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RENEWAL OF THE UNITED STATES–JAPAN SEMICONDUCTOR AGREEMENT

HEARING

BEFORE THE

SUBCOMMITTEE ON INTERNATIONAL TRADE

OF THE

COMMITTEE ON FINANCE
UNITED STATES SENATE

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RENEWAL OF THE UNITED STATES-JAPAN SEMICONDUCTOR AGREEMENT

FRIDAY, MARCH 22, 1991

U.S. SENATE,
SUBCOMMITTEE ON INTERNATIONAL TRADE,
COMMITTEE ON FINANCE,
Washington, DC.

The hearing was convened, pursuant to notice, at 10:04 a.m., in room SD-215, Dirksen Senate Office Building, Hon. Max Baucus (chairman of the subcommittee) presiding.

Also present: Senators Bentsen, Danforth, and Grassley.

[The press release announcing the hearing follows:]

[Press Release No. H-6, March 5, 1991]

TRADE SUBCOMMITTEE TO HOLD HEARING ON UNITED STATES-JAPAN SEMICONDUCTOR AGREEMENT; FOCUS TO BE ON NEGOTIATIONS OF NEW TRADE AGREEMENT

WASHINGTON, DC.--Senator Max Baucus (D., Montana), Chairman, announced Tuesday that the Subcommittee on International Trade will hold a hearing on the renewal of the U.S.-Japan Semiconductor Trade Agreement.

The hearing is scheduled for *Friday, March 22, 1991 at 10 a.m.*, in Room SD-215 of the Dirksen Senate Office Building.

The 1986 United States-Japan Semiconductor Trade Agreement expires this July. Talks are now underway to negotiate a new semiconductor trade agreement. The U.S. private sector has devised a number of recommendations for this agreement.

"Concluding a new United States-Japan Semiconductor Trade Agreement must be one of the top U.S. trade policy priorities for 1991," Baucus said.

"The 1986 agreement was successful in stopping dumping, but we still remain far short of the 20-percent import target set in the agreement. We must ensure that a new agreement continues to effectively prevent dumping. Most importantly, a new agreement must ensure that the 20-percent target is met and that further progress is made toward opening the Japanese semiconductor market," Baucus said.

OPENING STATEMENT OF HON. MAX BAUCUS, A U.S. SENATOR FROM MONTANA, CHAIRMAN OF THE SUBCOMMITTEE

Senator BAUCUS. The hearing will come to order.

In the last several years it has become clear that the United States' national security depends upon U.S. economic strength. In the next 10 years the United States' national security will be determined as much by the number of products we can export as by the number of bombs we can drop. We won the arms race with the Soviet Union, but we are running neck-and-neck in the economic race with Japan and with Germany. Our economic national security, therefore, is in serious question.

In some economic sectors, the United States is having difficulty holding its own in the face of unfair foreign trade practices. The

experience of the U.S. semiconductor industry provides an excellent case in point.

Semiconductors are the computer chips that play an integral role in all modern electronic products. They are found in everything from VCR's to Patriot missiles.

Only a few short years ago, the United States was the unquestioned leader in the design and manufacture of semiconductors; but that has changed. From 1980 to 1989, the U.S. share of the world semiconductor market fell from 57 percent to 35 percent. Simultaneously, the Japanese share rose from 27 percent to 52 percent. The U.S. share in the world market continues to shrink at the rate of 2 percent per year.

In 1980, all five of the world's top semiconductor equipment manufacturers were U.S. companies. Now, four of the five are Japanese companies.

Unfortunately, the decline of the semiconductor industry has implications far beyond chip plants in the Silicon Valley. As the U.S. capacity to manufacture computer chips has declined, so has its capacity to manufacture a range of computer and electronics products. Chips are also critical to many of the high-tech weapons that performed so well in the Persian Gulf. Semi-conductors are now more critical to U.S. military security than bullets and hand grenades.

How did the United States lose its lead in semiconductor production to Japan? In part, Japanese companies have worked hard. They have innovated and they have invested heavily in R&D. But that is not the whole answer. It is also predatory Japanese trade practices that drove U.S. semiconductor companies out of business.

The closed Japanese semiconductor market has posed the biggest problem. Many of the quotas and formal barriers that kept the United States out of the Japanese market in the 1970's are gone, but informal barriers still remain. For this reason, the United States' share of the Japanese market lags far behind the U.S. market share in other competitive world markets. For example, the U.S. share of the European chip market is 42 percent, but the U.S. share in Japan is only about 12 percent. This is very significant since Japan is now the world's largest market for semiconductors. In 1989, Japan was a $23 billion market for computer chips compared with the U.S. market of $17.9 billion.

A closed home market also allows Japanese companies to build profits at home to support predatory sales known as dumping abroad. In the mid-1980's, U.S. firms were hit hard by Japanese dumping. The Commerce Department found numerous instances of dumping by Japanese firms, but it simply could not keep pace with changes in semiconductor design. As a result, in 1985 and 1986, six of the eight U.S. companies that produce a high-tech type of chip known as a DRAM were driven out of business. For another type of chip known as the EPROM, the Commerce Department was forced to impose tariffs as high as 180 percent to level the playing field.

To respond to these unfair trade practices, the U.S. Government sought to conclude an agreement with the Government of Japan. The agreement was signed in September of 1986 and included three major provisions.

First, Japan agreed to open its market to U.S. semiconductors. Japan committed to the goal of a 20-percent foreign share of the Japanese market by 1991. Second, Japan agreed to stop chip dumping in the U.S. market. And finally, Japan agreed to stop dumping in third markets.

The agreement yielded mixed results. After a dispute in 1987, Japan stopped dumping in both the United States and third markets. But the market access provisions have not worked as well as we had hoped. U.S. chip sales in Japan still lag far behind chip sales in other markets. The foreign share of the Japanese market has risen from 8.7 percent to 13.3 percent, but still falls far short of the 20-percent target established in the agreement.

Primarily because of Japanese violations of the market access provisions, the U.S. imposed trade sanctions against Japan in 1987. Those sanctions still remain in place.

The current Semiconductor Trade Agreement expires July of this year. Recently, the U.S. industry, including both the semiconductor manufacturers and computer manufacturers, were able to settle on a joint set of recommendations for a new Semiconductor Trade Agreement. The administration and Congress shortly thereafter were able to settle their differences and use the industry recommendations as a basis for a new agreement.

Faced with a united front in the United States, Japan reluctantly agreed to enter negotiations aimed at concluding a new Semiconductor Trade Agreement. The third round of those negotiations took place this week in Tokyo.

I understand these negotiations are going smoothly. But there are three key issues that I and many in the Congress believe must be addressed.

First, a new agreement must include quantifiable indicators of progress to ensure that the Japanese market is open to U.S. semiconductors. The market access provisions in the current agreement are at best a qualified success. The 20-percent benchmark has not yet been reached.

But the U.S. industry tells me that the progress that has been made in penetrating the Japanese market is almost entirely due to the target. If it were not for this objective measure of progress, Japan would still be insisting that its market were entirely open. The new agreement must require that Japan meet that 20-percent goal.

Second, the trade retaliation now in place cannot be lifted until Japan meets the 20-percent market share target from the 1986 Agreement. In 1987, the U.S. imposed the current sanctions because the U.S. share of the Japanese market was woefully short of that target.

We simply cannot ignore the fact that Japan has failed to live up to its commitments.

And third, the agreement must include expedited antidumping enforcement provisions. All sides in the United States have agreed that the current dumping provisions can be relaxed. But the United States must remain vigilant to ensure that the dumping that devastated the U.S. industry in the 1980's does not recur.

I am pleased to have with us today senior representatives from two private sector groups that put together the recommendation

for a new Semiconductor Trade Agreement. The semiconductor manufacturers are represented by the Semiconductor Industry of America, SIA. The computer manufacturers, the main domestic consumer of chips, are represented by the Computer Systems Policy Project, CSPP.

In the 1986 negotiations, these two U.S. industries sometimes did not work entirely together. But I am pleased and proud to say that they were able to put aside their differences last year and work together for the greater good. Their cooperation headed off what could easily have been a major dispute between the administration and the Congress over a new agreement.

CSPP and SIA have shown great leadership. It is my hope that the model of cooperation they have built will be copied in other sectors. If the United States is to succeed in global economic competition, the private sector, the Congress, and the administration must learn to work together.

I look forward to hearing from our two witnesses: Mr. Jerry Junkins, the CEO of Texas Instruments, and Mr. Rod Canion, the CEO of Compaq Computer Co. I am also very honored to have today the Chairman of the full committee who has been active in negotiations with not only Japan, but other countries, and who is the father of the 1988 Trade Act. I would like now to turn to the Chairman of the Committee, Senator Bentsen.

[The prepared statement of Senator Baucus appears in the appendix.]

OPENING STATEMENT OF HON. LLOYD BENTSEN, A U.S. SENATOR FROM TEXAS, CHAIRMAN, SENATE FINANCE COMMITTEE

The CHAIRMAN. Thank you very much, Mr. Chairman. And I want to congratulate you on this hearing because what we are able to do in getting access to some of these foreign markets is terribly important to the economic future of our country.

The problem we have faced is that for over 40 years we fought a Cold War while some of the countries in the world really built an enormous and a very competitive economic force; countries such as West Germany and Japan. And trade for us was always below the salt. You had the State Department considering its foreign relations. The Department of Defense—if you wanted to really move in on another country to see if they opened up their markets, they would say, oh, do not get too tough. We are trying to get a military base placed there. And always Commerce was below that, but it is time that we consider as a primary objective the economic base of this country.

If we are going to continue to improve the standard of living of our people, it means that we have to have manufacturing jobs here and that we not finally end up with the biblical result of hewers of wood and haulers of water.

I am delighted you that chose these two companies. That might bias me a bit because they are from Texas. But let me also say that these are progressive, far-reaching companies of great economic significance that have made enormous capital investments to keep the United States competitive in world trade. We are pleased to have them here.

It has been an interesting thing that, in the enforcement of the 1988 Trade Act, we have provided the tools for the administration. But there has been some reluctance in using some of the provisions that really have some muscle to them and we have to keep pushing in that regard. We have done some things in the way of lowering the value of the dollar and that has helped us insofar as the Europeans. We have achieved a balance of trade there. But we have seemingly an intractable situation with the Japanese because they still represent approximately half of the trade deficit we have with the rest of the world.

We have seen a situation where as they began to develop the technology in a new industry, there has been a protection there for that industry until it achieved economies of size and could be world competitive. If you really had free trade—if we really had access to those markets, some of those technologies would have remained in this country as the dominant force in world markets. But some of them did not because of that kind of protectionism.

And the Chairman is sure right—when you are talking about an agreement with the Japanese, you want to quantify it and you want to get it down to hard numbers where there is no illusion about whether the agreement is lived up to or it is not.

So Mr. Chairman, I am looking forward to the testimony of these two gentlemen and once again, I am delighted that you are having them here.

Senator BAUCUS. Thank you very much, Mr. Chairman.

I would like to turn now to the Senator from Iowa, Senator Grassley.

OPENING STATEMENT OF HON. CHARLES E. GRASSLEY, A U.S. SENATOR FROM IOWA

Senator GRASSLEY. Thank you, Mr. Chairman. Like Senator Bentsen, I want to thank you for holding these hearings. They are very much needed, and, like you, I am concerned about the agreement that was concluded in 1986.

That agreement was intended to stop dumping and improve market access in Japan for U.S. semiconductor manufacturers. As we can recall, the United States imposed $300 million worth of sanctions on Japan in 1987, under Section 301, for failing to comply with either the market access or the third country dumping provisions of this agreement.

While Japanese dumping of semiconductors has nearly ceased, we have yet to reach the 20-percent share to which the United States and Japan originally agreed. Instead, only 13 percent, or roughly two-thirds of the agreement has been met as we approach the expiration of that agreement.

So, Mr. Chairman, I think that we can all agree that the best measure of success, as each of you have said—Senator Bentsen and Senator Baucus, is quantifiable indicators of progress. Clearly, the agreement that we are reviewing, at least in my opinion, while not a total failure, is a failure nevertheless.

I realize that the industry position may be split with the expiration of this agreement. Although they have issued a joint position to give Japan until 1992 to reach the 20-percent share, after which

they will negotiate another "quantifiable indicator of progress" to be attained by 1996, I am not convinced that it will be any more successful than the last agreement. In fact, based on the fact that we have seen the Japanese only achieve 13 percent of an agreed 20 percent, would it not be as likely that we will only see about 27 or 28 achieved if they shoot for a 35 percent-level?

Given Japan's failure to fulfill past pledges, whether in the area of semiconductors or financial commitments to the Persian Gulf effort, as two examples, this Senator is convinced that we will continue to hear more rhetoric and see no action.

Just this week, Japanese officials threatened to arrest American exhibitors at an international trade show for displaying just 10 pounds of American rice. Clearly, this situation is another example of Japan's unwillingness to share a world view similar to that of the United States and our other trading partners. The time has come for the United States to be more forthright in defending our own interests, rather than to be willing to settle for crumbs at the table.

As we all know, American companies are simply not allowed the influence in Japan that Japanese firms are allowed here in the United States. Very few former Japanese Government officials are willing to work for American firms, while the revolving door in the United States is spinning even faster. These American officials take their expertise and contacts with them to work for foreign corporations and interests. The Japanese hire as many law, public relations, and lobbying firms as the other three of our top trading partners combined. The Japanese are spending $100 million a year to hire 1,000 Washington lawyers, lobbyists and public relations people. They also spend an additional $300 million on grassroots lobbying and publicity across the United States.

Mr. Chairman, I am not sure how American companies can compete against the Japanese when some of the best and the brightest of our own government go to work for the Japanese. In fact, I have been advised that some U.S. companies are starting to withhold information from our government because these American officials are expected to bring a golden nugget of information with them when they go to work for the Japanese.

Mr. Chairman, I look forward to hearing what our witnesses have to say on this issue. At this point, I have not concluded whether I could support a new agreement which I perceive to be a carrot and stick approach. My feelings tend to lean towards a club approach by knocking down the unfair barriers our American exporters face in Japan. Honor and trust among men and women of goodwill apparently does not work in the Japanese market.

Thank you.

[The prepared statement of Senator Grassley appears in the appendix.]

Senator BAUCUS. Thanks so much, Senator. I turn to Senator Danforth.

Senator DANFORTH. I do not have a statement, Mr. Chairman.

Senator BAUCUS. All right. Thank you.

All right. Now we will turn to our first witness. First, Mr. Jerry Junkins who is the chairman of the board, president, and chief executive officer of Texas Instruments in Dallas. He is testifying here

on behalf of not only himself, but also the Semiconductor Industry of America.

In addition, he is joined by Mr. Joseph R. Canion, who is the president and chief executive officer of Compaq Computer Corp., testifying on behalf of the Computer Systems Policy Project in Houston.

Gentlemen, because of the value of your testimony, we are going to expand the 5 minutes to 10 minutes. So you will each have 10 minutes to testify and then we will ask you questions when you are finished.

STATEMENT OF JERRY R. JUNKINS, CHAIRMAN OF THE BOARD, PRESIDENT, AND CHIEF EXECUTIVE OFFICER, TEXAS INSTRUMENTS, INC., DALLAS, TX

Mr. JUNKINS. Thank you, Mr. Chairman, Chairman Bentsen and members of the subcommittee. I appreciate the opportunity to discuss the 1986 United States-Japan Semiconductor Trade Agreement. My purpose here this morning is to share with you, I believe, a success story that is in the making and urge you to support the negotiation of a new semiconductor agreement so the objectives of the 1986 Agreement can be finally realized.

