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*Last Updated: 08/30/2023*

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31 OCT 1985

MEMORANDUM FOR THE ECONOMIC POLICY COMMITTEE

FROM: Malcolm Baldrige

SUBJECT: Strike Force Recommendations on Semiconductors

ISSUE AND SIGNIFICANCE

- o Japanese companies are almost certainly dumping 256K RAMS and other semiconductors in the U.S. market at prices well below cost.
- o Formal DOC investigations of 64K RAMs and EPROMs pursuant to petitions filed by industry, as well as informal but equally thorough investigations of 256K RAMS, indicate dumping by margins of 30-130 percent.
- o This is, of course, a violation of U.S. and international law.
- o This has contributed to losses of over \$1 billion for the U.S. semiconductor industry in 1985. The Mostek division of United Technologies has been liquidated and Intel, AMD, and National have withdrawn from the RAM segment of the market.
- o Meanwhile, Japan's market remains very difficult to penetrate. Despite numerous "liberalization" steps, the U.S. share has remained at 10-14 percent for many years despite enormous efforts by U.S. companies. (Half of that comes from a Texas Instruments plant in Japan making an older technology product which Japanese producers decided not to pursue.)

Agreements negotiated in U.S.-Japan High-Technology Working Group in the 1983-84 aimed at further opening the market have not been fully carried out by the Japanese Government.

- o The U.S. and Japanese industries are the main competitors in the race for leadership in the world's \$25 billion semiconductor market.
- o The United States still leads (55 percent share vs. Japan's 35 percent and 10 percent for Europe), but is rapidly losing share of market and technological lead (4 years ago, U.S. share was 75 percent to 15 percent for Japan and 10 percent for Europe). (Japanese were first with 256K RAM.)
- o If Japanese market remains impenetrable while U.S. market is made unprofitable, U.S. industry will be driven out of market. This would have enormous implications for the U.S. position in all electronic industries, as well as for U.S. military capabilities.

RECOMMENDATIONS

1. Self-initiate a dumping case on 256K RAMS and announce that we may monitor other semiconductor products for possible dumping.

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BY: du NARA DATE: 11/16/2022

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2. Attempt to negotiate better access in the 301 process and consider a "package" settlement with the Japanese, keeping in mind that such settlement must resolve access and price/cost problems in both the United States and Japan.
3. In view of the meager results of 20 years of negotiations in this area, consider other remedial and/or pre-emptive steps that might be taken if current negotiations are no more successful than past ones.

BACKGROUND

- o Semiconductors are the electrical, integrated circuits etched on silicon that are the heart of computers, telecommunications and weapons systems, and all modern electronics. They do what vacuum tubes and copper wire used to do.
- o Semiconductors encompass a variety of products. The main ones are memory (RAMs - Random Access Memory) and logic (microprocessors).

These developed in succeeding generations:

	<u>RAM</u>	<u>LOGIC</u>
1978	16K	4 Bit
1981	64K	8 Bit
1984	256K	16 Bit
1986-87	1 Megabit	32 Bit

- o In the 1960's, U.S. industry was superior in all aspects. Japan imposed a ban on investment, high tariffs, and quotas to nurture domestic industry.
- o U.S. industry was prevented from using its comparative advantage to gain more than 10 percent of the Japanese market.
- o Japanese measures were illegal under the GATT.
- o In 1971, as a result of U.S. pressure, Japan agreed gradually to liberalize the industry by the end of 1974.
- o But in 1975, MITI announced measures to "counter the liberalization." This included various subsidies, directives to buy Japanese, and government-sponsored joint R&D programs.
- o In 1978, Public Law 84 was passed which continued to direct MITI to take steps to develop the domestic industry and give it broad powers to guide and discipline the industry. This law terminated in June 1985 to be replaced by a new law for promotion of high-tech industries.

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- o Over this entire period, U.S. manufacturers' market share remained steady at 10-14 percent, of which half came from Texas Instruments Japan plant. Imports from the United States to Japan ran about 5-8 percent.
- o Building of the TI plant was allowed in 1968 when TI caught Japanese companies infringing patents. TI was granted permission in return for licensing its basic patents and a proviso not to exceed 10 percent share of market.
- o Beginning in the late 1970's, the issue of predatory pricing by Japanese companies was added to that of market access.
- o In each semiconductor generation since 1976, Japanese pricing in the U.S. market has led to dumping charges. (Companies involved include Hitachi, NEC, Fujitsu, Toshiba.) Most recently, Hitachi ordered its salesmen to cut prices until they got orders.
- o This is not surprising since Japanese industrial policy has often led to similar results in other industries.
- o Over the years, there have been numerous negotiations. The most recent were those of the U.S.-Japan High-Tech Working Group of 1982-83. These resulted in two agreements, but neither have had much effect. The problems remain as they have been for the past 15-20 years.
- o Finding a solution is urgent. Major parts of the U.S. industry are finding it impossible to remain on the leading edge of the technology necessary to remain in business long term. Loss of this leadership would adversely affect many U.S. industries.

Recommendation 1 - Self-Initiated Dumping Case

Recent investigation by the DOC indicates that prices for 256K RAMs are in the \$2-2.50 range, while the fully allocated cost of production cannot be less than \$2.60 and may be as high as \$4.00. This constitutes dumping under U.S. and international law and may also constitute predatory behavior.

This evidence follows on the heels of the filing of dumping cases for 64K RAMS and EPROMs. In the case of EPROMs, Hitachi sent a letter to its distributors telling them to cut price continuously by 10 percent until they won the orders. Hitachi promised to guarantee the distributors' profit. This suggests that dumping may be endemic in all semiconductor markets.

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-4-

PROS:

- The dumping law specifically provides for self-initiation of dumping cases. Since such action has never been taken in the past, taking it now would send a powerful message to both the Hill and our trading partners that we are serious about dealing with unfair trade issues.
- Such a step would prove that the Administration is indeed executing the trade laws.
- Imposition of a dumping margin would provide relief to a hard pressed U.S. industry from a clearly unfair trade activity.
- Such a step would be a strong signal to the United States of USG concern and would encourage further effort by U.S. industry in the next generation of products.
- Such a decisive step in a key, perhaps the key, industry where Japanese is the main competitor would gain enormous political credit.
- Such a step would provide strong leverage for purposes of negotiating a better overall deal with Japan.
- The action is not trade-restrictive and is fully consistent with the GATT and other obligations.

CONS:

- Self-initiation might compromise the objectivity of the dumping process in the eyes of countries who are potential present and future objects of such action.
- A successful case would lead to at least a temporary increase in chip costs to U.S. users, who are now enjoying a windfall from the dumping.
- While the case looks strong, there is always some possibility that we would not in fact find dumping and injury and thus be embarrassed.

Recommendation 2 -- Negotiate access and consider "package" deal

The Semiconductor Industry Association's (SIA) filing of a 301 petition is the most recent step in a series of negotiations begun in 1982 by the US-Japan High-Technology Working Group over market access in Japan. This group negotiated two agreements that were approved by the Cabinets of both countries. These agreements committed Japan to providing access in Japan similar to that enjoyed by Japanese companies in the U.S. The Japanese government also undertook to encourage its companies to develop long-term relationships (as opposed to more "spot" buying) with U.S. suppliers.

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Throughout these negotiations, the SIA worked very closely with U.S. negotiators. When it became apparent in June that negotiations were not working, the SIA consulted with US negotiators about filing a 301 to put pressure on Japanese negotiators. The USG encouraged the filing with the intent of using it to negotiate better access.

The "package" concept was first suggested by Japan which wanted to trade something on access for a cessation of dumping and anti-trust cases.

