

JAPAN - TRADE IN SEMI-CONDUCTORS

*Report of the Panel adopted on 4 May 1988  
(L/6309 - 35S/116)*

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## I. INTRODUCTION

1. At its meeting on 27 October 1986, the Council considered a communication from the European Economic Community (L/6057, dated 18 October 1986) concerning a bilateral arrangement between the governments of Japan and the United States on trade in semi-conductor products (L/6076). The Community stated that it had already asked Japan and the United States for Article XXII:1 consultations, and proposed that these begin in the immediate future.

2. Such consultations were held on 20 November 1986 and 29 January 1987. As no satisfactory settlement was obtained, the Community, in a communication dated 19 February 1987, requested the formation of a panel to examine the matter pursuant to Article XXIII:2 (L/6129).

3. At its meeting on 15 April 1987, the Council agreed to establish a panel with the following terms of reference:

"To examine, in the light of the relevant GATT provisions, the matters referred to the CONTRACTING PARTIES by the European Economic Community relating to trade by Japan in semi-conductors, in the context of the arrangement between Japan and the United States, as specified in document L/6129, and to make such findings, including findings on nullification or impairment, as will assist the CONTRACTING PARTIES in making the recommendations or in giving the rulings provided for in Article XXIII:2." (C/M/208)

4. The Council also agreed that the Panel would be established on the basis of the following understanding related to the terms of reference:

"Given the special nature of the matter to be examined by the Panel, which is related to certain aspects of the arrangement between Japan and the United States concerning trade in semi-conductor products (L/6076), it is understood that in setting up its own working procedures, the Panel will provide adequate opportunity for the United States to participate in the work of the Panel as necessary and appropriate." (C/M/208)

5. Concerning the above understanding, the representative of the United States stated that "adequate opportunity to participate" had to be interpreted by the Panel in the same way as this phrase was interpreted in an earlier dispute addressed in document L/5776.<sup>1</sup> The Council took note of this statement (C/M/208).

6. The representatives of Argentina, Australia, Austria, Brazil, Canada, Hong Kong, Republic of Korea, Malaysia, Mexico, Singapore, Sweden for the Nordic countries, Switzerland and Thailand reserved their rights to make submissions to the Panel (C/M/207 and C/M/208).

7. The composition of the Panel was announced in document C/149, dated 24 June 1987, as follows:

Chairman: H.E. Mr. J. Lacarte-Muró  
Members: Mr. C. Falconer  
          Mr. J. Greenwald

8. The Panel met five times, on 16-17 September, 5-6 November, 26-27 November 1987, 4-5 February and 19-20 February 1988.

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<sup>1</sup>Panel report on the European Economic Community Tariff Treatment on Imports of Citrus Products from Certain Countries in the Mediterranean Region.

9. Information and arguments submitted by the two parties to the dispute, their replies to questions and requests put by the Panel, information and arguments submitted by the United States and by other interested parties, as well as relevant GATT and other documentation, served as the basis for the Panel's examination of the matter.

## II. BACKGROUND

### A. Developments leading to the Japan/US Arrangement in Semi-conductor trade

10. The United States and Japan are the largest producers and exporters of semi-conductors. The United States was the largest producer during the 1970's, but Japan became increasingly important as both a producer and exporter of semi-conductor products at the beginning of the 1980's. In 1981, its exports exceeded those of the United States for the first time. In February 1983, the United States' industry began to express concerns to the Government of the United States about the lack of access of non-Japanese companies to the Japanese market and possible unfair trade practices of Japanese companies in the US market.

11. On 14 June 1985, the United States Semi-conductor Industry Association filed a petition under Section 301 of the Trade Act of 1974 against the Government of Japan, alleging that Japan was restricting access to the domestic semi-conductor market for United States producers. This industry-wide action was followed by several complaints brought under the anti-dumping law. On 24 June 1985, an anti-dumping petition concerning 64K DRAMs from Japan was filed by Micron Technology Inc. Also, on 30 September 1985, a petition concerning the alleged dumping of EPROMs from Japan was filed by Intel Corporation, Advanced Micro-Devices, Inc. and by National Semi-conductor Corporation. Finally, on 6 December 1985 the United States Department of Commerce initiated an anti-dumping investigation to determine whether DRAMs of 256K and above from Japan were sold at less than fair value. Protracted negotiations between the governments of Japan and the United States led to the conclusion of a bilateral agreement in September 1986.

12. On 2 September 1986, Japan and the United States formally concluded an Arrangement concerning Trade in Semi-Conductor Products (hereinafter called "the Arrangement") which was subsequently notified to the GATT on 6 November 1986 in document L/6076. The Arrangement was linked to the suspension of anti-dumping procedures initiated in the United States against imports of certain categories of Japanese semi-conductors and to the suspension of the Section 301 proceedings on access to the Japanese market for US-made semi-conductors.

### B. Main provisions of the Arrangement

13. The Arrangement contains three main sections. The first section relates to market access. It provides that the Government of Japan will impress upon the Japanese producers and users of semi-conductors the need to aggressively take advantage of increased market access opportunities in Japan for foreign-based firms which wish to improve their actual sales performance and position. Specifically, the Government of Japan will provide further support for expanded sales of foreign-produced semi-conductors in Japan through the establishment of an organization which will provide sales assistance, quality assessment, research fellowship programmes, exhibitions, etc., for foreign semi-conductor producers, and through promotion of long-term relationship between Japanese buyers and foreign producers including joint product development programmes. On the other hand, the Government of the United States will impress upon the US semi-conductor producers the need to aggressively pursue every sales opportunity in the Japanese market and will also provide support for the activities of the organization mentioned above. This section further provides that there should be full and equitable access for foreign companies to patents resulting from government-sponsored research and development,

and that both Governments should refrain from policies or programmes which stimulate inordinate increases in semi-conductor production capacity.

14. The second main section of the Arrangement contains three sub-sections dealing with prevention of dumping. The first sub-section concerns the suspension of present anti-dumping cases on two types of semi-conductors: Erasable Programmable Read Only Memory (EPROM) and 256 Kilobits and above Dynamic Random Access Memory (DRAM). The second sub-section provides that, in order to prevent dumping, the Government of Japan will monitor cost and prices on a list of semi-conductor products<sup>1</sup> exported to the United States. The format of the data report concerning company and product-specific cost and export price data on monitored products is contained in an appendix to the Arrangement. It has 35 entries, seeking information on production costs, packaging costs, freight, insurance, duty, commissions and rebates, charges, other expenses, and finally, net prices. This sub-section also provides that if any monitored product is being sold or exported at prices less than company-specific fair value, the Government of the United States may request immediate consultations. Based on monitoring and/or consultation, the Government of Japan will take appropriate actions available under laws and regulations in Japan to prevent such exports to the United States. The third sub-section relates to monitoring of third-country markets. It is stated that both governments recognize the need to prevent dumping in accordance with relevant provisions of the GATT and encourage respective industries to conform with the above principles. It is also stated that in order to prevent dumping, the Government of Japan will monitor, as appropriate, cost and export prices on the products exported by Japanese semi-conductor firms from Japan to certain markets.<sup>2</sup>

15. The Third section contains general provisions on periodic and emergency consultations, on the conditions of amending and terminating the Arrangement, and on the preservation of GATT rights and the interests of third countries. The duration of the Arrangement is five years, ending on 31 July 1991.

C. Implementation of the Arrangement by Japan

16. According to information provided by the Japanese delegation, the following measures had been taken to implement the Arrangement.

(a) Access to the Japanese market

17. To promote the sales of foreign semi-conductors in Japan, the Japanese government encouraged Japanese users to purchase foreign semi-conductors from all sources on the whole range of semi-conductor products. Specifically, the Director-General of the Machinery and Information Industries Bureau sent letters in September 1986 and July 1987 to major domestic users or purchasers of semi-conductors, requesting their co-operation in increasing the purchase of foreign-based products. The Minister of the Ministry of International Trade and Industry (MITI) also organized meetings with the top ten major users of semi-conductors in March and May of 1987 to make the same request.

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<sup>1</sup>(a) Memory Devices: MOS SRAM, ECL RAM; (b) Microprocessors: 8 bit configuration, 16 bit configuration; (c) Microcontrollers: 8 bit configuration; (d) ASICS: GATE ARRAYS, STANDARD CELLS; (e) ECL LOGIC.

<sup>2</sup>Japan has stated that as an administrative matter, it monitors exports to all but the most insignificant markets. Exports are being monitored to countries accounting for 97 per cent of Japanese semi-conductor exports. These markets presently are: Brazil, Canada, China, France, Germany F.R., Hong Kong, Ireland, Italy, Republic of Korea, Malaysia, Mexico, the Philippines, Singapore, Sweden, Taiwan and the United Kingdom.

Relevant governmental departments also made similar requests to users' associations and individual companies. In addition, surveys of the procurement situation of foreign-based semi-conductors were carried out regularly by MITI.

18. The International Semi-conductor Co-operation Centre, an organization to promote the sales of foreign semi-conductors, was established in March 1987. The activities of the Centre were open to all foreign companies. The Centre held exhibitions, conducted survey, offered sales-related information and organized other activities helpful to the promotion of sales of foreign semi-conductors. The Centre's first exhibition was held on 13 to 16 April 1987. A symposium was held on 6 October 1987.

(b) Monitoring

19. The third Country Market Monitoring measures could be discussed under two headings: (i) requests by Government to producers and exporters; (ii) export approval and monitoring costs and export prices.

(i) Requests by Government to producers and exporters

20. The Director-General of the Machinery and Information Industries Bureau and the Minister of MITI organized meetings with producers and exporters (in September 1986, March and May 1987) to request that dumping should be avoided. These requests were general appeal, not legally binding. The likely consequences of disregarding these requests were pointed out. If requests were not complied with, they were repeatedly made by MITI.

