prove that competitors would be likely to use the information to harm the owner's competitive position. The owner of the proprietary information, then, is in the burdensome position of having to prove that a market exists for its new product. And, the newer the technology, the less defined the market, and the less certain it is the developer can establish "substantial harm."

2. Although the FOIA is silent on the point, the courts have interpreted the (b)(4) exemption as discretionary rather than mandatory. Thus, agencies can release information under their control even if it falls within the exemption, unless precluded by some other statute.
3. Also addressed in the (b)(4) exemption are "Trade Secrets." Such information has long been protected from public disclosure by an entirely independent statute; the Trade Secrets Act (18USC 1905). However, here too a recent court decision substantially restricts the quantity of information which would be eligible for protection under this rubric. In April 1983, the Court of Appeals for the District of Columbia, in the context of a suit to compel disclosure of information under the FOIA, stated that the only information which would be eligible for Trade Secret status under exemption (b)(4) was "a secret commercially valuable plan, formula, process or device that is used for the making, preparing, compounding or processing of trade commodities and that can be said to be the end project of either innovation or substantial effort." In so defining Trade Secrets, the court rejected a much broader Restatement of Torts definition which had been adopted by numerous courts and substantially impaired the proprietary rights in innovator firms.

Also, in addition to the limited protection afforded the submitter under the (b)(4) exemption, submitters do not have any specific procedural rights under the FOIA to oppose agency release of their information. Nor are agencies required to inform submitters that a request for information has been made. On the other hand, requesters of confidential business information have been given substantial procedural rights under FOIA in the event they are denied requested information.

What is needed, therefore, is the restoration of the original intent of the (b)(4) exemption as described in Senate Report No. 813 (89th Congress, 1965): to protect business information which

would: "... customarily not be released to the public by the person from whom it was obtained."

If the (b)(4) exemption were mandatory, it would relieve the uncertainty and anxiety which submitters have regarding the release of their confidential information. Further, if the definition of Trade Secret to be applied both for the purposes of the FOIA and the Trade Secret Act was explicitly stated to be the Restatement of Torts language, dual protection would be assured and an absolute bar to release would be clearly established. Submitters whose proprietary information falls within the (b)(4) exemption should not have to risk the release of such data by an agency except in the event of an overriding public interest. Even then, a submitter should have the right to oppose any decision to release its confidential information.

The FOIA, therefore, has produced unforeseen negative economic consequences and some economists have postulated that the Act has had a deleterious effect on the life cycles of some products. Disclosure, for example, of the class of knowledge known as "circumstantially relevant business information" (CRBI) could cut into the long-term profitability of a product by revealing what the manufacturer knows about the market for a product in development and not yet commercialized, or about its competitors. Because the time of disclosure can be helpful to competing firms, the information may be highly relevant to their decision making. The information may not be "relevant" enough to meet the "substantial-harm" standard, but it can nonetheless aid competitors in making marketing and production decisions -- and shorten the innovator's cycle of return.

Regulatory Impact

In the Senate Judiciary Committee's report on S.774 (September 12, 1983), the following statement, as required by Senate rules, was made:

In compliance with subsection 11(b) of rule XXVI of the Standing Rules of the Senate, the Committee finds that the business confidentially procedures of S. 1730 (the bill number during the previous session) will substantially improve the protection of trade secrets and other valuable commercial information submitted to the Government by regulated business. This should enhance the economic position of businesses and individuals who have in the past or might have possibly in the future lost such trade secrets or proprietary information to a competitor or some other requester pursuant to an FOIA request. The Committee also finds that S. 1730 will improve personal privacy protections for every individual about whom the Government maintains information. Finally, the Committee finds that no additional paperwork will be required of regulated businesses or individuals, but that the bill

improves protection for personal privacy and commercial information.

Cost Estimate

Pursuant to Section 403 of the Congressional Budget Act of 1974, the Congressional Budget Office (CBO) reviewed S. 774. Following is the relevant section of the CBO's findings:

The costs of administering the Freedom of Information Act are highly uncertain, and no comprehensive data are available. Based on information provided by the Justice Department, it appears that the direct cost of administering the act is at least \$60 million a year. Assuming this level of costs, the bill is expected to save the federal government at least \$10 million a year - through the establishment of a uniform fee schedule, recovery of a portion of the cost of processing an application, various applicant exclusions, and an anticipated decline in the use of FOIA resulting from higher fees. However, in view of the uncertain costs of FOIA and the lack of information on the fee guidelines OMB will eventually propose, the savings resulting from this bill could be significantly greater.

Conclusion

Congress is responding to the commercial espionage aspects of the excessive use of the FOIA slowly and incompletely. The full Senate is currently weighing S.774. The media's opposition to changes that will make it more difficult to obtain documents relating to law enforcement, environmental questions or military matters may make it difficult for meaningful and necessary changes in the FOIA to pass. The Administration has been equivocal in its attitude toward S.774, primarily because its determination to protect secrets in the files of the CIA, the FBI and Defense Department take precedence in protecting companies from commercial disclosures.

The business community nonetheless seems to be satisfied with the modest changes proposed by S.774, and eventual Senate passage seems likely. The picture in the House is less clear. This Commission has gone on record in support of preventing misuse of FOIA for competitive purposes, and recognizes S.774 as a valuable first step toward that goal.

RECOMMENDATION #5 - RESTORE PATENT TERM

Recommendation

U.S. Patent law grants inventors a 17-year term of exclusive rights on innovative processes and products. This limited term is intended to provide a major incentive for research and development, which is often costly and risky. However, for certain products, such as some chemicals and pharmaceuticals, the full 17-year patent term has been unintentionally eroded by Federal pre-market testing and review requirements. To remedy this situation, the Commission recommends passage of legislation that would restore patent life lost during the government approval process.

Issue

United States patent law grants an inventor 17 years of exclusive control over innovative new processes and products. The patent system provides important incentives for innovation. Its granting of a limited monopoly is widely recognized as fostering the large investments of time, talent and money required for research. However, the regulatory procedures and pre-market testing and review requirements for certain items, like pharmaceuticals and chemicals, have unintentionally eroded the full 17-year patent term, because during the pre-approval period no commercialization is possible. In such cases Federal regulatory and review procedures act as disincentives to innovative efforts, and can have a detrimental effect on the U.S. competitive position in vital high technology industries.

Background and Analysis

Products requiring government approval, such as prescription drugs, medical devices, insecticides and chemicals are rarely accorded the full 17-year patent term. The government review process has been lengthening in recent years -- particularly for pharmaceuticals -- due in part to increasingly sophisticated methods of determining safety and effectiveness. The entire R&D process for a pharmaceutical -- prior to marketing -- may take ten to thirteen years. In fact, the time actually available to market a drug under patent protection has declined precipitously -- from 12.0 years on average in 1969-1971 to 7.0 years in 1979-1981.

To a great extent this explains why pharmaceutical research is so expensive. The average cost of R&D per new drug marketed today is approximately \$70 million. Moreover, only about one in 5,000 new chemical entities that enter the testing process ever reach the market as a new product. These costs must be recovered during the life of a new drug's patent, since after the patent expires the drug faces competition from imitator products unencumbered by the need to recover development costs. It is a rare new compound, in other words, that is ready for marketing at the time the patent is issued because of lengthening FDA testing and review requirements. It is only fair, the proponents of patent restoration contend, that pharmaceutical manufacturers

should not be penalized for submitting to necessary and painstaking FDA procedures.

One legislative proposal to achieve this objective is the Patent Restoration Act of 1983 (S. 1306, Mathias, R-MD; and H.R. 3502, Synar, D-OK). This legislation would not change the current patent application process nor any aspects of regulatory review. Moreover, the extension would be limited to products or methods subject to review, and only to the specific use for which the review is required. Other products or uses contained in the same patent, but not subject to review, are not included in the extension.

The principal opposition to the Patent Restoration Act of 1983 comes from two sources: the American Association of Retired Persons and the National Association of Pharmaceutical Manufacturers, the trade group for the generic drug industry. They contend that longer patent terms would raise the cost of drugs to consumers by delaying the day when competitors, especially generic drug makers, could bring out cheaper copies. The fact is, however, that patent restoration would not apply to any already patented drug on the market. Moreover, patent term restoration is likely to result in the development of new products that would increase competition. Meanwhile, the incentive to develop a range of useful new therapies would be increased.

The President's Commission believes that restoration of lost patent term would contribute to increased competitiveness by increasing the incentives to develop new technology and carry it through to commercial products or services.

RECOMMENDATION #6 - STREAMLINE PATENT LAWS AND PROCEDURES

Recommendation

EAT PROBLEM

The patent laws continue to be a major mechanism to encourage R&D and the commercial development of new technology. Although major changes in the U.S. patent laws are not required, the Commission supports those essentially "fine-tuning" amendments to the patent laws which have evolved over several years of study by a variety of Congressional, industrial and bar association groups. They are essentially non-controversial and include provisions to:

1. Extend the law to make it an infringement of a U.S. process patent to have a product imported into the U.S. which is manufactured abroad by the patented process.
2. Simplify the procedures for obtaining export licenses to file and prosecute patent applications in foreign countries.
3. Eliminate unpublished information from the definition of

"prior art".

4. Permit the arbitration of patent interferences.
5. Restore balance in patent law licensing by requiring a person challenging the validity of a licensed patent either to continue paying royalties during the period of challenge, or, at the licensor's option, to terminate the license.
6. Relax the technical requirements relating a person in a single patent of claims to a joint invention where all joint inventors may not have contributed to all claims.

In addition, the Commission recommends that action be taken to reduce the erosion of intellectual property rights in foreign countries. All countries should be encouraged to implement systems of intellectual property protection which foster a climate of innovation and investment. U.S. policy should firmly oppose the misappropriation of intellectual property rights by any country. Also, the U.S. should encourage all countries to adhere to the Paris Convention for the Protection of Intellectual Property but should oppose efforts to weaken the Convention, for example, by permitting member countries to require the grant of compulsory exclusive licenses.

Issue

The national interest in the patent system is based on its contribution to strengthening the technological base of the nation, in encouraging research and invention and the commercial development of new technology, in stimulating investment by the private sector in technological progress, in improving the nation's international trade balance, in increasing employment, and in providing a wider selection of products and services.

The pace of technological growth is slowing in the United States. The President's Commission on Industrial Competitiveness believes that the patent system has the potential to serve as a more forceful element in encouraging technological commitment and investment. We believe that it is feasible to increase the effectiveness of the patent system for this purpose.

The urgency of our national situation, with respect to technological leadership and innovation, has convinced us that modification of the patent law, in ways that strengthen the incentive role of patents, can have a significant beneficial effect in encouraging investment in innovative efforts.

Background and Analysis

Item 1. Section 1 of S.1535 and H.R. 4526 deal with the infringement of process patents by offshore production. This is

a situation that has long been in need of remedy. The 1966 Report of the President's Commission on the Patent System commented:

"The unauthorized importation into the United States, for sale or use, of a product made abroad by a process patented in the United States, does not now constitute infringement... This recommendation would make it possible to prevent evasion of the process of patent owner's exclusive rights in the United States by the practice of his process abroad and the importation of the products so produced into this country."

Thus, under current U.S. law, a process patent is not violated if a product is manufactured outside of the United States using that patented process, then imported for sale here. The proposed legislation provides that such importation and sale of a product manufactured abroad by the patented process constitutes infringement of the process patent. All other major manufacturing countries have statutes against process patent infringement by offshore production, and it is inequitable for foreign laws to protect foreign manufacturers against imports of this type without the same benefit being available to U.S. manufacturers. This proposed change would broaden the procedural and substantive remedies available to the patentee, would embody basic principles of fairness, and would favor production within the United States of products intended for the United States market.

Similarly, H.R. 4526 provides that importation into, or use or sale in the United States of a product manufactured abroad by a process patented in the United States, constitutes infringement of the United States process patent. Damages may not be obtained unless the infringer had notice of the process patent. These provisions of S.1535 and H.R. 4526 differ in some respects from those of the Administration's S.1841. S.1535 and H.R. 4526, however, should be endorsed since they provide important substantive changes in the present law.

As a corollary to the principle of equitable treatment stated above, both S.1535 and H.R. 4526 also contain provisions to assure that a product patent cannot be circumvented by manufacturing the material components of the product in the United States, then assembling them and selling the finished product abroad. This is not covered by S.1841.

These proposals would close loopholes in the present law which work to the advantage of foreign manufacturers over U.S. manufacturers/patentees and should be endorsed.

Item 2. Sections 2-4 of S.1535 and H.R. 4524 are concerned with export licenses for the filing of foreign patent applications and subsequent amendments hereof. Under U.S. patent law, a U.S. inventor wishing to file a foreign patent application is required

to obtain a license from the PTO or wait for 6 months after the U.S. filing. The purpose of these requirements is to allow U.S. agencies concerned with security matters to inspect the patent application and determine whether it contains technical information bearing on national security. Any deviation from these requirements, including the furnishing of information abroad as an amendment to a foreign patent application without prior license, could result in invalidation of the corresponding U.S. patent and, additionally, in criminal penalties. These sanctions can apply even when the subject matter has nothing to do with national security and even when the general subject matter has been on file in the United States for over six months or has been published in an issued U.S. patent.

In order to comply with existing law, enormous volumes of paper flow through the PTO for the routine approval of such export licenses. A slightly modified system can fully meet the governmental purpose of the statute, while providing a significant benefit to users of the patent system and cost savings to the PTO. S.1535 and H.R.4524 would eliminate these burdens by allowing supplemental data or examples merely illustrative of the general patent disclosure to be presented to the foreign country without a subsequent license if a license had been obtained for its initial patent application and no secrecy order has been issued by a government agency. Additional provisions would make clear that failure to obtain a license for a patent application that is not subject to a secrecy order would not result in criminal penalties unless the failure was due to a deliberate attempt to deceive. These changes will significantly reduce an unnecessary burden on both the PTO and patent applicants without detriment to legitimate national security concerns and should be adopted.

Item 3. Sections 5-6 of S.1535, as well as H.R. 4525, focus on unpublished knowledge as prior art, eliminating as prior art against the grant of a patent unpublished information developed by the applicant solely or jointly with others, or which is known to him only by virtue of his employment. Research in corporate laboratories involves the continuing efforts of many individuals, often as a team effort, and the present provision would reverse a line of cases which have tended to discourage such cooperative research. Enactment would make it easier to obtain patent protection for the results of corporate or cooperative research efforts, and would thereby promote innovation and should be endorsed.