PROS:

- A negotiation leading to greater access in the Japanese market and a cessation of predatory pricing in the US market is what the industry has been requesting.
- Real market access is preferable to continued accusations of unfairness and retaliation.
- A package deal allows us to use the leverage of the dumping cases to obtain better market access.
- A package settlement allows the US and Japan as partners to avoid more drastic unilateral action.
- A "good" settlement would provide the basis for a "level playing field" in semiconductors.

CONS:

- Market access is undefined. Japan says the market is open and poor US results are due to lack of effort. No US negotiator believes that.

Essentially, we are looking for increased U.S. market share as evidence of an increase in access. But by how much? A deal inevitably leads to some, albeit tacit, agreement on market sharing.

- A package means some change in Japanese pricing policies. But of what kind and where? At a minimum we could ask Japanese companies to stop dumping in the US market, but to negotiate to get them to obey the law they should be obeying anyhow seems weak.

A meaningful pricing agreement would include cessation of sales below cost worldwide. But then are we negotiating a price cartel?

- Any settlement which does not halt the industrial policies that led to the problem in the first place is not likely to be meaningful. But no one believes Japan will ever halt these policies and practices.

- All semiconductor agreements with Japan in the past have failed. There is no mechanism here to ensure that this one would be any different.

Recommendation 3 -- Begin considering other steps.

This concept developed out of discussions at the interagency working level. All agreed that previous negotiations had failed to achieve equitable access. All agreed that the Japanese, if pressed sufficiently, might agree to a market-sharing agreement. All agreed that the US should not agree to market sharing. This meant, however, that a negotiated settlement would once again become a matter of relying on the GOJ to encourage its industry to buy more. All agreed that this would not work. There was a perceived need to give Japan an incentive to undertake to open the market.

PROS:

- The announcement of such consideration would be a powerful incentive to both the Japanese government and business to open the market.
- It puts the US in the position of being able to watch results and declare when it is satisfied, rather than becoming involved in sticky definitions of market access.
- It involves no irrevocable commitment.
- It begins to prepare us now for the possible eventuality that the Japanese will do nothing.

Cons

- It might complicate current negotiations.
- US chip users who rely on Japanese suppliers might become nervous.
- As long as the Japanese abide by US law in the US, there is no justification for restricting them. If they are breaking the law, then the appropriate legal remedies should be applied.
- This could establish a precedent for other sectors.



## THE IMPLICATIONS OF SEMICONDUCTOR TRADE

On June 14, the Semiconductor Industry Association petitioned for Section 301 relief from Japanese practices which deny market access. At the June 24 issues lunch we discussed the significance of the petition; this is the first from a competitive industry. Since then, the question of semiconductor trade has been active. Anti-dumping cases against Japanese companies have been filed and Secretary Baldrige's Strike Force is developing a strategy for dealing with Japanese trade practices. This paper outlines the implications of this question for American competitiveness.

A semiconductor takes its name from electrical characteristics which allow it to act as both an insulator and a conductor. It can selectively store, generate, or process electrical signals, that is, process information. It consists of a small (10 millimeters square) piece of silicon upon which is etched an electrical circuit. With the lines of circuitry only 1/1000 of a millimeter apart, as many as 100,000 "gates", or decision points, can be on a single chip. Because of the extreme sophistication needed to manufacture the chips, only U.S. and Japanese firms are active. As much as \$200 million investment is needed for each fabrication plant.

There are two basic roles a chip can play. First, it can simply store information and return it on demand. Each "memory" cell can be accessed in less than 250 billionths of a second. Memory chips are rated by the amount of information they can store. The current standard is 256,000 bits of data. Although these are standard, high volume, devices, their manufacture requires very precise and complex engineering skills. Consequently, a firm must make memory chips to have a base of production which allows it to also produce more complex items.

The second form is a logic chip. It actually processes data as the "brains" of an electronic system. Computers as we know them today would not be possible without these chips. A logic chip is rated by the amount of information it can process in each step. The current standard is 16 bits. These are even more complex to produce than the memory chips, and are needed in smaller quantities. Nevertheless, they are the key to the development of new electronic systems.

The pace of chip development has been accelerating. In 1978 the first chips offered only 16K of memory and processed it in 4 bit segments. By 1981, the capability had risen to 64K of memory and processing at 8 bits. Since 1984, 256K memory and 16 bit processing has been available. By 1986-87, 1 million bit memory chips and 32 bit processing will be commercially feasible. And, by 1990, 4 million bit chips may be available. These chips will revolutionize the commercial applications of electronics by allowing the development of devices not now possible.

Until recently, the U.S. was the undisputed leader. Five years ago, U.S. manufacturers supplied 65 percent of the world's semiconductor market. Today, they have lost 10 points to



Japanese competitors. The worst market conditions since chips were introduced has marked 1985. A combination of a slump in computer demand, Japanese dumping of chips, and Japanese market barriers has led to a drop in U.S. production of about 20 percent. In spite of the lost volume and profits, U.S. chip-makers will invest over 10 percent of gross revenue on R&D and another 25 percent on plant and equipment this year.

Each new semiconductor product which has come to the market has been marked by a short lifetime (as little as 3½ years) and rapidly falling wholesale prices (as much as 80 percent over the life of the product). Thus, if a firm cannot compete fully in each product developed, it cannot amass the capital and the engineering expertise to develop the next generation. Drop out in one area, and drop out permanently.

Four U.S. firms dropped out with the previous (64K) generation of memory chips. Only Texas Instruments, Micron Technology, and Motorola produce the 256K chips. (IBM produces chips only for internal use. Even so, it sources some 60 percent of needs from outside suppliers.)

The competition for the next generation of products will come from Japanese firms. Japanese companies now supply 60 percent of 64K chip needs, and 90 percent of the latest application of those chips. The European market is large, but has no significant domestic manufacturers.

The Japanese firms have grown so quickly because of a concerted plan. MITI promotion began in 1958. For the next 15 years, the Japanese market was protected by prohibitive quotas, tariffs, and foreign investment controls. In the late 1970's, formal barriers were replaced with government directed and funded R&D and informal limits on U.S. penetration of the Japanese market (10%). We have been negotiating with Japan ever since. Little has been accomplished and evidence of explicit subsidies is mounting.

The analyses now under way in the trade Strike Force will document whether the Japanese have truly been engaged in unfair practices. Recommendations will be made shortly. The outcome of the issue, however, will have a significant affect on America's competitiveness. Almost every segment of both the manufacturing and services sectors of the economy has been changed by computers and other electronic devices -- all made possible by semiconductor chips. The design, availability, and price of those chips determine in the most basic way how these other industries will develop. As American chip manufacturers drop out of the market, more than a company is lost. Each permanent loss takes with it one more bit of American creativity, entrepreneurship, and technical talent.

Office of Policy Development  
November 1, 1985

THE WHITE HOUSE  
WASHINGTON

November 1, 1985

MEMORANDUM FOR THE ECONOMIC POLICY COUNCIL

FROM: EUGENE J. McALLISTER <sup>EM</sup>

SUBJECT: Agenda and Papers for the November 5 Meeting

The agenda and papers for the November 5 meeting of the Economic Policy Council are attached. The meeting is scheduled for 1:00 p.m. in the Roosevelt Room.

The Council will consider a report from the Trade Strike Force. The Strike Force has prepared the attached papers addressing two issues: semiconductors and intellectual property. The issue of semiconductors concerns alleged unfair Japanese trade practices regarding predatory pricing and market access. The paper presents recommendations addressing each of those allegations.

The issue of intellectual property concerns how the Administration could strengthen intellectual property protection, both at home and abroad. The paper outlines a proposed comprehensive strategy addressing, for example, bilateral and multilateral negotiations, a legislative initiative, and a policy statement.

~~Confidential Attachment~~

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THE WHITE HOUSE  
WASHINGTON

ECONOMIC POLICY COUNCIL

November 5, 1985

1:00 p.m.