(ii) Export approval and monitoring costs and export prices

21. The export approval system for semi-conductors, based on the Foreign Exchange and Foreign Trade Control Law, was introduced for the purpose of COCOM enforcement. Since November 1986, this system had been used to monitor export prices of semi-conductors. Exporters of items subject to COCOM enforcement, including all semi-conductors, to be monitored under the Arrangement, were required to submit licence applications which were screened according to COCOM considerations and export licences were approved or rejected by MITI according to these considerations.

22. The threshold for shipments of semi-conductors requiring export licences was reduced from ¥1 million to ¥50,000 in January 1987. As a result of this change, the number of applications almost doubled, causing delay in the processing of certain licence applications. Incomplete information in applications also caused delay in some cases. There was no limit of processing time for export licence applications, whether maximum or minimum. Depending on various factors relating to individual applications, the time taken to process them ranged from a couple of weeks to several months.

23. Manufacturers and exporters were required to report data on export prices, and periodically on costs to MITI. The data collection procedures for prices were established in accordance with Article 67 of the Foreign Exchange and Foreign Trade Control Law and Article 10 of the Export Trade Control Order. Failure to report or submission of false reports were liable to penal servitude not exceeding six months or a fine not exceeding two hundred thousand yen. However, non-compliance in this regard would not lead to denial of export licence or prohibition of exports. When MITI found cases in which export prices were "extremely below costs", it would inform the companies concerned of the facts and of MITI's concern. MITI did not set minimum prices for exports and the communications by MITI to the companies were not legally binding. Companies were expected to understand that it was in their own self-interest to prevent dumping, and to take action accordingly.

24. The existence or non-existence of injury in foreign importing countries was not taken into consideration by MITI when watching costs and export prices.

25. Effective from 10 November 1987, the revised Foreign Exchange and Foreign Trade Control Laws to strengthen the regulations on reporting COCOM-related commodities had separated export approval from monitoring as far as semi-conductors were concerned. Under the new system, the licensing procedure was separated from the monitoring procedure. Exporters could either apply for licences and report on price information to MITI simultaneously or separately, but in any case prior to customs clearance. On receipt of a licence application and a report (in two separate documents), the licence application would be processed by the office dealing with COCOM screening. The report on prices would be processed in consideration of cost information obtained separately by the Monitoring Office. In cases where export prices were "extremely below cost", MITI would express its concern to the companies concerned. As there was no feedback from the Monitoring Office to the office dealing with COCOM screening, the approval or rejection of export licences was not affected by the contents of the reports. Under the old system, an export licence was approved only after the two consecutive processes of COCOM screening and monitoring, hence it took a longer time for processing and some misunderstanding seemed to have been created among exporters that delays had been caused by inappropriate pricing. The new system would eliminate such misunderstandings. MITI could not disapprove applications due to inappropriate pricing.

(c) Supply and demand forecasts

26. In relation to monitoring and improvement of market access, MITI compiled on a quarterly basis Semi-Conductor Supply-Demand Forecasts. It sent out questionnaires to all manufacturers and major users of various semi-conductors to seek data on production, demand and other information. Based on the results of the surveys, and taking into account information from foreign markets and various research organizations, a report was drafted for the deliberation of the Semi-conductor Supply-Demand Forecast Committee, composed of users, manufacturers, academics and experts. The report was then issued to the press and in MITI's public report. MITI also distributed it freely upon request.

27. The forecast was formulated as a reference for manufacturers in their production schedules. MITI explained its objective to manufacturers and impressed upon them the need to reflect real demand in their production. Individual companies were expected voluntarily to bring their production almost in line with the forecasts, taking into account the appropriate total production. The forecasts were not legally binding and the Government did not allocate production volume to individual companies. For manufacturers to conspire on production volume was against the anti-trust laws in Japan.

D. Movement of prices in certain semi-conductors

28. Appendix I contains three line graphs supplied by the EEC, showing the movement of prices in the EEC, US and Japanese markets of 256K DRAMs, 256K EPROMs, and 128K EPROMs in the first nine months of 1987, and a bar chart showing the movement of prices of the three semi-conductors over the period from 1984 to 1987 in the EEC market. Appendix II shows the movement of export prices of 256K DRAMs and 256K EPROMs from Japan to Europe from September 1986 to August 1987. This information was supplied by Japan. Appendix III contains selective contract prices in the European market supplied by the United States on several kinds of semi-conductors, from August 1986 to October 1987.

29. The EEC contended that the price increase in early 1987, contrary to what had been forecasted by Dataquest, an international industry analyst (also used by the United States), was explained by MITI production and price control activities. Japan maintained that pricing was a decision by businessmen based on commercial considerations. Especially in the period following the conclusion of the

Arrangement, pricing was affected by many factors such as trade issues with the United States, EEC anti-dumping investigations, industry's intention to avoid below cost pricing, recovery of balanced supply and demand relations and reduced supply capacity. Therefore, simple comparison of actual data with the forecast formulated by Dataquest on the basis of past data was not meaningful. The United States explained that prices of semi-conductors were affected by the elasticity of demand for the final product, for example, computers. Prices also fluctuated over the course of the year, depending on the time of contracts negotiated. The product life cycle of a particular type of semi-conductor, exchange fluctuations, and the initiation of anti-dumping investigations, and significant worldwide increases in downstream product demand were all factors which also influenced prices.

### III. RECOURSE TO ARTICLE XXIII:2 BY THE EEC

30. In its communication of 19 February 1987 (L/6129), the EEC claimed that the benefits accruing to it from the General Agreement were being nullified or impaired by the very nature of certain provisions of the Arrangement between Japan and the United States which constituted an unacceptable interference with the trade in, and production of, semi-conductors of contracting parties not parties to the Arrangement. Some of the measures so introduced were upsetting international competitive relationships unilaterally and artificially. This was all the more prejudicial in that the sector concerned was one in which the parties to the Arrangement had at present a dominant position in world production and trade, and was at the same time of fundamental importance to the industrial development of contracting parties concerned. Specifically, the Community considered that:

- (i) the monitoring measures applied by the Japanese Government, especially those vis-à-vis third country markets, contravened the provisions of Articles VI and XI;
- (ii) the provisions on access to the Japanese market included conditions for discriminatory implementation, contravening Article I;
- (iii) the lack of transparency surrounding the whole issue contravened Article X.

31. The Community invited the panel to recommend that the CONTRACTING PARTIES request Japan to take appropriate measures to eliminate the Third Country Market Monitoring system and to ensure that Japanese market opening in respect of foreign semi-conductors was applied in a non-discriminatory fashion.

32. The submission by Canada, dated 16 September 1987, added two aspects to the complaint on (i) above, claiming that the measures also violated Articles I and XVII:1(c). The Community, in a communication dated 22 October 1987, said that it agreed with the views advanced by Canada and requested the Panel to take these into consideration.

### IV. MAIN ARGUMENTS BY PARTIES TO THE DISPUTE

#### A. The Third Country Market Monitoring

##### (a) General

33. The EEC stated that the purpose of the export monitoring provision was clear. The implementation of the Arrangement had increased prices in the US market, thus placing US users at a disadvantage vis-à-vis their competitors in third countries and measures to increase prices artificially in those countries were therefore taken to the detriment of users in those countries. On the other hand, US producers



and exporters of semi-conductors would, in the absence of such measures, remain exposed to reported Japanese dumping in markets other than the United States. In the Japanese Position Paper presented to the United States in the second week of April 1987, it was stated that "... Japan has taken appropriate action to ensure that Japanese semi-conductors are being sold at not less than their cost in third country markets." The EEC rejected the justification given during Article XXII consultations that the monitoring of cost and export prices on products exported by Japanese semi-conductor firms was "the need to prevent dumping in accordance with the relevant provisions of the GATT" (sub-paragraph 1 of sub-section 3 of the Arrangement). The EEC also rejected the explanation given by the United States that the provision on Third Country Market Monitoring was necessary in order to avoid circumvention of the suspension agreement by exports from Japan to the United States through third country markets. This argument would imply that all contracting parties could apply export controls in respect of any product of their choice to all destinations in order to prevent circumvention and dumping on any one single market, and could do so with the agreement of only one contracting party, instead of with all parties concerned.

34. To implement the Third Country Market Monitoring provision, an export licensing system was used for the monitoring according to which licences were issued to applications which respected certain price guidelines, i.e. a minimum price fixed for individual products. Since Japan and the United States directly produced, or controlled through overseas manufacturing plants, a pre-dominant share of world semi-conductor production, the government-mandated export price control would lead to a situation in which importing countries would be forced to pay a price for such imports in excess of what normal conditions of competition would imply. This situation could force, induce or permit Japanese producers to exercise quantitative export limitations which could subject foreign competitors producing competing final products to considerable uncertainty and risks in their production plan or even prevent them from producing at all. The Community had been informed by some Japanese manufacturers that MITI was putting pressure on them through administrative guidance to restrict overall export volumes of certain semi-conductors, resulting in severe reduction of supplies, delays in the granting of export licences and other disruptions with potentially serious consequences.