Item 4. Sections 7-9 of S.1535 and H.R. 4528 provide for the arbitration of interferences (proceedings conducted by the PTO to determine which rival inventor made the invention first and is thus entitled to the patent). They also eliminate the unduly harsh penalties for inadvertent failure to file any agreement relating to the settlement of an interference. The arbitration provisions offer an opportunity to significantly reduce the expense and burden of present interference practice for both applicants and the PTO. Since penalties for deliberate failure

to file interference settlement agreements are maintained as a deterrent to antitrust violations, the provision seems well balanced and should be endorsed.

Item 5. Section 10 of S.1535 and H.R. 4529 seeks to unify the laws with respect to license estoppel when a licensee seeks to assert the invalidity of a licensee's patent and to reverse the trend of case law that has generally been unfavorable to patentees. Court decisions have established the right of a patent to challenge the validity of the licensed patent. Case law, however, may have shifted the balance of rights in such challenges too far in favor of the licensee, allowing undue leverage against the licensor. The changes proposed in S.1535 and H.R. 4529 would insure the right of the licensor to continue to receive royalty payments during the time the patent is under challenge, or, at the licensor's discretion, to terminate the patent license.

Item 6. Section 6 of S.1535 and H.R. 4527 change the present requirement that each named inventor must have made an inventive contribution to each and every claim of a patent. This again will promote joint or cooperative research efforts, and will bring us closer to the practices of most other nations.

Implementation

There does not seem to be any significant objective opposition to S.1535 or H.R. 4524-H.R. 4529. To date, the Administration has not taken a position on S.1535 or the Kastenmeir bills. The Administration does have, as noted above (Background and Analysis, 1), a slightly different view on protecting the rights of process patent holders.



PRESIDENT'S COMMISSION ON Industrial Competitiveness

John A. Young
Chairman

February 17, 1984

MEMORANDUM FOR THE CABINET COUNCIL ON COMMERCE AND TRADE

FROM: JOHN A. YOUNG *for JAY*

SUBJECT: RECOMMENDATION ON RENEWAL OF THE EXPORT
ADMINISTRATION ACT

Attached is Recommendation No. 7 approved by the President's Commission on Industrial Competitiveness on February 3, 1984. The Commission endorses the five principles in the January 26 letter prepared by The Business Group on the Export Administration Act, and recommends that these principles guide the Administration's development of export control policies.

Attachment

736 Jackson Place NW Washington DC 20503 (202) 395-4527

ISSUE PAPER

RENEWAL OF THE EXPORT ADMINISTRATION ACT

PCIC RECOMMENDATION #7

On February 3 in Pittsburgh, the President's Commission on Industrial Competitiveness approved the following recommendation:

THE PRESIDENT'S COMMISSION ON INDUSTRIAL COMPETITIVENESS ENDORSES THE ATTACHED LETTER OF THE BUSINESS GROUP ON THE EXPORT ADMINISTRATION ACT AND RECOMMENDS IT TO THE CCCT FOR CONSIDERATION IN FORMULATING ADMINISTRATION POLICY ON THIS ISSUE.

BECAUSE CONGRESS IS CURRENTLY DELIBERATING ON THE FINAL FORM OF THE RENEWAL OF THE EXPORT ADMINISTRATION ACT, THE PCIC WANTS TO EXPRESS ITS CONCERN ABOUT THE IMPACT THE ACT COULD HAVE ON U.S. INDUSTRIAL COMPETITIVENESS. IT IS IMPORTANT THAT WE MAKE IT CLEAR THAT NATIONAL SECURITY AND FOREIGN POLICY ARE DEPENDENT ON MAINTAINING OUR INDUSTRIAL COMPETITIVENESS. EXPORT RESTRICTIONS ARE GENERALLY ANTITHETICAL TO U.S. COMPETITIVENESS BECAUSE THEY POSTURE U.S. INDUSTRIES AS UNRELIABLE SUPPLIERS.

THE BUSINESS GROUP
ON THE
EXPORT ADMINISTRATION ACT
January 26, 1984

ORIGINAL LETTERS:

Donald T. Regan, Secretary of the Treasury
George P. Schultz, Secretary of State
Malcolm Baldrige, Secretary of Commerce
David A. Stockman, Director of OMB
William E. Brock, USTR
Caspar W. Weinberger, Secretary of Defense
Robert C. McFarlane, Assistant to the President,
National Security Council

Dear:

As Congress reconvenes, the most important trade-related issue awaiting legislative action will be the reauthorization of the Export Administration Act (EAA). We understand that you are participating in a Cabinet-level review of issues related to the administration of the EAA system. We want to remind you of the importance which American business attaches to this and other issues and to prompt passage of a new export control law. This new law should protect national security and foreign policy interests as well as restore the worldwide reputation of U.S. exporters as reliable suppliers.

A broad cross-section of the U.S. exporting community has agreed upon five principles as basic to development of appropriate and workable U.S. export control policies. We support adoption of control policies which would:

1. Maintain the current balance between the Departments of Commerce and Defense for implementing the EAA as crafted originally in 1979.
 - o Prevent jurisdictional overlap which causes unnecessary delays with regard to East-West trade.
 - o Prevent the duplication and diffusion of licensing authority and responsibility.
 - o Prevent increased licensing uncertainty for U.S. exporters and their potential Western customers.
 - o Preserve Commerce's expertise and primacy in evaluating the business practices and reliability of intended consignees, an area where the Department of Defense does not possess a comparable proficiency.
 - o Focus attention on information gathering and analysis and not on duplicative licensing reviews.

2. Preserve the sanctity of contracts under foreign policy export controls (except in instances of war or national emergency) and restrict these controls to goods and technology produced in the U.S.
3. Provide a clear statutory basis for multiple export licenses in lieu of individual licenses for each separate export transaction.
4. Lift the burden of unnecessary U.S. licensing for exports to allied nations such as Great Britain, and other major U.S. trading partners in CoCom.
5. Require that foreign availability of competing products be determinative in the decision to impose or extend U.S. controls.

Reauthorization of the Export Administration Act is a vital issue for the American Business community. We hope that cooperation between all parties concerned with this issue will produce - in timely fashion - a new law that meets the needs of our nation. To that end, representatives of the organizations listed below are prepared to meet with you at any time to discuss our views on the EAA.

Sincerely,

American Association of Exporters and Importers
American Electronics Association
American League for Exports and Security Assistance Inc.
American Soybean Association
The Business Roundtable
Chamber of Commerce of the United States
The Computer and Business Equipment Manufacturers Association
Computer and Communications Industry Association
Electronics Industries Association
Emergency Committee for American Trade
National Association of Manufacturers
National Foreign Trade Council
National Grange
National Machine and Tool Builders Association
Petroleum Equipment Suppliers Association
Scientific Apparatus Makers Association
Semiconductor Industry Association
U.S. Council for International Business



PRESIDENT'S COMMISSION ON Industrial Competitiveness

John A. Young
Chairman

February 24, 1984

MEMORANDUM FOR THE CABINET COUNCIL ON COMMERCE AND TRADE

FROM: JOHN YOUNG *Sum for JAY*
SUBJECT: GOVERNMENT DATA BANK

Attached is Recommendation No. 8 approved by the President's Commission on Industrial Competitiveness on February 3, 1984. This recommendation supports study of the feasibility of establishing a government data bank to help U.S. industry identify market opportunities overseas. The Commission approved this recommendation after extensive discussion by the International Trade Committee, and by the full Commission.

Also included is an issue paper that summarizes the background and arguments that justify the recommendation.

Attachment

PRESIDENT'S COMMISSION ON INDUSTRIAL COMPETITIVENESS

ISSUE PAPER

DATA NEEDS FOR TRADE ASSESSMENT:
IMPROVING THE U.S. GOVERNMENT
INFORMATION-DELIVERY CAPABILITY

RECOMMENDATION 8

THE PCIC RECOMMENDS THAT THE CCCT INITIATE AN EVALUATION OF THE POSSIBILITY OF ESTABLISHING A CENTRAL GOVERNMENT DATA BANK (WITHIN THE DEPARTMENT OF COMMERCE) WITH THE INTENT OF PROVIDING CURRENT, RELEVANT MARKET INFORMATION DETAILING VARIOUS INDUSTRIAL SECTORS AND DIFFERENT COUNTRIES. SPECIFICALLY, THE DEPARTMENT OF COMMERCE SHOULD BE ASKED TO PREPARE A MULTI-PHASE IMPLEMENTATION PROPOSAL FOR SUCH A DATA BANK IN CONJUNCTION WITH OTHER GOVERNMENT AGENCIES WHICH ARE EITHER POTENTIAL USERS OR SUPPLIERS OF INFORMATION.

TO BE USEFUL, THIS DATA BANK SHOULD REPRESENT A CONSENSUS FROM INDUSTRY TRADE ASSOCIATIONS AND OTHER INDUSTRY SOURCES WITH RESPECT TO WHAT IS REALLY NEEDED AND WOULD PROVIDE ADDED VALUE. A PROPERLY STRUCTURED AND WELL-MANAGED SYSTEM WHICH BECOMES A FOCAL POINT TO TIE TOGETHER GOVERNMENT RESEARCH CAPABILITIES WITH PRIVATE SECTOR INPUT COULD BE AN EXCELLENT COMPETITIVE TOOL, AS WELL AS ANOTHER STEP TO IMPROVE GOVERNMENT AND INDUSTRY COOPERATION.

IT IS RECOMMENDED THAT THE FEASIBILITY ASSESSMENT AND IMPLEMENTATION PROPOSAL BE COMPLETED AND TRANSMITTED TO THE PRESIDENT'S COMMISSION ON INDUSTRIAL COMPETITIVENESS FOR CONSIDERATION BY SEPTEMBER 1984.

Issue Paper
PCIC International Trade Committee

DATA NEEDS FOR TRADE ASSESSMENT:
IMPROVING THE U.S. GOVERNMENT
INFORMATION-DELIVERY CAPABILITY

ISSUE

The General Accounting Office has identified the fact that "only twelve percent of the nation's approximately 252,000 manufacturers are exporters. Further, it was estimated that 11,000 small, export-capable firms could be induced to try to export if properly approached and assisted, and that the value of exports by such firms could amount to more than \$4 billion a year." The major impediment to exporting identified in the study was a lack of information about export markets or the export process.

The administration views the expansion of exports as a key component in the nation's economic recovery program. A number of actions may be necessary in order to enhance export promotion efforts, particularly those targeted toward small to medium-sized companies and non-exporters. One such step is to identify a means to improve the delivery of relevant market information to all industry, both small and large. The intent should be to facilitate industry assessment of international trade opportunities and understanding of world markets.

PROPOSED COMMITTEE RECOMMENDATIONS:

The possibility of establishing a central government data bank (within the Department of Commerce) with the intent of providing current, relevant market information detailing various industrial sectors and different countries should be evaluated. Specifically, the Department of Commerce should be asked to prepare a multi-phase implementation proposal for such a data bank in conjunction with other government agencies which are either potential users or suppliers of information.

To be useful, this data bank should represent a consensus from industry trade associations and other industry sources with respect to what is really needed and would provide added value. A properly structured and well-managed system which becomes a focal point to tie together government research capabilities with private sector input could be an excellent competitive tool, as well as another step to improve government and industry cooperation.

It is recommended that the feasibility assessment and implementation proposal be completed and transmitted to the Presidential Commission for consideration by September 1984.

The approach should be to maximize the utilization of existing government resources. It is recognized that substantial relevant competitive information is already available via government or private sources. A mere compendium of "government statistics" is not fe

be a supportable or cost-effective utilization of government human or financial resources. However, it would be the intent of this recommendation to improve upon the organization and the distribution of information. In light of the increasing utilization and sophistication of electronic communication and data retrieval systems, we should be designing information tools now which provide the most current "state of the art" delivery capabilities, and which look to the future for technical refinements and increasing sophistication.

The objectives of improving upon the government information-gathering and delivery capabilities would be:

- To stimulate exports and new international business initiatives, particularly on the part of small and medium-sized companies and other companies which are not currently major exporters.
- To facilitate and enhance industry decision-making relative to international trade opportunities.
- To provide an early opportunity for preventive or corrective action by industry in response to changes in the competitive environment, including changes in the domestic market as a result of foreign competition.

The following are preliminary recommendations with respect to the development and structuring of the data base.

o HOW SHOULD THE INFORMATION BE STRUCTURED?

VEHICLE: A highly interactive computer data base is probably the best medium to provide a living, viable source of information. The cost and feasibility of such a venture must be very carefully analyzed. If the government cannot commit to a continuing, timely, and relevant update of the computer file, the project should not be attempted -- better left to existing resources and consultants. In addition to the content of the file, a variety of technical issues must be explored.

LOCATION: The subject of trade reorganization to a Department of International Trade and Industry is currently under consideration. This would be an obvious and logical spot to position the data base. The Department of Commerce which has committed itself to a program of competitive analysis, could provide management focus and direction to the development and implementation of the data base. In the absence of this trade reorganization, the Department of Commerce is in the best position to assume the task. However, splintered resources existing in Commerce, U.S.T.R., International Trade Commission, State, etc., must be coordinated for better utilization.

COST: Government should consider a charge for the use of the data. This would defray administrative and personnel costs, as well as assure that the information is a resource that is wanted in the marketplace.

o CONTENT OF THE DATE BASE

It is absolutely critical that information on file be credible and relevant to the industrial decision-making process. For this reason, it is essential that the form, format, and substance of the interactive data base be developed in conjunction with industry.

A guiding principle should be to "keep it simple," in order to minimize cost associated with direct access capability, and to assure that the information tool is useable and accessible to the target market. Maximum effort should be made to exploit the useability of information that is already available, and to design a system with a longer-term perspective. This should include the objective of harmonization of data from multiple sources. A possible approach would be to provide a menu of available files from which the user could access information contained in a variety of data bases existing in several government agencies, for example, the Departments of Commerce, Treasury, State Labor, U.S.T.R., etc. In addition, the technical analysis should consider a variety of different delivery mechanisms, including an on-line terminal display, printed summary, and/or the possibility of downloading data for company modeling. Another possible approach might be to consider a cross-referencing of other sources of information, possibly in both the public and private sectors.