Roosevelt Room

AGENDA

1. Report of the Trade Strike Force



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THE SECRETARY OF COMMERCE  
Washington, D.C. 20230

November 1, 1985

MEMORANDUM FOR THE ECONOMIC POLICY COUNCIL

FROM: Malcolm Baldrige, Chairman of the Strike Force  
SUBJECT: Strike Force Recommendations on Semiconductors

ISSUE

The U.S. semiconductor industry is threatened by two kinds of alleged unfair practices by Japan:

- o Japanese dumping of semiconductors in the U.S. market.
- o Policies and practices which limit U.S. access to the Japanese semiconductor market, the second largest in the world.

The EPC is being asked to act on recommendations from the Strike Force on the strategy that the Administration should adopt to deal with these unfair practices.

STATUS AND IMPLICATIONS

Bilateral negotiations between the U.S. and Japan have addressed this situation over a number of years without success. As a result, U.S. industry has taken a number of actions under U.S. trade law.

- o A dumping charge on 64K RAMs, filed by Micron Technology
- o A dumping charge on EPROMS, filed by Intel, Advanced Micro Devices (AMD) and National Semiconductor
- o A Section 301 case filed by the Semiconductor Industry Association (SIA) claiming lack of market access in Japan and predatory pricing.

In addition, two antitrust actions are in motion relating to Japanese predatory pricing practices in the U.S. market.

There is recent evidence that the newer 256K RAMs are also now being dumped on the U.S. market.

In the absence of equal access to markets and a restoration of fair pricing practices, it is likely that the United States semiconductor industry will be reduced to a very secondary role or eliminated as a significant factor in world competition. The impact on other U.S. industries that depend on this technology would be substantial if semiconductor manufacturing and applications skills were thus to be centered in Japan.

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BY dm NARA DATE 11/16/2022

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### RECOMMENDATIONS

The Strike Force recommends adoption and aggressive implementation of a program, already partly underway to counter the unfair aspects of this situation. Its elements include:

1. Prompt investigation and resolution of the two existing dumping cases. Self-initiation by the Department of Commerce of an antidumping case on 256K RAMs.
2. Support of USTR's accelerated plan for handling the existing 301 case. Support for consideration of a "package" proposal (addressing both market access and dumping) on semiconductors if such is put forward by the Japanese.
3. Announcement that the President will consider other remedial and/or preemptive actions to ensure U.S. access to Japanese markets.

### BACKGROUND

(A more detailed paper describing the industry, its history and the commercial situation is attached.)

#### Overview

Semiconductors are the heart of computers, robots, industrial process controls, and other modern electronic devices, and the key to technological and cost leadership in many industries. Worldwide sales of semiconductors totalled \$25 billion in 1984. In 1984, the U.S. had a \$1.6 billion deficit in semiconductor trade with Japan.

After a long period of dominance in this technology, the U.S. now shares leadership with Japan and is falling behind in the newest generations of semiconductor products. Overall world market share is now 55% U.S., 35% Japanese, 10% others, with Japan in the lead on the newer products.

This condition results from Japanese targeting. Their strategy has been to exclude U.S. companies from their home market, while gaining share in ours by aggressive pricing policies. Japan has also expanded capacity rapidly; as a result, the industry is now oversupplied, and rapid price declines have taken place.

This year U.S. industry losses are estimated at over \$1 billion. United Technologies has liquidated its semiconductor (Mostek) division; Intel, AMD, and National Semiconductors have withdrawn from the RAM segment of the market. With the exception of captive manufacturers, U.S. firms are hesitant to invest in developing and producing the new high capacity products (1 megabit and 4 megabit chips) now on the drawing board, anticipating that Japanese practices will prevent such ventures from ever being profitable.

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### History

In the 1960's, Japan used a ban on investment, high tariffs, and quotas to nurture its domestic semiconductor industry. Despite its comparative advantage, the U.S. was officially limited to no more than ten percent of the Japanese market.

In 1971, as a result of U.S. pressure, Japan agreed gradually to liberalize the industry by the end of 1974. But in 1975, MITI announced measures to "counter the liberalization." These included various subsidies, directives to buy Japanese, and government-sponsored joint R&D programs. A 1978 law continued MITI powers to develop and guide the industry. This law was replaced in mid-1985 by a new law for promotion of high-tech industries.

The U.S. market share has remained at 10 to 14 percent for many years, despite strong efforts by U.S. companies to expand in the Japanese market and their strong competitiveness elsewhere in the world. Half the market share that U.S. companies do have in Japan comes from one company's plant in Japan.

### Recommendation 1 - Self-Initiate Antidumping Case on 256K RAMs from Japan

U.S. law allows the Commerce Department to self-initiate antidumping cases. For antidumping duties to be imposed, Commerce must find dumping (U.S. sales below home market prices or below the cost of production) and the ITC must find injury to a U.S. industry.

Commerce investigation indicates that Japanese semiconductor companies are dumping 256K RAMs in the U.S. market by selling at less than their cost of production. Japanese 256K RAMs sell in the U.S. for \$2-2.50, while the fully allocated cost of production in Japan cannot be less than \$2.60 and may be as high as \$4.00. Commerce analysis also points to a probable injury finding by the ITC, based on substantial evidence of lost sales, major financial losses, massive layoffs, and U.S. companies exiting from the market entirely.

U.S. semiconductor producers that do not make 256K RAMs have filed AD cases on some types of semiconductors from Japan -- 64K DRAMs and EPROMs. The U.S. 256K industry strongly supports initiating a 256K RAM case, but fears repercussions in Japan if they are the petitioners. They are committed to cooperate fully in a case initiated by the USG.

Through an AD case, the U.S. industry wants to secure a change in Japanese pricing practices in the U.S. either by issuance of an antidumping order or by a negotiated solution leading to fair Japanese pricing. They expressly oppose any quantitative restriction on Japanese shipments of 256K RAMs to the U.S.



In the case of EPROMs, Hitachi sent a letter to its distributors telling them to successively cut prices by 10 percent until they won the orders. Hitachi promised to guarantee the distributors' profit. This suggests that dumping may be endemic in all semiconductor markets.

PROS:

- Self-initiating a dumping case now would send a powerful message to both the Hill and our trading partners that we are serious about dealing with unfair trade. Such a step would also be a signal to the U.S. industry of USG concern and would encourage further effort by the U.S. industry in the next generation of products.
- Imposition of a dumping margin would provide relief to a hard pressed U.S. industry from a clearly unfair trade activity.
- Such a step would provide strong, GATT-consistent leverage for purposes of negotiating a better overall solution in the 301 case.

CONS:

- Self-initiation might compromise the objectivity of the dumping process in the eyes of countries who are potential present and future objects of such action.
- A successful case would lead to at least a temporary increase in chip costs to U.S. users, who are now enjoying a windfall from the dumping. (However, semiconductors account for a small proportion of the final costs of most high-tech products.)
- While the case looks strong, there is always some possibility that Commerce would not find dumping, or the ITC find injury.

Recommendation 2 -- Negotiate access and consider "package" deal

The Semiconductor Industry Association's (SIA) filing of a 301 petition is the most recent step in a series of negotiations begun in 1982 by the US-Japan High-Technology Working Group over market access in Japan. This group negotiated two agreements that were approved by the Cabinets of both countries. These agreements committed Japan to providing access in Japan similar to that enjoyed by Japanese companies in the U.S. The Japanese government also undertook to encourage its companies to develop long-term relationships (as opposed to mere "spot" buying) with U.S. suppliers.

Throughout these negotiations, the SIA worked very closely with U.S. negotiators. When it became apparent in June that negotiations were

not working, the SIA consulted with US negotiators about filing a 301 to put pressure on Japanese negotiators. The USG encouraged the filing with the intent of using it to negotiate better access.