35. The EEC went on to state that the Japanese administrative guidance not only controlled export prices and export volume, but also production volume and other aspects in relation to exports. In the Japanese Position Paper mentioned above, it was stated that "Japan exercised administrative guidance to achieve production cutbacks and adopted more stringent export licensing practices with a view to aiding the US efforts over and above Japan's obligations under the Arrangement ... In February 1987, MITI exercised administrative guidance to the companies to reduce production during the first quarter of 1987 by 23 per cent below fourth quarter 1986 levels. Last month, MITI again exercised administrative guidance to the companies to reduce production still further in the second quarter to 32 per cent below fourth quarter 1986 levels." The Position Paper also stated that the Japanese government "has taken steps above and beyond its obligations under the Arrangement in part for the purpose of demonstrating its desire to cooperate with the United States during earlier consultations under the Arrangement." Thus, in November 1986, MITI had invoked the Export Trade control ordinance in order to prevent below-cost exports. Thereafter, in January 1987, Japan lowered the minimum level for export licences from ¥1 million to ¥50,000. In February 1987, Japan increased scrutiny of export licence applications for third country exports in order to prevent grey market sales. In March 1987, the MITI Minister had convened an emergency meeting with the Chairman or President of each of the ten major semi-conductor companies to impress upon them the importance of avoiding dumping in third country markets.

36. The Japanese Position Paper provided further insights into the operation of the Third Country Market Monitoring System. Following US Government's allegations in early 1987 that Japanese semi-conductors were still dumped on third markets, the Japanese Government had made known its readiness to share relevant data with the United States on a reciprocal basis in order to dispel these

allegations. In other words, information regarding third markets would be exchanged between the two parties with a view to proving that Japanese export prices had increased by the amount defined by the United States Government as being necessary to bring such prices up to the "fair market value" set for the US market by the US Department of Commerce. This, according to the EEC, clearly showed that the Japanese authorities had not been merely "watching" and passively issuing export licences but had acted in response to the restrictive purpose behind the Third Country Market Monitoring System. Finally, the fact that domestic prices remained well below government controlled export prices, provided Japanese users of semi-conductors with a further competitive advantage vis-à-vis their foreign competitors who had to pay for the essential inputs at higher prices.

37. Japan stressed that monitoring was mere watching. In cases when exports were made at prices "extremely lower" than the cost, MITI might present the facts and communicate its concern to the manufacturer. MITI's requests for dumping to be stopped were not export restrictions. No export licence had ever been denied to any application because of inappropriate pricing. When MITI had lowered the maximum amount per contract requiring no export approval from ¥1 million to ¥50,000 in January 1987, the number of applications had almost doubled, causing delays in processing applications at the beginning, but the situation had been improved since then. The lowering of the threshold had been necessary because some exporters had tried to circumvent the export licence system by dividing a contract into several smaller consignments. The supply and demand forecasts issued by MITI served only as a guideline to manufacturers, whereby MITI expressed its expectations that it was desirable to avoid over-production which far exceeded actual demand. The relationship between price and supply and demand in the semi-conductor industry was characterized by a learning curve effect in the sense that an increase in production and productivity brought about a sharp decline in costs. In these circumstances, the possible decrease in prices was liable to create a high expectation of demand expansion, leading to capacity investment, over-production and excessive competition over market shares. These conditions of over-production and excessive competition might promote a price war and destabilize the balance between demand and supply. On the other hand, if low-priced products were exported and regarded as dumped, or if low domestic prices prevented an increase in imports of foreign semi-conductors, international cooperation might be harmed. MITI's efforts to request manufacturers to align their production levels to reflect the real demand and to prevent dumping had not had a restrictive effect on exports, but were made with the objective of contributing to international co-operation.

38. Since production costs decreased sharply as a result of the learning curve effects, and since most semi-conductors had a short life-span, manufacturers tended to attempt to recoup their investments quickly by expanding production. They normally set price levels taking into account anticipated levels of supply and demand at a future period of time. This meant that typically the cost at the targetted production point would be lower than the current cost since a downward cost curve was expected. Consequently, sales prices, though not intended, could possibly be found to be below cost. This problem involved some basic issues related to the method of calculating costs when long-term pricing practices of high-technology goods with rapid technological innovation were involved. In addition, it was observed that unit cost became higher as production decreased. Therefore, when a producer decreased his production, he was likely to set higher prices to reflect the higher production cost. Thus, it was not abnormal that semi-conductor producers set higher prices in the process of adjusting production in accordance with the principle of profit-maximization.

39. Some Japanese manufacturers might think it convenient, in the light of the good relationship with foreign clients, to hold MITI responsible for their failure to fulfill some of their obligations under contracts because of adjustments in their production and shipment plans adopted for commercial reasons, which included their intention to avoid both a rapid price decline caused by over-production and a deterioration of their image caused by the allegation of suspected dumping.

40. The administrative guidance as reported in the Japanese Position Paper were taken for the following reasons. Since the Japanese companies raised their prices in the US market in accordance with the Suspension Agreement in the summer of 1986, export volume to the US market was reduced, causing an increased supply in the domestic market which in turn exceeded actual demand and prices declined rapidly. At the same time, US users had attempted to increase their procurement of semi-conductors in third country markets, mainly in South East Asia, because of the high prices of Japanese semi-conductors in the US market. Under such circumstances, some brokers had purchased semi-conductors in Japan and resold them in third country markets in order to benefit from the price differential. Since the supply and demand imbalance in the domestic market was harmful to the sector and because some of the sales at cheap prices might be regarded as dumping, MITI had revised its quarterly supply and demand forecast in February 1987 and had communicated its expectation to manufacturers that they should produce in reasonable volumes to restore the domestic supply and demand balance. Furthermore, the expression "more stringent export licensing practices" referred to the fact that MITI decided, also in February 1987, to request the submission of additional materials for clarification in the pre-sales monitoring in cases where it was deemed necessary because it appeared that some traders cheated in their applications through package deals. All these measures did not constitute export restrictions.

41. The EEC asked how mere watching by MITI could effectively ensure the prevention of dumping. Even if the measures taken by MITI were not binding in a legal sense, they were binding in a practical sense and were restrictive. Besides, if monitoring were mere watching, then there would be no need for the setting up of an entire system for that purpose, nor would there be any need to conclude a formal international agreement to that effect.

42. Japan reiterated that none of the measures was legally binding. The Japanese society was not so feudalistic that non-binding requests by government would be accepted readily and administrative guidance by MITI did not always work. If the semi-conductor manufacturers were to pursue their own profits and ignored MITI's concern, the whole dumping prevention mechanism would collapse. However, these manufacturers were fully aware that dumping would not be beneficial on a long-term basis. They had learned lessons from the disputes with the United States. They had realized that excessive competition using below-cost pricing was undesirable and that avoiding such situations would benefit not only themselves but also the world's semi-conductor industries in the long-run. The monitoring system was needed in the light of the present status of the industry. Although monitoring by MITI was limited in scope, it was still meaningful because MITI represented a neutral and objective figure overseeing the entire industry while taking into account cost and prices among competing companies in Japan. Monitoring also helped to stamp out suspicion among companies that others were cheating or resorting to dumping. It contributed to the establishment and maintenance of a healthy competitive environment.

(b) Article VI

43. The EEC considered that the Third Country Market Monitoring System was incompatible with the obligations arising from Article VI. This Article clearly provided for the exclusive right of the importing country to decide whether or not to take action against dumping. The reasons for this were obvious. Only the importing country could decide whether, on balance, the low prices of dumped goods were beneficial or harmful to its interests. Only the importing country could decide how much injury, if any, the dumping was causing, and what action, if any, was appropriate to eliminate it. Only the importing country could impose an anti-dumping duty which was appropriate to the conditions in its particular market. Only the importing country could satisfactorily monitor the implementation of an undertaking in relation to dumping. Nowhere in Article VI was it foreseen that such decisions, fundamental to the notion of sovereign choice of the importing country as to whether or not to take actions to protect the industry in question from dumping, could be taken by any other country. The

drafting history of Article VI was also relevant. The intention of the drafters of the Article had not been to condemn dumping itself but to limit the possibility of taking measures to counteract dumping and subsidization. The history also showed that there had never been agreement, including during the Tokyo Round negotiations which eventually led to the adoption of the Anti-Dumping Code in 1979, to encourage or justify actions by the exporting country to prevent dumping. If alleged anti-dumping measures could be taken by exporting countries, such measures could be misused to put up the price of sometimes indispensable and irreplaceable inputs to foreign competitors of the industries in the exporting country. The adoption of autonomous action by an exporting country was therefore a clear breach of Article VI.

44. It was obvious that the risk of circumvention of the Arrangement by exports being shipped from Japan to the United States through third countries should be dealt with according to normal practice. Article 12 of the Anti-Dumping Code provided a mechanism for dealing with third country dumping. In such a situation, the Code provided that the third country could request the importing country to seek the approval of the CONTRACTING PARTIES to take action against such imports. In considering such a request, the importing country was to be provided with adequate information regarding dumping and injury and was to consider the effect of the alleged dumping on the industry concerned as a whole in the third country. No requests had been made by the US for the EEC to seek the agreement of the CONTRACTING PARTIES to take action against imports of Japanese semi-conductors into the Community. The avoidance of circumvention could in no way be considered as warranting the imposition of measures with a much wider effect, nor as justifying the adoption of measures contrary to the basic principles of Article VI.

45. Japan argued that Article VI and the Anti-Dumping Code provided for anti-dumping measures by importing countries, but they did not contain any explicit provisions concerning actions taken to prevent dumping by exporting countries. There was no specific provision to prohibit such measures, non-restrictive in nature, conducted by exporting countries. Monitoring with the purpose of preventing dumping which Article VI condemned was not inconsistent with the Article, but on the contrary, accorded with the spirit of the GATT. History had showed that there had been rampant resort to anti-dumping duties, for the purpose of protecting domestic industries, resulting in severe distortion of world trade. The actual anti-dumping investigations, as well as the preceding uncertainty pending the imposition of anti-dumping duties had significant adverse impact on exports. Article VI, therefore, did not prohibit exporting countries from taking measures, consistent with GATT provisions, to prevent dumping. It was groundless to maintain that Article VI granted an exclusive right to importing countries with respect to anti-dumping measures. What it stipulated was that importing countries were only entitled to decide whether or not to levy anti-dumping duties when dumping took place and when their industries were injured or where injury was threatened. Besides, it should be noted that when measures designed to prevent dumping were ineffective, importing countries were free to resort to anti-dumping measures according to the rules of GATT. In this sense, the monitoring measures by Japan did not infringe upon the rights of importing countries.