Broadly speaking, information on file would include a organized by industry sectors and country markets. It should be developed following extensive private sector consultation and might include such things as:

COUNTRY DATA:

- o Economic/Demographic
- o Business Practices (do's, don't's, must's, can't's)
- o Tariffs, trade/barriers/incentives

BUSINESS CONTACTS:

- o Customers
- o Consultants (legal, market, financial)
- o Commercial and government contacts (U.S. and Foreign-based)
- o Trade Associations

INDUSTRY/PRODUCT:

SECTOR BUSINESS

DATA:

- o Market Size
- o Current Opportunities
- o Applicable Specifications and Standards
- o Competitors
- o Channels of Distribution

A "cross-reference" could also be included in the file .k

would direct the user to the location of other applicable information such as bilateral tax treaties, existing export controls, etc. In addition, the "cross-reference" would be extremely useful if it identified additional public and private references which could assist in implementation, once the individual company conducts its analysis and assessment of the market and trade opportunities. Such a "cookbook" could include references to export trading companies, export management companies, banks, countertrade opportunities, etc.

WHO SHOULD PARTICIPATE FROM INDUSTRY?

Since the focus of this recommendation is on individual company decision-making as the key entity in the competitive process, it is important that industry be a significant contributor to the design and implementation of the data base. There are a number of industry advisory mechanisms that currently exist and should be utilized for private sector consultation. Of prime importance is that a good cross section of industry be well-represented at appropriate levels in order to provide the most valuable input.

It is believed that trade associations and multi-association ad hoc groups are the best vehicle available. They provide an excellent means to sample a wide cross section of industrial opinion and should represent the primary source of participation and consultation from the private sector. Maximum outreach to both small and large non-exporting companies is essential.

Other industry advisory mechanisms, such as the President's Export Council, and Trade Advisory Committees (on Policy, Negotiations, Sectors, Defense, etc.), should also be considered for consultation.

PROJECT MANAGEMENT AND IMPLEMENTATION

Responsibility for evaluating the technical feasibility and long-term cost versus benefit of this project should be assumed by the Department of Commerce, which already has the responsibility for compiling data on trade and manufacturing. The multi-stage implementation proposal envisioned here should include an analysis of existing resources, recommendations for data harmonization, assessment of the optimal delivery mechanisms (e.g., local commerce offices, private sector vendors, direct access via personal computers, etc.), recommendations for communicating the new capability and for training industry on its use, and a proposal for initial data base capability with an outline of future refinements. The project proposal should include a delineation of issues, budget requirements, responsibilities, and a phased timetable for early implementation with future milestones.

It is important that private sector involvement and consultation be a continuing ingredient as the proposal is designed and implemented. Involvement of the PCIC Strategy Committee would also be appropriate to further investigate other strategic,

logistic, and technical issues relative to data base development and implementation. This could provide a vehicle for continued involvement of the PCIC, and a project focus oriented toward the broadest possible strategy objectives for industrial competitiveness.

While the primary objective of this recommendation is to enhance industry decision-making relative to trade opportunities, it is likely that there will be other potential benefits as well. For example, better government data will also enhance the capability of private sector data suppliers, such as consultants and forecasters, to serve their markets better. This group should also be asked to provide input to the project in order to minimize concerns relative to government competition in the information services market, and/or consider using these suppliers to develop the applicable software and market the information.

BACKGROUND AND ANALYSIS

Currently, only one percent of U.S. industry is responsible for eighty percent of our exports. Many small companies lack the information, resources, and capabilities to vigorously explore existing opportunities. Even a small increase in the number of U.S. companies competing internationally would substantially impact export trade volumes and penetration of international markets.

The General Accounting Office staff study concluded that the major impediments to be overcome in order to induce more small businesses to become exporters include: (1) little or no knowledge of export markets or the export process; (2) a preoccupation with the large domestic market; and (3) a fear that exporting is too risky, too complex, and beyond their capabilities.

The administration has stated that "existing trade promotion efforts must be conscientiously targeted to small business to help them gain access to international markets." The chairman of the President's Export Council has urged an aggressive export strategy that encourages more firms to start exporting, thereby broadening the export base.

Competition on an international scale occurs between different companies, not between countries. A key ingredient in stimulating consideration of trade opportunities by an individual firm would be more readily accessible and understandable market information. While many U.S. firms already have impressive intelligence about currently served markets, they may lack information about new markets, which is needed to develop and implement appropriate market penetration strategies.

Current government research capabilities are spread between numerous departments and are never really consolidated into pertinent, timely, accessible data. (See table 1 for summary of selected existing capabilities.) The amount of data available is not nearly as important as its quality, relevance, and effectiveness!

Some major U.S. firms can afford to compile basic information about foreign industry sectors in order to make decisions about exporting opportunities. However, most companies rely very heavily on publicly available information, much of which is compiled by these various government departments.

One major theme of testimony from 125 witnesses before the House Subcommittee on Economic Stabilization (representing a wide spectrum of opinions from business, labor, academia, the financial community, and government) was that we are "losing the ability to organize knowledge for action." The committee report identifies the fact that "government data is not organized and systematically brought to the attention of decision makers - public and private."

In a detailed study of "the market for government data bases sold through commercial firms," Frost and Sullivan concludes that "U.S. government data is underutilized outside the government itself." J. Timothy Sprehe of the Office of Management and Budget echoes that conclusion in his statement to the American Society for Information Science that "the great volume of statistics produced by the federal government are seriously underutilized."

Agencies of the federal government, and federally-supported institutions, produce an estimated 20 percent of the data bases created in this country. However, "vast reservoirs of information within the federal government are not adequately disseminated to those who could make use of it." One reason for this is that few government agencies have an identifiable budget for data access activities or personnel to support it. Additionally, there is a lack of knowledge by many would-be vendors and users about its availability.

Accordingly, this proposal to the President's Cabinet Council would be intended to represent only one possible action to increase export promotion efforts, particularly those targeted to small businesses and non-exporters. Improvement in the organization and distribution of the already extensive government-produced data would provide critical, early information to individual companies and enhance their ability to analyze and assess trade opportunities; and later to secure information on how to proceed.

Such analysis at the micro-economic level is oriented toward the decision-making process of the individual company. The proposal seeks to facilitate free market forces by removing disadvantages facing U.S. firms, rather than attempting to erect a barrier against foreign companies, or establishing government industry targeting. It seeks to stimulate a more global perspective on the part of U.S. manufacturers; that is, to develop the skill to assess new international opportunities, while also evaluating the impact of foreign competition on domestic markets. The result should be a coherent strategy to respond to both.

Additionally, on the macro-economic level, the government itself would also be a major beneficiary. Improved interagency data access and data harmonization would provide a powerful enhancement to the government analytic capability for public policy-making.

QUESTIONS FOR DELIBERATION

Prior to submission to the Cabinet Council, the International Trade Committee and the PCIC thoroughly discussed the following issues relative to this proposal:

- Some have argued that improved industry trend information would lead to increased pressures for protectionism. What is the "fine line" between an information resource on sectoral competitiveness and central industrial planning or targeting? Is this an appropriate role for the government?
- Will the availability of better information actually influence industry export decisions? This has been an underlying premise of the data base proposal.
- Does industry really need an interactive computer capability? Would it be sufficient to simply recommend an improvement in the coordination and communication of our current delivery systems and existing resources?
- What should the relationship be between this effort and already existing services in the private sector (economic forecasters, consulting services, etc.)?
- How massive is this project? Are there any parameters for payback which should be established in order to determine whether the cost structure is an impossible deterrent?
- Should personnel assignments to U.S. embassies abroad be further reviewed to include more marketing specialists and strengthened to provide a more effective "first line" for generating information relevant to market opportunities for U.S. products abroad?

TABLE 1
SELECTED U.S. GOVERNMENT
INDUSTRY INFORMATION RESOURCES

1. INDUSTRY ANALYSTS

- o Dept. of Commerce
 - International Trade Administration
- o U.S. International Trade Commission (USITC)
 - Bureau of Industries
- o Central Intelligence Agency (CIA)
- o Office of the U.S. Trade Representative

2. COUNTRY SPECIALISTS

- o Dept. of State
 - Foreign Service Officers
- o Dept. of Commerce
 - Foreign Commerce Officers
- o Dept. of Agriculture
 - Attaches
- o CIA

3. DATA SOURCES

- o Dept. of Treasury
 - Customs Bureau
- o Dept. of Commerce
 - Census Bureau
 - Bureau of Economic Analysis
- o U.S. International Trade Commission
- o Dept. of State

SOURCES

1. Efforts to promote Exports by Small Non-Exporting Manufacturers, General Accounting Office, January 18, 1983.
2. Forging An Industrial Competitiveness Strategy, Hearings by the Subcommittee on Economic Stabilization of the Committee on Banking, Finance, and Urban Affairs - House of Representatives - November 1983.
3. "An Untapped Resource: Government Data Bases," Infosystems, July 1982, Victor Block, Washington Editor.



PRESIDENT'S COMMISSION ON **Industrial Competitiveness**

John A. Young
Chairman

June 4, 1984

To: Cabinet Council on Commerce and Trade

From: John Young

Subject: Recommendations approved by the President's Commission on Industrial Competitiveness meeting in Detroit, May 1st.

Attached are the six recommendations approved by the President's Commission on Industrial Competitiveness on May 1, 1984. Two recommendations concern international trade and the remaining four concern human resources. The issues are: The Foreign Sales Corporation Act; Trade Law Revision; Labor Management Cooperation; Engineering Education; Partnerships in Education and Education Technology.

The Commission has developed 14 recommendations to date for CCCT consideration.

Attachments: Summary of Recommendations
Issue Papers (Recommendations 9 through 14)

Summary of Recommendations

INTERNATIONAL TRADE

1. The Foreign Sales Corporation Act

The President's Commission on Industrial Competitiveness recommends enactment of the Foreign Sales Corporation Act as supported by the Administration and under review in Congress (S. 1804 and HR. 3810).

2. Reform of Trade Law Administration

Dumping and Subsidies Remedies

Streamlining Procedures: Parallel antidumping (AD) and countervailing duty (CVD) investigations dealing with the same products be carried out concurrently. Joint petitioners be permitted to have standing to file AD and CVD requests for investigations so that a coalition of firms, unions and trade associations might be allowed to file together.

Clarification of Injury Definition: The statutes need to be amended to define threat of injury and allow a clear cause of action.

HUMAN RESOURCES

3. Labor-Management Cooperation

The competitiveness of U.S. industry depends largely upon its ability to become increasingly productive. In today's marketplace, characterized by vigorous international competition and rapid technological innovation, that productivity is largely a function of labor-management cooperation. Adversarial practices based on an outmoded view of production must give way to the development of collaborative relationships characterized by trust, open communications, and worker participation. While recognizing that labor and management bring different viewpoints to the business enterprise, there must also be the recognition that the economic fate of both labor and management are intertwined with that of the enterprise.

The Commission hereby endorses those cooperative efforts already underway which seek to implement these principles. Additionally, the Commission urges American labor and management to move boldly to establish new cooperative relationships which will maximize productivity through involvement of employees, and their elected representatives, in decision-making in the workplace, as well as encouraging participative management throughout the organization.

4. Engineering Education

The Commission recommends that the National Science Foundation, and other Government R&D agencies such as DOD and NASA, provide a program of stipends, of adequate size, for graduate students in engineering.

The Commission endorses the Presidential Young Investigators Award program, and recommends that it emphasize areas of engineering that face faculty shortages, and that it be directed at outstanding engineers who have recently completed or are about to complete their graduate studies and who therefore face the choice between remaining in academia or entering industry.

The Commission endorses the Administration's proposed 22% increase in the National Science Foundation's FY 85 engineering research budget and recommends similar emphasis in the future.

The Commission believes that the emphasis that the Administration is now placing on equipment and instrumentation is long overdue and should be continued, if not accelerated, in future years to compensate for more than a decade of neglect. The Commission also recommends that much more emphasis be placed on the support required for maintenance and effective use of modern instrumentation.

The Commission endorses the National Science Foundation's new program to develop on-campus, cross-disciplinary, engineering research centers, and recommends that after FY 85, the program grow and expand markedly.

5. Partnerships In Education

The Nation's high dropout rate threatens the economic health of the country with the potential development of a permanent underclass. To counter this threat to our ability to be competitive, the Commission endorses the proposal that a national "partnership" between the Federal Government and the private sector be established.

The purpose of this partnership would be to replicate the approach of integrated service delivery in schools similar to that utilized by Cities in Schools. This would be accomplished through the funding of technical assistance and the training of local staff to implement and coordinate local programs. Additionally, through this partnership, the "adoption" of individual schools by corporations should be encouraged.

The Commission further recommends that the President establish a task force comprised of representatives of relevant Federal agencies interested corporations and private sector organizations to implement this partnership.

6. Education Technology

The use of computers in elementary and secondary education may offer substantial promise for improving the quality and productivity of education. For this potential to be realized, however, quality educational software must be available. High development costs, lengthy development time, and a fragmented education market have been among the contributing factors impeding development of good software. To facilitate the development and use of effective software which employs the computer's capabilities to interact with the learner, the Commission recommends:

- Sustained Federal support for a new program of basic and prototype research funded through the National Science Foundation and the U.S. Department of Education. By providing support for the research underlying software development and identifying those approaches which promise the most effective results, the Federal Government will help to remove a major barrier which currently exists to the development of quality software by industry.

- Teacher training in the use of computers and the capabilities of quality software. The training is needed for teachers in all fields to increase the sophistication of school systems in demanding quality software from producers. States should be encouraged to provide such training, while the Federal Government should aid in these efforts by increasing its dissemination of information on the effectiveness of available software.

THE FOREIGN SALES CORPORATION ACT

RECOMMENDATION #9

THE PRESIDENT'S COMMISSION ON INDUSTRIAL COMPETITIVENESS RECOMMENDS ENACTMENT OF LEGISLATION TO ESTABLISH FOREIGN SALES CORPORATIONS (FSC) TO REPLACE THE EXISTING DOMESTIC SALES CORPORATIONS (DISC) LEGISLATION TO PRESERVE THIS INCENTIVE.