But first, let me note several underlying concerns which relate to the process and which we in the semiconductor industry and you in the Finance Committee must deal.

Reports of the National Advisory Committee on Semiconductors, a Presidential panel created by the 1988 Trade Act, have called attention to a strategic industry at risk. We have related the panel's concerns to you previously and provided you copies of the report, so I will not go into the details of that today in deference to the time.

But as a member of this strategic industry, we at Texas Instruments have wrestled with several fundamental issues which bear on our discussion today and I would like to share these with you. As we view the next decade and in trying to set our strategic course as far as our company is concerned, we believe there are five questions that must be answered.

First, how important is the marketplace? Clearly even with moderate GNP growth rates, we are talking about an industry that will have double digit growth rates through the year 2000.

Second, and quite importantly, will the higher cost of capital in the United States ever allow us to compete successfully with our international competition? While we think the gap will narrow, present policies will not close this gap. In the case of our company, we have made some progress over the next 2 to 4 years at least, by closing the gap through the creation of innovative financing, joint ventures and alliances, both at home and abroad.

Third, is the question of whether the United States and the worldwide environments for the protection of intellectual property will remain positive enabling innovators to receive a fair value for the fruits of their research and development. It certainly seems so here in the United States at present, but I think a question does remain with regard to many of our trading partners. Obviously, the fate of the Uruguay Round and the proposed inclusion of the intellectual property code within GATT is still an unresolved issue.

Fourth, will we quickly react to unfair trade practices such as dumping and market access? These are the issues that bring us together today, and I will talk a bit more about them shortly.

And, finally, notwithstanding these other issues, will we have the ability to compete and the staying power to compete head-on with our competitors in an extremely aggressive worldwide environment? I believe so, but if we cannot answer all of these questions with a "yes," a company such as ours must reassess its strategic decision to be a major semiconductor competitor. Three out of five, or four out of five, does not make a successful investment.

Mr. Chairman, these concerns certainly have ramifications beyond the American industry alone. As you have already noted, the future of our high-technology industry depends on how well domestic semiconductors can compete in the world marketplace. Not only do I believe this, but our customers and our colleagues in other sectors of the electronics industry also believe it.

And that is really why Rod Canion and I are here today.As you have already stated, Rod represents our customers, the Computer Systems Policy Project. Together, our two organizations have spent about 8 months developing a unified industry position with respect to United States-Japan semiconductor trade policy, importantly aimed not at protecting the industry, but at giving it an opportunity to compete and be a healthy industry.

Now, when we sat down to discuss these issues almost a year ago, I think certainly we felt we might have different objectives. And those could be summed up as, we would like to sell as high as we can and our customers would like to buy as low as they can. But I think we have transcended a good bit of that and found that our interests really are the same.

Semiconductor makers must invest a large percentage of revenues in order to create next-generation devices. Computer producers need these advanced devices to remain competitive. They also want a multiple supplier base, and understandably, they desire globally competitive, self-reliant vendors in their own country. In order for this vendor base to exist, the U.S. semiconductor industry needs an environment that will promote open trade and deter unfair trades practices.

Now we came away from our discussions with a common goal: to promote a new United States-Japan Semiconductor Trade Agreement that will continue the progress that has already been made and meet the basic objectives that were outlined in the 1986 accord.

As you have stated, the industry alliance between the makers and the manufacturers of computers is historic, I believe. And we think it is a model of how diverse sectors of an industry must recognize their shared interest in order to promote a trade policy in a way that is beneficial to all.

Let me take just a moment to underscore a critical point. Electronics is an important industry. It provides 2.6 million jobs in the United States—is more than double the number of jobs in the auto and steel industries combined. But I think the most important factor is that the jobs in the semiconductor industry and the jobs which serve the entire electronics industry serve to enhance productivity across our economy thereby elevating the American standard of living. This is a unique industry. Within the decade, we

think the entire worldwide electronics market will grow by a factor of two and the semiconductor by about a factor of four.

As you have already stated, the growth of this industry has been fueled by the ability of semiconductor producers to consistently pack increased performance onto a single chip. No other industry has delivered so much capability improvement at so little cost to the consumer. Further, no other industry faces such severe competitive pressures to innovate and move forward with the latest technological advances, and this is for a very simple reason. Countries around the world recognize the strategic importance of this industry to their future development and standard of living.

Semiconductors are the building blocks for the electronics industry. If you were to pick the one technology that enabled our military leadership and the well-trained men and women to accomplish their task in the Gulf War so successfully, it is semiconductor technology. Whether it is embedded in fire control systems or communication equipment or in the brains of precision weapons, all are enhanced because of semiconductor-based data processing.

Now in order to create and continue creating leading-edge technology, the semiconductor industry has to make large investments in the range of 25- to 40-percent of revenues per year in capital and research and development; that is substantially higher than other sectors of industry.

The size of these investments, the higher cost of capital to U.S. companies vis-a-vis our major foreign competitors, and the relatively short product life cycles, make semiconductor producers extremely vulnerable to the effects of unfair trade practices. Remedies that offer solutions months and years after the damage is done are too little and too late. And as you already commented, the experience in 1985 and 1986 in DRAMs is a clear example.

Now we at TI have been a major part of the Japanese economy for a number of years. In the 1960's and 1970's when the market in Japan was relatively small, barriers to access by foreign producers could be described as simply irritants. Today, as you have already noted, Japan is the largest semiconductor market in the world, and lack of access means that U.S. producers cannot hope to achieve the economies of scale needed to remain competitive without that access.

After the years of conflict, in 1986 the two countries signed the Trade Agreement, which called for an end to dumping of semiconductors and obligated the Japanese to open their market. And the agreement was just that, an agreement. Dumping cases were suspended in exchange for a Japanese commitment not to dump. And the SIA Section 301 case against unfair trade practices in Japan was suspended in exchange for the Japanese cessation of market-blocking activities and facilitation of U.S. access.

Included in the agreement was a measurable market-share goal of 20 percent to be reached by the time the agreement expires in July of this year. It is a benchmark—just that—a benchmark to measure the progress toward compliance with the market-access objective of the agreement.

Now there has been progress as you have noted, albeit limited. Foreign share in Japan is up from under 10 percent, typical prior to the agreement, to more than 13 percent today, and dumping has

stopped. U.S. companies have invested in sales offices, design centers, research efforts and manufacturing facilities in Japan in an attempt to meet the demands of the Japanese market. In the case of our company, we have invested over $1 billion in the last 5 years in the area of DRAMs alone in facilities and research and development. And there has been a trend toward closer relationships between foreign suppliers and Japanese customers.

Some Japanese manufacturers are working hard to buy more foreign-base semiconductors and to design foreign chips into their products at critical, early stages of development. Their good efforts are constructive and should not go unnoticed.

But progress does not mean complete success. The 13 percent is still far short of the anticipated 20 percent. And although the accord has been in place for more than 4 years, we began to make real progress toward achieving that goal only in about the last 2 to 2½ years.

In order to make this story a complete success, we believe we must reach a new agreement with Japan. And we have been working constructively with Secretary Mosbacher and Ambassador Hills and their staffs to do just that. Critics would suggest that such an agreement, which includes specific goals, represents "managed trade." It absolutely does not. Managed trade would be unacceptable not only to our industry, but also to the U.S. Government. Rather, the 20 percent establishes an objective method of gauging a degree of openness of the Japanese market and the extent of compliance with the agreement.

Now we, the SIA and the CSPP, do not advocate a punitive approach toward Japan. Instead, we believe the positive efforts toward compliance that the Japanese have undertaken in the last 2½ years should be encouraged to continue. And our proposal provides a framework that will allow that to happen. Our plan recognizes the improved trade relationship with Japan, but also reflects the belief that only through a government-to-government agreement, can the aims of the 1986 accord be ultimately met.

Let me turn to our proposal. First, we propose that the market access results must be measured by quantifiable indicators of progress and the goal of the 20-percent market share minimum should be extended through the end of 1992.

Secondly, the 1986 accord stopped dumping in the United States and third world countries, and our proposal calls for a new method of preventing a recurrence of such dumping in the future.

Mr. Chairman, restoring America's competitiveness and recapturing world markets are primarily private sector responsibilities. As you pointed out, however, U.S. trade policy has an important effect on the global environment.

You have strengthened trade remedies and encouraged the executive branch to pursue realization of free and open markets. And it is in this context that we ask our government to continue to press for access to Japan's semiconductor market and respond effectively to future allegations of dumping.

This concludes my prepared testimony. Thank you.

Senator BAUCUS. Thank you very much, Mr. Junkins.

Mr. Canion, you are next.

[The prepared statement of Mr. Junkins appears in the appendix.]

STATEMENT OF JOSEPH R. CANION, PRESIDENT AND CHIEF EXECUTIVE OFFICER, COMPAQ COMPUTER CORP., HOUSTON, TX

Mr. CANION. Good morning, Mr. Chairman and Senators. I am pleased to be here today representing the Computer Systems Policy Project.

Let me begin by saying this has been a significant year for the electronics industry in Washington. The fact that Jerry and I are here, together, testifying before Congress on a common position on semiconductor trade is evidence of just how significant.

While the computer systems and semiconductor industries have had good relationships, we have held divergent views on many of the trade issues. Given that they manufacture semiconductors and we use the semiconductors, that should not be a surprise. I think what is a surprise is that despite these differing perspectives, our two industries recognize the importance of, and actually made a commitment to, working together on mutual semiconductor trade concerns.

The result of our efforts is the historic alliance represented before you today. We believe our joint effort is a model for the sort of industry cooperation needed to maintain America's technological leadership. Indeed, our alliance has grown so that our joint position now reflects the views of all the major U.S. electronics trade associations.

Nonetheless, our work together has not been easy. When the computer systems industry came to the table a year ago, it was very difficult for us to envision how we would deal with the semiconductor trade issue given some of the fundamental perspectives that generally frame our public policy positions. For example, we abhor the idea of managed trade. We dislike the notion of a guaranteed market share. We do not support sanctions for unattainable goals. And we are extremely wary of government intervention in market pricing unless absolutely necessary. It seemed to us that the 1986 Semiconductor Trade Arrangement contained some elements of all of these things.

Once at the table, however, we came to see that our two industries share some important, common objectives. It was these common objectives that provided the foundation for our joint effort. Like the semiconductor industry, we have a strong interest in ensuring that the Japanese market be opened. As computer companies, it is in our best interest to be sure that there is a steady supply of state-of-the-art semiconductors at reasonable prices from many sources, including the U.S. Opening the Japanese market, one of the world's largest, is vital to promote a healthy, competitive U.S. supplier base capable of meeting our needs for advanced semiconductors.

We also share a strong interest in ensuring that illegal semiconductor dumping does not occur in the future because, frankly, dumping hurts all of us. I can assure you, as a consumer of semiconductors, that an anti-dumping order causes fluctuations in chip

prices that can be very disruptive. Dumping also threatens to eliminate multiple suppliers by forcing many out of the market.

What we found compelling after discussions with our colleagues in the semiconductor industry, was that the 1986 Arrangement, at least in the last 2 years, has produced some much needed results: instances of dumping have been contained; United States and Japanese companies have begun to form the kinds of long term relationships necessary for U.S. commercial success in Japan; and momentum toward an open market, we feel, has begun.

Now we have not abandoned the principles that originally brought us to the table. What we and our semiconductor industry colleagues have done is develop a joint proposal for a new semiconductor trade arrangement with Japan that builds on the progress begun under the 1986 Arrangement; meets the needs of both industries; and addresses the fundamental problems CSPP members had with the 1986 Arrangement.

In essence, we have forwarded to the government a joint proposal that will increase competition in all markets, while eliminating protectionism and preventing market abuse.

We are convinced that the United States and Japan should negotiate a new arrangement on semiconductor trade. We are equally convinced that to be successful, the new agreement must contain ways to measure progress by measuring results. The history of trade agreements with Japan clearly illustrates that, without such a means to measure progress, the agreement simply will not work.

Therefore, our joint proposal calls for a reaffirmation of the commitment made by Japan to secure a 20-percent market share for foreign suppliers of semiconductors. This is not a guarantee, since achieving this level of progress depends on the efforts of our semiconductor colleagues to sell in Japan, as well as the willingness of Japanese customers to recognize the competitiveness of our suppliers. After studying the situation with our semiconductor industry colleagues, we are convinced that 20 percent is an attainable goal. Furthermore, we view achievement of this 20-percent market share as evidence that necessary efforts are being made to open the market in Japan. If needed, we are prepared to recommend additional incremental measures of progress to reach the goal of an open market. This is not managed trade.

On the dumping side, we are convinced that new procedures should be adopted to deter the threat of future dumping. These procedures will also allow the return of some of the market flexibility that has been lost over the last several years as a result of fairly extensive and intensive price guidance by both the United States and Japan. In light of the fact that dumping has stopped, we think this can be safely accomplished at this point. Nevertheless, since dumping remains a threat, we have proposed measures to deter the practice in the future.

Finally, I am pleased to note that negotiations between the United States and Japan are underway. As they move forward, I urge Congress and the administration to look as we have done, beyond ideology and traditional policy perspectives to focus on the most important objectives—opening the Japanese market and creating an effective deterrent to dumping. We have tried to be creative in our approach and we urge the United States and Japanese

governments to do the same. We believe these objectives can be best accomplished by negotiating a new semiconductor trade agreement with Japan, consistent with the joint position of the U.S. computer and semiconductor industries.

And with that, I would like to conclude by thanking you, Senator Baucus, and the other members of the subcommittee for recognizing the importance of this issue and our unique industry alliance. We hope that you will not only support our joint effort, but will encourage other industries to form similar public policy alliances.

Thank you.

[The prepared statement of Mr. Canion appears in the appendix.]

Senator BAUCUS. Thank you very much. I would like to ask you both a question—perhaps you in particular, Mr. Junkins, about the U.S. semiconductors and the state-of-the-art American technologies in the Gulf; that is, the Tomahawk missiles and the Patriot missiles, for example. I think all Americans, and the world for that matter, are very impressed with American military technology.

It is my understanding, however, that the technology in the Patriot and the Tomahawk and all these missiles is really old technology; that is, it was developed 10, 15 years ago. And at that time, we Americans had a greater share of chip production, much greater than we do now. The point being, that 10, 15, 20 years from now if present trends continue and if an agreement is not reached, much of that technology would not be American produced, as much of the advances in new military technology would not be American produced. Could you shed some light on all that, please?

Mr. JUNKINS. I think your comments are accurate. The majority of the semiconductor technology existing in the equipment that was used in the Gulf crisis is 1970's technology. Probably the most modern semiconductor technology that existed is in the products that Mr. Canion's company makes that are commercial products that were probably used by command and control activities. But the basic missiles, the infrared equipment, the radar equipment, almost all were second generation solid state products that were designed in the 1970's.

And there are two other factors at work. Semiconductor technology tends to roll-over in terms of a next generation about every 3 or 4 years—some products sooner than that. So, within the life cycle of the development of a defense product, you can have two or three generations of semiconductor technology.