46. Furthermore, Article VI did not guarantee profits of importing countries accruing from dumped exports, and importing countries had no legitimate right to ask for the continuation of dumping.

47. The EEC stated that Japan had constantly failed to quote fully the words of Article VI which lay down that, "... dumping is to be condemned if it causes or threatens material injury." These words showed, when they were properly considered, that anti-dumping measures could be taken only by or with the consent of the importing country, as only the importing country could determine whether injury had been caused by dumped products. If anti-dumping action by the exporting country had been thought to be acceptable, the conditions for its application would have required definitions which were as detailed as those provided in Article VI for action by the importing country, since such action would be allowed only in derogation from other Articles of the General Agreement, in particular from Article XI. The

Japanese statement seemed to recognize that anti-dumping action by exporting countries was incompatible with Article VI if it contravened any other provisions of the GATT. Since the anti-dumping action adopted under the Third Country Market Monitoring System was, in the Community's view, incompatible with Articles XI, I and XVII of the General Agreement, it followed logically that such measures were also incompatible with Article VI. As for the statement that when dumping occurred despite the measures to prevent dumping, importing countries were free to take anti-dumping actions, it was only formally correct. An importing country could, in theory, still take anti-dumping actions even if it had been pre-empted in doing so by the exporting country, but this would expose its users and consumers to the risk of incurring a multiple penalty created by the combined effect of the price increase imposed by Japan and the eventual anti-dumping duty collected by the importing country. It could also provide producers in the importing country with an excessive degree of protection.

48. Japan stressed that measures taken by the Japanese Government were intended to prevent "dumping to be condemned" as stipulated in Article VI, and were permitted as long as they did not violate any provision of the General Agreement, including Article XI. Japan considered that such measures should not be merely judged in relation with Article XI. Rather, it should be taken into account that the measures were employed in line with the spirit of Article VI. What Article VI stipulated was that importing countries were entitled to decide whether or not to levy anti-dumping duties when dumping occurred. Paragraph 1 of that Article did not make any distinction between exporting and importing countries and it did not prohibit measures to be taken by exporting countries. The negotiating history also showed that there had never been any consensus that measures taken by exporting countries should be prohibited. Therefore, if, through monitoring and communicating concern by governments of exporting countries, "dumping to be condemned" was prevented as the result of voluntary decisions by exporting firms to set export prices at certain levels so as to avoid dumping, such government measures should not be condemned, but should be considered as in accord with the spirit of Article VI. There was no justification for the multiple penalty alleged by the EEC as Japan was not pre-empting any of the Community's rights concerning anti-dumping procedures and the Community was free to take any appropriate actions.

(c) Article XI

49. The EEC considered that the Third Country Market Monitoring System was incompatible with the provisions of Article XI relating to export restrictions. Firstly, the Arrangement had a restrictive intent in that the purpose of the Third Country Market Monitoring System was to artificially raise Japanese export prices through government intervention. This intent was explicitly acknowledged in the Japanese Position Paper in which the Japanese authorities had emphasized their determination to implement more stringent export licensing practices "to prevent below-cost exports". Secondly, the restrictive effects of the licensing system were universally recognized, not only by EEC users and importers, but by those in other importing countries like Australia, Canada or Hong Kong, and even by the United States. In a report to the President of the United States, dated September 1987, the Semi-Conductor Industry Association had stated that, "through the use of production controls and floor price measures, the Government of Japan has disrupted the pricing and supply of key semi-conductor products. These policies have meant artificially high prices and short supply for US semi-conductor users ...". It was irrelevant under Article XI whether the Government of Japan would subject the granting of export licences to the observance by exporters of the "fair market value" defined for the US market or of other criteria such as the avoidance of exports below-cost. The fact was that controls with price and quantitative effects had been imposed on the exports of semi-conductors, violating Article XI.

50. Japan maintained that monitoring of semi-conductor exports by the Japanese Government was indeed merely watching cost and export prices. Monitoring was not intended to prohibit or restrict trade, nor did it in practice produce such results. There were no minimum price requirements. It

was also contrary to the facts to say that export restrictions, production controls or artificial price increases existed. Through monitoring, Japanese companies were encouraged to prevent dumping, but this would only happen through a voluntary decision of the company concerned. The encouragement by the Japanese Government was not legally binding by any means, and there was no penalty even if the company did not comply with such encouragement. Companies were expected to refrain from dumping of their own will, taking into consideration factors such as the likelihood that importing countries would introduce anti-dumping measures which would adversely affect their business. Such voluntary actions of the companies were irrelevant to the provisions of Article XI which dealt with actions by governments.

51. The EEC said that in its Position Paper, the Government of Japan had admitted taking measures which were intended to bring about increased prices and reduced production. It had also been "monitoring" prices, in the context of its export approval system, and the purpose of this monitoring had been to ensure that export prices were not below certain levels. The question of whether the "administrative guidance" measures, used by the Japanese authorities to bring about increased prices, were or were not legally binding was irrelevant. The measures were intended to raise prices, and to reduce production in order to reduce exports so as to keep up export prices. It was admitted that the measures were taken either to implement the obligations imposed by the Arrangement with respect to the monitoring of exports to third countries or to carry out the purpose of the Arrangement as the Government of Japan understood it. It was generally admitted that Article XI:1 must be interpreted broadly and its wording proved this. What mattered was the intended result, not the method used. The EEC was not saying that all kinds of non-binding measures might infringe Article XI but that they could do so, at least when the following conditions were all fulfilled, as they were in this case:

- (i) the measures were admittedly taken in order to achieve a result which could not have been achieved by legally binding measures in a manner consistent with GATT;
- (ii) these measures were intended, by the two interested Contracting Parties, to be effective to achieve the results desired (that is, something more than mere "best efforts" was required). There was ample evidence, within the Arrangement itself and in the documents from US Government sources, that the US had expected, and indeed insisted, that the Japanese measures to prevent dumping in third countries markets should be effective; if not, the US would adopt retaliatory measures, as indeed the US had done. The statement by President Reagan on 4 November 1987, announcing the suspension of a portion of the sanctions placed on Japanese products, had said that the suspension of sanctions was "because the most recent review of the data shows that third-country dumping has ceased for both DRAMs and EPROMs"; and
- (iii) the non-binding measures were not the incidental result of purely internal measures, but were measures intended specifically to implement an international agreement, the express purpose of which was to affect international trade by raising the price of goods exported from the contracting party adopting the measures in question.

52. Measures which were not legally binding could be completely effective to bring about a desired result if it was sufficiently clear that, if necessary, more effective measures and ultimately legally binding measures would be adopted. In the present circumstances, it had been known to Japanese industry that the Japan-US Arrangement had been concluded, and that Japan was considered to be therefore legally bound vis-à-vis the USA to carry out its obligations under this Arrangement. There was therefore an objective reason for Japanese industry to be conscious that legally binding measures would be adopted to fulfil Japan's obligations if non-binding measures proved insufficient. After the US had given warning of its intention to take retaliatory measures, and after these measures had been taken on 17 April 1987, there could have been no doubt in the minds of Japanese industrialists that the Japanese authorities

would consider it essential to adopt binding measures if non-binding measures proved ineffective. If it were accepted that non-legally binding measures could never infringe Article XI, the result would be to discriminate in favour of contracting parties which, because of tradition or due to State involvement in the economy or for other reasons, preferred the use of non-binding measures to legally binding measures. Such discrimination would be totally unjustifiable and irrational.

53. In the case under consideration, the question of whether the administrative guidance by MITI were measures designed to reduce production for exports or measures to reduce exports directly was immaterial. Measures were contrary to Article XI if they were intended to reduce exports in order to increase prices at which goods were exported. It was irrelevant whether this result was achieved directly by restrictions on the quantities exported or on the prices at which the goods were exported, or by restrictions on the quantities produced which were available for export.

54. Japan stated that to consider whether or not certain government measures infringed Article XI, the intention of the government per-se was irrelevant, the consideration was on whether or not the measures concerned were of a binding nature, with trade distorting effect. Thus, it was wrong to consider government measures such as general appeal, public relations activities and supply of information which did not entail any binding nature to be violating Article XI. Under the Arrangement, the obligations with respect to monitoring aiming at exports to the United States did not apply to exports to third markets. Paragraph II.6 of the Arrangement provided that for exports to the United States, restrictive measures could be taken, if necessary, upon consultation. In practice, however, MITI was imposing no restriction except for COCOM enforcement. With respect to exports to third countries, the Arrangement did not obligate nor did it provide for any mechanism enabling the Japanese Government to invoke any legally binding measures. Moreover, the Japanese Government did not have the slightest intention of introducing any measure that would affect the rights and obligations of third countries in the absence of negotiation and their consents, as explicitly stated in Paragraph IV.7 of the Arrangement.

55. EEC's assertion that the Japanese Government would adopt legally binding measures as a result of pressure from the United States was totally unfounded because Japan had been repeatedly asking for the complete removal of the US sanctions. Article XXIII.1 consultations were held on 4 August 1987 when Japan condemned the US measure as a clear violation of GATT provisions. Since the measure was not lifted, Japan had expressed its intention, at the GATT Council on 11 November 1987, to ask for the establishment of a panel at an appropriate time.

(d) Article I

56. The EEC shared the views expressed by Canada (see paragraphs 32 and 88) regarding the incompatibility of the Third Country Market Monitoring System with Article I of the General Agreement. Since the system was applied to only 16 countries, 14 of which were contracting parties, it violated Article I to the extent that Japan granted immunity to all but the 14 contracting parties and that the Community did not benefit from the advantages granted to those countries to which the system did not apply.