ISSUE

THE DOMESTIC INTERNATIONAL SALES CORPORATION (DISC) TAX DEFERRAL ON EXPORT EARNINGS WAS ESTABLISHED IN 1971 AS AN INCENTIVE FOR U.S. FIRMS TO EXPORT. IN 1981, THE GENERAL AGREEMENT ON TARIFFS AND TRADE (GATT) COUNCIL ADOPTED A GATT PANEL CONCLUSION THAT THE DISC IS INCONSISTENT WITH THE GATT. IN 1982, THE UNITED STATES ANNOUNCED TO THE GATT THAT LEGISLATION WOULD BE PROPOSED IN THE U.S. CONGRESS TO REPLACE THE DISC WITH A GATT-COMPATIBLE ALTERNATIVE. THE ADMINISTRATION SUPPORTS THE EFFORTS OF CONGRESS, WHICH HAS HAD THE ISSUE UNDER REVIEW IN THE BILLS S. 1804 AND H. R. 3810, TO EFFECT THIS CHANGE.

IT IS IMPERATIVE THAT ACTION BE TAKEN TO SUPPORT PASSAGE OF LEGISLATION ESTABLISHING THE TYPE OF CORPORATION THAT IS ENTITLED TO EXPORT INCENTIVES TO REPLACE THOSE NOW PROVIDED BY THE DISC. AT THE SAME TIME, THE FOREIGN SALES CORPORATION CHARACTERISTICS MUST BE SUCH THAT THEY ARE LIKELY TO BE REGARDED AS CONSISTENT WITH GATT RULES. SUCH A FOREIGN SALES CORPORATION MUST HAVE A DEMONSTRABLE FOREIGN PRESENCE AND MEET OTHER RELATED REQUIREMENTS IN ORDER TO BE TAXED ACCORDING TO THE PRINCIPLE OF TERRITORIALITY. THE FOREIGN SALES CORPORATION PROPOSED IN BILLS BEFORE CONGRESS IS DESIGNED TO QUALIFY BEFORE THE GATT AS A REPLACEMENT FOR THE DISC TAX INCENTIVES. FAILURE OF CONGRESS TO REACH AN ACCORD IN THE CONFERENCE COMMITTEE JEOPARDIZES THE REPLACEMENT OF THE DISC AND MAY PROVOKE FURTHER DIFFICULTIES IN THE GATT.

BACKGROUND

The DISC was enacted in 1971 to give U.S. exporters some of the tax advantages enjoyed by:

- (1) foreign exporters whose governments return their value added tax payments on goods produced for export and may have other export benefits available under their territorial tax systems, and
- (2) U.S. multinational companies whose foreign subsidiary earnings are generally insulated from U.S. taxes until repatriated.

The DISC has been a successful export incentive for firms of all sizes. The number of active DISCs has grown from less than 3,000 in 1973 to 8,665 in 1981. The Treasury estimates that the DISC incentive created between \$7 and \$11 billion in extra exports in 1981. The direct revenue loss in tax deferrals for that year was \$1.65 billion. Every \$1.00 in lost revenue generated \$4.20 to \$7.00 in additional exports.

GATT CONTROVERSY

The DISC tax deferral benefit has been attacked in the General Agreement on Tariffs and Trade (GATT) as an illegal export subsidy. The United States announced to the GATT in October 1982 that legislation would be proposed in the U.S. Congress to replace the DISC with a GATT-compatible alternative. Therefore, the United States seeks a substitute that meets the following criteria:

- compliance with GATT rules,
- no greater revenue cost than the current DISC,
- benefits similar to the DISC for current users, and
- special provisions for the needs of smaller exporters.

The result is the proposed Foreign Sales Corporation Act which passed the Senate on April 13, 1984 as part of the Deficit Reduction Tax Act of 1984. Although the FSC is not contained in the House Tax Bill, there is a good chance that it will be included when the House and Senate Bills are reconciled in the upcoming House-Senate conference committee negotiations.

FOREIGN SALES CORPORATION PROPOSAL

The Administration's Foreign Sales Corporation proposal would allow the establishment of Foreign Sales Corporations, which typically would be foreign incorporated subsidiaries of U.S. parent corporations engaged in exporting. To qualify as a FSC, a corporation would have to be organized under the laws of a jurisdiction outside the U.S. customs area, including U.S. possessions other than Puerto Rico, and meet certain foreign presence requirements.

The tax rules of the proposal would apply to the export income of a FSC if it were managed outside the United States and if some economic processes of

the transaction took place outside the United States. In addition, the proposal would apply to the export income of a small FSC attributable to up to \$5 million of export receipts whether or not its management or economic processes were foreign. Furthermore, the proposal would treat accumulated DISC income as having been previously taxed, so that tax on those amounts would be forgiven.

CONFORMITY TO GATT

The FSC proposal is a territorial system of taxation -- exempting U.S. taxation only for income arising from activities performed outside the U.S. customs territory-- and is, therefore, legal under the rules of the GATT. Accordingly, the United States proposes that the membership of the GATT accept the FSC proposal as a legitimate substitute for the DISC. Although the European Community may want to retaliate for past DISC activities and may raise technical objections, the United States has tried to shape the FSC to be an effective response within the councils of the GATT.

U.S. LABOR POSITION

Among labor union leaders, the AFL-CIO has made clear its opposition to the FSC and would prefer a termination of the DISC itself. Their opposition is based on concerns about the equity and effectiveness of this tax incentive, especially when budget deficits are projected to be high in the years ahead. An AFL-CIO statement of February 17, 1984 points out, for example, that out of 8665 DISCs active in 1981, over a third of the benefits went to 26 DISCs--organizations that the AFL-CIO presumes would continue to export in the absence of this incentive. According to AFL-CIO estimates, "terminating DISCs would generate a cumulative addition of \$10.9 billion in federal revenues in fiscal years 1985 through 1989."

BUSINESS SUPPORT

The business community, whose representatives were continuously consulted during the process of Administration formulation of the legislation, strongly endorses swift passage of Foreign Sales Corporation Act. They argue that whatever the decrease in tax revenues due to FSC, exports increase by a multiple of that sum to reduce our trade deficits and generate additional jobs for Americans.

TRADE LAW REVISIONS

I. RECOMMENDATION #10

PARTS A, B and C

As part of its ongoing trade law reform effort, the PCIC recommends that the following technical changes be proposed for enactment in U.S. trade law dealing with countervailing duty (CVD) and antidumping duty (AD) investigations. The first two call for procedural changes and the third is definitional in that it seeks to make transparent the criteria currently used by the International Trade Commission in determining the existence of threat of injury.

These changes do not exhaust the potential improvements that might be identified. Rather, they represent some of the more important of a long list of needed changes in U.S. CVD and AD laws. The Department of Commerce, in participation with an interagency task force, has undertaken an examination of the CVD and AD laws and produced a far more extensive list of remedial changes which underscore the need for improvements in the laws.

Dumping and Subsidy Remedies

The PCIC recommends that:

- A. PARALLEL ANTIDUMPING (AD) AND COUNTERVAILING DUTY (CVD) INVESTIGATIONS DEALING WITH THE SAME PRODUCTS BE CARRIED OUT CONCURRENTLY.
- B. JOINT PETITIONERS BE PERMITTED TO HAVE STANDING TO FILE AD AND CVD REQUESTS FOR INVESTIGATIONS SO THAT A COALITION OF FIRMS, UNIONS AND TRADE ASSOCIATIONS MIGHT BE ALLOWED TO FILE TOGETHER.
- C. THE STATUTES NEED TO BE AMENDED TO DEFINE THREAT OF INJURY AND ALLOW A CLEAR CAUSE OF ACTION.

II. OVERVIEW

The Commission in recommending public initiatives to improve U.S. industrial competitiveness believes that the continued strength of the American economy must be a paramount objective of public policy. Because that strength enables the United States to exert diplomatic influence and project military power in the national interest, promoting economic strength as a national policy objective must be seen as equal (if not indeed superior) to relevant military, diplomatic and social objectives.

The PCIC Committee on International Trade and Marketing, while emphasizing overall policy objectives and broad areas for policy initiative or change, has tried in the following recommendations to point the Administration and the Congress toward some reasonable specific objectives and strategies to guide legislative efforts and administrative practices. The Committee continues to deliberate on additional recommendations that it will propose subsequently.

Principles of Trade Law

These and future proposed recommendations are being developed in accord with the following principles of trade law policy:

(a) U.S. producers should have access to foreign markets for their goods on a basis as favorable as that enjoyed by any other nation and be allowed to compete fairly with goods produced in the importing country.

(b) Where provided under the terms of U.S. trade law and international agreements, customs duties may be imposed to assure that imported goods do not enjoy subsidies or are not sold at less than fair value, thus giving them unfair competitive advantage.

(c) American firms and workers in industries where increased imports are a substantial cause of serious injury may be given temporary import relief and other assistance in order to improve their competitive posture or adjust to the competitive realities.

(d) Customs duties may provide a modest revenue source, but they should not be used to place imported goods at a marked competitive disadvantage.

III. DUMPING and SUBSIDIES REMEDIES

Streamlining Procedures

The PCIC recommends that:

- A. PARALLEL ANTIDUMPING (AD) AND COUNTERVAILING DUTY (CVD) INVESTIGATIONS DEALING WITH THE SAME PRODUCTS BE CARRIED OUT CONCURRENTLY.

Classical dumping or subsidized exports can be effectively met by the imposition of antidumping or countervailing duties assuming the administration of the laws provide timely and certain relief based upon a

common-sense causation test. Antidumping and countervailing duty investigations are long and complex with different functional responsibilities assigned to the Department of Commerce and the International Trade Commission. The decision to impose remedial tariffs is the result of their interrelated decisions. Timetables differ for the two agencies and the two types of investigations.

A legislative change should be proposed to provide that where AD and CVD investigations are initiated simultaneously, the International Trade Commission would normally conduct one injury hearing covering both proceedings. This practice would eliminate an unnecessary but costly aspect of current procedures. In such cases, the scheduling would follow the somewhat longer AD timetable to ensure that completeness of AD investigations are not jeopardized. Where investigations can be shortened in conformity with the law and without detriment to concerned parties, they should be so expedited.

- B. JOINT PETITIONERS BE PERMITTED TO HAVE STANDING TO FILE AD AND CVD REQUESTS FOR INVESTIGATIONS SO THAT A COALITION OF FIRMS, UNIONS AND TRADE ASSOCIATIONS MIGHT BE ALLOWED TO FILE TOGETHER.

This proposed legislative change would permit ad hoc industry-labor coalitions to have standing as interested parties to AD and CVD investigations. No valid purpose is served by denying standing to such coalitions. Such a change would overturn a 1981 court decision (Matsushita Electrical Industrial Co. v. United States). The Administration would support the proposed change.

Clarification of Injury Definition

The PCIC recommends that:

- C. THE STATUTES NEED TO BE AMENDED TO DEFINE THREAT OF INJURY AND ALLOW A CLEAR CAUSE OF ACTION.

The lack of a clear definition of the threat of material injury may cause domestic producers to be uncertain and delay taking action until the threat of injury becomes actual material injury.

The ITC has not been impeded from making affirmative determinations on the basis of threat of material injury, but what would be helpful to industry is an explicit codification or clarification of the current standards for threat of injury used by the ITC. Such a clarification would add to the effectiveness of this aspect of U.S. trade law.

This change need not involve an extension in the scope of the threat of material injury test beyond the current ITC practice. Neither would the change envision the determination of affirmative injury where the alleged threat is purely speculative, rather than real and imminent.

LABOR-MANAGEMENT COOPERATION

RECOMMENDATION # 11

THE COMPETITIVENESS OF U.S. INDUSTRY DEPENDS LARGELY UPON ITS ABILITY TO BECOME INCREASINGLY PRODUCTIVE. IN TODAY'S MARKETPLACE, CHARACTERIZED BY VIGOROUS INTERNATIONAL COMPETITION AND RAPID TECHNOLOGICAL INNOVATION, THAT PRODUCTIVITY IS LARGELY A FUNCTION OF LABOR-MANAGEMENT COOPERATION. ADVERSARIAL PRACTICES BASED ON AN OUTMODED VIEW OF PRODUCTION MUST GIVE WAY TO THE DEVELOPMENT OF COLLABORATIVE RELATIONSHIPS CHARACTERIZED BY TRUST, OPEN COMMUNICATION, AND WORKER PARTICIPATION. WHILE RECOGNIZING THAT LABOR AND MANAGEMENT BRING DIFFERENT VIEWPOINTS TO THE BUSINESS ENTERPRISE, THERE MUST ALSO BE THE RECOGNITION THAT THE ECONOMIC FATE OF BOTH LABOR AND MANAGEMENT ARE INTERWINED WITH THAT OF THE ENTERPRISE.

THE COMMISSION HEREBY ENDORSES THOSE COOPERATIVE EFFORTS ALREADY UNDERWAY WHICH SEEK TO IMPLEMENT THESE PRINCIPLES. ADDITIONALLY, THE COMMISSION URGES AMERICAN LABOR AND MANAGEMENT TO MOVE BOLDLY TO ESTABLISH NEW COOPERATIVE RELATIONSHIPS WHICH WILL MAXIMIZE PRODUCTIVITY THROUGH INVOLVEMENT OF EMPLOYEES, AND THEIR ELECTED REPRESENTATIVES, IN DECISION-MAKING IN THE WORKPLACE, AS WELL AS ENCOURAGING PARTICIPATIVE MANAGEMENT THROUGHOUT THE ORGANIZATION.

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THE COMMISSION HEREBY ENDORSES, AND RECOMMENDS THAT THE PRESIDENT RECOGNIZE, THOSE COOPERATIVE EFFORTS ALREADY UNDERWAY WHICH SEEK TO IMPLEMENT THESE PRINCIPLES. ADDITIONALLY, THE COMMISSION URGES AMERICAN LABOR AND MANAGEMENT TO MOVE BOLDLY TO ESTABLISH NEW COOPERATIVE RELATIONSHIPS WHICH WILL MAXIMIZE PRODUCTIVITY THROUGH INVOLVEMENT OF EMPLOYEES, AND THEIR ELECTED REPRESENTATIVES, IN DECISION-MAKING IN THE WORKPLACE, AS WELL AS ENCOURAGING PARTICIPATIVE MANAGEMENT THROUGHOUT THE ORGANIZATION.