Further, the defense market only constitutes now about 8 percent of the semiconductor market here in the United States. And that is not a large enough sector of the market to drive volume on its own to get the kind of technology advances and the cost advances that come from it. So there is absolutely no doubt that the military market must depend on the advances in the commercial sector and be prepared to use that when new products are designed and built.

Senator BAUCUS. Is it fair to conclude then that if present trends continue, and if say no semiconductor agreement is reached with Japan, that 10, 15 years from now when new military technologies are developed, that more of that will be developed by Japan than by the United States?

Mr. JUNKINS. Absolutely. If present trends continue and the loss of market share in the United States continues, there is little doubt that what exists today relative to 1970's will continue to worsen.

Senator BAUCUS. I think everyone is impressed with the ability of both of your industries to come together. I wonder if you could tell us briefly what separated you before and what brings you together now?

Mr. CANION. Well, as I pointed out, there were a number of concerns the computer systems companies had with the 1986 Agreement. We were specifically concerned about the aftermath, if you will—the shortages, the higher prices and what appeared to be the result of the controls that went into place and the management of prices that followed.

And, in fact, there were some very vocal members of industry who were up in arms against the things that were going on. But after the dust settled, of course, we could see that the important thing was that we prevent the situation that had occurred from occurring again. And we realized that we could not do it by fighting with our colleagues. We had to look for common goals and common interests. And interestingly enough when we did that, we found that our interests were very much in common, in looking to the long-term and not just the short-term, and that we had some very important, common interests.

We got to the table and we recognized the need for putting those together and then that led to this agreement. It was not easy. It took us 8 months to a year but we did——

Senator BAUCUS. But in part, it is just the need for a large number of suppliers. Is that one of the reasons?

Mr. CANION. Well, there are many reasons, really. One, is the need for a large number of suppliers but we also have some very important relationships built up over the years with American semiconductor companies. And we would not like to see those opportunities go away. That becomes very important. It is more than just being able to have a source of parts. Developing the latest technology requires that we work closely with our suppliers.

Senator BAUCUS. There is not a lot of time here before my time expires. Could you just briefly describe some of the informal barriers that exist in Japan to prevent market access in Japan?

Mr. JUNKINS. The informal barriers are largely cultural. Certainly, in the 1970's and the late 1960's, subtle barriers were intended to protect a small industry and to give an industry within Japan time to grow. As time has gone on, that has continued to be at least an important factor in terms of allowing these industries to gain substantial market share in memory and to become dominant suppliers. So to that extent, there is I think a very real intent to try to control market access and limit competition from without the country.

To be fair, cultural differences are not necessarily unique to Japan. There have to be opportunities to work together very early in design cycles and create a relationship such as Mr. Canion just described where you are allowed to participate and design products in the earliest stages, such that when these devices go into produc-

tion, you will have a position in the market. These two factors have existed concurrently, frankly.

Senator BAUCUS. Thank you very much.

Senator Bentsen?

The CHAIRMAN. Thank you very much, Mr. Chairman.

Well, I certainly agree with you, Mr. Canion, that we do not want an industrial policy that picks winners or losers. But I also feel very strongly that while government is not the answer, government can help. And it can help provide a domestic, economic climate that, for example, helps get interest rates down as Mr. Junkins was talking about.

We have seen the Japanese interest rates go up and we have seen the Germans' interest rates going up. I am convinced we are going to have more of a capital crunch in this country because of what is happening with real estate values in Japan and its affecting the banks, and they are trying to increase their own infrastructure. I do not think they are going to be buying our securities as much as they have in the past.

I look at the West Germans trying to put a lot of money into East Germany and the demands on their currency there. That is one of the reasons that we are trying to bring back the IRA in this country—not just because of the individual's objectives for savings, but also for the whole country to try to get capital here and interest rates down, because you fellows make enormous capital investments and it is a continuing thing. With the rapid movement of your technology, you have to, and I understand that.

So those are the things that we have to do. Government can do some things that you cannot do in the way of breaking down barriers and has the additional muscle to do it. I think that is why it is important to proceed with the Uruguay Round on the protection of intellectual property rights, copyrights, and all the rest of that. And this committee has a primary responsibility in that.

But in looking at the reaction you are getting from Japan, I would like to know what you are hearing from them insofar as their attitude toward a new semiconductor agreement. Is it cooperative? Is it encouraging or what is the reaction to it? Either one of you.

Mr. JUNKINS. Well, Senator, let me comment, first. I think certainly publicly, our competitors have stated that they believe there should not be another agreement and that things have gone on enough and that momentum is such that an agreement should not be necessary. In my discussions with people in the Ministry of International Trade, they have offered some of the same comments. On the other hand, at least from the reports that we get from those in our government that have been holding recent discussions, there seems to be at least some understanding that the problems do continue and that we need to find some way to come together as far as this particular issue is concerned. I think there is little doubt, but what left to their own desires, our Japanese competitors would just as soon this problem go away.

I might make one other point, because there is concern about this 20 percent, metric goal. The significance of that is that not only is a measure of the degree of process, it also represents a level at which if we achieve it, we will not only be supplying commodity

parts, but we will have been designed-in or beginning to be designed-into critical applications. And that in itself, I believe, will create some sustainable momentum. If we stop short of that, whether it is 20 or 15 or 18 or whatever the number is, then this is not a sustainable situation in my mind.

So in direct answer to your question, I think they just as soon it not happen. On the other hand, certainly there is conversation going on with our negotiators.

Mr. CANION. Our sense is that the solidarity of the two industries coming together along with the cooperation between us and the government has sent a clear signal that while it may not be the most desirable thing, they accept it as something that must be dealt with.

The CHAIRMAN. I frankly believe if you have a continuing, major imbalance with another country over a long range of years, that finally it works to the detriment of both of those countries. And you cannot have a long, enduring, stable relationship with that kind of an imbalance.

I am delighted to have you here, gentlemen.

Senator BAUCUS. Thank you, Mr. Chairman.

Senator Grassley?

Senator GRASSLEY. Thank you, Mr. Chairman. In your industry paper you cite and I quote, "signs of progress under the current arrangement include the fact that foreign market share for semiconductors in Japan has increased from 8.6 percent in 1986 to approximately 13 percent at the end of 1990."

You shoot for 20 percent, you get 13 percent, and you call this progress. My question to either one of you or both of you is what you think that percent would have been, in your estimation, if you had had no agreement, but instead had to compete for a share of the market assuming the market were open?

Mr. JUNKINS. Well, Senator Grassley, let me take a shot at that. If you look at the history of 20 or 25 years and you only read from that particular curve, you would conclude that market share would be about the same as it has been for the last 15 or 20 years because there was little progress made until well into the middle of this agreement. So no one could have predicted what might have happened, but certainly history would indicate that that is what would have happened.

Senator GRASSLEY. The point is that we would not have been as far as we are?

Mr. JUNKINS. That is my personal opinion. The efforts that have been made by the Japanese Government and by the companies in Japan certainly has increased market share, and it has been as a result of those efforts. And I think without that, there is little doubt that it would have been no better than it is and conceivably worse, because that market has been growing faster than the other markets in the world.

Senator GRASSLEY. What is the Japanese share of the semiconductor business in the United States as compared to U.S. manufacturers on the one hand, and other foreign manufacturers on the other?

Mr. JUNKINS. Well, the Japanese share in the United States is in the 21-percent range or so, and other foreign manufacturers are approximately at the 7-percent level.

Senator GRASSLEY. What is the share of American computer sales in Japan versus Japanese computer sales in the United States?

Mr. CANION. I do not have the exact numbers. But the share of American computer sales in Japan is very low relative to the Japanese computer sales in the United States. And it relates back to the very same issue—the market in United States very broadly being open and being primarily driven by products. And we believe that in the computer industry as well, there are barriers to completely open markets for computer products.

Senator GRASSLEY. So then your answer was the share—I did not get the answer about the share of computer sales in Japan versus the Japanese computer sales in the United States.

Mr. CANION. We can get you the specific numbers as they exist, but it is much lower for U.S. companies in Japan than the other way around.

[The information appears in the appendix.]

Senator GRASSLEY. With Japan's reluctance to purchase either semiconductors or computers from U.S. manufacturers, what would you estimate the losses to be for the American economy in the following areas: American jobs and wages, Federal taxes, capital investment, research and development?

Mr. JUNKINS. Senator Grassley, we do not have that—or I do not have that data here at hand but we can submit that for you. The Semiconductor Industry Association has calculated that data in terms of the jobs lost and the R&D investment and taxes lost and we will be happy to submit that for the record.

Senator GRASSLEY. Mr. Chairman, I happen to have those figures and I would like to share them with the committee: $150 million; capital investment, $100 million; lost taxes, $75 million; jobs, 10,940. I guess the point is that—whether your figures compare to those or not, and I hope they do—it really costs the U.S. economy when the Japanese do not live up to their agreement. I guess it would be obvious you would have to agree with that.

Mr. JUNKINS. Senator, excuse me, I have found the information. Basically, we are saying that opening the Japanese markets to competition certainly provides those resources. The actual increase we have seen is about $150 million and with full compliance in R&D, that would have been nearly another $150 million, with capital investment about the same. And you are right, the jobs that have come from the increase are about 5,500 or so and with full compliance it would be something close to 11,000. Government taxes would total something like $70 million to $140 million.

Senator GRASSLEY. And you agree that the cost to the American economy in each of those categories is that much?

Mr. JUNKINS. Yes.

Senator GRASSLEY. All right. My last question is simply this: Why have you not or do you not want a 301 petition tool used?

Mr. JUNKINS. I would not say that we do not want the 301 remedy used. I think it should be put in this context: As I stated earlier, there was little progress made in the first year or two of the agreement. I think that as we began to try to determine what

would be a fair metric, we gave credit for the progress that has been made in the last 2 years. Now part of the reason the progress did not start earlier is because it followed past histories of there being nothing done. I think you also must recognize that it does take some time to build these relationships.

And so as we saw progress in the last 2 years or so, and what we said is if the trends continue, we ought to be able to reach this metric by about the end of 1992. On that basis, we said we felt that it was better for us to continue the progress and encourage it rather than taking further actions under Section 301. Had progress been made in 1986 and had it flattened out since then or gone down, we would probably have a different view of the world than we do.

Senator GRASSLEY. Thank you, Mr. Chairman.

Senator BAUCUS. Thank you, Senator.

Senator Danforth?

OPENING STATEMENT OF HON. JOHN C. DANFORTH, A U.S. SENATOR FROM MISSOURI

Senator DANFORTH. Gentlemen, thank you very much. We always hope to learn from the past when we face the future and I would like to go through with you the 1986 experience and see if we can draw from it any lessons in how we handle agreements, particularly with Japan on matters of trade, and see if you would agree with these conclusions that I would draw from 1986 and then maybe we should apply them to a future Semiconductor Agreement or any other agreement with Japan.

The first conclusion I would reach is that when we think that we have reached an agreement, that is not necessarily dispositive of the problems we have. We negotiate agreements, but to negotiate something that is satisfactory to us where we think that we have been promised a result does not necessarily mean that we are going to get what we have been promised.

The second conclusion that I would reach is that whatever we do, particularly in dealing with Japan has to be very, very tightly drafted. It really calls for the toughest negotiation skills and the best legal draftsmanship by the finest lawyers we can find. Otherwise, we are going to be immediately getting into questions as to whether or not there is a difference between an agreement and a side letter, whether what is in a side letter really is an agreement or not an agreement.

So I would conclude that not only is reaching what we think is an agreement not necessarily dispositive, but if we believe if an agreement is important, that it has to be very, very tightly drawn.

A third lesson that I would draw is that while I think both of you are correct, that measuring progress under an agreement is important, you have to be able to have benchmarks—that measuring progress in itself does not necessarily do the job Something must happen if those benchmarks are not met.

Then I would conclude that the something that must happen has to be more than us complaining that we have been had. I will tell you, having dealt with Japan now for 12 or 13 years in the trade area, that any expression of any degree of questioning about Japa-

nese behavior in the area of trade immediately leads to those of us who raise the question being branded as Japanese bashers. I mean that follows as the night the day. It is very perilous. All of the columnists, the editorial writers, not to mention the Japanese themselves, immediately seize the offensive. And those of us who say, hey, we have been had—I mean we had an agreement for 20-percent market access but we only have 13 percent of the market. We have been had. The immediate response to that is: you are a Japan basher.

So my conclusion is that it is not only important to measure the degree to which you have been had, but to have something happen under the terms of the agreement, which means sanctions.

And finally, I would conclude that the sanctions have to be adequate to the job. Here we have a case where there are $165 million in sanctions. My guess is, and you would know better than I would, that $165 million is nothing. I mean it is just something that the Japanese are willing to eat for the sake of avoiding the agreement.

So to me the lessons are that the negotiations have to be very tough. The draftsmanship has to be very, very tight or the Japanese will find the loopholes and find the arguments. And the measurement has to be precise and regular and that the sanctions must follow and then they must be adequate to do the job.

Those are my lessons from the 1986 Semiconductor Agreement. And I would simply ask you whether you would agree or disagree with those lessons or whether you have other lessons that you might offer us?

Mr CANION. Well, I think we agree with those lessons. I think there are other insights, as you mentioned to be gained from the experience and too numerous to mention right now.

But I would only add that the aspect of this last 5 years that maybe ought to be pointed out, is the difficulty of moving market share. We are not talking about a very small number of people in a room just walking out and doing it. We are talking about changing patterns that have been established over decades. And I think it is true, we all have acknowledged that the first couple of years nothing seemed to happen. Maybe there was no action and certainly no results.

But the very important thing is that once the action did begin to occur, we did see what we view as very difficult things to accomplish starting to be accomplished which led us to conclude as each individual group and together, that the most effective thing we can do at this point is to give that a chance to continue.

We certainly have the opportunity to measure it as we go along and to see if things turn around or do not progress the way they are. But if they do continue and we can continue to move things steadily along, then that is the most sure way of reaching the common end goal of an open market. And certainly, there is no magic number that is the end result. We do not want a specific market share. What we want to do is, over time, break down the barriers.

And I think Jerry was very right, that we have to get the market share above a certain point or you are still just on the fringes. You have got to be building relationships with the companies that can then turn around and last for a long time, hopefully after we have

no more need for the controls and the market share continues to be open and normal.

Senator DANFORTH. Mr. Junkins?

Mr. JUNKINS. Senator, I certainly would agree with your three points. We have lived with this problem a long time, and it is impossible to accomplish it if things are fuzzy. People in countries and companies tend to do what you "inspect" and not always what you "expect." I think the metrics are important, and the certainty of the consequences are important. Without that, then in 1992 or 1995 or whenever else it is, we will be short again, looking at what do we do from here on. And also importantly, these metrics clearly are within reach. They are not unreasonable in terms of time and/or level, and so they can be done if we just put our mind to it.

The sanctions that were put in place early in the agreement had an effect. There was little effect before that. Other factors took over in terms of market forces and market shares and so on. So it is arguable as to what really caused the final end to dumping, but clearly in the early stages, the sanctions made a difference.

Senator BAUCUS. I would like to follow-up on that last point. Are the current sanctions sufficient?

Mr. JUNKINS. That is something that we have not, as industry groups, taken a position on one way or another. We really believe, Senator, that the government, since it is a government-to-government agreement, ought to make those decisions. I believe sanctions were sufficient to cause some movement in 1987 or 1988.