The "package" concept was first suggested by Japan which wanted to trade something on access for a cessation of dumping and antitrust cases.

PROS:

- A negotiation leading to greater access in the Japanese market and a cessation of predatory pricing in the US market is what the industry has been requesting.
- Real market access is preferable to continued accusations of unfairness and retaliation.
- A dumping case would give leverage in the overall negotiating process.
- A package settlement allows the US and Japan as partners to avoid more drastic unilateral action.
- A "good" settlement would provide the basis for a "level playing field" in semiconductors.

CONS:

- Market access is undefined. Japan says the market is open and poor US results are due to lack of effort. No US negotiator believes that.

Essentially, we are looking for increased U.S. market share as evidence of an increase in access. But by how much? A deal inevitably leads to some, albeit tacit, agreement on market sharing.

- A package means some change in Japanese pricing policies. But of what kind and where? At a minimum we could ask Japanese companies to stop dumping in the US market, but to negotiate to get them to obey the law they should be obeying anyhow seems weak.

A meaningful pricing agreement would include cessation of sales below cost worldwide. But then are we negotiating a price cartel?

- Any settlement which does not halt the industrial policies that led to the problem in the first place is not likely to be meaningful. But no one believes Japan will ever halt these policies and practices.
- All semiconductor agreements with Japan in the past have failed. There is no mechanism here to ensure that this one would be any different.

1. Embargo future products

2. I.P. —

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no, spt concept



*Embargo*  
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*future items* -6

Recommendation 3 -- Begin considering other steps.

This concept developed out of discussions at the interagency working level. All agreed that previous negotiations had failed to achieve equitable access. All agreed that the Japanese, if pressed sufficiently, might agree to a market-sharing agreement. All agreed that the US should not agree to market sharing. This meant, however, that a negotiated settlement would once again become a matter of relying on the GOJ to encourage its industry to buy more. All agreed that this would not work. There was a perceived need to give Japan an incentive to undertake to open the market.

PROS:

- The announcement of such consideration would be a powerful incentive to both the Japanese government and business to open the market.
- It puts the US in the position of being able to watch results and declare when it is satisfied, rather than becoming involved in sticky definitions of market access.
- It involves no irrevocable commitment.
- It begins to prepare us now for the possible eventuality that the Japanese will do nothing.

Cons

- It might complicate current negotiations.
- US users who rely on Japanese suppliers might become nervous.
- This could establish a precedent.

*market share  
if we don't  
embargo future products*

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## OVERVIEW PAPER -- SEMICONDUCTORS

### The Product

The electrical characteristics of semiconductors fall between those of insulators and conductors. This allows them selectively to store, generate, or process electricity as signals--that is, to handle information.

Silicon is the main semiconductor material. It is formed into thin, circular wafers, each divided into roughly 100 rectangular "chips". On each chip is etched a tiny pattern of circuitry that determines function and performance. Once complete, the wafer is tested and sliced into individual chips. The chips are then packaged in plastic and bonded to metal wires that plug the semiconductor into a larger electronic system (see "Applications" below).

### Its Manufacture

The lines of circuitry printed on each chip are as small as one micron (1/1000 of a millimeter) wide. An individual chip, roughly 10 millimeters on a side, can contain 100,000 "gates" or circuit functions.

The manufacture of such precise structures requires technology ranging from an ultra-clean environment (since the smallest dust particle can incapacitate a circuit) to the highest-resolution optical equipment (to transmit complex designs from the "drawing board" onto the chip, error-free). A modern semiconductor fabrication plant can cost \$200 million.

### Semiconductor Applications

Semiconductors are used in a variety of electronic equipment important to both service and manufacturing industries. They made possible the computer; they are the heart of telecommunications hardware and consumer electronic items (calculators, VCRs). They are the solid-state, microelectronics revolution that has so improved the performance of these products, miniaturized them, and reduced their cost.

Semiconductors now pervade our entire economy. In heavy industry, they enable robots to weld automobiles which rely on semiconductors for engine control, braking, passenger comfort. They precisely control oxygen flows and temperature conditions for steel plants. They provide the high-speed data handling and analysis on which our banking and insurance industries depend.

### Semiconductor Types

The simplest semiconductors are called "discretes" because each chip has only a single electrical junction and can perform only one function. For example, a light-emitting diode--a discrete device used in electronic displays--can only be on or off, and its "choice" is determined by the incoming electrical signal.

Another type of discrete semiconductor is the transistor, which in 1948 launched the electronics age. Eleven years later, engineers placed several transistors onto a single chip--the first integrated circuit (IC)--to perform more complex tasks. Today, ICs dominate the semiconductor world. Progress in microelectronics now depends upon packing more and more transistors onto a single chip without sacrificing speed or consuming more electricity. The result is the miniaturization that we eventually see in more compact and powerful electronic products.

There are two basic roles for an integrated circuit--memory or logic. Memory devices store information and return it on demand. Their primary features are their capacity and their response time. The 256K DRAM is a memory device that can store some 256,000 "bits" of data; most of these chips require less than 250 billionths of a second to access a stored cell. Although difficult to produce, they are standard, high-volume products, and the lessons learned from their manufacture are critical for production across a much broader range of devices.

Logic chips, on the other hand, process data. These include the "brains" of electronic systems, the microprocessor. The performance of logic chips is measured in terms of their speed per step and the amount of information (e.g., 16-bit) that they can handle at once. Their layout can be far more complex, and they are consumed in much smaller volumes than memories.

#### The US Semiconductor Industry

Historically, the US semiconductor industry has been the world's leader. Only five years ago, US manufacturers supplied some 65 percent of the world semiconductor market. Since then, they have lost roughly 10 points of market share to their Japanese competitors.

And 1985 has now brought the worst market conditions in over a decade--Japanese dumping, restricted access to their market, and a slump in computer demand will combine to drive US output down this year by 18-20 percent. This squeeze has hit independent American firms hardest because of the longer-term need to continue devoting tremendous resources to R&D and plant modernization. Despite the grim semiconductor business environment, chip-makers will spend over 10% of sales on R&D and another 25% of sales on plant and equipment in 1985.

#### Key Market Features

The long-term trend for semiconductor prices is down. This results from rapid technological progress in the lab and on the production line. Product lifetimes can be as short as 3 1/2 years. Over the last decade, the average cost per function dropped 17% annually. But in 1985, the final figure will fall between 35 and 40 percent.

This year's unusually steep decline was driven by some striking developments at the product level. The largest single market segment, random access memories (RAMs), was valued in 1984 at nearly \$6 billion. In 1985, another explosive increase in Japanese production capacity, stimulated by industrial targeting efforts, helped to drive prices of leading edge 64K and 256K dynamic RAMs down by over 80 percent.

But a presence in the memory market is critical for the US industry despite difficult competitive circumstances. Because companies manufacture here in greatest volume, this is where they can best advance their production and engineering skills. These capabilities are then transferred to other product segments. For this reason, memories are considered "technology drivers", fundamental to one's overall competitiveness in semiconductors.



Nevertheless, the collapse of memory prices has induced most American companies to withdraw from the mainstream RAM market. Four firms dropped out with the previous (64K) generation. Only Texas Instruments, Micron Technology, and Motorola are likely to produce standard 256K DRAMs. AT&T manufactures primarily for internal use and has had difficulty marketing its device in the open market. IBM is strictly an in-house supplier, and even then it sources some 40% of its requirements from outside suppliers. Most US firms will now try to hold their ground in the other large memory field, electrically programmable read-only memories (EPROMs).

#### International Competition

For the US industry, semiconductor competition can be summed up in one word--Japan. The European market is significant, but features no domestic manufacturers of consequence. Japanese firms now supply 60 percent of world demand for the 64K DRAM and control 90% of the market for the latest device in this targeted product area. If current Japanese overinvestment and dumping practices continue, they will also dominate the coming 1-Megabit market.