ISSUE

The challenges of international competition, slow growth in productivity, and technological changes in the workplace are producing pressures on both labor and management to alter traditional adversarial relationships in favor of more cooperative approaches. The interrelationship between product competitiveness and the optimal utilization of human resources is becoming increasingly evident. Fundamental changes in attitudes and relationships are required if labor and management are to achieve enhanced productivity and competitiveness.

BACKGROUND AND ANALYSIS

The search for improved labor-management relations -- moving beyond traditional adversarial relations to long-term cooperation -- is a difficult, yet imperative, task. Within the past decade, under the pressures of declining productivity and the emergence of a world economy, the need to change the traditional adversarial roles of labor and management to more positive, problem-solving relationships has intensified.

Traditionally, labor-management relations have been dominated by two alternative modes of interaction: 1) adversarial, characterized by clear lines of separation between management, on the one hand, and workers and unions on the other; and 2) confrontational, marked by open hostility, communication breakdowns, strikes, and unilateral decisions by management. The adversarial/confrontational relationships which have historically characterized labor-management interaction are rooted in the nation's

experience of the Industrial Revolution. Faced with a workforce having minimal education and little prior industrial experience, a model of production was devised which subdivided work into a series of discrete tasks. Under this "scientific management" approach, management directed and labor responded; limited commitment was required by the worker, whose exercise of discretion was minimized in the production process. It was assumed that productivity could best be maximized by workers' de minimis participation. Additionally, management's highly hierarchical structure provided no incentive for upward communication in the organization.

Today, there is increasing pressure to discard these outmoded assumptions and to develop more cooperative relationships which reflect the realities of the current industrial climate. Neither management nor labor can any longer afford the consequences of the adversarial/confrontational modes of doing business. While adversarial relations may suffice to sustain collective bargaining, they are limited in levels of trust, cooperation, and mutuality of goals. Effective collective bargaining will be enhanced in an environment characterized by increased trust and cooperation. Confrontational relations are counter-productive to the interests of all parties. Failure of management and labor to accept this challenge will likely result in a continuation of the counter-productive behaviors which have plagued organizations in the past, ultimately precluding the sustained attainment of high productivity and quality products. Additionally, management will lose the benefit of the skills and creativity of workers who know their jobs better than anyone in their organization.

The growing movement to establish and sustain lasting forms of labor-management cooperation within major corporations in key industries is clear. This growing movement reflects the deepening concern over adverse economic trends, the persistent rise in unit production costs, growing foreign competition in U.S. markets, the need to adapt to rapidly changing process innovations, the outsourcing of American production, and the structural changes in the economic base of the industrial heartland. In the face of these changes, the current industrial relations system has not fared well. Inflationary wage increases in industries facing stiff international competition can no longer be passed on to consumers without serious ramifications. To function in a free trade environment, management has been forced to seek new approaches to managing.

Similarly, the changing nature of the work force, with better educated workers who want a greater voice in managing their jobs and who have more to contribute than ever before, has generated significant impetus for change among labor. The strong, visible link between survival of the enterprise and the employment security of workers and managers has reinforced the need and the value of such cooperation.

Cooperation between labor and management takes many forms. Typically, it has involved the formation of joint committees or councils, augmented in some situations by shop floor problem-solving teams. The term "labor-management committee" encompasses a great variety of arrangements, reflecting different purposes and situations. Each type differs in its agenda, methods of operation, and relationship to the collective bargaining process. Despite their diversity, these cooperative efforts have in common the recognition of mutuality of interests, joint problem-solving, and the goal of increased worker participation in most facets of the enterprise.

The purpose of this increased participation is to improve the economic results of the enterprise (productivity and profitability) so that employment security is strengthened; the organization engages its total human resources to remain competitive and strong. These mechanisms reflect the recognition that labor and management have a common interest not only in the survival and growth of their firm, but also in their industry as a whole, in the community in which they are employed, and in the national economy which affects their general welfare. It is this recognition which can provide the much-needed impetus for improved cooperation in the legislative process, as well, to assure that legislation affecting health and safety in the workplace is effective, yet sensitive to the goal of increased productivity.

Cooperative relations have been achieved in many industries, companies, communities, and in literally thousands of plants across the country. Some of the key industries in which cooperation is to be found include the auto industry, airlines, steel, retail food, telephone, ship building, construction, health care, apparel and textiles. Among the companies leading the effort are American Airlines, Bethlehem Steel, Jones and Laughlin, National Steel, Ford, General Motors, Westinghouse, AT&T, Firestone, Xerox, Kroger, Safeway, Honeywell, General Electric and the Postal Service. The unions who have participated in and supported such cooperation include the United Auto Workers, United Steel Workers, Communication Workers of America, Teamsters, retail food unions, United Rubber Workers, IBEW, IUE, construction craft unions, the Machinists, and AFSCME.

Through these efforts, organizations have realized increased productivity and product quality; the development of new problem-solving capabilities; greater commitment by workers to their firms; lower turnover and absenteeism, and fewer work stoppages. Workers have realized increased job satisfaction, personal development, and employment security by being able to use their knowledge and skills more effectively in the workplace.

Despite this record, and the acceleration of this trend in the past decade, the cooperative model of labor-management relations remains the exception rather than the rule. The historic suspicion between management and unions has provided a difficult environment in which to cultivate a climate of cooperation. For this climate to change, the development of trust between the parties is imperative. Several conditions are key to the building of that trust: 1) both labor and management must make appropriate disclosures in a timely fashion; 2) there must be openness in their relationship; 3) the parties must refrain from taking advantage of each others' weaknesses; and 4) both labor and management must exhibit a willingness to risk. Management and unions, alike, must develop a new breed of leader who is open to change, willing to cooperate, and committed to cooperation as a better and more effective way to work.

These changes do not come easily. Born of necessity and forged under severe economic conditions, cooperative arrangements have opened a new dimension in the capacity of unions, management, workers, and supervisors to meet the challenge of competition and improve employment security. Where such arrangements have flourished, they have done so in an environment in which workers have a renewed sense of commitment to their employers and employers, in turn, are committed to the employment security

of their employees as well as to the overall success of the enterprise.

ENGINEERING EDUCATION

RECOMMENDATION # 12

1. THE COMMISSION RECOMMENDS THAT THE NATIONAL SCIENCE FOUNDATION, AND OTHER GOVERNMENT R&D AGENCIES SUCH AS DOD AND NASA, PROVIDE A PROGRAM OF STIPENDS, OF ADEQUATE SIZE, FOR GRADUATE STUDENTS IN ENGINEERING.
2. THE COMMISSION ENDORSES THE PRESIDENTIAL YOUNG INVESTIGATORS AWARD PROGRAM, AND RECOMMENDS THAT IT EMPHASIZE AREAS OF ENGINEERING THAT FACE FACULTY SHORTAGES, AND THAT IT BE DIRECTED AT OUTSTANDING YOUNG ENGINEERS WHO HAVE RECENTLY COMPLETED OR ARE ABOUT TO COMPLETE THEIR GRADUATE STUDIES AND WHO THEREFORE FACE THE CHOICE BETWEEN REMAINING IN ACADEMIA AND ENTERING INDUSTRY. THE COMMISSION ALSO URGES STATES TO PROVIDE ADEQUATE SUPPORT FOR FACULTY SALARIES TO ASSURE THAT THESE ARE SUFFICIENTLY COMPETITIVE TO ENABLE UNIVERSITIES TO RETAIN FACULTY IN DISCIPLINES PLAGUED BY SHORTAGES.
3. THE COMMISSION ENDORSES THE ADMINISTRATION'S PROPOSED 22% INCREASE IN THE NATIONAL SCIENCE FOUNDATION FY85 ENGINEERING RESEARCH BUDGET AND RECOMMENDS SIMILAR EMPHASIS IN THE FUTURE.
4. THE COMMISSION BELIEVES THAT THE EMPHASIS THAT THE ADMINISTRATION IS NOW PLACING ON EQUIPMENT AND INSTRUMENTATION IS LONG OVERDUE AND SHOULD BE CONTINUED, IF NOT ACCELERATED, IN FUTURE YEARS TO COMPENSATE FOR MORE THAN A DECADE OF NEGLECT. THE COMMISSION ALSO RECOMMENDS THAT MUCH MORE EMPHASIS BE PLACED ON THE SUPPORT REQUIRED FOR MAINTENANCE AND EFFECTIVE USE OF MODERN INSTRUMENTATION.
5. THE COMMISSION ENDORSES THE NATIONAL SCIENCE FOUNDATION'S NEW PROGRAM TO DEVELOP ON-CAMPUS, CROSS-DISCIPLINARY, ENGINEERING RESEARCH CENTERS, AND RECOMMENDS THAT AFTER FY85, THE PROGRAM GROW AND EXPAND MARKEDLY.

ENGINEERING EDUCATION

RECOMMENDATION

1. THE COMMISSION RECOMMENDS THAT THE NATIONAL SCIENCE FOUNDATION, AND OTHER GOVERNMENT R&D AGENCIES SUCH AS DOD AND NASA, PROVIDE A PROGRAM OF STIPENDS, OF ADEQUATE SIZE, FOR GRADUATE STUDENTS IN ENGINEERING.

The goal of the program should be to attract and retain the very best young men and women in graduate schools in engineering. The program might come in the form of allowances for larger stipends for graduate students in agency research grants, or in the form of fellowships. In either case, the program should exhibit two characteristics: Its goal should be to attract high quality, rather than more, students; and the stipends should be large enough to make the prospect of graduate school a not unattractive option.

2. THE COMMISSION ENDORSES THE PRESIDENTIAL YOUNG INVESTIGATORS AWARD PROGRAM, AND RECOMMENDS THAT IT EMPHASIZE AREAS OF ENGINEERING THAT FACE FACULTY SHORTAGES, AND THAT IT BE DIRECTED AT OUTSTANDING YOUNG ENGINEERS WHO HAVE RECENTLY COMPLETED OR ARE ABOUT TO COMPLETE THEIR GRADUATE STUDIES AND WHO THEREFORE FACE THE CHOICE BETWEEN REMAINING IN ACADEMIA AND ENTERING INDUSTRY. THE COMMISSION ALSO URGES STATES TO PROVIDE ADEQUATE SUPPORT FOR FACULTY SALARIES TO ASSURE THAT THESE ARE SUFFICIENTLY COMPETITIVE TO ENABLE UNIVERSITIES TO RETAIN FACULTY IN DISCIPLINES PLAGUED BY SHORTAGES.

The goal of the Young Investigators Award Program is to attract and retain outstanding engineers in university faculty positions. The awards offer five-year grants, of up to \$100,000 per year, to 200 young scientists and engineers per year, to induce them to stay in academia rather than leave for better paying jobs in industry. To be successful, the program should focus on young Ph.D's who are completing or have recently completed their graduate studies and who are facing the choice between remaining in academia and entering industry. The program should not be directed at faculty with already-proven academic records, as a more traditional program might be, since they have already chosen to pursue academic careers.

3. THE COMMISSION ENDORSES THE ADMINISTRATION'S PROPOSED 22% INCREASE IN THE NATIONAL SCIENCE FOUNDATION FY85 ENGINEERING RESEARCH BUDGET AND RECOMMENDS SIMILAR EMPHASIS IN THE FUTURE.

The increased funding should support not only more grants, but grants of larger size that emphasize research of importance to industry; that provide for modern instrumentation; and that support teams of researchers. The specific fields of research so supported should be those that the engineering community — led by engineers from industry — believes will do the most to advance engineering in general, and the quality and productivity of American production, in particular.

4. THE COMMISSION BELIEVES THAT THE EMPHASIS THAT THE ADMINISTRATION IS NOW PLACING ON EQUIPMENT AND INSTRUMENTATION IS LONG OVERDUE AND SHOULD BE CONTINUED, IF NOT ACCELERATED, IN FUTURE YEARS TO COMPENSATE FOR MORE THAN A DECADE OF NEGLECT. THE COMMISSION ALSO RECOMMENDS THAT MUCH MORE

EMPHASIS BE PLACED ON THE SUPPORT REQUIRED FOR MAINTENANCE AND EFFECTIVE USE OF MODERN INSTRUMENTATION.

Across all R&D agencies, the Administration will invest more than \$400 million in research instrumentation in FY85. The problem has been neglected for so long, however, that this amount falls far short of accumulated university needs for instrumentation. Furthermore, keeping up with new technology is a continuing process, not one that can be solved once and for all. There is, therefore, a long term need for substantial federal support of university equipment, and operation and maintenance. All too often, large federal investments are made in major facilities, only to have the facilities lie unused for substantial fractions of available time for want of operation and maintenance support.

At the same time, the university community must recognize that instrumentation and facilities are integral to their overall research programs and should not be understated in research funding requests. Past practice of postponing acquisition of new equipment in favor of protecting research positions has contributed to this serious problem.

Federal funding for instrumentation comes in the form of set-aside programs, as well as increased support for instrumentation within research grant programs. Other things being equal, the Commission believes that the latter approach is preferable. Supporting instrumentation within research grant programs links funding of instrumentation to research priorities and allows researchers the discretion to decide how to allocate the funds.

5. THE COMMISSION ENDORSES THE NATIONAL SCIENCE FOUNDATION'S NEW PROGRAM TO DEVELOP ON-CAMPUS, CROSS-DISCIPLINARY, ENGINEERING RESEARCH CENTERS, AND RECOMMENDS THAT AFTER FY85, THE PROGRAM GROW AND EXPAND MARKEDLY.

The National Science Foundation developed the Engineering Research Centers program with the aid of the National Academy of Engineering. NAE recommended that the centers have two purposes: to contribute to the education of engineers at all levels, with emphasis on engineering practice and preparation for the team environment in which engineers work in industry; and, to conduct cross-disciplinary research on problems of importance to industry.

NAE emphasized that the program should be structured flexibly, and that different universities might well develop very different sorts of centers. But while the activities at the centers are likely to take different forms, each center should exhibit three common characteristics: first, each center should emphasize participation by industry scientists and engineers. Funding by industry would of course be welcome, but more important than funding is the active participation of industry scientists and engineers. Second, each center should focus upon problems of "system synthesis" — for example, problems underlying development of Computer Integrated Manufacturing Systems, biotechnology systems, and voice and data education, as well as research. NAE recommended that each center strive to "involve at least ten percent of its home institution's graduate (both masters and doctoral) students" and that they should have "a substantial impact on undergraduate engineering students and on continuing education." NAE also recommended that mechanisms be established to allow participation of colleges and universities that produce large numbers of engineers, but that

are not yet capable of organizing and managing such centers.