I would agree also with Senator Danforth that you are talking about very small amounts of money relative to the size of the markets on which sanctions were levied. And so whether it is the economic impact or the political impact, I am not sure. But we think that is something that should be considered as a part of reaching a new agreement, frankly.

Senator DANFORTH. I wonder if you could help us to do that because I think that really is important. If the fine so to speak is so light that the offending party is just willing to eat it—just pay it, you know—meet the sanctions and go ahead with the exclusive market practices, then the sanctions are not adequate. I think if there is some way to quantify the economic loss of the closed markets so that there can be some measuring up of the sanctions with the laws, I think that would be very important.

Senator BAUCUS. What other leverage comes to mind? Frankly, I have heard from your answer your concern that remaining current sanctions might not be adequate. Is that a proper inference or not?

Mr. JUNKINS. My comment really had to do with, let us look at where we are today and what does it take to achieve a new agreement with the kinds of stipulations that Senator Danforth suggested. That is really where we have put most of our energies, and we have not tried to decide whether sanctions are adequate as they are today or what we should recommend as far as added sanctions. We have left that to our government negotiators as a part of what they believe they need to enforce the agreement, and we have not dealt significantly with that, partly because again, we as an industry would prefer that they not exist at all.

We recognize the distortions that sanctions place on the system. But if we drive toward an agreement that has got some teeth in it,

we must also recognize that there has got to be some penalty for noncompliance. And unfortunately, sanctions tends to be the only penalty that is there if we are not able to achieve it.

Senator BAUCUS. But you do believe the current sanctions should remain in effect until a successful agreement is concluded, is that correct?

Mr. JUNKINS. Yes. I think that at this stage of the game, all of these issues have to be dealt with at one time. I do not think you can dismantle this unilaterally. And I think again, the people in Commerce and USTR are the ones that need to handle that.

Senator BAUCUS. Could you go in to a little more detail? We had gotten to this in the last round of questions—the barriers that exist in Japan. As I understand it, there are discriminatory design standards that have an effect. The Keiretsus have an adverse effect. I mean if you could just tell me as a practical matter what some of the barriers are.

Mr. JUNKINS. This is really a complicated area. First, as I said, the barriers were one of making sure that their industries had an opportunity to have a closed home market in order to gain the size and gain the market share that is necessary to basically have a dominant share in the marketplace. That is the single, most important one that took place early. It showed up early in terms of our entrance into Japan, and the difficulty we had in making investments there to start with. And only because of some of the intellectual property that we had, were we allowed to set up shop in Japan 20 years ago and so on.

Now we reached a stage where it becomes much, much tougher, in that you must be allowed to have a relationship with a customer that is an intimate relationship very early in the design cycle. That means you are going to be designing-in as this business becomes more customized and less standard products or commodity products. Then you have got to have design systems that are similar. You have got to be able to engage with the engineering departments rather than just the purchasing departments, such that you can begin to be designed-in to the performance and custom side of their business. That is not something that happens easy.

And I really think that this is the single biggest barrier left today. It is just having that kind of relationship. And it takes effort on our part to have designers, to have sales offices, have intimate design centers in place and that is beginning to happen slowly. But you have had a series of barriers—cultural, prejudicial, whatever—over a long period of time that has brought us here. But the most significant one today, I think, is the ability to be accepted and granted the ability to design in custom and semi-custom devices.

Senator BAUCUS. And it is your point that because of the difficulty getting a handle on all that, that 20 percent roughly or maybe a slightly higher benchmark figure is necessary; that is, a number is necessary. Is that one of your points?

Mr. JUNKINS. Right, Senator. We could achieve some higher market share than we have today by Japan firms' basically buying commodity parts from U.S. producers. That is not a sustainable situation. That can be turned off as easy as it can be turned on. And, in fact, that is part of where the progress has been made over the last 4 or 5 years. We have benefited from it. Others have benefited

from some increased buying of commodity parts. But you must achieve a bigger share than that. And only when you do that, will you have the relationship that I described earlier that then is sustainable. And that means you have got to be designed into custom applications. You have got to be designed in earlier in the cycle.

And I do not know whether it is 20 percent of 25 percent or something, but it is in that level where then, I think, you could declare that at least the system is beginning to work and is sustainable in terms of an open market over a long period of time.

Senator BAUCUS. I wonder if you could together address the dumping provisions. As I understand it, one of the reasons why the computer industry is a little bit nervous or had some problems with the earlier agreement is because the dumping provisions from the computer industry's point of view have the effect of setting a foreign market value which tended to create a higher price for the product that you were buying. But now you have recommended something called a 3-month fast track procedure to monitor potential dumping.

Would you go into that, please, Mr. Canion?

Mr. CANION. Well, there were a couple of things that happened in the first year of the agreement. Initially, the fair market value prices that were set respective of some of the computer systems companies was that they were inaccurate or two high and that resulted in some confusion at first. But then very quickly after that, we believe other stronger forces set in which had to do with short supply and an increasing demand from high growth in the computer industry.

But it was all those forces added together to create tremendous shortages. It would go beyond just higher prices. We could not get parts to build the computers that our customers were demanding. So it was a very, very impactful situation in our business. Now we do not attribute all of that to the agreement itself. We think it may have had a factor in it and certainly we want to prevent that aspect of it from occurring again.

Well, let me say that one of the things we have learned from the agreement is that setting forces in motion that result in tight control of prices, and the industry and the Japanese Government working closely together to manage that whole industry have a lot of negative effects—prices, control, supply and so forth that you almost cannot avoid once you get that control mechanism in place.

So our proposal is to try to prevent dumping without the negative side of putting the controls in place that tend to have so many side effects.

Senator BAUCUS. And you think this 3-month track provision will accomplish that objective?

Mr. CANION. We believe it will. We believe that that combined with the other measures that go with that—it is a system that has to hang all together. That is, they have to have the data collected. There has to be a mechanism in place for it to be supplied quickly and then we would like to see our government committing to react as quickly as possible so that the threat of action is there in case any company were tempted to dump.

Senator BAUCUS. What other industries can you think of where your model can be helpful? I am reminded of Benjamin Franklin's

adage, you know, either we hang together or most assuredly, we hang separately.

Are there industries that come to mind where perhaps this model can be constructive and helpful?

Mr. JUNKINS. Well, I would take a shot at it to say that almost any industry—if you are dependent upon a supplier and the supplier is dependent upon the user for their business, they obviously have got a mutual interest. And if you look at the long period of time transcending, what prices might be today, either high or low, then you have got to be concerned about what happens if your supplier goes away and what happens if, in fact, the dominant supplier that is left in place is in control of such a large share of the market. Ultimately, you are going to lose even though you may have paid very good or very low prices for a period of time.

So it is hard for me to believe that if you are looking at the long term in terms of what is good for the entire industry of the United States, that virtually any industry that has got a supplier/user relationship needs to take a look at it with that in mind. And it is really a short-term decision versus what is best for long-term health.

Senator BAUCUS. Does that mean we develop or own Keiretsus here in this country?

Mr. JUNKINS. Well, I think that you simulate that to some extent, frankly. We do not have in this country, with maybe one or two exceptions, the very large vertically integrated companies that the Keiretsus have developed. But I think that what you are seeing happen in the relationships between the semiconductor producers and their customers, is cooperation in design. You are finding cooperation in maybe getting on the same process road map. You are finding cooperation in our case where people have actually put some up-front money in place in order to buy capacity. These things can happen and we can then simulate some of the effects of the Keiretsus, frankly.

Mr. CANION. I think there is another very important side to this and that is that when the suppliers and the customers come at the government at different perspectives and aggressively argue for different courses of action, the government is caught in the middle. And to then expect a good result to come out of that is very unrealistic.

The first thing we realized when the systems companies began to work with the government was that we were arguing strongly and perhaps technically in areas that were very difficult for them to adjudicate between us, and that the only real chance of having an effective—you know, if you get back to the bottom line—something that will work, an effective path would be for us to work it out and then the third party—it is actually three—is that the customer and the supplier work it out and then integrate the needs of the government in together. And if you reach a three way consensus, then you have got something that really has a chance of working.

Senator BAUCUS. That is interesting. Could you give me an example of that if you can, where, you know, the supplier and the systems producer got in a bind and it caused a problem for the government. And I guess the government is a purchaser of the system, as I understand it.

Mr. CANION. Well, a very good example is the one we were just talking about, FMV's. It was viewed between the government and the semiconductor companies initially as an effective way of stopping dumping. And I think in that limited scope it did. But when you add the interest of the customers into it, it gives you a little bit different picture. And so the initial reaction was to simply go fight that and try to stop it or change it in such a way that it only served the systems company's needs. When in reality, the only answer that would work is if we step back and come up with a solution that meets all three needs.

Senator BAUCUS. Mr. Junkins, are you concerned that 20 percent or 22 or 23 percent benchmark might turn into a ceiling?

Mr. JUNKINS. I am concerned that if we allow that to happen, that would be a mistake because first, then it becomes a target and then it becomes managed trade on both sides. And that is certainly not our intent. Our intent here is to suggest some metric that you can use to establish really an opinion on the degree of openness.

And with market shares as they exist in the rest of the world, there is no reason that 20-percent should be a ceiling. So our proposal again, to keep from setting new metrics in place at this time, is to use the original number which is really a delay of about 18 months. Then let's take a look at the situation and decide what sort of quantifiable measures are necessary beyond that.

Senator BAUCUS. This is not really relevant to this hearing—not directly anyway, but while we have you here, what recommendations do you have to allow American cost of capital to be competitive?

Mr. JUNKINS. Mr. Chairman, we have addressed that in the National Advisory Committee report in a fair amount of detail, but it really comes in two or three areas as we view it. One, as Senator Bentsen stated earlier, interest rates have got to go down. Two, there must be some sort of incentive for investment across industry, and not just semiconductors, but in any industry that has such a high degree of capitalization. So it is interest rates; it is shorter depreciation cycles; it is investment incentives and further, R&D incentives.

We are being out-spent by the Japanese industry in the last 5 years by about $12 billion—our industry. If those trends continue, it will be $15 billion or more in the next round. And it really comes back to some fundamental tax and R&D and investment policy that we need to address.

Senator BAUCUS. Mr. Canion, do you have any observations on that?

Mr. CANION. No. We would support that same approach.

Senator BAUCUS. All right. And the importance of intellectual property in the GATT Round?

Mr. JUNKINS. It is very important, as I mentioned in my prepared testimony, that we continue strong enforcement here in the United States and that IP enforcement is a part of the multi-lateral—and where necessary, bi-lateral—negotiations around the world. Today, as long as we are vigilant here in the United States, we represent such a large market, that it is a major deterrent on the unlicensed use of intellectual property, copyrights, and patents. As the markets of the world begin to grow, it will become more im-

portant that a similar and a unified system exists around the world. Otherwise, just the deterrents in the United States will not be enough to protect the industry because our U.S. market will be substantially smaller as a percent than the world market than it is has been. So it is an important and critical issue.

Senator BAUCUS. I have no further questions. Do you have other areas of concern? Anything come to mind?

Mr. JUNKINS. No. I do not think so.

Senator BAUCUS. I want to thank you both very much. It is clear that your testimony is going to go along way to help us achieve a successful Semiconductor Agreement with Japan. And again, thank you very much for your testimony.

Mr. JUNKINS. Thank you.

Mr. CANION. Thank you.

Senator BAUCUS. The hearing is adjourned.

[Whereupon, the hearing was adjourned at 11:28 a.m.]

APPENDIX

ADDITIONAL MATERIAL SUBMITTED

PREPARED STATEMENT OF SENATOR MAX BAUCUS

In the last several years, there has been a realization that U.S. national security depends upon U.S. economic strength. In the next ten years, U.S. national security will be determined as much by the number of products we can export as by the number of bombs we can drop.

Unfortunately, U.S. national security is in serious question in the economic arena. We won the arms race with the Soviet Union, but we are running neck-and-neck in the economic race with Japan and Germany. In some economic sectors, the U.S. is having difficulty holding its own in the face of unfair foreign trade practices.

WORLD SEMICONDUCTOR MARKETS

The experience of the U.S. semiconductor industry provides an excellent case in point.

Semiconductors are the computer chips that play an integral role in all modern electronic products. They are found in everything from VCRs to Patriot Missiles.

Only a few short years ago, the U.S. was the unquestioned leader in the design and manufacture of semiconductors. But things have changed.

—From 1980 to 1989, the U.S. share of the world semiconductor market fell from 57% to 35%. Simultaneously, the Japanese share rose from 27% to 52%. The U.S. share of the world market continues to shrink at a rate of 2% per year.

—In 1980, all five of the world's top semiconductor equipment manufacturers were U.S. companies. Now, four of the five are Japanese companies.

Unfortunately, the decline of the semiconductor industry has implications far beyond chip plants in the Silicon Valley. As the U.S. capacity to manufacture computer chips has declined, so has its capacity to manufacture a range of computer and electronics products. Also, chips are critical to many of the high-tech weapons that performed so well in the Persian Gulf. Semiconductors are as critical to U.S. military security as bullets and hand grenades.

SEMICONDUCTOR TRADE PRACTICES

How did the U.S. lose its lead in semiconductor production to Japan?

Part of the answer is that Japanese companies have worked hard and innovatively and invested in R&D. But that is only part of the answer. A big part of the problem has been predatory Japanese trade practices that drove U.S. semiconductor companies out of business.

The closed Japanese semiconductor market has posed the biggest problem. Many of the quotas and formal barriers that kept the U.S. out of the Japanese market in the 1970s are gone, but informal barriers remain. For this reason, the U.S. share of the Japanese market lags far behind the U.S. market share in other competitive world markets. For example, the U.S. share of the European chip market is 42%, but the U.S. share in Japan is only about 12%. This is very significant since Japan is now the world's largest market for semiconductors. In 1989, Japan was a $23 billion market for computer chips compared with a U.S. market of $17.9 billion.

A closed home market also allows Japanese companies to build profits at home to support predatory sales—known as dumping—abroad. In the mid-1980s, U.S. firms were hit hard by Japanese dumping. The Commerce Department found numerous instances of dumping by Japanese firms, but it simply could not work fast enough to keep up with the problem. As a result, in 1985 and 1986, 6 of the 8 U.S. companies that produce a high-tech type of chip known as a D-RAM were driven out of busi-

ness. For another type of chip known as the EPROM, the Commerce Department was forced to impose tariffs as high as 180% to level the playing field.

THE 1986 SEMICONDUCTOR AGREEMENT

To respond to these unfair trade practices, the U.S. government sought to conclude an agreement with the government of Japan.

The agreement was signed in September of 1986. It included three major provisions:

—First, Japan agreed to open its market to U.S. semiconductors. Japan committed to the goal of a 20% foreign share of the Japanese market by 1991.

—Second, Japan agreed to stop chip dumping in the U.S. market.

—Finally, Japan agreed to stop dumping in third markets.

This agreement yielded mixed results. After a dispute in 1987, Japan stopped dumping in both the U.S. and third markets. But the market access provisions have not worked as well as we had hoped. U.S. chip sales in Japan still lag far behind chip sales in other markets. The foreign share of the Japanese market has risen from 8.7% to 13.3%, but still falls far short of the target of 20% established in the agreement.

Primarily because of Japanese violations of the market access provisions, the U.S. imposed trade sanctions against Japan in 1987. Those sanctions remain in place today.