57. Japan said that countries subject to the monitoring system were selected with a view to covering the entire export volume. Some minor markets were exempted solely for the sake of administrative efficiency and, in practice, 97 per cent of total export volume or virtually all exports were covered. The list of countries subject to export monitoring would be reviewed for necessary adjustment as export patterns changed. The system by no means violated the principle of most-favoured-nation treatment stipulated in Article I. Besides, the measures concerned were not restrictive in nature.

(e) Article XVII:1(c)

58. The EEC also shared Canada's view (see paragraphs 32 and 88) that the actions taken by the Japanese Government with a view to preventing Japanese companies from selling semi-conductor products in third markets below cost and reducing exports were inconsistent with the obligation in Article XVII:1(c) that no contracting party should prevent any enterprise, whether or not a state trading enterprise, from acting solely in accordance with commercial considerations.

59. Japan, referring to the finding in the panel report on "Canada - Administration of the Foreign Investment Review Act", adopted on 7 February 1984, said that Article XVII:1(c) was interpreted on the basis that "commercial considerations" referred to in sub-paragraph (b) was merely an articulation of the general principle of non-discriminatory treatment prescribed in Article XVII:1(a). Since the monitoring was implemented on a most-favoured-nation basis, and it did not contain any restrictive effect, Article XVII:1(c) was irrelevant in the consideration of the dispute.

B. Access to the Japanese market

60. The EEC said that the conditions surrounding the improvement of market access in Japan showed that Japan had been granting preferential market access to US producers and exporters of semi-conductors. Some of them had claimed that MITI was exercising "administrative guidance" to promote a "Buy American" policy among Japanese companies. The US Semi-Conductor Industry Association's report to President Reagan (see paragraph 49 above) also stated that, "Beginning in late March (1987), US companies operating in Japan indicated that they saw evidence of MITI administrative guidance to the larger Japanese companies, asking that they increase their purchase of US parts." The same report also indicated the existence of an "expectation" by the US industry on market share as well as Japan's recognition of such an expectation that, "... the US share in Japan must show a steady increase to a level slightly above 20 per cent by 1991. The Government of Japan recognized the US industry's expectation when it signed the Agreement." The preferential market access policy was also confirmed by the use of the terms "foreign-based" and "foreign capital-affiliated" companies in different context in the Arrangement. Since there was only one "foreign capital-affiliated" company which was of US origin operating in Japan, these terms and clauses were clearly tailor-made so as to accord preferential treatment to this company. To the EEC's knowledge, there had been no clear or published denial by the Government of Japan of the existence of preferential market access.

61. All the above, and the general tendency of the Arrangement to address issues on a bilateral basis, should lead to a prima facie conclusion that the Government of Japan had created a situation in which Japanese importers and users of semi-conductors were under strong political and administrative pressure which, even if indirect and implicit, could not but have discriminatory effects contrary to Article I of the General Agreement.

62. Japan said that measures taken for improving access to its semi-conductor market were non-discriminatory in that they applied not only to semi-conductors produced by US firms, but to all foreign-based semi-conductors. The terms "foreign-based" and "foreign capital-affiliated" meant substantially the same. They were enterprises owned or controlled, directly or indirectly, by nationals or companies of the countries other than Japan. The term "Foreign-based firms" was used with regard to market access, and the term "foreign capital-affiliated companies" was used concerning participation in research and development projects. Japan had never promised any specific market share or preferential access to any country, and had denied allegations of such promises to all concerned including the press at every opportunity. For instance, the Director-General of MITI's Machinery and Information Industries Bureau had publicly denied this allegation during a symposium held on 6 October 1987 in which many EEC companies had participated. The activities of the International Semi-conductor Co-operation Centre, created to promote foreign semi-conductor sales, were open to all foreign companies. One EEC company



had become a member of this organization from the outset when no US company had joined. Semi-conductors of eight EEC companies out of 32 foreign companies were on display at the exhibition held on 13 April 1987 by the Centre. Furthermore, figures showed that the sales of non-US foreign semi-conductors were steadily expanding as well as those of US semi-conductors. The market share of foreign non-US semi-conductors in foreign semi-conductors had increased from 2.8 per cent in the first half of fiscal year 1986 to 4.2 per cent in the first quarter of 1987. With regard to the statements by the US Semi-Conductor Industry Association, its reference to "US" instead of "foreign" semi-conductors was simply because the Association was a US industry association, indifferent to non-US matters.

63. The EEC was not convinced that the terms "foreign-based firms" and "foreign capital-affiliated companies" were used indiscriminately. If there had been no discriminatory intent, the term "foreign produced Semi-conductors" would have sufficed. The participation of one European company in the activities of the International Semi-conductor Co-operation Centre could not be regarded as proof of anything regarding effective access. Nor could the short-term statistics quoted by Japan be regarded as proof of the absence of preferential market access policies. Besides, an increase in imports said nothing about what the trade might have been in the absence of the Japanese measures. The denial by the Japanese Government on preferential access was hardly relevant to the purchasing behaviour of Japanese semi-conductor users who must have been influenced by the pervasive, uncontradicted and officially promoted impression that improved market access was exclusively foreseen for United States companies, including the one which had major production facilities in Japan.

#### C. Transparency

64. The EEC said that the absence of transparency on the Third Country Market Monitoring System and the market access arrangements increased the problems which they engendered. No information had been provided regarding the implementation of the Third Country Market Monitoring System except that obtained by the EEC when Japan had provided it bilaterally to the United States. It was still unclear whether the Japanese Authorities had systematically refused all export licence applications for exports below a given price. It was not clear whether different criteria were used for export approval; what were the sanctions for circumvention; which were the criteria for determining which markets would be covered, why certain export licences had been delayed seriously, etc. As for the market access issue, the conditions for improved access to the Japanese market were still surrounded by uncertainty and reports of preferential treatment. This was an unequivocal case of violation of Article X of the General Agreement.

65. Japan said that full transparency was ensured with respect to the improvement of market access measures and the Third Country Market Monitoring measure. This was exemplified by the fact that the text of the Arrangement had been notified to the GATT, and sufficient explanation had been provided in the forum of GATT and OECD. The monitoring measure was also implemented in conformity with Article X which required publication of trade restrictive measures. Not only were procedures of application for export approval made public, but detailed explanation had also been provided to the applicants concerning the procedures and necessary documents for application.

#### D. GATT objectives

66. The EEC stated that one of the objectives contained in the Preamble of the General Agreement was the "substantial reduction of tariffs and other barriers to trade", and that the objective of this reduction included the expansion of production and exchange of goods. The latter had, of course, led to greater international interdependence. To achieve these objectives, it was necessary for all contracting parties not to manipulate the system through the imposition of arbitrary, unilateral export restrictions especially in areas where they had gained a substantial degree of preeminence in terms

of concentration of production of essential products. Export controls had, in the industrial field, so far largely been adopted either in concert with the importing country, or for reasons of national security. This was not the case for the Third Country Market Monitoring system applied by Japan to semi-conductors. This system was contrary to the basic philosophy and objectives of the General Agreement. It could not be the intention of the General Agreement to condone unilateral measures which, applied to the advantage of one or two contracting parties, led to the manipulation of supply of a key component of modern technology, to the detriment of other contracting parties. Nor could it be condoned that such action was taken bilaterally, in the absence of any form of meaningful consultation and without transparency.

67. Japan stated that measures taken by its Government were in line with the Japan-US Arrangement concerning trade in semi-conductor products. Measures for the improvement of market access benefited the EEC as well as other third countries. The Third Country Market Monitoring measures were exercised to prevent dumping which Article VI of the GATT condemned. All these measures were implemented with a view to achieving a sound development of world semi-conductor trade as well as to promoting a healthy growth of semi-conductor industries in the world under the aegis of a fair and free trade system. They accorded with the spirit and the basic objectives of GATT.

E. Nullification and impairment

68. The EEC considered that the Third Country Market Monitoring system, the discriminatory effects of import market access, and the lack of transparency surrounding these aspects of the Arrangement were inconsistent with Japan's obligations under the General Agreement and that this resulted in the nullification or impairment of the benefits accruing to the Community under the General Agreement. The application of measures which were judged inconsistent with the GATT obligations of the contracting party concerned constituted, in accordance with established GATT practices, a prima facie case of nullification or impairment. It was therefore not necessary for the Community to provide evidence of the actual damage to its trade caused by these actions by the Japanese Authorities.

69. Even if there had not been a violation of the provisions of the General Agreement, the application of the Third Country Market Monitoring system by Japan had nullified or impaired benefits accruing to the EEC. In addition to the failure of Japan to carry out its obligations arising under the specific provisions of the General Agreement (Articles I, VI, X, XI and XVII), the Community was of the view that the attainment of the objectives of the Agreement had also been impaired. Any measure which significantly impeded exports to any contracting party without its consent and which was not covered by one of the exceptions foreseen in the General Agreement must be examined very critically. It would no doubt have been considered unnecessary when the General Agreement was drafted to include a specific Article to say that contracting parties were prohibited from adopting unilateral or bilaterally agreed measures which were intended directly and substantially to increase the price of components, or indeed other goods, to other contracting parties. Any such arrangement, whether unilateral or bilaterally agreed, was so clearly contrary to the basic principles of free trade that it did not need to be specifically prohibited by Articles separate from those already referred to. The Japan-US Arrangement constituted an intergovernmental agreement to increase the price of important components to buyers throughout the world, except in Japan itself. Any such intergovernmental agreement necessarily involved nullification or impairment of the benefits to other contracting parties resulting from the General Agreement, for the simple reason that it deprived the other contracting parties of the most basic benefit of free trade, which was the freedom to buy at prices at which companies were willing to sell.