Ten million dollars has been included in the President's FY85 budget to start-up four to seven centers. But for the centers to achieve their ambitious purposes (e.g., involving ten percent of graduate students, and contributing to the understanding of problems of systems synthesis now confronting industry), their annual budgets will have to range between \$2.5 and \$5 million. Furthermore, in order for the centers to have a significant impact on U.S. engineering education and research, as many as 25 such centers may have to be established.

ISSUE

During the past several years, intense concern has been expressed over the state of our engineering education system, and how it ultimately affects the quality of the goods we produce, and the productivity of American industry.

There is a direct relationship between engineering education and industrial competitiveness. To compete we must produce goods that perform better, are priced lower, and have a higher quality than others that are available in the world market. To do this we need an ever expanding base of knowledge in science and engineering as a result of research; and the engineering talent that can develop superb designs as well as world class manufacturing techniques and processes.

The fundamental question is whether our engineering education system is producing the people and research results that industry needs now and in the future.

BACKGROUND AND ANALYSIS

This question is best addressed by considering four separate issues:

1. Engineering Graduates
 - a) numbers at bachelor's, master's, doctor's levels
 - b) mix among various disciplines
 - c) substance and content of education
2. Engineering Faculty
 - a) shortage
 - b) understanding of engineering practice
3. Engineering Research
 - a) level of support
 - b) specific areas being supported
4. Engineering Equipment
 - a) in undergraduate teaching laboratories

b) for graduate education and research.

1. Engineering Graduates

To begin the discussion of the numbers of engineers graduating in the United States, the following table is presented:

	1972	1982
Enrollment, Full Time Undergraduate	195,000	404,000
Enrollment, Full Time Graduate	36,000	51,000
Degrees Granted, Bachelor's	44,000	67,000
Degrees Granted, Master's	17,400	18,500
Degrees Granted, Doctor's	3,800	2,900

These figures suggest that the undergraduate pipeline has filled rapidly in response to the current demand. However, shortages still exist in selected fields (e.g., electronics, computers). In those areas, the demand of the marketplace is alleviating the problem somewhat—the number of bachelor's degrees granted in computer engineering was 7.5 times greater in 1982 than in 1972, while there has been a substantial decrease in the number of entering chemical engineering freshmen in rapid response to the declining job market.

The problem of mix among disciplines will be alleviated further as engineers in all disciplines will have a better knowledge and understanding about computers and electronics, and the demand for specialists in these fields will decrease.

The same is not true at the graduate level. The ratio of master's to bachelor's degrees has decreased from 0.39 to 0.28; and at the doctor's level the absolute number of degrees granted has declined by 25%—a number that does not tell the whole story because the number of United States citizens among graduate students has declined much more rapidly than the total.

Based on these data (as well as more detailed data for the intervening years and by engineering curriculum), one can reach the conclusions that:

- a) The shortage of engineers with bachelor's degrees is improving, but in specific areas, shortages continue;
- b) The mix among the various curricula will take care of itself, but somewhat slowly;
- c) There does not appear to be any adjustment in numbers at the graduate level (master's and doctor's), so that the existing shortages at these levels may well continue.

But what about the substance of what is being taught in our engineering schools today? For a period of time starting at the end of World War II, there was a tendency in our engineering schools to shift away from

engineering practice and toward engineering science. This shift coincided with the availability of large sums of Federal funds for basic engineering research and a simultaneous reduction in university-industry relationships. Thus, the best of our faculty, and therefore the best of our students, became far more interested in the science underlying engineering than in working on practical applications of the scientific results. At the same time more fundamental knowledge needed to be taught, and one by one the practical hands-on engineering courses and experiences gave way to theory. Moreover, the typical entering engineering student now comes with less practical experience than those of earlier periods. For all of these reasons, the distinction between scientist and engineer has become blurred. Much has been written to suggest that the recent decline in American quality and productivity is related, at least in part, to the decline in engineering practice at our colleges and universities as just described.

Many engineering schools have started to reverse this trend to bring renewed balance to the educational process. Some have invested heavily in the modern equivalent of the drafting table—the computer and the computer graphics screen; others have started efforts in manufacturing engineering, quality control, and the application of microelectronics. Several have turned once again to industry, not only for the funding available from industry, but especially to get the involvement and close relationship with the end user of engineering graduates and engineering research—the American manufacturing company.

All of these moves are in the right direction. However, there is a view held among many that the numbers of engineers produced who have both the essential fundamental understanding of physical and engineering principles, and the practical bent required of the working engineer are still very small.

The need for engineers with a practical bent exists not only at the bachelor's level, but at the graduate level as well. In fact, there is so much material to be covered even by the journeyman engineer that before too long the master's degree could and perhaps should replace the bachelor's degree. The demand for engineers with doctorates to go into industry is also increasing as a result of the complexity of much computer-based machinery and, of course, engineers with doctorates will continue to be in demand by industrial and government research laboratories as well as the universities.

In summary:

- a) The shortage and mix of engineering graduates at the bachelor's level are taking care of themselves.
- b) The shortage at the master's and doctor's levels is continuing.
- c) There is a need, at all levels, to provide renewed emphasis to produce engineers who can contribute as practical engineering professionals.

2. Engineering Faculty

The shortage of engineering faculty continues. The best estimates indicate that there are 1400 vacancies out of a total of 18000 engineering faculty in the United States (1982 data). This number has been fairly constant over the past several years, and stems from the larger engineering enrollments, the declining number of Ph.D. graduates, and the need for faculty to devote increasing amounts of time to research.

Another reason for the current faculty shortage is the fact that the engineering laboratories at our universities are generally much less well equipped than those in industry. As a result, many researchers believe that they cannot make the most significant contributions while on university faculties, and therefore choose a career in industry. This clearly has an effect, both on the quantity and the quality of engineering faculties.

Starting salaries for engineering faculty have become quite competitive with industrial salaries in recent years. On a 12-month equivalent basis these salaries now range between \$40,000 and \$45,000 for fresh Ph.D.'s, slightly higher than those paid in industry. Thus the faculty shortage is not directly related to starting salaries, but there may be an indirect relationship, based once again on the stipends paid to graduate students, on the overall economic payback of the Ph.D. (whether at the university or in industry), and on the esteem (or lack of esteem) in which faculty positions are held.

Faculty members at most institutions are encouraged to consult with industry, and at some institutions to have industrial ties with the work that they do on campus. In addition, at most institutions, there are some faculty members who have recent full-time experience in industry. Thus, there exists a basic understanding among many faculty members of engineering practice in industry today. Just how this is passed on to the students depends a great deal on the kind of work in which faculty members and their students are currently involved. If that work is engineering science-oriented, then that is what students will learn; if it is related to engineering practice, then the students will also be immersed in the practical aspect of engineering.

The involvement of engineering faculty in cutting edge research, as well as their close interactions with industry, also has a profound benefit to undergraduate education: Teachers who participate actively in what is going on in the world will make their lectures much more interesting and exciting, and will motivate their students accordingly.

An important issue for faculty to address, on a continuing basis, is how quickly to change the curriculum in response to changing discipline requirements and technologies used in industry. The matter of balance between an education that stresses the fundamentals, and one that stresses current applications is of key importance. The American education system, with its emphasis on fundamentals, has in the main produced engineers who are able to shift in a rapidly changing technological environment. Yet much of the thrust of this paper leads in a direction toward a more practical orientation. It is therefore essential to guard against the pendulum swinging too far in that direction.

An involved faculty, with experience in industry and at the cutting edge of

research, should help assure such a balance. Additional involvement by industry, on advisory councils, and through the ranks of adjunct faculty should also bring greater realism to university research and teaching.

In summary:

- a) There continues to be a shortage of engineering faculty.
- b) Many engineering faculty members are quite capable of involving students in the practical aspects of engineering.

3. Engineering Research

Traditionally in this country most of the basic and some of the applied engineering research has been conducted in our universities, and has been supported by the Federal government. Although there has been a recent trend toward more support by American industry, it is not expected that this support will reach more than about 20% of the total.

Much of the government support has been in the areas of engineering sciences rather than engineering practice. Equally important, the level of engineering support has not taken into account the fact that most research today is becoming "big research;" and that much of it can no longer be done by individual investigators, but must be done by teams of investigators.

There is also a question concerning the specific directions of research that should be pursued. In many fields of science (e.g., chemistry, physics, astronomy), there have been comprehensive studies sponsored by the National Science Foundation (and undertaken by the National Research Council of the National Academies) to help establish the direction for future research and, hence, National Science Foundation funding. The same has not been true in engineering. However, there is currently underway the beginning of a National Research Council (NRC) study to establish the need for engineering research, and to help set the directions for that research. This study should have an initial output in time for the fiscal year 1986 budget decisions.

In the meantime, there has been one specific study (after a comprehensive review of a number of fields of engineering) on the use of computers in design and manufacturing. This study was undertaken by the Academies' Committee on Science, Engineering, and Public Policy (COSEFUP), and led to a "research briefing" for the President's Science Advisor. One significant conclusion of that study is that there is a pervasive lack of the underlying basic knowledge in this field, and that a first priority should be to build a classical research community through increased government support of basic research at universities.

Although it is dangerous to generalize from one study, it seems fairly obvious that university research has fallen behind the applications of some of the newer technologies in industry; and that the development of classical research communities in the fields underlying today's industrial applications is essential if we are to continue to make progress.

It is important to note a significant difference in current initiatives

(undertaken by the NRC and COSEPUP) and many previous activities. There is a great deal of involvement by people from industry in the current activities, whereas this was not true in the past. Thus, the directions for the proposed engineering research directly reflect the needs of industry, and not merely the desire of the academics.

In summary:

- a) There needs to be an increase in the level of government support for engineering research, with special recognition of research teams involved in "big research," in addition to the support of individual investigators.
- b) The engineering community—from industry as well as from academe—needs to determine which areas of research will be those that are the most important to pursue, and advise the government accordingly.

4. Engineering Equipment

Not long ago there was a view that the equipment used in engineering education should be no older than the students who were using it. Not so, anymore. The equipment used today has three things in common: it is highly complex; it is difficult to maintain; and it becomes obsolete quickly, often in three to five years.

Undergraduate education today requires easy access to computers and computer-aided-design laboratories, to laboratory practice in the application of microprocessors, to all sorts of laboratory instrumentation that is driven by computers, and to the analysis of laboratory results with sophisticated computational capabilities. It is not unusual to have an investment of several millions of dollars (in hardware and software) in an undergraduate computer graphics laboratory, with annual operating expenses of the order of one million dollars.

At the graduate level, as pointed out earlier, much of the research is becoming "big research." This means that research equipment is becoming enormously expensive. A single piece of equipment may easily cost a million dollars, while a research team working on a related set of problems may require a laboratory investment of several millions. At the same time much of the laboratory space at our universities is out-of-date, and cannot provide the proper environment for today's sensitive instrumentation (e.g., cleanrooms, vibration isolation, etc.).

The costs of operations are also increasing rapidly with the advent of big complex pieces of equipment. No longer can faculty members and their graduate students keep all of the equipment in running order. Instead, substantial numbers of highly trained technicians are needed.

In summary:

- a) There is a need to upgrade, on a continuing basis, the equipment and instrumentation used in undergraduate teaching as well as that use in research.

- b) There is also a need to provide for the maintenance of that equipment and instrumentation, and for the space in which it is housed.
- c) The costs for doing this are generally beyond the "tuition budget," and beyond those provided for individual investigators.

PARTNERSHIPS IN EDUCATION

RECOMMENDATION # 13

THE NATION'S HIGH DROPOUT RATE THREATENS THE ECONOMIC HEALTH OF THE COUNTRY WITH THE POTENTIAL DEVELOPMENT OF A PERMANENT UNDERCLASS. TO COUNTER THIS THREAT TO OUR ABILITY TO BE COMPETITIVE, THE COMMISSION ENDORSES THE PROPOSAL THAT A NATIONAL PARTNERSHIP BETWEEN THE FEDERAL GOVERNMENT AND THE PRIVATE SECTOR BE ESTABLISHED.

THE PURPOSE OF THIS PARTNERSHIP WOULD BE TO REPLICATE THE APPROACH OF INTEGRATED SERVICE DELIVERY IN SCHOOLS SIMILAR TO THAT UTILIZED BY CITIES IN SCHOOLS. THIS WOULD BE ACCOMPLISHED THROUGH THE FUNDING OF TECHNICAL ASSISTANCE AND THE TRAINING OF LOCAL STAFF TO IMPLEMENT AND COORDINATE LOCAL PROGRAMS. ADDITIONALLY, THROUGH THIS PARTNERSHIP, THE "ADOPTION" OF INDIVIDUAL SCHOOLS BY CORPORATIONS SHOULD BE ENCOURAGED.

THE COMMISSION FURTHER RECOMMENDS THAT THE PRESIDENT ESTABLISH A TASK FORCE COMPRISED OF REPRESENTATIVES OF RELEVANT FEDERAL AGENCIES, INTERESTED CORPORATIONS AND PRIVATE SECTOR ORGANIZATIONS TO IMPLEMENT THE PARTNERSHIP.

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ISSUE

The nation is confronted with the development of a growing, permanent underclass resulting from the high dropout rate experienced by our secondary schools. This development has direct implications for industry's ability to be competitive, as increasing numbers of new entrants into the workforce lack the basic skills to be productive employees.

ANALYSIS AND BACKGROUND

In 1983, 27 percent of students enrolled in school dropped out. At this rate, our nation is producing in excess of a million dropouts annually. The dropout rate among minorities is substantially higher — estimated by the Census Bureau in 1981 to be as high as 40 percent among blacks and 43 percent among Hispanics. The significance of these figures becomes clear when one notes that in 1980, 40 percent of all black Americans were nineteen years of age or under, while the comparable figure for Hispanic Americans was 43 percent (compared with 30 percent for all whites). If minority students continue to leave school at current rates, the number of school dropouts is expected to increase significantly through the 1980's.