A NEW U.S.-JAPAN SEMICONDUCTOR TRADE AGREEMENT

The current Semiconductor Trade Agreement expires on July 31, 1991.

Recently, the U.S. industry, including both semiconductor manufacturers and computer manufacturers, was able to settle on a joint set of recommendations for a new Semiconductor Trade Agreement. The Administration and Congress shortly thereafter were able to settle their differences and use the industry recommendations as the basis for a new agreement.

Faced with a united front from the U.S., Japan reluctantly agreed to enter negotiations aimed at concluding a new Semiconductor Trade Agreement. The third round of those negotiations took place this week in Tokyo.

THE BOTTOM LINE

I understand that these negotiations are going smoothly. But there are three key issues that I and many in Congress believe must be addressed in a new agreement.

FIRST, A NEW AGREEMENT MUST INCLUDE QUANTIFIABLE INDICATORS OF PROGRESS TO ENSURE THAT THE JAPANESE MARKET IS OPEN TO U.S. SEMICONDUCTORS. The market access provisions in the current Semiconductor Trade Agreement are at best a qualified success. The 20% bench mark has not yet been reached.

But the U.S. semiconductor industry tells me that the progress that has been made in penetrating the Japanese market is almost entirely due to the target. If it were not for this objective measure of progress, Japan would still be insisting that its market was entirely open.

The new agreement must require that Japan meet the 20% goal and that further measures of progress be employed once it is reached.

SECOND, THE TRADE RETALIATION NOW IN PLACE CANNOT BE LIFTED UNTIL JAPAN MEETS THE 20% MARKET SHARE TARGET FROM THE 1986 AGREEMENT. In 1987, the U.S. imposed the current sanctions because the U.S. share of the Japanese market was woefully short of the 20% target.

We simply cannot ignore the fact that Japan has failed to live up to its commitments. If U.S. trade policy is to retain any credibility, we must insist that Japan meets its international obligations. In this case, the retaliation must remain until Japan fulfills its semiconductor market access commitments.

THIRD, THE AGREEMENT MUST INCLUDE EXPEDITED DUMPING ENFORCEMENT PROVISIONS. All sides in the U.S. have agreed that the current dumping provisions can be relaxed. But the U.S. must remain vigilant to ensure that the dumping that devastated the U.S. industry in the mid-80s does not recur. We must ensure that an adequate anti-dumping provision is included in the new agreement and enforced by the U.S. Commerce Department.

CONCLUSION

I am very pleased to have with us today senior representatives of the two private sector groups that put together the recommendation for a new Semiconductor Trade

Agreement. The semiconductor manufacturers are represented by the Semiconductor Industry of America—SIA. The computer manufacturers—the main domestic consumer of chips—are represented by the Computer Systems Policy Project—CSPP.

In the 1986 negotiations, these two U.S. industries sometimes worked against each other. But I am pleased and proud to say they were able to put aside their differences last year and work for the greater good. Their cooperation headed off what could easily have been a major dispute between the Administration and the Congress over a new Semiconductor Trade Agreement.

CSPP and SIA have shown great leadership. I hope that the model of cooperation they have built will be copied in other sectors. If the U.S. is to succeed in global economic competition, the private sector, the Congress, and the Administration must learn to work together.

I look forward to hearing from our two witnesses: Jerry Junkins—CEO of Texas Instruments, and "Rod' Canion—CEO of Compaq Computer Company.

PREPARED STATEMENT OF ROD CANION

Good morning. I'm Rod Canion, president and chief executive officer of Compaq Computer Corporation. I am pleased to be here today representing the Computer Systems Policy Project (CSPP).

Let me begin by saying that this has been a significant year for the electronics industry in Washington. The fact that Jerry and I are here, together, testifying before Congress on a common position on semiconductor trade is evidence of just how significant.

While the computer systems and semiconductor industries have long had good supplier/customer relations, we have held divergent views on many semiconductor trade issues. Given that they manufacture semiconductors and we use semiconductors, that's not a surprise. What is a surprise is that, despite these differing perspectives, our two industries recognized the importance of—and made a commitment to—working together on mutual semiconductor trade concerns.

The result of our efforts is the historic alliance represented before you today. We believe our joint effort is a model for the sort of industry cooperation needed to maintain America's technological leadership. Indeed, our alliance has grown so that our joint position now reflects the views of all the major U.S. electronics trade associations. I would almost be satisfied if this hearing does nothing more than bring attention to the significance of this alliance.

Nonetheless, our work together has not been easy. When the computer systems industry came to the table a year ago, it was very difficult for us to envision how we would deal with the semiconductor trade issue given some of the fundamental perspectives that generally frame our public policy positions. For example, we abhor the idea of managed trade. We dislike the notion of a guaranteed market share. We do not support sanctions for unattainable goals. And we are extremely wary of government intervention in market pricing unless absolutely necessary. It seemed to us that the 1986 Semiconductor Trade Arrangement contained some elements of all these things.

Once at the table, however, we came to see that our two industries share some important, common objectives. It was these common objectives that provided the foundation for our joint effort. Like the semiconductor industry, we have a strong interest in ensuring that the Japanese market be opened. As computer companies, it is in our best interest to be sure there is a steady supply of state-of-the-art semiconductors at reasonable prices from many sources, including the U.S. Opening the Japanese market, one of the world's largest, is vital to promote a healthy, competitive U.S. supplier base capable of meeting our needs for advanced semiconductors.

We also share a strong interest in ensuring that illegal semiconductor dumping does not occur in the future because, frankly, dumping hurts all of us. I can assure you, as a consumer of semiconductors, that an antidumping order causes fluctuations in chip prices that can be very disruptive. Dumping also threatens to eliminate multiple suppliers by forcing many out of the market.

What we found compelling after discussions with our colleagues in the semiconductor industry, was that the 1986 Arrangement, at least in the last two years, has produced some much needed results:

- instances of dumping have been contained;
- U.S. and Japanese companies have begun to form the kinds of long term relationships necessary for U.S. commercial success in Japan; and
- momentum toward an open market has begun.

We have not abandoned the principles that originally brought us to the table. What we and our semiconductor industry colleagues have done, is develop a joint proposal for a new semiconductor trade agreement with Japan that:

- builds on the progress begun under the 1986 Arrangement;
- meets the needs of both industries; and
- addresses the fundamental problems CSPP members had with the 1986 Arrangement.

In essence, we have forwarded to the government a joint proposal that will increase competition in all markets, while eliminating protectionism and preventing market abuse.

We are convinced that the United States and Japan should negotiate a new agreement on semiconductor trade. We are equally convinced that to be successful, the new agreement must contain ways to measure progress by measuring results. The history of trade agreements with Japan clearly illustrates that, without such a means to measure progress, the agreement won't work.

Therefore, our joint proposal calls for a reaffirmation of the commitment made by Japan to secure a 20 percent market share for foreign suppliers of semiconductors. This is not a guarantee, since achieving this level of progress depends on the efforts of our semiconductor colleagues to sell in Japan, as well as the willingness of Japanese customers to recognize the competitiveness of our suppliers. After studying the situation with our semiconductor industry colleagues, we are convinced that 20 percent is an attainable goal. Furthermore, we view achievement of this 20 percent market share as evidence that necessary efforts are being made to open the market in Japan. If needed, we are prepared to recommend additional incremental measures of progress to reach the goal of an open market. This is not managed trade.

On the dumping side, we are convinced that new procedures should be adopted to deter the threat of future dumping. These procedures will also allow the return of some of the market flexibility that has been lost over the last several years as a result of fairly intensive price guidance by both the U.S. and Japan. In light of the fact that dumping has stopped, we think this can be safely accomplished. Nevertheless, since dumping remains a threat, we have proposed measures to deter the practice in the future.

Finally, I am pleased to note that negotiations between the United States and Japan are underway. As they move forward, I urge Congress and the Administration to look, as we have done, beyond ideology and traditional policy perspectives and to focus on the most important objectives—opening the Japanese market and creating an effective deterrent to dumping. We have tried to be creative in our approach and we urge the U.S. and Japanese governments to do the same. We believe these objectives can be best accomplished by negotiating a new semiconductor trade agreement with Japan, consistent with the joint position of the U.S. computer and semiconductor industries.

With that, I would like to conclude by thanking you, Senator Baucus, and the members of the Subcommittee for recognizing the importance of this issue and our unique industry alliance. We hope that you will not only support our joint effort, but will encourage other industries to form similar public policy alliances.

Thank you.

Attachment.

April 18, 1991

The Honorable Charles Grassley
U.S Senate
135 Hart Senate Office Building
Washington, D C 20510

Dear Senator Grassley

When Jerry Junkins and I testified before the Finance Subcommittee on International Trade on March 22, 1991, you asked for some figures related to computer market share I am writing to provide you with the information I have gathered from the U S Department of Commerce so it can be included in the hearing record

The figures you requested were the share of U S computer sales in Japan versus the share of Japanese computer sales in the U S As you can imagine, the first part of this question is significantly easier (though not entirely clear-cut) to answer than the second

The Department of Commerce provided data, received from private sector sources, on the *foreign* share of the Japanese market The United States accounts for the majority of foreign share In 1989, the *foreign* share of the Japanese market was 36 8 percent of the private market and 10 1 percent of the public market

Identifying the Japanese share of the U S computer market is extremely difficult and is estimated by the Department of Commerce using a fairly complex formula that compares Japanese imports to a figure known as apparent domestic consumption (ADC). Using this formula for data gathered in 1989 and estimated for 1990 only, the Department of Commerce believes the Japanese share of the U S computer market to be about 15 percent

Unfortunately, as Commerce explained, the import to ADC formula does not reflect Japanese products or components manufactured in the United States In recent years, there has been a substantial increase in the number of Japanese plants and

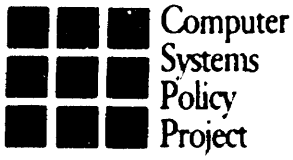
facilities in the U.S. In fact, according to recent article in Fortune magazine, Japanese manufacturing plants in the U.S. increased by 40% in 1990. Moreover, in addition to increasing production in the U.S., the Japanese have also increased their production facilities in other Asian countries. As a result, no matter what figure is determined, the actual Japanese share of the U.S. computer market is likely to be much greater than any number currently calculated.

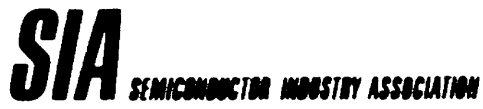
I hope this information is helpful. Thank you again for the opportunity to testify.

Sincerely,

Rod Carlton

cc Senator Max Baucus
Tim Miles, Department of Commerce
Jerry Junkins, Texas Instruments
Wayne Hosier, Committee on Finance





TOWARD A NEW U.S.-JAPAN AGREEMENT ON SEMICONDUCTOR TRADE

AN UNPRECEDENTED INDUSTRY ALLIANCE

Predicated on the belief that America's future competitiveness in electronics depends on cooperation among industries, the Semiconductor Industry Association (SIA) and the Computer Systems Policy Project (CSPP) have formed an unprecedented alliance to develop and advocate a unified industry position for establishing a new semiconductor trade agreement when the current U.S.-Japan Semiconductor Trade Arrangement expires in July, 1991.

The SIA-CSPP alliance is unique. It represents the first time that American semiconductor consumers and manufacturers have joined together to achieve the same trade policy objectives. The joint proposal provides the U.S. government with a united base of support and a powerful tool for negotiating a new semiconductor agreement with Japan. CSPP and SIA believe that their alliance is a model for the type of inter-industry relationships necessary to enhance U.S. competitiveness in a changing world.

THE NEED FOR A NEW AGREEMENT -- CONTINUING THE MOMENTUM

Despite the fact that the 1986 Semiconductor Trade Arrangement has been in place for four years, legitimate progress has only been achieved during the last two years. The improved trade outlook is encouraging because it indicates that the necessary infrastructure and market changes required to fulfill the goals of the original Arrangement can, in fact, be implemented. It also illustrates, however, that the transformation to an open market in Japan has not been achieved and cannot occur without government-level commitments from the U.S. and Japan.

Signs of progress under the current Arrangement include the fact that the foreign market share for semiconductors in Japan has increased from 8.6 percent in 1986 to approximately 13 percent in 1990. A number of cooperative efforts have been initiated by U.S. producers and Japanese semiconductor distributors and customers to forge better trading relationships and open the Japanese market. Furthermore, instances of semiconductor dumping by Japanese producers have largely ceased.

Though encouraging, this progress should not be interpreted as success. Foreign market share is still well below the 20 percent threshold agreed to by the government of Japan in 1986. In addition, relatively closed market conditions and Japan's excess semiconductor plant capacity are signs that future dumping remains a possibility.

The joint SIA-CSPP proposal for a new semiconductor agreement provides a formula that will allow for continued progress begun belatedly under the 1986 accord. If a new agreement is adopted, movement toward an open market in Japan can continue, and the threat of further Japanese semiconductor dumping can be eliminated.

ELEMENTS OF THE SIA-CSPP PROPOSAL

The joint industry proposal for a new semiconductor agreement was made public and presented to the U.S. government for consideration in October 1990. Both CSPP and SIA indicated a commitment to achieving an open market for U.S. products in Japan, and strong opposition to the dumping of semiconductors.

Provided that progress under the current Agreement continues, the two groups agree there should be a new five-year government-to-government pact negotiated that completes the effort initiated in 1986.

Specifically, the two groups agree that market access results must be measured by quantifiable indicators of progress -- not quotas. The aim is to achieve an open market in Japan that functions freely and does not restrict foreign products.

Much as individual companies set sales targets as a means of achieving a specific goal, a new semiconductor agreement should also have numerical targets to measure success. The minimum 20 percent foreign market share level agreed to under the 1986 accord is an indicator that market forces are functioning freely. The U.S. should insist on a quantifiable indicator to ensure that Japan abides by its prior commitment to open its market to foreign semiconductors.

Given Japan's past pledges, and the strong competitive ability of U.S. foreign semiconductor manufacturers in other markets, every effort should be made to achieve the 20 percent market share objective by the end of 1992. After 1992, periodic assessments made after to determine whether additional quantitative measures should be developed.

Reflecting the view that instances of dumping have apparently been contained, SIA and CSPP have proposed reducing the degree of government involvement, while maintaining effective measures to prevent future dumping in the United States and in third countries.

The two organizations agree that under the current EPROM and DRAM cases, the U.S. Department of Commerce should no longer collect cost or price data, and that "foreign market values" (FMVs) should no longer be issued to Japanese semiconductor producers. The DRAM dumping investigation should be terminated, while a modified version of the EPROM suspension should remain in place. The SIA and CSPP have also proposed that the Department of Commerce maintain a "fast track" response for investigations of dumping in the semiconductor industry.

REACTION TO THE PROPOSAL

Initial reaction to our joint proposal has been favorable. Representatives of the U.S. government have commended CSPP and SIA for working together. More importantly, they have already indicated to the Japanese government the intent to negotiate a new agreement.

Leaders throughout the broader U.S. electronics industry have been supportive of the joint effort as well. The major electronic industry associations -- including the American Electronics Association (AEA), the Computer Business and Equipment Manufacturers Association (CBEMA), and the Electronic Industries Association (EIA), and others -- have all gone on record in support of the SIA-CSPP position and have forwarded letters of support to the Bush Administration.

Predictably, the initial public response from Japanese government and industry was not favorable to the SIA-CSPP proposal nor to the general concept of a new semiconductor agreement.