70. Japan said that since the measures relating to semi-conductor trade had not had the effect of raising export prices nor reducing the export volume and were not inconsistent with GATT, benefits accruing to the EEC could not be nullified or impaired as defined in Article XXIII:1(a). Furthermore, even if there had been a rise in export price or reduction in export volume, as the result of "the application

... of any measure" not conflicting with the provisions of the General Agreement in the Article XXIII:1(b), or "the existence of any other situation", indicated in the Article XXIII:1(c), it was not right to conclude that "any benefit ... is being nullified or impaired". If such an argument were to be accepted, corporate marketing strategies, including their pricing policies, would have to be regarded as being within the mandate of the GATT. From this viewpoint, the General Agreement required discretion in the application of the Article XXIII in relation to the matter pertaining to (b) or (c) of the same Article. This was clearly indicated in paragraph 5 of "Agreed Description of the GATT in the Field of Dispute Settlement (Article XXIII:2)" which stated that if a contracting party bringing an Article XXIII case claimed that measures which did not conflict with the provisions of the General Agreement had nullified or impaired benefits accruing to it under the General Agreement, it would be called upon to provide a detailed justification.

71. The assertion by EEC that even if the measures of the Japanese Government were not in violation of GATT, they were still nullifying and impairing the EC's benefits by raising the price and reducing the volume of the exports meant that the EEC was claiming that the importing country had the right to purchase a limitless amount of semi-conductors at low prices. Clearly, GATT did not ensure such a right to contracting parties. The EEC was only saying that profits of the importers gained by importing inexpensive semi-conductors were lost as the exporters voluntarily eliminated any export practice which might be considered as dumping. Such corporate action was not the subject for the dispute settlement procedures of the General Agreement. In either case, the measures in question did not come within the purview of the nullification or impairment of benefits guaranteed under the GATT, and the EEC's claim was utterly unacceptable.

## V. ARGUMENTS BY THE UNITED STATES

72. The United States said that for many years its Government had been greatly concerned about the continued health and vitality of the semi-conductor industry. This concern was derived from the role that mass production of certain semi-conductors known as "technology drivers" played in the US industry's ability to competitively produce a full range of semi-conductor products. If this essential segment were to disappear from US production, the entire microelectronics industry could be threatened or lost in subsequent years, potentially resulting in further damage to vital national interests. The focus of this concern had been Japan. For over ten years the United States Government had sought to improve access to the Japanese market. In June 1985, the US industry filed a petition under Section 301 of the Trade Act of 1974. Additionally, starting in the early 1980's, there had been evidence of below-cost sales by Japanese semi-conductor producers. This had led the US industry in 1985 to file two anti-dumping petitions on the two major semi-conductor products. In addition, the US Department of Commerce self-initiated an anti-dumping investigation on another semi-conductor product. The Administration could have continued to treat each issue separately, but it had decided that a comprehensive solution would be preferable. The Arrangement between the Governments of Japan and the United States of America had culminated the multi-year effort by the United States to enhance the ability of foreign semi-conductor manufacturers to compete in the Japanese market and to ensure that Japanese manufacturers competed fairly. For the United States, the fundamental principle in negotiating this Arrangement had been to take steps that would enable the free market to work. One aspect of this principle was to remove barriers to free trade in semi-conductors. The other was to ensure that market principles applied to the pricing and production decisions of semi-conductor manufacturers. As to this latter goal, there had not only been the short-term need to end the widespread resort to below-cost pricing by Japanese manufacturers, but also the more fundamental, long-term issue of eliminating over-capacity. In a free market, firms unable to operate profitably took whatever measures were necessary to attain or restore profitability. Such measures ranged from shifting lines of production, restructuring, closing down less efficient plants or laying off workers, to the ultimate step of going out of business. However, in Japan, semi-conductor producers had continued to make production

capacity investments at a time when the semi-conductor industry had been experiencing a recession and operating unprofitably. This had resulted in further over-capacity, providing an added incentive for predatory below-cost pricing.

73. The United States believed the Arrangement constituted a major step forward in the conduct of high technology trade. It did not, as the European Communities and some others feared, promote US interests at the expense of third countries. To the extent its objectives were met and free trade in semi-conductors was enhanced, all benefited.

A. Access to the Japanese Market

74. There was no truth to the belief that the US had sought, expected or was receiving preferential access to the Japanese market. The Arrangement uniformly spoke of enhanced access for "foreign-based semi-conductors". There were no secret understandings on preferential access for US companies and that subject had never been discussed during the negotiations. It was true that the US industry had expressed on many occasions its expectations of a share of the Japanese market. However, statements of expectations, be they written or otherwise, simply reflected the expectations of those making the statements and certainly were not a commitment by governments. It was expected that US companies would benefit from the increased access opportunities, but equally it was expected that other foreign-based companies would benefit as well. The United States wanted semi-conductor producers from other countries to have improved access to the Japanese market as well. From a practical standpoint, improved broad-based access by non-US producers would provide indirect benefits to the US industry, as Japanese consumers of semi-conductors became accustomed to purchasing from non-Japanese producers generally. Statistics showed that there had been no growth in the US position in the Japanese market at the expense of other non-Japanese suppliers. EEC's allegation of preferential access in contravention of Article I was not established.

B. The Third Country Market Monitoring

(a) Article VI

75. EEC's claim that the monitoring measures were incompatible with Article VI had no foundation in fact or law. There was no foundation in fact because, on the one hand, the EEC complained about the alleged artificial increase in prices within the Community because of these measures. On the other hand, however, the EEC had recently initiated anti-dumping investigations against Japanese exports of two major semi-conductor products (DRAMs and EPROMs), complaining about low semi-conductor prices within the Community, based upon sales prices up to 30 per cent below the Japanese companies' cost of production. Artificially inflated prices and prices significantly below costs of production obviously could not co-exist. Assuming that EEC's initiation of anti-dumping investigations was warranted by credible evidence, the allegation of a supposed "spillover effect" and increase in prices was unsupported and inconsistent. Legally speaking, the Third Country Market Monitoring provisions represented a commitment by the Government of Japan to implement a monitoring system to prevent predatory below-cost pricing by their semi-conductor exporters. Article VI of the General Agreement clearly was limited to actions taken by an importing country to counter "dumped" imports. Neither Article VI nor any other Article of the General Agreement covered efforts by an exporting country to prevent below-cost pricing at the source, before the product had entered international trade. The negotiating history of Article VI made no reference to consideration of the issue of an exporting country monitoring the exports of its own companies. There was no hint of any intention to preclude such actions and the EEC was unable to provide evidence to support its allegation. Finally, the United States asserted that EEC's argument depended on the panel finding that there was a GATT-protected right to dump, and that the Arrangement was a restriction on this normal trade practice. On the contrary, in the view of the United States, the General Agreement clearly considered dumping a trade-distorting

practice and the EEC argument effectively stood the underlying principle of the General Agreement on its head.

76. The United States questioned the accuracy of the graphic depiction of pricing data supplied by the EEC (Appendix I). The price breakpoints in the graphs did not consistently correspond to the Dataquest prices supplied by the United States. First, the EEC failed to report the monthly prices on a consistent basis. Instead of using, for instance, the first or last reported monthly price or the average monthly price in a consistent manner, the EEC selectively chose prices for a given month in one market in a manner different from its selection of a price in another market. Second, some of the prices in the EEC's graphs were simply inaccurate. For example, for 256K DRAMs sold in the European market, the EEC presented prices of \$2.50 for May and \$2.60 for June. However, Datquest reported 256K DRAM prices in Europe of \$2.15 for May and \$2.35 and \$2.50 for June. There were other similar inaccuracies. In the U.S. view, the price graphs supplied by the EEC materially distorted actual pricing patterns in order to exaggerate purported differences in prices between various markets.

77. The United States considered all arguments relating to the Anti-dumping Code to be outside the mandate and competence of the Panel, which was constituted under Article XXIII of the General Agreement.

(b) Article XI

78. The EEC claimed that the Third Country Market Monitoring provisions were inconsistent with Article XI. The Arrangement did not require, or even suggest, quantitative restrictions within the meaning of Article XI. It called for the Government of Japan to monitor Japanese semi-conductor manufacturers' cost and export prices in order to prevent exports at below-cost prices. Quantity exported was irrelevant under the Arrangement. The key was whether the export price was below a company's cost. The focus was on pernicious below-cost pricing, not on quantities exported. Reports of minimum prices established on a product-specific basis and of restriction of export volumes referred to by the EEC were also received by the United States. When first received, the US reaction to those expressing this concern and to the Government of Japan had been that the Arrangement was meant to prevent below-cost pricing, not to restrict or disrupt exports. The intended prevention of dumping could be exercised only with reference to each Japanese semi-conductor exporter's cost of production for each product. Any other system, the US had stressed firmly, was not consistent with the terms and spirit of the Arrangement. The Government of Japan had repeatedly declared that it was not refusing to grant export licences except for COCOM purposes. Furthermore, on 3 November 1987, Japan affirmed that it was not imposing any quantitative or other restrictions on the production, shipment or supply of semi-conductors. Moreover, the EEC had presented no evidence of a decrease in exports of semi-conductors from Japan attributable to the Arrangement. Indeed, exports of semi-conductors from Japan had actually increased significantly after the Arrangement came into effect. Thus, there was no basis for finding a "restriction" in contravention of Article XI.

(c) Article I

79. The United States concurred with the arguments of the Government of Japan with respect to Article I. It noted that Japan was monitoring virtually all semi-conductor exports, constrained only by administrative feasibility. Neither the EEC nor Canada had explained how such actions based on administrative feasibility were inconsistent with Article I.