As noted above, US exclusion from this market has serious implications for American companies' ability to compete in other areas. At the same time, the Japanese have begun to branch out from this base in commodity memory to attack more specialized memory products as well the logic field, two remaining areas of US leadership. Recent Hitachi dumping of EPROMs indicates that they will use this practice in their drive for market share in other segments as well.

#### The Japanese Strategy

The Japanese challenge in semiconductors was shaped by a concerted program of industrial targeting, aimed at a dominant world market position and similar to that used in shipbuilding and steel. This policy structure, and the economic/financial environment it fostered, encouraged the six major electronics firms in Japan to pursue semiconductor development aggressively. At the same time, it protected them from both domestic and international competition. Their initial concentration on core products and technologies is now spreading to a broader range of devices.

#### The Unfair Trade Practices--A History

The Japanese semiconductor program began in 1953 with passage of legislation that directed MITI to develop and implement a comprehensive promotion scheme. This included plans for creating an industry, providing financial support, suspending antitrust regulations, and coordinating R&D activity. For the next fifteen years, the Japanese market was formally protected by prohibitive quotas, tariffs, and foreign investment controls. Only Texas Instruments, in settlement of a Japanese violation of its semiconductor patents, was able to establish production in Japan, and even this occurred subject to MITI monitoring that limited its market share to 10 percent.

In 1974, the first market-opening measures were immediately neutralized by a "counter-liberalization" program, which included "buy-Japanese" provisions along with the continuation of subsidized research and inter-firm cooperation. By the late 1970s, more formal barriers had been lifted, but the legislation enabling government promotion was renewed and a landmark industry-wide R&D effort (the VLSI project) was launched with guidance and financing from MITI. This commercial project centered on dynamic-RAMs, now the competitive stronghold of the Japanese semiconductor industry. Typically, this product-specific focus, supported by the



safety-net of protective legislation for depressed sectors, has encouraged overinvestment, overcapacity, and ultimately, dumping. (e.g., textiles, TVs)

Meanwhile, despite the ostensible openness of the Japanese market, US chips retained only a 10-15% share, frustrated by the vertically integrated and horizontally coordinated Japanese electronics establishment. In addition, only one-half of these semiconductor sales were actual imports; the rest came from US-owned production in Japan.

In 1982, negotiations began, aimed at improving US participation in the Japanese chip market, the world's second largest. The inability of US firms to compete with emerging Japanese rivals on the latter's home turf clearly weakened their overall strategic position, and by depriving US sales, raised total US production costs. Cabinet-level agreements, reached by the US-Japan High Technology Working Group, to pry open opportunities in Japan and refrain from illegal pricing practices were not implemented.

The Japanese pushed to export in greater volumes, and dumping became integral to their drive for market share in targeted product lines. As they gained production experience, the Japanese also focused more on upgrading their technological base. NTT continued to circulate its advances selectively to Japanese manufacturers. MITI organized new commercial research programs for semiconductor advancement--opto electronics, new materials, and microelectronics work for its 5th generation and supercomputer projects. And unauthorized Japanese duplication of semiconductor designs and processes, a problem early on for the inventors of the integrated circuit (Texas Instruments), arose again for American developers of the microprocessor as the Japanese industry sought to diversify into new product areas.

#### The Current Situation

Today, semiconductor trade frictions continue in both new and traditional forms. Negotiations continue (MOSS talks), yet the US share of the Japanese semiconductor market has fallen again to 10%, giving no indication that foreign access has improved. The Semiconductor Industry Association filed a 301 case directed at this problem; USTR plans a recommendation to the President in December. US firms have filed two dumping cases, both against Japanese memory producers. The Justice Department also began its own predatory pricing investigation of a Japanese semiconductor firm; a separate, private case was filed shortly thereafter.

#### The Implications for the United States

The fate of the US semiconductor industry will have far-reaching ramifications. It will directly determine our competitiveness across most high-tech industries, since semiconductors are their foundation. It will profoundly affect the capabilities of traditional manufacturers that have relied on electronics and automation to modernize facilities and maintain their business position. It will influence the cost effectiveness of our information-based service sector, from financial institutions to retailing. In addition, the entrepreneurship that has always characterized a healthy semiconductor industry attracts and cultivates a wealth of technical talent here in the United States, ensuring our position as a global technological leader.

Semiconductor-based electronics contribute directly to our economic efficiency and productivity as a nation. The growth, profitability, and employment that ensue are critical to our long-term economic well-being.

MEMORANDUM FOR: The Economic Policy Council  
FROM: The Trade Strike Force  
SUBJECT: Strengthening Protection for Intellectual Property

### ISSUE

The violation of U.S. intellectual property rights--patents, trademarks and copyrights--is a serious impediment to U.S. international trade or competitiveness. An absence of laws in many countries, or the inadequate enforcement of existing laws, presents a barrier to American companies selling their products, and to establishing plants. What Administration steps would strengthen U.S. intellectual property owners' rights and secure more adequate foreign protection of U.S. intellectual property?

### SUMMARY OF RECOMMENDATIONS

The Administration should pursue a comprehensive strategy that combines a legislative initiative with intensified ongoing efforts to combat foreign violations of intellectual property rights. The program would include:

- (1) an accelerated program of bilateral consultations on intellectual property and, where appropriate, consideration of additional Section 301 unfair trade cases.
- (2) continued efforts to improve multilateral disciplines on intellectual property through the new trade round, the OECD, and existing conventions on intellectual property (WIPO/UNESCO).
- (3) issuance of a policy statement on intellectual property that reflects the items above.
- (4) an Administration legislative initiative to close gaps in U.S. protection of intellectual property and to strengthen U.S. intellectual property owners' rights against infringers.
- (5) identification of ways in which existing treaties and U.S. laws can be used to secure adequate foreign intellectual property protection, including prompt notice to GSP countries of the progress they must make in protecting intellectual property in order to retain GSP benefits following the January 1987 GSP review
- (6) creation of an advisory committee on intellectual property rights, co-chaired by USTR and Commerce, to provide a formal channel for private sector advice.

## BACKGROUND

### Inadequate Foreign Protection

Theft of intellectual property rights is on the increase worldwide and causes an estimated lost U.S. sales of \$8-20 billion annually. Additional substantial losses result from restrictions on access to foreign markets by U.S. innovations. International violations of intellectual property rights have become rampant as communications and markets are now international and intellectual property has become key to high-tech trade.

Inadequate intellectual property protection access is particularly acute in, although not confined to, the NICs. It includes:

- o the absence of national patent, trademark, and copyright laws, (e.g., Indonesia).
- o patent laws that inadequately protect chemicals and pharmaceuticals (Taiwan, Korea, Brazil, Mexico and Canada).
- o copyright laws that provide uncertain or inadequate protection to U.S. works or which exclude or provide overly short-term protection for computer software (Korea, France).
- o inadequate implementation and enforcement (many countries).

These practices affect a wide spectrum of American industries including chemicals, pharmaceuticals, motion pictures, publications, semiconductors, computer software, apparel and other consumer goods, and new industries such as biotechnology.

- o RECOMMENDATION #1: That the United States pursue an aggressive, effective bilateral strategy to accelerate discussions with key countries. This has already been undertaken in accordance with a Presidential directive. We should also examine appropriate additional cases for Section 301 action.

Background: Piracy and counterfeiting have grown dramatically especially in the newly industrialized countries of the Pacific Basin and Latin America. Effective protection of intellectual property rights in most of these countries lags far behind that provided in nearly all developed countries.

For example, Korea's copyright laws do not protect foreign works or computer software and Singapore's do so only in limited circumstances. Indonesia has no patent law. Patent law in Korea and Taiwan does not cover chemicals and pharmaceuticals.