However, there have been a number of indications, both privately and in the news media, suggesting that a new agreement does have support in some quarters within Japan. In fact, a Japanese industry representative was recently quoted in the Japan Economic Journal as saying, "despite reservations, Japan's semiconductor industry is leaning toward establishing a new trade agreement with the United States."

BACKGROUND

The Semiconductor Industry Association

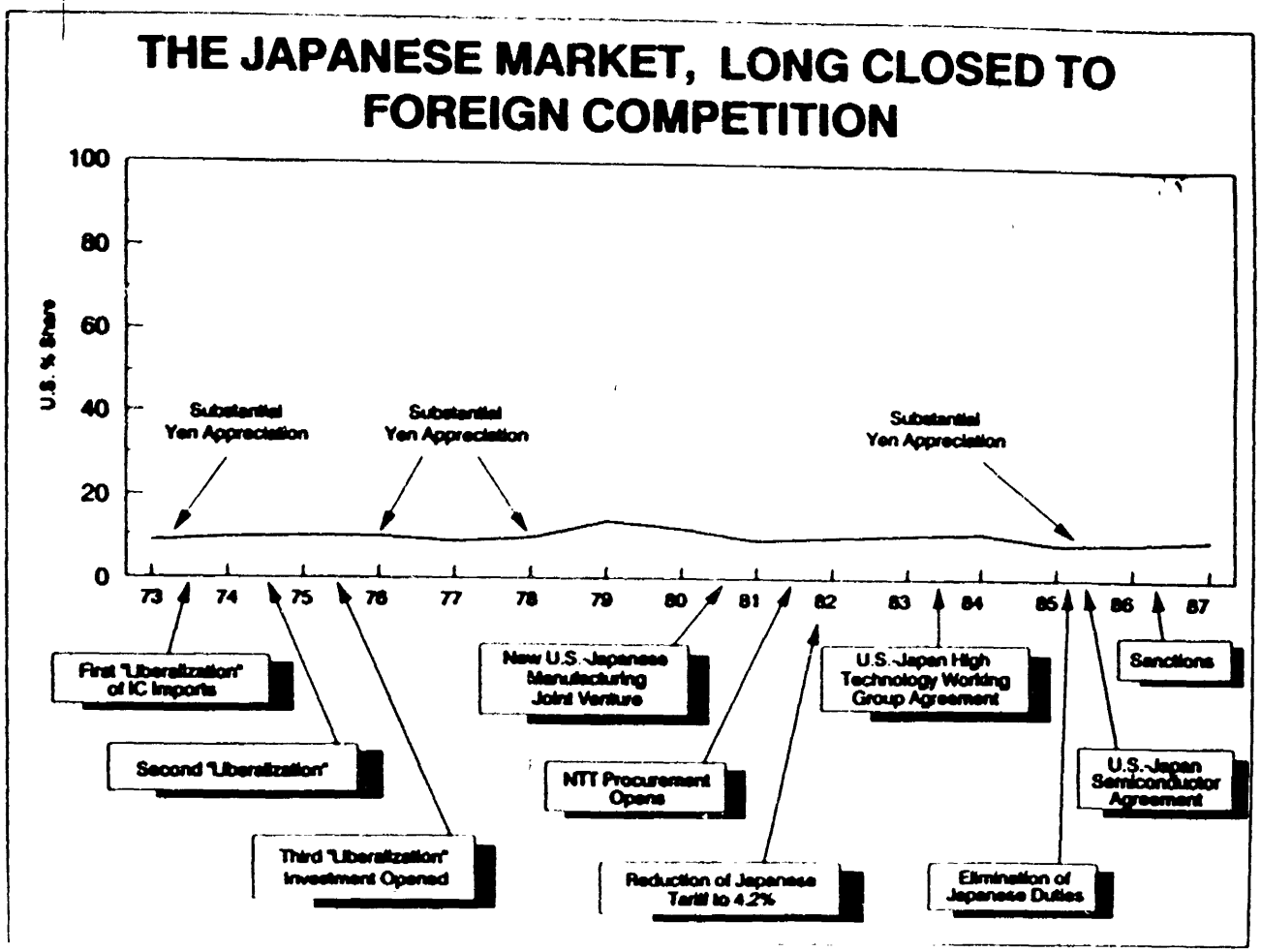
Since 1977, the Semiconductor Industry Association (SIA) has represented U.S.-based semiconductor manufacturers -- an industry whose worldwide sales exceeded $18 billion in 1990. SIA member companies comprise 90 percent of U.S. semiconductor production and employ more than 200,000 Americans. The association's primary focus is on international trade, specifically unfair trade practices and unequal access for U.S. products in world markets.

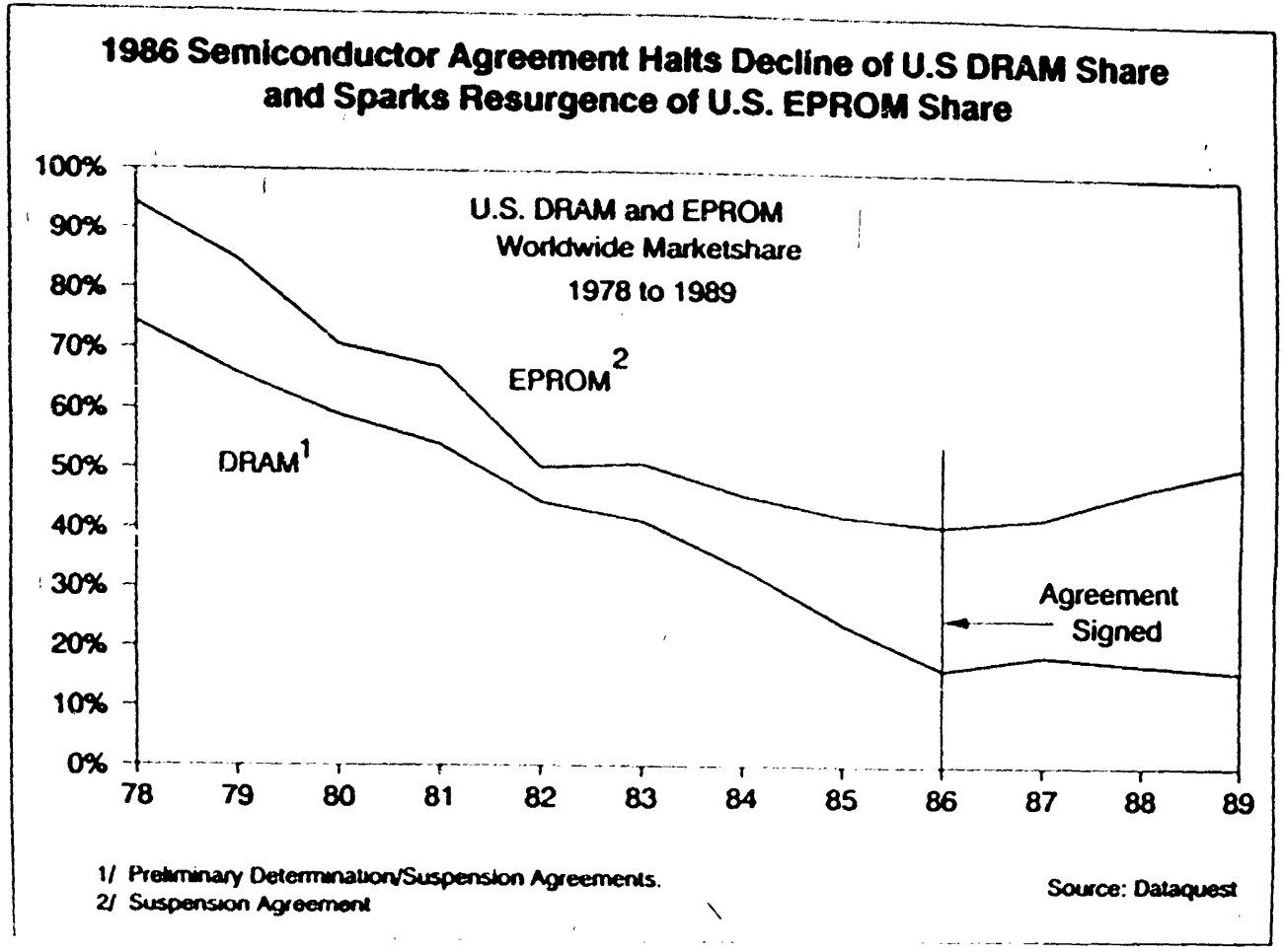
SIA activities also include a broad range of industry concerns including: technology policy, occupational safety and health, the environment, industry statistics, government semiconductor procurement, and related issues affecting U.S. semiconductor competitiveness.

The Computer Systems Policy Project

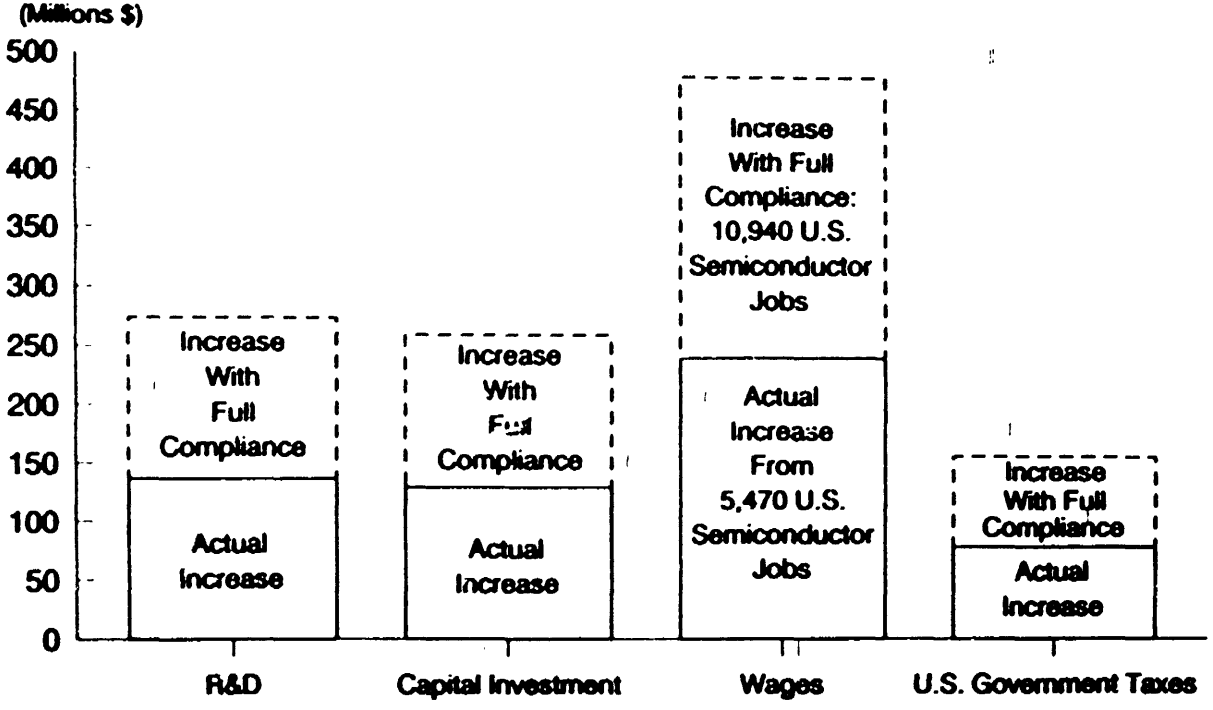
The Computer Systems Policy Project (CSPP) is an affiliation of chief executive officers of American computer companies that develop, build and market information processing systems and related software and services. CSPP member companies are a vital component of America's economy employing over 587,000 workers in the United States.

The eleven CSPP CEOs joined together in 1989 to create a forum to exchange views on major public policy challenges that affect their industry and the nation. More importantly, CSPP's members are committed to developing and advocating a unified public policy agenda on trade and technology issues that will encourage America's high-technology industries to continue to innovate, create and be competitive in a increasingly challenging international marketplace.


THE JAPANESE MARKET, LONG CLOSED TO FOREIGN COMPETITION
U.S. % Share
100
80
60
40
20
0
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
Substantial Yen Appreciation
Substantial Yen Appreciation
Substantial Yen Appreciation
First "Liberalization" of IC Imports
Second "Liberalization"
Third "Liberalization" Investment Opened
New U.S.-Japanese Manufacturing Joint Venture
NTT Procurement Opens
Reduction of Japanese Tariff to 4.2%
U.S.-Japan High Technology Working Group Agreement
Elimination of Japanese Duties
Sanctions
U.S.-Japan Semiconductor Agreement


1986 Semiconductor Agreement Halts Decline of U.S DRAM Share and Sparks Resurgence of U.S. EPROM Share
U.S. DRAM and EPROM
Worldwide Marketshare
1978 to 1989
EPROM 2
DRAM 1
Agreement Signed
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
78
79
80
81
82
83
84
85
86
87
88
89
1/ Preliminary Determination/Suspension Agreements.
2/ Suspension Agreement
Source: Dataquest

Opening Japan's Market to Competition Provides Additional Resources for R&D, Investment, Jobs and U.S. Tax Base



Note: The Agreement applies to all foreign semiconductor sales. Non-U.S. sales have also increased.

PREPARED STATEMENT OF SENATOR CHARLES E. GRASSLEY

I am concerned about the agreement, concluded in 1988 between the United States and Japan, that was intended to stop dumping and improve market access in Japan for U.S. semiconductor manufacturers.

As we all can recall, the United States imposed $300 million dollars in sanctions on Japan in 1887 under section 301 for failing to comply with either the market access or third-country dumping provisions of this agreement. While Japanese dumping of semiconductors has nearly ceased, we have yet to reach the 20 percent share to which the U.S. and Japan originally agreed. Instead, only 13 percent, or roughly two-thirds of the agreement, has been met as we approach the expiration of the agreement.

Mr. Chairman, think we can all agree that the best measure of success is quantifiable indicators of progress. Clearly, this agreement at least in my opinion . . . while not a total failure, is a failure nevertheless.

I realize that the industry position may be split with the expiration of this agreement. Although they have issued a joint position to give Japan until 1992 to reach the 20 percent share, after which they will negotiate another "Quantifiable Indicator of Progress" to be attained by 1998, I'm not convinced it will be any more successful than this last agreement. In fact, based on the fact we have seen the Japanese only achieve 13 percent on an agreed 20 percent, wouldn't it be as likely that we will only see about 27-28 percent achieved if they shoot for a 35 percent level?

Given Japan's failure to fulfill past pledges, whether in the area of semiconductors or financial commitment to the Persian gulf effort as two examples, this Senator is convinced that we will continue to hear more rhetoric and see no action.

Just this week, Japanese officials threatened to arrest American exhibitors at an international trade show for displaying 10 pounds of American rice. Clearly, this situation is another example of Japan's unwillingness to share a world view similar to that of the U.S. and our other trading partners. The time has come for the United States to be *more* forthright in defending our own interests, rather than to be willing to settle for crumbs at the table.

As we all know, American companies are simply not allowed the influence in Japan that Japanese firms are allowed in the United States. Very few former Japanese Government officials are willing to work for American firms, while the revolving door in the United States is spinning ever faster. These American officials take their expertise and contacts with them to work for foreign corporations and interests. The Japanese hire as many law, public relations, and lobbying firms as the other three of our top trading partners combined. The Japanese are spending $100 million dollars a year to hire 1,000 Washington lawyers, lobbyists, and public relations people. They also spend an additional $300 million on grassroots lobbying and publicity across the United States.