(d) Article XVII:1(c)

80. The negotiating history of Article XVII indicated that the concern of the drafters had been that discipline on state trading enterprises not exceed that on private enterprises. Therefore, they had included

sub-paragraph 1(c). There was no indication that the drafters had intended to use this Article as a vehicle for creating new disciplines with respect to private enterprises. An assessment of the scope of Article XVII:1(c) obligations had been undertaken by a dispute settlement panel in 1984 in "Canada - Administration of the Foreign Investment Review Act". The Panel had concluded that "the commercial considerations criterion becomes relevant only after it has been determined that the governmental action at issue falls within the scope of the general principles of non-discriminatory treatment prescribed by the General Agreement". Since there was nothing inherently discriminatory about monitoring export prices, the argument as to the applicability of Article XVII:1(c) did not stand. Furthermore, dumping could not be considered a normal "commercial consideration" as implied by the EEC and Canada. The United States considered it fundamental that the Panel not establish an affirmative right to engage in activities that all contracting parties had agreed at the very beginning of GATT were trade distorting.

#### C. Transparency

81. There was no lack of transparency. The Arrangement had been notified to the GATT, the US and Japan both had expended considerable time and resources explaining the Arrangement and responding to questions during the Article XXII consultations, and voluminous written answers had been provided to questions raised both in the GATT and in the Trade Committee of the OECD. No more could or should be expected of either the United States or Japan.

#### D. Nullification and Impairment

82. Just as the EEC could not establish that the Arrangement was inconsistent with any provision of the General Agreement, it also could not establish that any benefit accruing to it was being nullified or impaired. With regard to market access, EEC-based semi-conductor firms had the same opportunity to benefit from the market access provisions of the Arrangement as US-based firms. This equal opportunity already had been acted upon, witnessed among other things by the participation of a European company in Japan's International Semi-conductor Co-operation Centre. With regard to dumping, the General Agreement did not preclude a government from taking steps to prevent dumping by its exporters. Therefore, the EEC could not claim that any benefits were being nullified or impaired. The EEC had not shown as a factual matter that there was a nullification and impairment in third country markets. Also, as a factual matter, the EEC had not shown how any increases in prices of semi-conductors within the EEC could be attributed to Japan's efforts to prevent dumping by its exporters.

### VI. SUBMISSIONS BY INTERESTED THIRD PARTIES

83. Several interested third parties submitted to the Panel arguments on Articles VI and XI similar to those advanced by the EEC. To avoid repetition, details of these arguments are not recorded in the following paragraphs.

#### A. Australia

84. Australia considered that the Arrangement nullified and impaired the benefits accruing to Australia and other affected contracting parties to the General Agreement. In particular, the provisions of the Arrangement relating to the monitoring and control of semi-conductor exports to third country markets were in contravention of the provisions of Articles VI and XI and were also contrary to Articles 2, 3, 5, 7.6 and 12 of the Anti-dumping Code and probably also Australia's Trade Practices Act. The Arrangement constituted a government sanctioned cartel which not only attempted to fix prices but also apparently involved the implicit assumption that the US share of the Japanese market for semi-conductors would be more than doubled to about 20 per cent by 1991. There was a lack of transparency. It was not clear what "appropriate actions" the Japanese Government would take to prevent

exports at prices less than company-specific fair values, nor on what basis the US authorities assumed that US firms would obtain a 20 per cent share of the Japanese market as a result of the Arrangement.

85. The Arrangement also constituted an assertion of a right of the US Government to exercise remedies against alleged dumping in third countries which pre-empted the rights of other GATT members. It had the intention and the effect of raising prices for semi-conductors sold in third country markets to levels based on US prices, which might not necessarily reflect normal market conditions in those markets. Complaints had already been received by the Australian Authorities on the price rise of certain important components. Prices of products containing semi-conductors were also likely to be increased. This mechanism of fixing prices for particular semi-conductors in specific markets could be used for cross-subsidization and to suppress comparative advantage for finished products incorporating semi-conductors by differential pricing to discriminate between producers so as to favour the products of related or vertically integrated producers. The export control provisions of the Arrangement were potentially detrimental to the development of indigenous capacity in high technology in countries such as Australia which were mainly dependent on imported semi-conductors since such countries could have their access to state of the art chip technology inhibited as a result of extension of the effects of the cartel. In October 1987, the Australian Computer Equipment Manufacturers' Association had complained that the prices for memory chips purchased by Australian firms had increased from \$A4.16 to \$A6.20 over the past few months. This increase exceeded any adjustment that could be attributed to movements in exchange rates. The Association also advised that deliveries from Japan had moved from "off the shelf" to quotations of up to six months on chips other than memories. A six to eight week delay was being quoted for supply of 256K DRAM chips with small quantities impossible to obtain. One Australian company had reported that leading edge memory products, such as 256K 100 nanosecond Dynamic Random Access Memory chips had been placed on strict allocation in Japan. There were other serious longer term effects arising out of the possible extension of the export control provisions in the Arrangement. In Australia, the vulnerability to disruptions in supplies of chips as a result of this Arrangement could have a highly negative effect by discouraging investment in manufacturing capacity in areas utilizing new technologies. This would frustrate industrial restructuring and the expansion and diversification of the manufacturing sector. Finally, this bilateral arrangement might, if it were allowed to succeed, become the model for further attempts at trade and market fixing in other areas, particularly in high technology product areas. It represented a continuation of a growing trend in recent years towards managing trade flows through the use of measures such as orderly marketing arrangements and voluntary export restraint arrangements.

86. Australia asked that the Panel find the Arrangement to be contrary to the obligations of the two parties concerned and recommend that the Arrangement be terminated.

B. Canada

87. Canada said that the Arrangement was contrary to the spirit of the General Agreement, undermined the integrity of the international trading system and contravened Articles VI, XVII.1(c) and 1 of the General Agreement. Canada was concerned that the Arrangement, particularly through monitoring prices to third country markets, in effect constituted a world-wide market sharing and price arrangement which would increase prices for Canadian users of semi-conductors. The Arrangement went beyond what was required to address the anti-dumping action in a strictly bilateral context, to the detriment of third party interests. The agreement of the Japanese Government to control export prices of a wide variety of semi-conductors also went against the spirit and principles of the General Agreement. Such an arrangement lay open the likelihood of cartelization of the world market, since the US and Japan overwhelmingly dominated world production of semi-conductors. Moreover, by taking action against allegedly dumped exports to third markets without recourse to established GATT procedures, the Arrangement further undermined the international trading system. The precedent set by this Arrangement

created the danger that others, faced with similar protectionist pressures, might see no option but to emulate such behaviour.

88. Canada believed that the unilateral determination by the United States which underpinned the Arrangement that semi-conductor products were being dumped in third country markets was contrary to Article VI of the General Agreement. Article VI and the Anti-dumping Code were quite precise regarding the circumstances under which contracting parties could take action against dumping, a matter of concern only where material injury occurred or was threatened. Neither the GATT nor the Code envisaged unilateral or bilateral action to counteract the effects of dumping in third markets which was precisely what the Arrangement was directed at. Canada also considered that the provisions in the Arrangement whereby Japan agreed to monitor, as appropriate, semi-conductor firms from Japan was contrary to Article XVII:1(c) which stipulated that "no contracting party shall prevent any enterprise (whether or not a state trading enterprise) under its jurisdiction from acting in accordance with the principles of sub-paragraphs (a) and (b) of this paragraph". Paragraph 1(b) of Article XVII stipulated, *inter alia*, that enterprises should make their sales abroad solely in accordance with commercial considerations, including price, quality, availability, marketability, transportation and other conditions of sale. By monitoring cost and export prices of semi-conductor products, the Government of Japan was in effect undertaking to prevent Japanese companies within its jurisdiction from acting in accordance with commercial considerations, particularly with respect to prices. The intention of the Arrangement, regardless of how it was being implemented, was to prevent Japanese companies from selling their semi-conductor products in third country markets below what had been deemed to be "fair value". This view was confirmed by the action taken by the President of the United States on 17 April 1987 to introduce a punitive tariff of 100 per cent on certain Japanese products, because "Japan has not enforced major provisions of the arrangement aimed at preventing dumping of semi-conductor chips in third country markets and improving US producers' access to the Japanese market". The White House Fact Sheet released in conjunction with the imposition of this tariff stated in part that "A comprehensive Commerce Department analysis of Japanese pricing activity in third country markets conclusively demonstrates that significant dumping was still occurring as of the 28 February deadline. At that time, Japanese-produced DRAMs were being sold on average at 59.4 per cent of the fair value, while EPROMs were being sold at 63.6 per cent of the fair value. If dumping of this magnitude were to continue, US semi-conductor companies would have little or no chance to compete in overseas markets." These quotations demonstrated that it was the US Government's view that the Government of Japan had undertaken to ensure by means of this Arrangement that the semi-conductor products would be sold at "fair value" (whatever value that had been determined to be). As the clear intention of the Arrangement was to prevent Japanese companies from selling semi-conductor products in third markets below cost, and no determination of dumping or finding of injury had been made with respect to the sale of these products in third country markets by these countries, Canadian authorities considered that the Arrangement was inconsistent with Article XVII:1(c). Canada also contended that the Third Country Market Monitoring provisions of the Arrangement were inconsistent with Article I of the General Agreement with respect to most-favoured-nation treatment. Article I stipulated that "any ... immunity granted by any contracting party to any product ... destined for any other country shall be accorded immediately and unconditionally to the like product ... destined for the territories of all other contracting parties". As Japan granted immunity to all but fourteen contracting parties from the undertaking to monitor cost and export prices on the products exported by Japanese semi-conductor firms, it was acting in a manner contrary to Article I of the General Agreement.