The U.S. has had a series of bilateral consultations with Latin American and Asian nations to remedy the problem. These consultations should be accelerated. Contacts should include: Korea, Taiwan, Brazil, Argentina, Yugoslavia, India, the Philippines, Mexico, Indonesia, Malaysia, Singapore and Thailand. Further consultations also should be held with Canada on its practices with respect to pharmaceutical patents, and France on its recently enacted overly short term protection for computer software.

If consultations fail to produce sound progress in a timely fashion, the Strike Force will consider whether the filing of additional 301 actions is warranted. We have already initiated a 301 case involving Korea.

- Pro:
- o Bilateral consultations would build on previous discussions which have resulted in some positive changes in foreign countries. This allows countries to address the problem and change practices before any action is taken.
  - o We have the precedent of initiating a 301 case on Korea. Further consultations with other offender countries should be undertaken before any additional action is taken.
- Con:
- o Bilateral packages would have to be consistent with current and proposed multilateral agreements, possibly diluting them because of inadequate minimum standards at the multilateral level.
  - o Some Section 301 cases might be challenged through the GATT.
  - o Countries will probably react negatively to Section 301 actions.
  - o Excessive use of 301 by the Strike Force could overload USG circuits and diminish our ability to bring these cases to a successful conclusion.
- o RECOMMENDATION #2: That the Administration increase efforts aimed at securing multilateral protection of intellectual property rights through: including the topic as a priority in a new round of trade negotiations; vigorously pursuing ongoing efforts to improve existing conventions; and expanding OECD work on the issue.



Background: The GATT, while addressing intellectual property in four areas, does so on an exception basis. Existing multilateral discipline comes through a number of other international agreements, including the Paris and Berne Conventions, administered by the World Intellectual Property Organization (WIPO), and the Universal Copyright Convention, administered by UNESCO. These agreements center generally on ensuring national treatment and establishing some minimum standards for the holders of intellectual property rights, but they lack a proven mechanism for resolving disputes. Despite the existence of international conventions, violations of intellectual property rights have become rampant. Ongoing efforts to improve existing conventions should be pursued vigorously, e.g. WIPO's work on semiconductor chip protection and biotechnology.

Efforts have been underway in the GATT since the end of the Tokyo Round to conclude an Anticounterfeiting Code, which have intensified since the November 1984 Contracting Parties meeting. These efforts need to be expanded in the new round context. As a first step, the U.S. should take the lead in seeking to form a "Friends of Intellectual Property" group in the GATT to advance consideration of the issue in the New Round.

Multilateral efforts should continue in other arenas as well, such as investigating efforts to include intellectual property in the coverage of the Invisibles Code in the OECD.

- Pro:
- o Would signal multilateral commitment to the issue and would supplement bilateral initiatives.
  - o Would bring intellectual property disputes in the trade area into the clear purview of the institution charged with addressing trade disputes, the GATT.
  - o Would build on over 100 years of effort internationally, for instance the Paris Convention was adopted in 1883.
- Con:
- o Multilateral solutions are by their nature slow and deliberate. They do not show immediate results as do bilateral initiatives. Thus they would not be responsive to the short-term concerns of the business community or Congress. Multilateral efforts need to be supplemented by bilateral and unilateral actions aimed at short-term remedies.

- o RECOMMENDATION #3: That the Administration issue a policy statement on intellectual property.

Background: Such an action is supported by industry and labor. A policy statement would provide a focal point and a touchstone for the implementation of the programs described in this document, similar to the previous Administration trade and investment policy statements.

There is, however, an issue of timing relating to the issuance of a policy statement which the EPC should address.

Option 1: The Strike Force should be directed to produce a policy statement within a week's time for issuance by the Administration. Such a statement would incorporate the initiatives included in this paper and private sector advice received to date.

- Pro:
- o Would show our determination to move quickly on this issue and put other countries on notice as to the priority the Administration attaches to it.
  - o Would provide a useful vehicle for organizing the various elements of our initiative into a comprehensive program.

Con:

- o Moving on this fast timetable would preclude our systematically seeking private sector advice, a process which proved useful in the development of past policy statements, e.g. the 1983 investment policy statement.

Option 2: As indicated in the attached Action Plan, the Strike Force would be directed to produce a policy statement within 4-6 weeks time.

Pro:

- o Would allow for extensive consultation with industry and on an interagency basis, thus producing a statement which reflects a broad consensus of views.

Con:

- o May give the appearance of delaying action on the intellectual property issue.

- o RECOMMENDATION #4:

- o (A) That the Administration introduce an Administration bill amending domestic law to strengthen intellectual property protection for U.S. producers. Alternatively, the Administration could announce active support for intellectual property legislation introduced on the Hill.

- Pro:
- o Would put us out in front on the issue and make clear that this is an Administration priority.
  - o Would gain faster action on proposals we have supported for some time.

- Con: o Would introduce the risk that the bill could be put into legislation the Administration does not support, creating problems for Presidential action.
- o (B) The legislation would contain the following provisions:
- Amend Section 337 of Tariff Act of 1930 to delete injury test and necessity to show that the domestic industry is economically run.
  - Extend patent protection to cover products of patented processes.
  - Extend life of agricultural chemical patents to compensate for time lost due to regulatory processes. (This was done for pharmaceuticals in the 98th Congress.)
  - Subject aspects of patent licensing arrangements to "rule of reason" in antitrust cases instead of "per se" rule.
  - Increase procedural safeguards to prevent inappropriate release of privately-owned proprietary information held by the Government.

Background: These provisions have already been approved in the legislative package.

- Pro: o Would remove burdensome administrative requirements that hamper the effectiveness of existing statutes (particularly in the case of Section 337).
- o Would close loopholes now benefitting foreign producers at the expense of U.S. property rights holders (particularly in the case of current process patent law)
- o Would make U.S. law consistent in recognizing the need to compensate patent holders for the patent life lost due to pre-marketing regulatory clearance proceedings.
- o RECOMMENDATION #5: That the U.S. Government use existing laws and agreements more aggressively to ensure greater protection for U.S. holders of intellectual property rights worldwide. This could include prompt notice to GSP countries of the progress they must make in protecting intellectual property in order to retain GSP benefits following the January 1987 GSP review.

Background: We should examine existing bilateral treaties such as FCNs and BITS to determine whether any of the rights and obligations they create can be used to enforce the rights of U.S. owners of intellectual property rights. A failure to enact laws which enable a nation to live up to its treaty obligations, or using liberal definitions of such terms as "property" in existing treaties to include intellectual property, might be grounds for trade action. In addition we should examine the applicability of anti-expropriation provisions of various U.S. statutes in cases where foreigners impose compulsory licensing on American patent and copyright owners without prompt, adequate and effective compensation.

Perhaps the strongest incentive for positive change in developing and newly industrialized nations is the amendment of GSP in the 1984 Trade and Tariff Act giving the President increased authority to act to protect U.S. intellectual property rights under this program. New GSP provisions require consideration of a nation's treatment of intellectual property rights in the general review of continued eligibility for tariff concessions.

- Pro:
- o Would be a strong indication to our trading partners and the U.S. business community that we are serious about pushing for increased protection in this area.
  - o Notice to GSP countries that adequate intellectual property rights will be a significant review criterion could push infringer countries into making earlier and more fundamental changes.
  - o RECOMMENDATION #6: That the USG pursue formal lines of communication with the private sector through the Advisory Committee on Trade Negotiations (ACTN) working group on intellectual property rights and establish a private sector advisory committee on intellectual property rights co-chaired by USTR and Commerce.