Mr. Chairman, I'm not sure how American companies can compete against the Japanese when some of the best and brightest in our own Government go to work for the Japanese. In fact, Ihave been advised that some U.S. companies are starting to withhold information from our Government because these American officials are expected to bring a "golden nugget" of information with them when they go to work for the Japanese.

Mr. Chairman, I look forward to hearing what our witnesses have to say on this issue. At this point, I have not concluded whether I could support a new agreement which I perceive to be a carrot and stick approach. My feelings tend to lean toward a club approach of knocking down the unfair barriers our American exporters face in Japan. Honor and trust among men and women of goodwill apparently does not work in the Japanese market.

PREPARED STATEMENT OF JERRY R. JUNKINS

Mr. Chairman, Members of the Subcommittee, I am Jerry Junkins, chairman, president, and CEO of Texas Instruments. I appreciate this opportunity to discuss the 1986 U.S.-Japan Semiconductor Trade Agreement. My purpose this morning is to share with you a success story in the making and to urge you to support the negotiation of a new semiconductor agreement so that the objectives of the 1986 Agreement can be fully realized.

But first, let me note several underlying concerns which relate to this process and which both we in the semiconductor industry and you who serve on the Finance Committee must deal.

Reports of the National Advisory Committee on Semiconductors, a presidential panel created by the 1988 Trade Act, have called attention to "a strategic industry

at risk." We've related this panel's concerns to you previously and provided you copies of our reports.

As a member of this "strategic industry," we at Texas Instruments have wrestled with several fundamental issues which bear on our discussion today and which I'd like to share with you:

First, is the worldwide semiconductor market really an important one? We give an emphatic "yes." Worldwide growth is projected at double digit rates through the year 2000.

Second, will the higher cost-of-capital in the U.S. allow us to compete successfully with our international competition? We think the gap will narrow, but present tax policies will not close the gap. In the case of our company, we have closed the gap through creation of innovative joint ventures and alliances, at home and abroad.

Third, will the U.S. and worldwide environments for protection of intellectual property remain positive, enabling innovators to receive fair value for the fruits of their research and development? It seems so in the U.S. at present, but a question remains with regard to many of our trading partners. As this Subcommittee well knows, the fate of the Uruguay Round and the proposed inclusion of an intellectual property code in the GATT is unresolved.

Fourth, will we quickly react to unfair trade practices, such as dumping, and market access—the issues which bring us together today and about which more will be said?

And finally, notwithstanding these other issues, will we have the ability and staying power to compete head-on with our competitors in an extremely aggressive worldwide environment? I believe that we will. We have the technology to compete, and we are committed to that purpose.

If we cannot answer all of these questions with a "yes," a company such as ours must reassess its strategic decision to be a major semiconductor competitor.

But, Mr. Chairman, these concerns have ramifications beyond the semiconductor industry alone. The future of America's high technology industry depends on how well domestic semiconductor manufacturers compete in the world marketplace. Not only do I believe this, but my colleagues and customers in other sectors of the electronics industry also believe it.

That is why Rod Canion and I are here today. Rod represents the Computer Systems Policy Project, and I represent the Semiconductor Industry Association. Together, our two organizations spent about eight months developing a unified industry position with respect to U.S.-Japan semiconductor trade policy, aimed not at protecting the industry, but at giving it the opportunity to compete.

When we first sat down to discuss this issue last year, we thought we had different objectives. But what we found was that our interests are the same. For example, semiconductor makers must invest a large percentage of revenues in order to create next-generation devices. Computer producers need these advanced semiconductors to remain competitive. Computer makers want a multiple supplier base, and understandably, they desire globally competitive, self-reliant vendors in their own country. In order for this vendor base to exist, the U.S. semiconductor industry needs an environment that will promote open trade and deter unfair practices.

We came away from our discussions with a common goal: to promote a new U.S.-Japan Semiconductor Agreement that will continue the progress that already has been made and meet the objectives stated in the 1986 accord.

This industry alliance between semiconductor makers and computer manufacturers is historic. We feel it is a model of how diverse sectors of an industry must recognize their shared interests in order to promote trade policy in a way that will be effective for all.

Let me take a moment to illustrate further the importance of the electronics industry to our nation. It provides 2.6 million jobs in the United States—more than double the number of jobs in the auto and steel industries combined, and the jobs are those which serve to enhance productivity across our economy thereby elevating our American standard of living. Within the decade, the worldwide electronics industry will reach two trillion dollars. The semiconductor segment of this industry alone will top 200 billion dollars.

The growth of the electronics industry has been fueled by the ability of semiconductor producers to consistently pack increased power onto a single chip. Today's state-of-the-art chip is quickly replaced by the next generation, offering greater complexity, higher performance and faster speed—usually at lower costs. No other industry has delivered so much capability improvement at so little cost to the consumer. And no other industry faces such severe competitive pressures to innovate and move forward with the latest technological advances.

Semiconductors are the building blocks for our electronics industry. Without semiconductors, today's advances in areas such as computers, software, and medical equipment would be nonexistent. Were you to pick the one technology that enabled our military leadership and our well-trained men and women to accomplish their task in the Gulf War so successfully, it would be semiconductor technology. Whether embedded in fire control systems and communication equipment or in the brains of precision weapons, all are enhanced because of semiconductor-based data processing.

In order to continue creating leading-edge technology, the semiconductor industry must make large investments in capital and research and development. The industry requires investments of 25–40 percent of revenues per year in research and development, and plant and equipment. That is substantially higher than other sectors of industry.

The size of these investments, the higher cost of capital to U.S. companies vis-a-vis our major foreign competitors and the relatively short product lifecycles in this industry, make semiconductor producers extremely vulnerable to the effects of unfair trade practices. Remedies that offer solutions months and years after the damage is done are often too little, too late. For example, Japanese dumping of DRAMS in the United States in 1985–86 forced all but Texas Instruments and one other U.S. producer out of the DRAM business.

In the 60's and 70's, when the market in Japan was relatively small, barriers to access by foreign producers could be described as simply an irritant. Today, however, Japan is the largest semiconductor market in the world, and lack of access means that U.S. producers cannot hope to achieve the economies of scale needed to remain competitive.

After years of conflict, in 1986 the two countries signed the U.S.-Japan Semiconductor Trade Agreement, which called for an end to dumping and obligated the Japanese to open their market. The SIA Agreement was just that—an agreement. Dumping cases were suspended in exchange for a Japanese commitment not to dump. The Section 301 case against unfair trade practices in Japan was suspended in exchange for the Japanese cessation of market-locking activities and facilitation of U.S. access.

Included in this agreement was a measurable foreign market share goal of slightly more than 20 percent, to be reached by the time the agreement expired in July 1991—a benchmark by which to measure the progress toward compliance with the market-access objective of the Agreement.

There has been progress, albeit limited. Foreign market share in Japan is up, from the under 10 percent levels typical prior to the agreement, to more than 13 percent today. Dumping has stopped. U.S. companies have invested in sales offices, design centers, research efforts and manufacturing facilities in an attempt to meet the demands of the Japanese market. And, there is a trend toward closer relationships between foreign suppliers and Japanese customers. For example, some Japanese manufacturers are working hard to buy more foreign-based semiconductors and to design foreign chips into their products at the critical, early stages of development. Their good efforts are constructive and should not go unnoticed.

But progress does not mean complete success. Today's 13 percent foreign market share is still far short of the anticipated 20 percent. And although the accord has been in place for more than four years, we began to make progress toward achieving this goal only in the last 30 months, after the U.S. imposed sanctions against Japan.

In order to make this story a complete success, we must reach a new agreement with Japan on semiconductor trade and we have been working constructively with Secretary Mosbacher and Ambassador Hills and their staffs to do just that. Some would suggest that such an agreement, which includes specific goals, represents "managed trade." It does not. Managed trade would be unacceptable not only to our industry, but to the U.S. Government as well. Rather, it establishes an objective method for gauging the degree of "openness" of the Japanese market—and the extent of compliance with the Agreement.

The SIA and CSPP do not advocate a punitive approach toward Japan Instead, we believe that the positive efforts toward compliance that the Japanese have undertaken in the last 2½ years should be encouraged to continue. Our proposal provides a framework that will allow that to happen. The SIA-CSPP plan recognizes the improved trade relationship with Japan, but also reflects the belief that only through a government-to-government agreement can the aims of the 1986 accord ultimately be met.

First, we believe that market access results must be measured by quantifiable indicators of progress. Thus, the goal of a 20 percent foreign market share minimum

should be extended through the end of 1992, giving Japan time to continue its current progress.

Second, the 1986 accord stopped dumping in the U.S. and third country markets. Our proposal calls for a new method of preventing future semiconductor dumping in a manner that involves less government intervention.

These and other recommendations contained in our proposal will help promote fair and open semiconductor trade. In the long run, they will contribute to the strengthening of the entire electronics industry.

Mr. Chairman, restoring America's competitiveness and recapturing world markets are primarily private sector responsibilities. U.S. firms must redouble their commitment to invest in new technology, continuously improve their products and processes, and plan for the long-term. U.S. trade policy, however, has an important effect on the global business environment. Mr. Chairman, you and members of this Subcommittee have stoutly defended the appropriate role of the United States government as an advocate for American industries ready and able to compete in an open, global marketplace. You have recognized the importance of an environment which fosters research and development and encourages capital formation. You have strengthened trade remedies and encouraged the Executive Branch to pursue realization of free and open markets with our trading partners. It is in this context that we ask our government to continue to press for access to Japan's semiconductor market, and to respond effectively to future allegations of dumping.

This concludes my prepared testimony, Mr. Chairman. I appreciate your attention and that of the Subcommittee.

Attachment.

STATEMENT OF THE COMPUTER SYSTEMS POLICY PROJECT (CSPP) AND THE SEMICONDUCTOR INDUSTRY ASSOCIATION (SIA)

[Represented by Joseph R. Canion, President & CEO of Compaq Computer Corp. for CSPP and Jerry R. Junkins, Chairman, President & CEO of Texas Instruments for SIA]

INTRODUCTION

U.S. computer manufacturers—represented by the Computer Systems Policy Project (CSPP) [1]—and semiconductor manufacturers—represented by the Semiconductor Industry Association (SIA) [2]—have reached a unique industry agreement concerning the course that the United States should take with respect to U.S./Japan semiconductor trade policy after the scheduled expiration of the 1986 U.S./Japan Semiconductor Trade Arrangement. By reaching a consensus on this important issue, CSPP and SIA hope to encourage a rapid and fruitful resolution of this problem.

The starting point for developing a joint position on U.S./Japan semiconductor trade was a careful analysis of the factors that have been critical to the 1986 Arrangement's successes and shortcomings.

SUCCESS OF THE 1986 ARRANGEMENT

The CSPP/SIA proposal aims to build on the partial success achieved under the 1986 U.S./Japan Semiconductor Trade Arrangement. The Arrangement has helped open the Japanese market. This year alone, foreign semiconductor sales in Japan are estimated to be more than $1 billion higher than they would have been had foreign market share remained the same as it was in 1986. The agreement has engendered welcome cooperation between U.S. semiconductor companies and Japan's semiconductor and electronics industries. Texas Instruments' advanced digital signal processor is at the heart of Sony's critically acclaimed CD players. LSI Logic succeeded in wining the design-in of the key ASIC chips Matsushita uses for its new Panasonic Palmcorder video camera, while Rockwell provides key components for the facsimile and data transmission equipment produced by Japanese manufacturers.

The Arrangement also has helped control Japanese dumping of semiconductors. Dumping of Japanese semiconductors in the United States stopped shortly after the signing of the Arrangement. Third country dumping continued for a period of time.

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[1] A membership list of the CSPP is attached.

[2] A membership list of the SIA is attached.

but was controlled after President Reagan imposed sanctions on Japan in early 1987.[3]

To understand the nature of the CSPP/SIA proposal, it is appropriate to review the key elements of the 1986 Arrangement that made it successful. *First*, it provided clear, enforceable measures of progress which previous, unsuccessful agreements to open Japan's semiconductor market had lacked. Such clear measures of success—far from being the managed trade that opponents have called them—were a realistic response to the history of Japanese managed trade and unfulfilled commitments.

Second, Congress and the Administration provided strong support for the Arrangement. It is highly unlikely that without that support the success achieved to date would have occurred.

Third, the Arrangement provided the U.S. industry with an opportunity to compete more fairly in Japan, and U.S. investment has risen accordingly. Thus, the already substantial U.S. sales efforts in Japan increased dramatically. Scores of U.S. offices and design centers have been opened in Japan.

These three factors explain much of the very real progress achieved through the Arrangement and thus became the foundation for the CSPP/SIA proposal.

PROBLEMS OF THE 1986 ARRANGEMENT

The CSPP/SIA proposal also was influenced by the fact that the Arrangement has not achieved all of its objectives. First, foreign share of the Japanese semiconductor market still is well below the share anticipated under the Arrangement. While foreign sales have increased, they are estimated to fall more than $1 billion short of the level that they would have reached in 1991 had Japan complied with its minimum 20% commitment. This breach by Japan costs the United States industry not only the $1 billion in sales but also an estimated $100 million in annual semiconductor R&D and thousands of semiconductor jobs.

Second, with respect to dumping, unfortunately the existence of the FMV system and the Japanese Government monitoring system established under the Arrangement were used at an early stage of the Arrangement as a justification for an attempt by the Japanese Government to impose production and export controls. Thus, the market for nondumped DRAMs and some other monitored semiconductors was distorted. As a result, computer manufacturers experienced severe shortages of semiconductors, especially DRAMs, which led to an inability to meet product demand. Those DRAMs and other semiconductors that could be procured were too expensive. Such Japanese interference in the marketplace cannot be permitted to happen again.

DEVELOPING A COMPUTER AND SEMICONDUCTOR CONSENSUS

While at first glance it would appear difficult to develop a consensus between semiconductor producers and consumers on the difficult issue of Japanese trade, the two U.S. industries found that they share many common interests. Both desire innovation and investment in semiconductor technology—which will not occur under the imminent threat of dumped imports. U.S. computer producers need a multiple supplier base for the most advanced semiconductors in the world. U.S. producers want to be able to make the investments necessary to produce these semiconductors.

Both realize that fair access of U.S. semiconductor producers to the world's largest semiconductor market—Japan—is necessary to encourage the economies of scale that would propel investment and innovation. Both want the market, rather than government policies, to determine the success or failure of high-tech companies.

Based on these shared objectives, ad aware of the key factors that led to the success of the 1986 Semiconductor Arrangement, the two groups developed a joint proposal for an agreement to replace the 1986 Arrangement (scheduled by its terms to expire in July 1991).

Before discussing the details of this proposal, it is important to note the historic nature of the CSPP/SIA agreement. It is rare indeed when the producers and consumers of a good can agree on trade measures. inter-industry agreement spares the government the role of arbitrating between industries when disagreements arise. We hope that our joint effort will serve as a model to other industries seeking to develop an effective consensus on trade policy.

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[3] The sanctions with respect to third-country dumping were lifted in November of 1987. Sanctions for Japan's failure to abide fully by the market access provisions of the Arrangement, discussed more fully below, are still in place because Japan's performance in market access still falls far short of expectations.