This situation occurs at a time when the workforce is undergoing substantial demographic change. By 1995, reduced birthrates following the post-war "baby boom" are expected to result in an absolute decline in the number of young workers (aged 16 to 24) by 3 million. However, an exception to this trend is to be found among minorities, as past high fertility rates and immigration result in a growing minority population. While the total 16 to 24-year-old population will experience decline, the percentage of minorities in the labor force is expected to increase from 12.7 percent to 14.3 percent. Thus, it is this fastest growing segment of

the young worker population which is most likely to drop out of school and enter the workforce without critical basic skills. Clearly, the competitiveness of U.S. industry is threatened when many of its young workers are so ill-prepared to enter the workforce.

Data collected by the National Center for Education Statistics (NCES) on students dropping out during the sophomore year or later make clear the severe economic implications of dropping out. In that survey, approximately 27 percent of male dropouts and 31 percent of female dropouts were found to be looking for work; only 60 percent of the males and 33 percent of the females were engaged in paid, full or part-time employment. The dropouts reported that when employed, the jobs they held were frequently low-skilled and low wage. Only about 14 percent of the males and 3 percent of the females reported doing skilled trade work. Additionally, within a short period after dropping out, approximately 25 percent of the males and 17 percent of the females reported participating in some type of training program outside of school.

The social costs of underlying statistics are substantial. As a group, dropouts are much more likely to become involved with drugs, school violence, crime, unemployment and welfare. Over 82 percent of the inmates in the prisons of North Carolina and Texas are dropouts. A disproportionate amount of juvenile crime is committed by dropouts; in Oakland, California, for example, an estimated 90 percent of all break-ins and burglaries are committed by jobless teenagers.

Studies have indicated that low socioeconomic background and poor academic performance are directly related to higher dropout rates. These findings were borne out by the NCES survey. Seventeen percent of the students having low socioeconomic status were dropouts, compared with five percent of students in the high socioeconomic category. The chief reasons cited by students in the survey for leaving school included "poor grades," "school was not for me," and "couldn't get along with teachers." Pregnancy and/or marriage plans were the top reasons given by females. (In this regard, it should be noted that 600,000 teenagers give birth annually; 80 percent of these drop out.)

To address the problem of school dropouts and stem this loss of human resources, new approaches are required. National attention must be focused on the severity of the problem, its causes and its consequences. Partnerships between the schools, government and the private sector need to be forged to systematically confront the problem. Additionally, our traditional approach to delivering services — which provides for fragmented service delivery through the funding of diverse, competing social services agencies — should be altered to emphasize coordination of services and the leveraging of scarce resources.

Cities in Schools (CIS), a national organization operating at 32 school sites in six cities, is one such program offering coordinated service delivery by bringing public and private resources into the schools. Local service and volunteer agency workers providing counseling, educational services, health, financial, legal, and employment assistance, team up with teachers in schools to work with small groups of students having serious attendance, academic, behavior or family problems. Cities in Schools attempts to change the pattern of school failure by assuring that students

come to school regularly, get the human services they and their families need, and improve academic performance. This process frees the teacher to teach, as well as providing a safe and productive school environment for both student and teacher.

As a consequence of Cities in Schools intervention, increases in attendance rates have been experienced in at least three of the cities in which Cities in Schools is operating. In Atlanta, where over half the CIS students had been dropouts prior to enrolling in the CIS program of alternative schooling, attendance rates increased to 82 percent. In Houston, students referred to CIS as juvenile offenders or truancy cases improved their attendance from a pre-CIS rate of 57 percent to 88 percent. In Washington, D.C., attendance increased to 91 percent, a dramatic improvement over its pre-CIS levels. Additionally, academic achievements were reported in a number of cities, including New York City, where CIS students gained an average of 1.5 years in reading achievement. These gains have been achieved through a leveraging of funds — every private dollar raised by Cities in Schools has leveraged an additional four dollars in staff and resources assigned to the program from school systems, service agencies, churches and businesses.

There is currently pending in the Administration a proposal which would establish a partnership between the Federal Government and the private sector to implement nationally this approach of integrated services in schools. As envisioned, this partnership would be comprised of: 1) representatives of key Federal agencies whose mandates most directly affect the youth at risk of dropping out; and 2) representatives of corporations, Cities in Schools, and other private sector organizations having particular interest in youth and the youth market. It would be the goal of this partnership to focus national attention on the dropout (and the related school violence) problem and to provide technical assistance to schools seeking to reach these high risk students. The public and private sector participants in the partnership would supply matching amounts of funding, totalling \$2 million, to be used over an 18-month period. These funds would be used to provide: 1) support for facilitators to give technical assistance to local communities and states to develop their own public/private partnerships; 2) support for the establishment of a Training Institute which would train local staff in implementing and coordinating local programs; and 3) support for evaluation and management information systems to chart the progress of local programs as they are implemented. Through these activities, local communities and states would be supported in developing programs of coordinated services, provided in the school setting to assist students and their families to address academic, behavior, and other problems. The establishment of such a coordinating mechanism, additionally, would provide a natural vehicle for aiding schools and businesses to link through Adopt-A-School. Thus, the proposed activities would utilize private sector support in focusing national attention on the problem, as well as encouraging private sector involvement with individual schools at the local level.

No funds under the proposal would be used to actually operate local programs. Instead, all dollars would be spent for dissemination, technical assistance, training, and quality control. Because Federal funds would not directly support program services, the danger of institutionalizing Federal funding would be obviated. The Training Institute, once established, would

be self-supporting through the charging of fees to trainees. Additionally, cities and states would be charged for the provision of ongoing technical assistance after the initial 18-month period expired.

Thus far, a commitment for partial funding support for the proposal has been received from the Department of Justice, and negotiations are underway with the Department of Labor for additional funds. Federal leadership is needed to establish this partnership and to coalesce private sector support for addressing this drain on our human resources.

EDUCATION TECHNOLOGY

RECOMMENDATION # 14

THE USE OF COMPUTERS IN ELEMENTARY AND SECONDARY EDUCATION MAY OFFER SUBSTANTIAL PROMISE FOR IMPROVING THE QUALITY AND PRODUCTIVITY OF EDUCATION. FOR THIS POTENTIAL TO BE REALIZED, HOWEVER, QUALITY EDUCATIONAL SOFTWARE MUST BE AVAILABLE. HIGH DEVELOPMENT COSTS, LENGTHY DEVELOPMENT TIME, AND A FRAGMENTED EDUCATION MARKET HAVE BEEN AMONG THE CONTRIBUTING FACTORS IMPEDING DEVELOPMENT OF GOOD SOFTWARE. TO FACILITATE THE DEVELOPMENT AND USE OF EFFECTIVE SOFTWARE WHICH EMPLOYS THE COMPUTER'S CAPABILITIES TO INTERACT WITH THE LEARNER, THE COMMISSION RECOMMENDS:

- 1) SUSTAINED FEDERAL SUPPORT FOR A PROGRAM OF BASIC AND PROTOTYPE RESEARCH FUNDED THROUGH THE NATIONAL SCIENCE FOUNDATION AND THE U.S. DEPARTMENT OF EDUCATION. BY PROVIDING SUPPORT FOR THE RESEARCH UNDERLYING SOFTWARE DEVELOPMENT AND IDENTIFYING THOSE APPROACHES WHICH PROMISE THE MOST EFFECTIVE RESULTS, THE FEDERAL GOVERNMENT WILL HELP TO REMOVE A MAJOR BARRIER WHICH CURRENTLY EXISTS TO THE DEVELOPMENT OF QUALITY SOFTWARE BY INDUSTRY.
- 2) TEACHER TRAINING IN THE USE OF COMPUTERS AND THE CAPABILITIES OF QUALITY SOFTWARE. THIS TRAINING IS NEEDED FOR TEACHERS IN ALL FIELDS TO INCREASE THE SOPHISTICATION OF SCHOOL SYSTEMS IN DEMANDING QUALITY SOFTWARE FROM PRODUCERS. STATES SHOULD BE ENCOURAGED TO PROVIDE SUCH TRAINING, WHILE THE FEDERAL GOVERNMENT SHOULD AID IN THESE EFFORTS BY INCREASING ITS DISSEMINATION OF INFORMATION ON THE EFFECTIVENESS OF AVAILABLE SOFTWARE.

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ISSUE

Education technology provides a mechanism for improving both the quality and productivity of the educational process in elementary and secondary schools. Despite the fact that schools are purchasing computer hardware at ever increasing rates (with approximately 325,000 computers in place in 1983), quality software for use in those computers is largely unavailable. How can the barriers to the development of quality educational software be overcome so that the potential benefits of computer use in schools can be realized?

ANALYSIS

There is general agreement today that rapidly changing technology and the explosion of information which accompanies it will transform the society in which we live, making it imperative that our schools produce students who are adaptable to change and who possess the analytical skills needed to solve problems which are as yet unimagined. At the same time, there is a need to increase the productivity of the educational process itself — in

1982, education-related costs rose 12 percent, while prices in the economy generally increased only four percent.

There is ample evidence that use of computers in schools can address these needs. Study-results show that at all levels of education, computer-aided instruction produces significant improvements in performance, more positive attitudes toward subject matter, and a reduction in time-on-task by as much as one-third. Computers in Education: Realizing the Potential, a report summarizing the findings of a recent research conference, provides examples of some of the educational opportunities presented by computers. Among them are: 1) tutoring — computers can provide individualized instruction, adapted to the student's own capabilities and current level of attainment; 2) exploratory learning environments — computers can be used to simulate, through animated displays, phenomena which would be difficult to replicate using real materials or in real time; 3) diagnosis — computers can be used to analyze the individual student's current understanding and misconceptions, aiding teachers in giving appropriate instruction; and 4) tools for students and teachers — the capacity of computers to perform calculations, function as automated dictionaries, provide information retrieval by accessing large data bases, and routinize daily record-keeping tasks, enables students and teachers to de-emphasize routine skills and focus on the development of analytical thought processes. It is this last area, particularly, which many experts in the field believe has the capacity to revolutionize the education process, redefining our basic expectations concerning what needs to be taught.

The availability of computers in the nation's elementary and secondary schools has increased markedly since 1980. In that year, there were an estimated 31,000 microcomputers in schools; by 1983, the figure had risen to 325,000 (a ten-fold increase). No firm data exist concerning the level of investment which this represents, but assuming that the cost per unit is somewhat in excess of \$1,000, a total investment in excess of \$400 million is probably realistic. At the same time, estimated expenditures on software by the schools are considerably lower - roughly in the \$30 to \$40 million range.

According to recent studies conducted under contract with the U.S. Department of Education, there are a sizeable number of commercially-produced educational software programs available — 1650 in math and science education, 500 in reading and writing, and 500 in foreign language instruction. However, the studies found that important gaps exist. Most software is designed for a single topic within a subject area, rather than providing comprehensive coverage of a curriculum. Subject area coverage is uneven. Gaps were noted in such fields as elementary science, secondary mathematics, and critical foreign languages. Additionally, the preponderance of software was routine drill and practice programs or functioned as "electronic textbooks", with less than five percent of the software found to make full use of the innovative learning capabilities of the computer. Not surprisingly, surveys of schools owning microcomputers have discovered that drill and practice and programming ("computer literacy") are the most frequent uses of technology in schools.

To move beyond these limited applications and realize the educational opportunities presented by computers requires the development of software which utilizes the potential of the computer's artificial intelligence in

interacting with the learner. Generally, such software is thought to be characterized by: 1) an ability to motivate students to learn; 2) a "branching" capacity, such that subject matter not grasped the first time can be presented again in different ways until understood by the student; 3) an ability to handle freely constructed responses, not just multiple choice answers; 4) an ability to reinforce the student's learning progress, giving cues and encouragement; and 5) an ability to respond appropriately to incorrect answers and track student progress.

The reasons why more sophisticated, comprehensive software has not been forthcoming in the education field are multiple. The education market is diverse, fragmented, and relatively limited in size. There are 16,000 school districts in the country and approximately 110,000 public and private elementary and secondary schools, each with different software needs and purchasing constraints. Teachers, who typically provide the impetus for computer purchases, are largely untrained in the new technology, and as a consequence, are ill-equipped to act as informed consumers demanding quality products. Additionally, the education market with its 325,000-plus computers, is substantially smaller than the five million-computer home consumer market.

The development costs of comprehensive software are high, with some estimates ranging as much as \$700,000 per package. The development of a package covering a single topic may require as much as six to nine months time, with years of development required for comprehensive curricula in a subject. At the same time, the funds available by schools for the purchase of software are limited -- typically, expenditures on equipment and materials comprise roughly .7 percent of a school district's budget. Additionally, the rapidly-changing nature of the technology creates a situation in which software obsolesces quickly (with science software estimated to have a half-life of roughly two to three years). With high development costs, rapidly-changing technology, and limited school budgets, developers have moved into the market cautiously. An added factor exacerbating the situation is software "piracy" (copying), which reportedly is common in schools and which has the effect of raising the price of individual packages as developers are able to sell fewer copies.

Officials in industry and government alike agree that to develop quality, comprehensive software which fully utilizes computers' interactive capabilities requires extensive additional research. Such research should focus on: 1) developing prototype instructional systems utilizing our knowledge of the learning processes involved in skilled reading, writing, math, and science; and 2) furthering our basic knowledge of these areas through basic cognitive research. This research should actively involve teachers and students in refining and transforming theoretical concepts into workable prototypes.

The Federal Government has been and should continue to be an important catalyst, supporting research as a means of stimulating the use of these technologies in the education field. By providing support for the costly research underlying software development and identifying those approaches which promise the most effective results, government can remove a major barrier to the development of quality software by industry. Once prototypes are developed, it will be considerably easier and cheaper for industry to devise applications appropriate to the education market. While

the National Science Foundation and the Department of Education are currently supporting some activities in this regard, particularly in the areas of science and math, NSF funding has been inconsistent (a "rollercoaster", to quote one observer) over recent years and funding by the Department of Education has been limited. The Department's major initiative in the area is a five-year, \$7.7 million contract with the Harvard-based Educational Technology Center, whose research agenda focuses on the role of computers in science, math and computer instruction. Such federal research initiatives should be augmented by additional funding delivered in keeping with a coherent, long-range program of prototype and basic research as suggested above.