Background: The business community and labor groups are strongly committed to improving intellectual property protection. The Presidentially appointed Advisory Committee on Trade Negotiations has formed a task force on intellectual property. This task force has split its work into two stages: first it will make recommendations to the full ACTN on multilateral approaches to trade policy, and then it will work to identify major bilateral initiatives and approaches. Their objectives are 1) higher norms, transparency and removal of current practices such as compulsory licensing; 2) adequate enforcement mechanisms; and 3) dispute settlement procedures.



- Pro: o During the past year the Administration has informally worked with the private sector through individual companies, the ISACs and umbrella organizations established by U.S. industry on intellectual property rights. Work by the ACTN task force and a private sector advisory committee would complement these efforts.
- Con: o Once communication is formalized, the business community may have false expectations on how quickly the USG can make changes.

- Attachments: A. Timetable for Action Plan Initiatives  
B. Summary of Current U.S. Law and International Rules

Action Plan Dates

- a. Intellectual Property Policy Statement  
Staff draft with private sector comments reflected:  
December 1, 1985
- b. Action on Legislation Related to Strengthening Domestic Practices of Intellectual Property: Fall 1985
- c. Acceleration of Bilateral Negotiations  
Target plan for Brazil/Mexico and other countries with IPR problems: December 1, 1985
- d. Review Obligations of Our Trading Partners Existing in Current Bilateral Agreements: December 1, 1985
- e. Review of Korea 301 Case and Consideration of Other Possible Immediate Intellectual Property-related 301 Actions:  
January 1, 1986
- f. Completion of Full ACTN Report on Priority Countries and Issues for Consultation and 301 and GSP Action Programs:  
February 28, 1986
- g. Review of Private Sector Report for Possible Section 301 Actions: March 1, 1986
- h. Initiation of GSP-related Review Based on Intellectual Property Criteria of Trade Act: Summer 1986

## APPENDIX

### Current U.S. Law

The Administration has favored certain improvements relating to intellectual property, e.g., process patents, firmware, chemicals, and patent misuse rules, and remedies against infringement,

U.S. intellectual property owners have two remedies against infringement:

- o Seeking damages and injunctions against infringers in federal courts. Because the courts must have jurisdiction over the infringer, this remedy applies chiefly to violations in the U.S.
- o Filing an unfair practice case under Section 337 of the Tariff Act of 1930. Under Section 337, the ITC may issue an exclusion order barring imports of items that infringe U.S. patents, trademarks and copyrights. To obtain relief, the petitioner must demonstrate that the import or sale of the infringing product substantially injures an industry that is efficiently and economically operated in the U.S.

### International Rules

The GATT covers intellectual property only on an exception basis.

The effectiveness of existing international intellectual property conventions is in some cases limited due to lack of signatory countries, lack of minimum standards, lack of coverage, and lack of enforcement.

The Paris Convention on patents and trademarks provides for national treatment and priority for filing dates, but generally does not set minimum levels of protection.

For copyrights, the Berne Convention provides for national treatment and generally a minimum copyright term of the author's life plus 50 years. (The U.S. is not a signatory, but the Administration has supported joining.) The Universal Copyright Convention (UCC), to which the U.S. is signatory, provides for national treatment and a term of the author's life plus 25 years. Both the Berne and UCC contain substantial minimum standards. Significant countries (e.g., Korea, Indonesia) are signatory to neither copyright convention.

## THE IMPLICATIONS OF SEMICONDUCTOR TRADE

Talking Points  
November 4, 1985

- O Very few items can, in themselves, determine the structure and future of a nation's economy. Semiconductors represent such an item. Almost every facet of our personal and professional lives has been affected by the "electronics revolution".
- O Multifold increases in the capability, size, and speed of semiconductors in the next few years will undoubtedly bring about another revolution.
- O Their manufacture requires large amounts of capital investment. Even more importantly, it requires high levels of engineering expertise and a great degree of innovation. Given the rate of change within the industry, one simply cannot keep up without participating in the development and manufacture of each generation of devices.
- O The U.S. is losing its once commanding lead. We invented the transistor, the integrated circuit, and the semiconductor chip. As recently as five years ago, U.S. companies had 65 percent of the world market. That has now dropped to about 55 percent and shows signs of dropping even further. Our industry will lose \$1 billion in 1985.
- O Two factors seem to account for this.
- O First, the Japanese government has restricted its own market. Through oppressive tariffs, quotas, and informal measures they have restricted U.S. companies to about 10 percent of the Japanese market. With the short life span of each device (as little as 3½ years), it is crucial for each manufacturer to gain economies of scale through volume production as quickly as possible. Thus, U.S. firms may market in the U.S. and Europe. Their Japanese counterparts are free to market in the U.S., Europe, and Japan.
- O The best indicator that U.S. products can command more than 10 percent of a market is Europe. There, in spite of Japanese pricing practices which I will mention in a moment, U.S. companies capture 55 percent of the market.
- O The next factor is price. During the short life span of these devices, their price falls dramatically, sometimes as much as 80 percent. Some of this, of course, is due to volume production and legitimate price competition. Some of it is almost certainly due to below cost pricing.
- O Antidumping cases have been filed against Japanese semiconductor firms with every generation of device since 1976.



O Recent investigations by the Department of Commerce of 256K memory chips found prices of \$2-2.50 and production costs of \$2.60-4.00.

O Thus, U.S. companies may be faced with an impossible dilemma. Loose market share and, with it, the resources to continue to invest in new product.. Or, retain market share by charging below the cost of production and still lose the resources for new investment. Trade negotiations have failed to resolve this dilemma.

O The USTR in investigating a Section 301 case dealing with access to the Japanese markets.

O Secretary Baldrige's trade Strike Force has been looking into the pricing aspects of the problem. He will report to the EPC on preliminary results tomorrow. Recommendations will be made shortly on whether we should take unilateral action (such as initiating a dumping case).

O However the specific issues might be decided, the ability of U.S. companies to continue to participate in the development and manufacture of semiconductors will have implications for all other sectors of the economy. This may be the most important industry-specific trade issue to come before you. Unlike all the others which were aimed only at preserving an uncompetitive structure, this is aimed at the future of one of our most competitive.

THE WHITE HOUSE

WASHINGTON

November 8, 1985

MEMORANDUM FOR EUGENE J. McALLISTER

FROM: Michael A. Driggs *macd*

SUBJECT: Decision Memorandum on Semiconductors

Thanks for giving me a chance to see this in draft. I think that it's a good memo. My suggestions are few and are noted in the margins of the attached paper.

My only question is the clarity of the 3d recommendation. I know the debate among the agencies about restricting future products is intense. But, I gather the decision has been made. It would be better, then, not to raise the question at all, rather than to run the risk of confusion from an ambiguous reference. The issue you raise is difficult enough: this Administration has not closed U.S. markets to the Japanese, do we want to box ourselves in to do so in advance of the 301 investigation? [I would vote yes -- it's the only way to conclude the negotiations.]

attachment

cc:

Jack Svahn  
Chuck Hobbs

*Semiconductor  
301*

THE WHITE HOUSE

WASHINGTON

November 8, 1985

MEMORANDUM FOR THE PRESIDENT

FROM: THE ECONOMIC POLICY COUNCIL

SUBJECT: International Trade in Semiconductors

In your September 23 speech to the President's Export Council, you unveiled an interagency strike force designed to search out instances of unfair foreign trade practices and to offer recommendations to remedy those practices. The Strike Force, under the chairmanship of Secretary Baldrige, has presented the Economic Policy Council with its findings on unfair Japanese trade practices in the semiconductor industry and recommendations to address these practices.

The Economic Policy Council has reviewed the Strike Force's findings and recommendations, and we are offering you our views on the issue of unfair Japanese practices in semiconductors.

BACKGROUND

The Strike Force looked at trade in semiconductors for two reasons: (1) trade in semiconductors is very large, \$25 billion worldwide in 1984; and (2) semiconductors are the heart of computers, robots, and industrial process controls, and are a key to technological leadership.