CSPP/SIA AGREEMENT

The agreement that we have reached—and recommended to the Administration—seeks to encourage continued growth in foreign access to Japan's semiconductor market while minimizing government interference in the market. CSPP and SIA have kept two major objectives in mind. First, the agreement must include clear, unambiguous, enforceable measures of Japanese compliance. Second, the agreement must maintain an effective deterrent against future Japanese dumping so that the past history of severe Japanese dumping is not prologue.

To accomplish these two objectives, the joint proposal has several interdependent key elements. Assuming that Japan continues to make progress under the current Arrangement through July, CSPP and SIA recommend the following:

(1) Japan must make a measurable, enforceable market access commitment. CSPP/SIA recommend that Japan initially be expected to meet the same level of access that it committed to in 1986, but that Japan be given another year and one-half—until the end of 1992—for foreign share of Japan's market to rise to "at least slightly above" 20%. Given the competitiveness of the U.S., European and Korean industries in other markets, this figure can easily be exceeded if Japan's market is truly liberalized.

(2) In 1993, the need for measures of progress to encourage continued progress toward a fully open market should be evaluated. The goal by the end of the New Semiconductor Agreement is to have a truly free Japanese semiconductor market.

(3) CSPP and SIA agree that the free operation of the market should ensure consumers supplies of semiconductors at non-dumped prices. Any dumping of semiconductors is unacceptable and must be deterred. At the same time, CSPP and SIA do not want more government involvement in the marketplace than is necessary. Such a program should include:

- an end to calculation of FMVs, a termination of the 1985 case against Japanese DRAMs and a revision of the suspension agreement with respect to Japanese EPROMs. This may represent the first time in U.S. trade policy where both producers and consumers of a good subject to government monitoring have jointly sought its elimination;
- a requirement that Japanese firms continue to collect the data that is necessary for an antidumping investigation; and
- a "fast track" system to respond to allegations of Japanese semiconductor dumping in the United States or third countries.

(4) The 1986 Section 301 case should remain suspended.

(5) Sanctions should be applied if necessary to achieve the objectives of the agreement.

In sum, the CSPP SIA proposal in all respects continues momentum toward an open market in Japan—minimizing government involvement—while recognizing current market conditions. Both U.S. industries believe it to be the best method to continue progress in U.S.-Japan semiconductor trade.[4]

THE CSPP/SIA PROPOSAL IS NOT MANAGED TRADE

The market access provisions of the CSPP-SIA proposal are trade liberalization measures designed to open the Japanese market. Japan's semiconductor market has been closely managed by the Japanese Government and large industrial organizations for many years—by formal controls until the early 1970s and by "counterliberalization measures" after the end of those formal controls. Foreign market share remained around 10% until 1987 notwithstanding the negotiation of a series of semiconductor agreements that lacked strong, enforceable measures. It has only been since the 1986 Arrangement was signed that some initial momentum toward an open Japanese market has been created.

The CSPP-SIA proposal aims to continue that momentum by incorporating the same feature that made the 1986 Agreement effective—a specific market share objective of at least 20 percent. The 20 percent figure does not represent a guarantee of Japanese market share. Rather, it is a benchmark of Japan's compliance with its legal obligation to open its market, a way to determine whether free market principles are operating.

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[4] The CSPP/SIA proposal is supported by major U.S. electronics industry associations—including the American Electronics Association, the Computer Business and Equipment Manufacturers Association and the Electronics Industries Association.

We are convinced that 20 percent is an attainable goal. Furthermore, we view achievement of this 20 percent market share as evidence that necessary efforts are being made to open the market in Japan. Moreover, if needed, we are prepared to recommend additional measures of progress to reach the goal of an open Japanese semiconductor market.

CONGRESSIONAL SUPPORT IS PIVOTAL

As was the case in 1986, Japanese acceptance of this proposal will require the strong support and resolve of Congress. Members of Congress should take every opportunity to remind their counterparts in Japan and members of the Japanese bureaucracy that the 1986 Arrangement was a necessary response to unfair trade practices and that the CSPP/SIA proposal is a reasonable approach to negotiating a new semiconductor agreement.

Congress should also work closely with the Administration in support of the CSPP/SIA proposal. Congressional support can bolster the Administration's efforts to implement the proposal. The Administration needs to be aware of congressional expectations in order to convince the Japanese Government of the necessity of resolving this problem.

CONCLUSION

Anything less than full implementation of the CSPP/SIA proposal would, in our view, be an inadequate response to Japanese unfair semiconductor trade. We need an agreement that provides clear, enforceable measures to promote market access and a strong deterrent to dumping. Previous agreements failed because they lacked these two elements.

The joint CSPP-SIA effort has been a great success. Together we have presented the U.S. government with a proposal for a new trade agreement with Japan that will meet the needs of both the semiconductor and systems industries. Our proposal will continue the momentum for opening the Japanese market by measuring progress toward that goal. At the same time, it will provide an effective deterrent to semiconductor dumping that, compared to the current agreement, significantly reduces government involvement in the marketplace.

This has been an important year for our industry. We believe the CSPP-SIA alliance on this critical trade-policy issue is a model for the sort of industry cooperation needed to maintain America's technological leadership. We are confident that a new agreement on semiconductor trade that incorporates our joint position will help to strengthen the entire U.S. electronics industry.

We urge Congress to support the CSPP-SIA proposal. If a new semiconductor agreement is to be successfully negotiated, our trading partners, and the Administration, should clearly understand that Congress will expect no less than what the industry proposed

CSPP MEMBER COMPANIES

Apple Computer
Compaq Computer Corporation
Control Data Corporation
Cray Research, Inc
Digital Equipment Corporation
Hewlett-Packard Company
IBM Corporation
NCR Corporation
Sun Microsystems
Tandem Computers
Unisys

SIA MEMBER COMPANIES

Advanced Micro Devices, Inc.
Allied Signal Aerospace Company
American Telephone and Telegraph Company
Atmel Corporation
Analog Devices, Inc.
Brooktree Corporation
Catalyst Semiconductor
Cherry Corporation
Cirrus Logic, Inc.
Digital Equipment Corporation
Ford Microelectronics, Inc.
Gigabit Logic, Inc.
Harris Corporation
Hewlett-Packard Company
Intel Corporation
International Business Machines Corporation
International Rectifier Corporation
Landsdale Semiconductor, Inc.
LSI Logic Corporation
Micron Technology, Inc.
Motorola, Inc.
NCR Corporation
National Semiconductor Corporation
Northern Telecom Electronics, Inc.
Raytheon Company
Rockwell International Corporation
Sprague Electric Company
Texas Instruments, Inc.
Unisys Corporation
United Technologies Corporation
VLSI Technology, Inc.
Xilinx, Inc.
Zilog, Inc.

BACKGROUND: U.S./JAPAN SEMICONDUCTOR TRADE

The Industries

The semiconductor and electronics industries are critical to the United States. Semiconductors lie at the heart of virtually all modern electronics equipment. Without state-of-the-art semiconductors, the United States cannot produce the most sophisticated computers and electronic equipment. (Similarly, without top-of-the-line semiconductor manufacturing equipment, U.S. firms cannot produce the most advanced semiconductors.)

It is estimated that by 1992, the worldwide electronics market will grow to $1.07 trillion, with the U.S. industry accounting for $332 billion of that market.[1] In 1990, the U.S. electronics industry—with 2.6 million employees and $312 billion in sales—was the country's largest industrial sector. Moreover, electronics technology can be expected to play a ever increasing role in terms of U.S. national security ad economic competitiveness in the twenty-first century.[2] One need look no further than the "smart" weapons technology that has been used so effectively in the Persian Gulf to understand the need for the United States to maintain one of the world's premier electronics industries.

SEMICONDUCTOR TRADE

Unfortunately, maintaining the U.S. competitive edge in semiconductors (and, thus, in computers and other electronics equipment) has been made far more difficult by other countries' efforts to foster their electronics industries through various formal and informal trade barriers and development techniques. With extremely high development and capital costs and short life-cycles, to be competitive, the electronics industry, and particularly the semiconductor industry, must utilize economies of scale to the maximum extent possible.

Given the fact that the U.S. market is relatively open while the largest foreign market—Japan—remains relatively closed, the U.S. industry is put at a substantial disadvantage. The U.S. industry must compete for survival with limited access to the world's largest market while that nation's industry can develop in a relatively protected market as well as compete freely in the U.S. market.

This relative imbalance has taken its toll. In ten years, the U.S. semiconductor industry has gone from dominance to fighting for parity. In 1980, U.S. share of the world semiconductor market was 57% (compared to 27% for Japan). By 1990, U.S. share had dropped to 40% (while Japan's share had risen to 47%).

The loss of market share has driven some U.S. firms from the business. Others have been forced to limit their product lines and restrict investments and research and development below optimum levels. Since 1984, the Japanese semiconductor industry has outspent the U.S. industry on plant and equipment and R&D by $12 bil-

[1] Only Japan—with an estimated $360 billion of the market—is anticipated to lead the United States.

[2] In 1987, the Defense Science Board concluded that the decline of the U.S. semiconductor industry posed a threat to U.S. national security. See U.S. Department of Defense, Office of the Undersecretary of Defense for Acquisition, *Report of the Defense Science Board Task Force on Defense Semiconductor Dependency* (Feb. 1987).

lion. This gap is conservatively projected to rise to $15 billion between 1990 and 1994.

This trend has serious repercussions for the rest of U.S. electronics industry. If U.S. competitiveness in semiconductor production and equipment deteriorates, the entire domestic electronics sector suffers. U.S. electronics firms are forced to rely on foreign sources for critical components.

The U.S. computer and electronics industry needs a multiple vendor base to ensure ready access to reasonably priced, state-of-the-art chips. As the National Advisory Committee on Semiconductors explained, if the U.S. semiconductor industry continues to face difficulties in maintaining its competitive edge "[f]oreign competitors will be increasingly able to influence U.S. firms' access to enabling technologies, the quality and price of the technologies, and the time-to-time market of components and subsystems incorporating the latest technical advances." The U.S. computer and electronics industry needs a world-class U.S. semiconductor industry to maintain prompt and secure access to these critical components.

JAPANESE TRADE

In the 1980s, after years of government fostered growth, Japan became the world's largest producer and consumer of semiconductors. While U.S. semiconductor manufacturers had worked diligently to sell in Japan since the 1960s—with limited success because of a plethora of formal and informal barriers—by the 1980s, the growth of the Japanese market made it absolutely imperative that U.S. semiconductor producers have access to the Japanese market if they were to maintain their international competitiveness. Without such access, U.S firms could not hope to maintain the economies of scale necessary to ensure adequate investment and innovation.

Unfortunately, Japan's semiconductor market remained largely impregnable as a result of formal and informal barriers. By 1986, despite several U.S./Japan agreements to open up Japan's semiconductor market,[3] the U.S. industry held 66% of the world semiconductor market outside of Japan, but only 8.6% in Japan. During this period, with the benefit of a relatively protected home market, the Japanese industry engaged in massive dumping of semiconductors on the U.S. and third country markets. In one key semiconductor market—Dynamic Random Access Memory (DRAM) chips—6 of 8 U.S. DRAM makers were driven from the market as a result of dumping by Japanese producers.

After the U.S. semiconductor industry filed antidumping cases and a case against Japanese market barriers under Section 301 of the Trade Act of 1974, the United States ad Japan entered into the most recent trade agreement on semiconductors—the 1986 U.S./Japan Semiconductor Trade Arrangement.

Pursuant to that agreement, Japan was to open its market and Japanese companies were to stop dumping. Given the history of unsuccessful agreements, the 1986 Arrangement incorporated provisions by which success could readily be measured. For dumping, Japan's Ministry of International Trade and Industry was to monitor the "Fair Market Value" of Japanese semiconductors (to ensure that chips were not sold at below cost) based on a methodology constructed in consultation with the U.S. Department of Commerce. For market access, it was agreed that if Japan opened its market, foreign semiconductor's share of the Japanese market would be expected to rise to "slightly above" 20% by July 1991—still far below the share of foreign semiconductors in other, open markets. The 1986 Arrangement is scheduled to expire in July of 1986. the United States and Japan are seeking to negotiate a New Semiconductor Agreement.

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[3] For example, facing the U.S. threat of a complaint to the General Agreement on Tariffs and Trade, in 1971, Japan agreed to liberalize its semiconductor market Unfortunately, that agreement was followed by a series of official "liberalization countermeasures" including subsidies, government sponsorship of joint R&D, administrative guidance to buy Japanese, creation of horizontal links between Japanese producers, an organized division of product markets, and official encouragement of tight relationships between Japanese producers and consumers of semiconductors.

COMMUNICATIONS

American Electronics Association AEA

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March 11, 1991

Laura Wilcox
Hearing Administrator
Senate Finance Committee
205 Senate Dirksen Office Bldg.
Washington, DC 20510

Dear Ms. Wilcox:

The American Electronics Association strongly supports the proposals by the CSPP and SIA for semiconductor trade following the expiration of the U.S.-Japan Semiconductor Agreement in July 1991. The proposals advanced by CSPP and SIA are the culmination of extensive work and analysis on how best to promote a healthy and competitive U.S. semiconductor industry.

The American Electronics Association represents more than 3,000 U.S. electronics companies across the U.S. Semiconductor producers and users are both members of AEA as are firms that produce equipment and materials for the semiconductor industry. The Japanese market is the second largest market in the world and has been growing extremely rapidly. The U.S. has been largely excluded from this market until quite recently by a range of formal trade barriers and today by extensive informal barriers. We believe it is absolutely critical that the U.S. gain full access to this market.

This letter is submitted in response to your request for comments for your March 22 hearings on the semiconductor agreement. Please enter this in the record. We are enclosing a copy of a letter to Ambassador Carla Hills from the American Electronics Association outlining our views.

Sincerely,

William K. Krist
Vice President, International Trade Affairs

cc: Ed Mihalski, Minority Chief of Staff
203 Senate Hart Office Bldg.
Washington, DC 20510

American Electronics Association AEA

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February 26, 1991

Ambassador Carla Hills
U.S. Trade Representative
600 17th St., NW
Room 209
Washington, DC 20506

Dear Ambassador Hills:

On May 7 the American Electronics Association will be having its annual Capital Caucus here in Washington, D.C. At this event we bring several hundred CEOs and senior company officials to Washington, D.C. They spend the morning meeting with key Administration officials and the afternoon lobbying the Hill.

We would like very much this year to bring a senior group to USTR to meet with you and your senior deputies. I'm writing to see if it would be possible to meet with you on Tuesday, May 7 at 10:00 a.m. If your schedule would permit, we would propose that perhaps you could meet with the group for 15 to 20 minutes to brief them on the Uruguay Round developments and other major trade policy issues so that the group can be supportive when they call on the Congress in the afternoon. (As you know, AEA strongly supports your Uruguay Round efforts and wants to do all that we can to ensure that these negotiations remain on track.)

Following the meeting with you, we would very much like the opportunity to meet with Ambassador Williams for in depth discussions of AEA's position vis-a-vis Japan and the Administration's activities to open up that market.

We look forward to your response and hopefully to the opportunity to meet with on Tuesday, May 7.

All the best!

Sincerely,

Dick Iverson

J. Richard Iverson
President and CEO

cc: Ambassador Williams
Tim Richards