In addition to the need for research, it is clear that one factor accounting for the inadequate quality of available software is the education system's lack of sophistication needed to demand quality. The demand for innovative software will be limited so long as teachers are unfamiliar with its use and distrustful of its capabilities. The possible solutions to this problem are numerous. Its recognition has led IBM, for example, to require teacher training as a condition of schools' participation in the company's \$12 million computer donation program. In schools receiving computer software and equipment, a critical nucleus of teachers is trained in the use of the technology in advance of the actual placement of computers in the schools. Additionally, a support network for the teachers is established to facilitate the school's adoption of the technology.

States should undertake systematic efforts to provide inservice training in the use of computers for teachers in all fields, through on-site training, workshops, and conferences. Training should stress the integration of computer-assisted instruction in the school curriculum, aiding teachers in adapting the technology to their own needs. In this regard, it should be designed particularly to give teachers an understanding of the characteristics of quality software, enabling them to discern among varying capabilities offered by the alternative coursewares available. In addition to emphasizing computer-related training, states should facilitate teacher receptivity to this medium by employing computer technology in training programs designed to upgrade teacher skills in other subject areas. The Federal Government can aid states in their teacher training efforts through increased dissemination of information on the effectiveness of available software. One aspect of this dissemination activity might be the establishment of software resource centers, similar to those operating in California, to provide teachers an opportunity to view and demonstrate available quality software before purchasing.

TAB B

WORKING GROUP ON INTELLECTUAL PROPERTY
COMMENTS ON INTELLECTUAL PROPERTY RECOMMENDATIONS
OF THE
PRESIDENT'S COMMISSION ON INDUSTRIAL COMPETITIVENESS

The President's Commission on Industrial Competitiveness at its February 3, 1984, meeting adopted four recommendations aimed at strengthening protection of intellectual property. The Cabinet Council on Commerce and Trade (CCCT) considered these recommendations at its March 7, 1984, meeting and referred them to the Working Group on Intellectual Property (WGIP) for comment. The Working Group greatly appreciates the efforts of the Commission and its recognition of the critical importance of intellectual property protection to the economic well-being of the United States.

The Administration has been active in all four areas considered by the Commission. At this time, the Working Group is prepared to endorse three of the four recommendations, as discussed below. Based on the recommendation of the Commission, the Working Group is now preparing a position paper on the fourth area for the CCCT's consideration.

The areas which the Administration has already considered are the Commission's Recommendations 3, 5, and 6. These recommendations are discussed below.

Recommendation #3 - Deter Product Counterfeiting.

"There has been a dramatic increase in recent years in commercial counterfeiting, i.e., the fraudulent practice of affixing someone else's trademark to a product which is superficially indistinguishable from its legitimate counterpart. The Commission urges the Administration to attack this problem by:

- Domestically, supporting legislation to make the trafficking in counterfeit trademarks with intent to deceive or defraud a criminal offense; and
- Internationally, supporting efforts to implement an anticounterfeiting code."

The Working Group welcomes the Commission's recommendation for concerted action in this area so crucial to U.S. businesses. The Administration, through the CCCT, has strongly endorsed an aggressive, two-pronged attack on counterfeiting. At its April 6, 1983, meeting, the CCCT determined that:

- Internationally, the United States should continue its efforts in the General Agreement on Tariffs and Trade (GATT) to develop an anticounterfeiting code.
- Domestically, the Administration should strongly support legislation strengthening criminal and civil sanctions for commercial counterfeiting along the lines of the "Trademark Counterfeiting Act of 1983."

In testimony on S.875, the "Trademark Counterfeiting Act of 1983," introduced by Senator Mathias, Assistant Secretary Mossinghoff reiterated the Administration's staunch support for prompt effective action to stem the tide of counterfeiting. This measure is on the Senate Judiciary Committee agenda for markup within the next few weeks. Its counterpart in the House, H.R.2447, introduced by Chairman Rodino, has been the subject of three hearings and is now being considered by the House Judiciary Subcommittee on Courts, Civil Liberties, and the Administration of Justice.

Internationally, the Administration is working diligently through GATT to develop an international anticounterfeiting code and is making a special effort to persuade other countries to accept the code. GATT is studying the problems of counterfeiting, and the Administration has submitted information for this study. GATT plans to complete the study this summer.

The Administration also has ongoing bilateral discussions on counterfeiting with three countries (Taiwan, Korea, and Singapore) to resolve particularly severe problems with those nations.

The Working Group believes that the support of the Commission for prompt effective action in this area will help the Administration achieve its objectives in ameliorating the problems of counterfeiting.

As a technical matter, the Administration prefers a definition of counterfeiting which includes counterfeit "goods and services," because the problem of counterfeiting may severely affect services as well as goods. In reporting S.875, the Senate Subcommittee on Patents, Copyrights and Trademarks adopted this definition.

The Working Group wholeheartedly agrees with the Commission that increased sanctions are necessary to solve the counterfeiting problem domestically, but would broaden those sanctions to include increased civil, as well as criminal, sanctions.

Recommendation #4 - Amend Freedom of Information Act.

The Working Group is preparing a position paper for the CCCT on this issue.

Recommendation #5 - Restore Patent Term.

"U.S. Patent law grants inventors a 17-year term of exclusive rights on innovative processes and products. This limited term is intended to provide a major incentive for research and development, which is often costly and risky. However, for certain products, such as some chemicals and pharmaceuticals, the full 17-year patent term has been unintentionally eroded by Federal pre-market testing and review requirements. To remedy this situation, the Commission recommends passage of legislation that would restore patent life lost during the government approval process."

The Working Group is pleased by the Commission's recommendation in this area where prompt remedial action is essential to restore incentives

for innovation. The Commission recognizes the inequity to certain industries--primarily drugs and agricultural chemicals--whose inventions are denied a full patent term due to Federal premarketing approval requirements. The Administration strongly supports enactment of the Patent Term Restoration Act of 1983 (H.R.3502 and S.1306) to restore to patentees a part of the effective patent term which has been eroded by Federal premarket regulatory review.

This issue has been a continuing concern to the Administration. The Cabinet Council for Economic Affairs, for example, endorsed patent term restoration on May 25, 1982, as part of a series of recommendations by the National Productivity Advisory Committee. The Administration's continued support was evidenced in hearings before the Senate Judiciary Subcommittee on Patents, Copyrights and Trademarks (S.1306) on June 22, 1983, and before the House Judiciary Subcommittee on Courts, Civil Liberties, and the Administration of Justice on March 28, 1984 (H.R.3502).

In the House, a compromise measure is being worked on, one which hopefully will allow this important legislation to be enacted soon.

Recommendation #6 - Streamline Patent Laws and Procedures.

In this recommendation, the Commission proposed six specific actions to streamline patent laws and procedures in the United States and made general comments on strengthening intellectual property rights in foreign countries. Though the six actions are basically technical in nature, the Commission rightly perceives them to be necessary for the patent system to provide the greatest possible incentive for invention and protection of intellectual property. The Working Group welcomes the action of the Commission in highlighting these essential improvements.

The six specific actions called for by the Commission are legislative proposals on which the Administration has recently testified. The discussion of each item refers to this testimony of March 28, 1984, before the House Judiciary Subcommittee on Courts, Civil Liberties, and the

Administration of Justice, and on April 3, 1984, before the Senate Judiciary Subcommittee on Patents, Copyrights and Trademarks.

Item 1:

"Extend the law to make it an infringement of a U.S. process patent to have a product imported into the U.S. which is manufactured abroad by the patented process."

The Administration's interest in process patent infringement is ongoing. The Cabinet Council on Legal Policy considered this issue on March 24, 1983. This consideration resulted in the President forwarding a specific proposal to the Congress on process patent protection embodied in S.1841 and H.R.3878.

Process patent protection is vital to the national economy in such fields as industrial chemicals and pharmaceutical manufacturing, microbiology, and solid state electronics. The Commission recommends a statutory remedy (H.R.4526 and S.1535) for importation of products made abroad by a process patented in the United States. The Working Group wholeheartedly agrees that such a remedy is critical and notes that the remedy should be expanded--as it is in the Administration bill--to make it an infringement to use or sell any product made by a patented process, regardless of where the product is made. This will eliminate any potential problems with U.S. GATT obligations on nondiscrimination between domestic and foreign manufacturers.

The Administration bill also includes a provision on proving infringement that is very important to patent owners. In suing for infringement of a process patent, the burden of establishing infringement now rests entirely on the patent owner. This can be particularly difficult for the patent owner because the laws of most countries do not provide the discovery procedures available through United States courts. The Administration's provision would benefit process patent owners by establishing in some circumstances a presumption that a product that could have been made by a patented process actually was made by that process.

The Commission also described the problem of process patents being circumvented by offshore assembly and exploration. The Working Group agrees that a legislative remedy against such activities is necessary to provide the patentee with effective protection. The Administration has suggested possible approaches to this problem in its testimony. Legislation relating to process patents is still pending.

Item 2:

"Simplify the procedures for obtaining export licenses to file and prosecute patent applications in foreign countries."

Since the Commission made this recommendation, the Patent and Trademark Office has promulgated regulations (April 4, 1984) to streamline foreign license procedures. The Working Group agrees with the Commission that simplified, improved license procedures are needed to lower the risk of patent invalidation and criminal violations for those seeking to file patent applications abroad. The Administration believes that the new regulations will provide a flexibility and degree of detail not available from a statutory provision, while guarding national security and the rights of applicants. Though the Administration noted in testimony that additional statutory authority is not needed for promulgation of these regulations, it does not object to such a statutory provision provided such a provision leaves sufficient latitude to fix conditions assuring protection of national security interests. Legislation on foreign filing license issues is still pending (H.R.4524 and S.1535).

Item 3:

"Eliminate unpublished information from the definition of 'prior art'."

Use of corporate owned unpublished information to prevent the obtaining of a patent by an employee discourages communication and the exchange of information within the corporation. Denying a patent to an employee possessing such background information is counterproductive. The Administration supports remedial legislation to remove unpublished information owned by a corporation as prior art against otherwise patentable inventions

of its employees. The Commission notes that such legislation would make it easier to obtain patent protection for the results of corporate or cooperative research efforts and would thus promote innovation. Drafting an appropriate provision has, however, proven to be an elusive and complex task. The Administration will be pleased to work with the Congress in addressing these difficulties. Pending legislation on this issue includes S.1535 and H.R.4525.

Item 4:

"Permit the arbitration of patent interferences."

The Working Group strongly agrees with the Commission that arbitration now available for resolving infringement and validity disputes should also be available to resolve interferences. Interference settlements would be simplified and speeded up. This would reduce the workload of the courts and the Patent and Trademark Office.

The Administration, in its testimony on measures to accomplish this (S.1535 and H.R.4528), noted that it has objections to certain provisions of the legislation. One provision would extend the Commissioner's authority to accept the filing of settlement agreements and add an additional defense when agreements are not filed. The Department of Justice opposes enactment of this provision. The limited potential benefits of the provision are clearly outweighed by the resulting diminishing of the deterrent effect that the statute presently has on entry into anticompetitive interference settlement agreements. Another provision would limit the presentation of evidence in interference proceedings to use of affidavits. The Patent and Trademark Office opposes this provision because it would take away flexibility of the Office to obtain testimony by the most appropriate means. In its testimony on these measures, the Administration has suggested possible wording to meet these concerns. The measures are pending in the House and Senate.

Item 5:

"Restore balance in patent law licensing by requiring a person challenging the validity of a licensed patent either to continue paying royalties during the period of challenge, or, at the licensor's option, to terminate the license."

The Administration believes that a fairer balance is needed between the rights of the licensor and the licensee without compromising the public interest. The Working Group agrees with the Commission that a Federal statute is needed to achieve this balance. Proposed legislation (H.R.4529 and S.1535) provides that either the licensee or the licensor could terminate the license once patent invalidity was asserted in a judicial action. Until the license was terminated, the licensee would be obliged to pay royalties directly to the licensor. Otherwise, the licensee would risk nothing but legal fees and spurious patent challenges would continue to be brought.

The Administration believes enactment of legislation along these lines would restore a balance between the rights of the licensor and the licensee. Instead of providing an automatic right of licensor to terminate the license if the patent is challenged by the licensee, such legislation should merely recognize that the parties to an agreement may agree to such a provision without offending Federal policy. This would assure the greatest amount of flexibility to the private sector and ensure that there is not undue Federal intrusion into private patent licensing. The Working Group also notes that licensees have the option, in some instances, to test the validity of the licensed patent without resorting to litigation. Through a reexamination proceeding in the Patent and Trademark Office, the validity of a patent can often be more easily determined and at much less expense than litigation would require.

Item 6:

"Relax the technical requirements relating a person in a single patent of claims to a joint invention where all joint inventors may not have contributed to all claims."

Modern team and corporate research situations make it hard, if not impossible, to specify the actual inventors of each claim in a patent application. Present law requires that each named inventor have contributed to each claim. This artificial requirement raises patenting costs and the possibility of invalidity. The Working Group strongly agrees with the Commission that remedial legislation is necessary. The Administration suggested wording for such legislation in testimony in the House and Senate. Pending bills are H.R.4529 and S.1535.

The Commission concludes its overall discussion of recommendation #6 with the following recommendation:

"The Commission recommends that action be taken to reduce the erosion of intellectual property rights in foreign countries. All countries should be encouraged to implement systems of intellectual property protection which foster a climate of innovation and investment. U.S. policy should firmly oppose the misappropriation of intellectual property rights by any country. Also, the U.S. should encourage all countries to adhere to the Paris Convention for the Protection of Intellectual Property but should oppose efforts to weaken the Convention, for example, by permitting member countries to require the grant of compulsory exclusive licenses."

The Working Group commends the Commission for its attention not just to domestic legislation but also to the international arena. Strong international intellectual property protection is crucial to U.S. industry, and the Working Group itself has discussed measures to encourage the protection of intellectual property in developing nations.

The Administration has actively supported and participated in numerous activities to strengthen intellectual property protection throughout the world and will continue to do so. For example:

- ° At the recent Fourth Session of the Diplomatic Conference for the Revision of the Paris Convention, the United States joined with other developed nations in successfully opposing efforts to weaken the Convention.
- ° U.S. efforts to assist China in developing a patent system came to fruition with the establishment of a patent system on March 12, 1984.
- ° Through numerous bilateral discussions, the United States has worked to resolve problems in intellectual property protection.
- ° The United States has provided training for numerous patent and trademark officials from countries all over the world.