U.S. semiconductor manufacturers argue that the Japanese engage in two kinds of unfair trade practices:

- o Dumping semiconductors into the U.S. market, and thus damaging the U.S. semiconductor industry.
- o Pursuing policies and practices that limit U.S. access to the Japanese semiconductor market, the second largest in the world.

After a long period of dominance in this technology, the U.S. now shares leadership with Japan and is falling behind in the newest generation of semiconductors. Our position is a result of many factors, some of our own making. But a prominent cause is the Japanese practice of targeting. Their strategy has been to exclude U.S. companies from their home market, while gaining

The best indicator of what U.S. market share would be in a relatively open overseas market is Europe. There, where U.S. and Japanese products compete head-to-head, U.S. companies have 55 percent of the market. -2-

share in ours by aggressive pricing policies. Japan has expanded production capacity rapidly; as a result the industry is now oversupplied, and prices are declining.

The U.S. market share has remained at 10 to 14 percent for many years, despite strong efforts by U.S. companies to expand in the Japanese market and our competitiveness elsewhere in the world. Half of the market share that U.S. companies have in Japan comes from Texas Instruments' plant in Japan.

#### UNFAIR TRADE ACTIONS INITIATED BY INDUSTRY

As might be expected, U.S. industry has taken a number of actions under U.S. trade law:

- o Micron Technology has filed a dumping charge on 64K RAM (random access memory) chips.
- o Intel, Advanced Micro Devices (AMD) and National Semiconductor have filed antidumping charges on EPROM (erasable programmable read only memory) chips.
- o The Semiconductor Industry Association (SIA) has filed a Section 301 case claiming lack of market access and predatory pricing.

In addition, two antitrust actions relating to Japanese predatory pricing practices in the U.S. markets are underway.

In accordance with your policy, we are committed to assure the vigorous pursuit of legal remedies addressing unfair trade practices -- and we are doing so in all these cases.

#### RECOMMENDATIONS

The Strike Force forwarded three recommendations to the Economic Policy Council. If adopted, these would supplement the actions initiated by the industry as noted above.

1. The Department of Commerce would initiate an antidumping case on 256K RAMS, if the Commerce Department is very confident that the ITC will find injury and the Commerce Department will find dumping.
2. The USTR would accelerate its consideration of the SIA's Section 301 case. The USTR would seek a "package" settlement with Japan.
3. The Administration would confirm our intention to retaliate if the Section 301 case is not concluded to our satisfaction.

A more complete discussion of the recommendations follows.

Recommendation 1:      Self-initiate an antidumping case on 256K RAMs if the Commerce Department is very confident that the ITC will find injury and the Commerce Department will find dumping.

U.S. law allows the Commerce Department to self-initiate antidumping cases. Dumping duties are imposed when: (1) the ITC determines that because of such imports, the U.S. industry is injured or threatened with injury; and (2) the Commerce Department determines that an import is being sold in the U.S. at "less than its fair value." If both these findings are made, the Customs Service may impose duties on the products being dumped. For the antidumping duties to be imposed, Commerce must find either: (1) U.S. prices are below home market prices; or (2) U.S. prices are below the cost of production. If dumping is found to exist, the Customs Service may impose duties on the products being dumped.

4  
Although an antidumping case has never been self-initiated, this instance might be a clear-cut opportunity.

A Commerce Department preliminary investigation indicates that Japanese semiconductor manufacturers are dumping 256K RAMs in the U.S. market at less than their cost of production. Japanese RAMs sell in the U.S. for \$2.00-2.50 while the fully allocated cost of production in Japan cannot be less than \$2.60 and may be as high as \$4.00.

The Commerce Department analysis also points to a probable injury finding by the International Trade Commission based on substantial evidence of lost sales, major financial losses, massive layoffs, and U.S. companies exiting from the market entirely.

Advantages

- o Imposing a dumping margin would provide relief to the hard pressed U.S. industry.
- o Self-initiating an <sup>continues to be</sup> antidumping case would send a message to Japan, U.S. industry, and the Congress that the Administration ~~is~~ concerned about unfair trade practices, particularly in critical technology industries.
- o An antidumping case may strengthen our position in negotiating a solution to the market access and predatory pricing practices raised in the Section 301 case.



Disadvantages

- o The industry has not initiated an antidumping case. If they apparently are not interested enough to pursue such a case, the case may not be strong enough.
- o Initiating an <sup>could discredit</sup> antidumping case that the ITC ultimately finds unwarranted, ~~may damage our efforts to use~~ self-initiation as a practice to emphasize Presidential interest in correcting unfair trade practices.
- o A successful case would lead to at least a temporary increase in chip costs to U.S. users. However, because semiconductors account for a small proportion of the final costs of most high technology products, e.g. computers, the cost increase should be extremely small.

Recommendation 2: USTR will accelerate its consideration of the SIA's Section 301 case. The USTR would seek a "package" settlement with Japan.

The Semiconductor Industry Association's (SIA) filing of a 301 petition is the most recent step in a series of negotiations begun in 1982 by the US-Japan High-Technology Working Group over market access in Japan. This group negotiated two agreements that were approved by the cabinets of both countries. These agreements committed Japan to providing access in Japan similar to that enjoyed by Japanese companies in the U.S. The Japanese government also undertook to encourage its companies to develop long-term relationships (as opposed to mere "spot" buying) with U.S. suppliers.

When it became apparent in June 1984 that negotiations to fulfill the promise of greater U.S. access to Japan were failing, the SIA consulted with U.S. negotiators about filing a 301 case to put pressure on Japanese negotiators. The United States Government encouraged the filing with the intent of using it to negotiate better access.

In our efforts to resolve the Section 301 case, we could address a number of issues including market access and predatory pricing. It might be possible to pursue a "package" of Japanese actions to remedy their unfair practices. Such a package might include an agreement by the Japanese to provide greater access to its market in return for the ~~U.S.~~ dropping the antidumping and Section 301 cases.

[U.S. cannot "drop" case]

Advantage

semiconductor industry

- o A successful 301 case, particularly if the Japanese accept a "package" solution, would address the major concerns of the

This is consistent with the goal we have established in the MOSS talks with Japan.

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U.S. industry: greater access to the Japanese market and a cessation of predatory pricing in the U.S. market.

#### Disadvantage

- o Market access in a vaguely defined term. Essentially we are looking for increased U.S. market share. A deal inevitably leads to some, albeit tacit, agreement on market share, which is contrary to the Administration's free market principles.

Recommendation 3: The Administration will confirm our intention to retaliate if the Section 301 case is not concluded to our satisfaction.

This intention is implicit in a Section 301 case. The recommendation is to make the implicit threat explicit.

#### Advantage

- o The history of U.S.-Japan discussions on market access is one of failure. An explicit statement of our intention to retaliate is necessary to convey to the Japanese that we mean business.

#### Disadvantage

- o Making the threat of retaliation explicit ~~raises the stakes if retaliation is necessary. Retaliatory action that would be perceived by Congress and our trading partners as sufficient under an implicit threat may be regarded as inadequate under an explicit threat.~~ *forces us to act if the Japanese do not agree quickly. Our range of options is limited. In addition, it would give the appearance that we have prejudged the 301 investigation.*

Note: Without specifying what retaliatory measures would be adopted -- even if only for our internal use -- it is not clear what this option would mean. To the extent that it means closing our market to certain very high technology Japanese products (as recommended by some), it might have adverse national security effects in the short run.

Gene, I think this note is confusing if one does not have the background of the working group discussion. It would be better to leave the option as you have it: "commit up front? Yes or No?" The future products question should be treated explicitly or dropped entirely as, I think, the  
FPC decided