89. Canada requested that Japan withdraw its monitoring undertaking with respect to Japanese semi-conductor products destined for export to third markets. It also reserved its rights on the Arrangement's provisions on the subject of access for foreign companies to patents resulting from government-sponsored research and development activities.

C. Hong Kong



90. Hong Kong said that it traditionally sourced about 30 per cent of its integrated micro-circuits from Japan and had in value terms imported between 8 and 10 per cent of total Japanese semi-conductor exports over the past four years. These integrated micro-circuits were used as components in electronic products for export to world markets. The Japan/US Arrangement on Semi-conductors had no basis either under Article VI of the GATT or the Anti-Dumping code, which were the relevant provisions of the GATT on anti-dumping. The Arrangement was not a price undertaking authorized under Article 7 of the Anti-Dumping Code, nor could it be construed as any of the anti-dumping actions envisaged under Article VI of the GATT or the Anti-Dumping Code. Article VI:6(b) of the GATT and Article 12 of the Anti-Dumping Code provided for anti-dumping actions on behalf of a third country but these provisions had not been invoked. Since the entry into force of the Arrangement, there had been reports of major manufacturers of semi-conductors in Japan being encouraged or directed by the Government of Japan to cut production of particular semi-conductor products, in order to achieve price increases. Clause II:3(2) of the Arrangement stated that "... the Government of Japan will monitor, as appropriate, cost and export prices on the products exported by Japanese semi-conductor firms from Japan". Although the Arrangement was not explicit on how this Clause was to be brought into effect, developments to date seemed to have confirmed that for the purpose of achieving desired price levels, the Japanese Government had expanded and intensified its export licensing régime. In Hong Kong, there had been complaints that as a result of these measures, supply of integrated circuits from Japan, in particular the DRAM, had in many cases been interrupted, as the exporters had been unable to obtain the requisite export licences or had been faced with undue delays. The use of export licensing by the Japanese Government to enforce pre-set price levels for semi-conductor products constituted a restriction on exportation which was in violation of Article XI of the GATT. The denial by the Japanese Government of the right of Japanese exporters to sell in accordance with commercial considerations ran contrary to the GATT principle of comparative advantage and basic GATT aims of non-discriminatory and open trade policies.

91. As a result of the implementation by Japan of the Arrangement, the electronics industry of Hong Kong had suffered considerable interruptions in its operation. Many Hong Kong companies depended on semi-conductor supplies from Japan. The difficulties some Japanese exporters had experienced, in particular in the early part of 1987, in obtaining the requisite export licences had meant longer lead time for orders as well as uncertain or late deliveries of components. Because of this, Hong Kong companies had had to switch involuntarily to alternative sources of supply, often at higher cost and at the expense of operational efficiency. The Hong Kong electronics industry had also suffered a loss of comparative advantage. The Japanese monitoring measures had artificially driven up prices of Japanese semi-conductor products imported into Hong Kong. As an example, the selling price of a Japanese 64K DRAM had been between US\$ 0.5 to US\$ 0.65 in July 1986 but had increased some 30 to 40 per cent to US\$ 0.7 to US\$ 0.9 in July 1987; for the 256K DRAM, increases in the region of 20 to 50 per cent had been registered during the same period. Although Hong Kong was able to absorb some of the impact by alternative sourcing, higher component costs had reduced Hong Kong's competitiveness in the world market for electronic products.

92. In conclusion, Hong Kong submitted that the Arrangement, in particular its Clause II:3(2), was inconsistent with the GATT and that Hong Kong's interests had been adversely affected. Hong Kong therefore hoped that the Panel would arrive at findings leading to the termination of the Arrangement.

#### D. Singapore

93. Singapore considered the Arrangement between Japan and the United States covering trade in semi-conductor products was inconsistent with the provisions of Articles VI and XI of the GATT and the Anti-Dumping Code. Singapore's electronics industry was highly dependent on semi-conductor imports. It had imported about S\$3.8 billion worth of semi-conductors in 1986, of which 22 per cent had been sourced from Japan. The Arrangement was adversely affecting Singapore's electronics industry

which was of strategic importance to the future development of Singapore's economy. The immediate impact of the Arrangement on Singapore's electronics industry was the difficulty in the sourcing of wafers and other chips from Japan. Both multinational and local companies had complained that the lead time had increased from the normal 4-6 weeks to as long as three months for obtaining supplies. Deliveries had also become uncertain. The situation was expected to become worse in 1988, in particular for DRAMs as demand was picking up strongly. The prices of chips had increased considerably in Singapore as a result of the Japanese monitoring measures. For example, the prices of DRAMs had risen by 50 per cent, from US\$1.80 before the Arrangement came into effect, to US\$2.70 or more at present. This could only be attributed to the Japanese monitoring measures given that the Japanese semi-conductor industry had been favoured with sharply falling production costs for some time. Higher component cost would reduce Singapore's competitiveness in the world market for electronic products. Thus far, the worse hit were the small local sub-assembly operations, which did not have direct access to or long-term supply contracts with Japanese suppliers. These companies were unable to hold large inventories of components. As a result, their supplies had been interrupted, causing undue delays and loss of operation efficiency.

94. To conclude, Singapore reiterated that the Arrangement, in particular its Clause II:3 was inconsistent with the GATT Articles VI and XI and the Anti-Dumping Code and that Singapore's interests had been adversely affected. Singapore asked that the Panel find the Arrangement to be inconsistent with the provisions of the GATT and the Anti-Dumping Code and recommend that the Arrangement be terminated.

E. Brazil

95. Brazil said that the Brazilian electronics and related industries had noted several negative aspects arising directly or indirectly from the implementation of the Arrangement. It was pointed out that before the entry into force of the Arrangement, the general market tendency in the field of semi-conductors was of a downward price movement. Since then, an increase of between 10 and 25 per cent in the price of integrated circuits of 256K memory type, which Brazil imported from various sources, had been observed. Brazil was also encountering difficulties in importing several types of components from alternative sources other than Japan and the US. In the light of this situation, it was the Brazilian view that the Japan/US Arrangement had caused problems for many electronics industries in third countries that depended, in part or totally, on imports of these components. Contrary to the needs and expectations of these industries, there had been a price increase of required components and a growing uncertainty on future price trends as well as the supply conditions of these products, which were necessary for the normal production and planning of the industrial sectors concerned.

VII. FINDINGS

96. The Panel understood the complaint of the EEC to be that:

- the measures applied by the Japanese Government to exports of semi-conductors at prices below company-specific costs to certain third countries to implement its Arrangement concerning Trade in Semi-Conductor Products with the United States, restricted exports of semi-conductors and therefore contravened Articles VI and XI; and also Articles I and XVII;
- the measures taken by the Japanese Government to improve access to the Japanese market for semi-conductors pursuant to that Arrangement favoured United States' products and therefore contravened Article I;

- the measures applied to exports of semi-conductors to third country markets and the measures to improve access to the Japanese market lacked transparency and therefore contravened Article X.

97. The Panel further noted that the EEC had alleged that, even if the above measures were considered to be consistent with the General Agreement, they nullified or impaired benefits accruing to the EEC under the General Agreement and impeded the attainment of the objectives of the General Agreement.

98. The Panel examined each of these issues in accordance with its terms of reference. In accordance with past GATT practice and the understanding reached in the Council on 15 April 1987 about the participation of the United States, the Panel took into consideration points made by the United States and interested third parties on issues raised by the parties to the dispute, but did not make findings on issues raised solely by the United States or interested third parties.

A. The Third Country Market Monitoring

99. The Panel considered the following facts as central to its examination of this part of the EEC's complaint. After having concluded the Arrangement with the United States concerning Trade in Semi-Conductors, the Japanese Government:

- requested Japanese producers and exporters of semi-conductors covered by the Arrangement not to export semi-conductors at prices below company-specific costs;
- collected data on company and product-specific costs from producers; introduced a statutory requirement, reinforced by penal servitude not exceeding six months or a fine not exceeding ¥ 200,000, for exporters of semi-conductors to report data on export prices;
- systematically monitored company and product-specific cost and export price data on semi-conductors which were sold for export to certain contracting parties other than the United States;
- instituted quarterly supply and demand forecasts and communicated to manufacturers its concern about the need to accommodate their production levels to the forecasts as compiled by MITI.

100. Up to 10 November 1987 the cost and price data had been reviewed within the framework of the screening of exports for COCOM purposes. An export licence for semi-conductors had been granted only after the Japanese Government had examined the information on costs and export prices. As a result of this monitoring, export licences had been granted with delays, sometimes amounting to several months. As of 10 November 1987 the COCOM screening and the monitoring of costs and export prices had been administratively separated. Producers and exporters of semi-conductors were now still obliged to supply the Government with information on costs and export prices before shipment and the Government still examined this information systematically, but the granting of the export licence within the framework of the COCOM regulations was no longer dependent on the examination of costs and prices.

101. The Panel noted that the complaint by the EEC started with arguments on Article VI. It decided, however, to examine Article XI before addressing other Articles.

102. The Panel understood the main contentions of the parties to the dispute on the consistency of the measures set out in paragraph 99 with Article XI:1 of the General Agreement to be the following. The EEC considered that such measures constituted restrictions on the sale for export of semi-conductors

at prices below company-specific costs through measures other than duties, taxes or charges within the meaning of Article XI:1. Japan contended that there were no governmental measures limiting the right of Japanese producers and exporters to export semi-conductors at any price they wished. The Government's measures to avoid sales at dumping prices were not legally binding and therefore did not fall under Article XI:1. Exports were limited by private enterprises in their own self-interest and such private action was outside the purview of Article XI:1.

103. As for the export approval system, the EEC did not ask the Panel to examine the COCOM export controls as such but the delays in the issuing of export licences resulting from the monitoring of costs and export prices. The EEC considered that these delays constituted restrictions on exportation made effective through export licences within the meaning of Article XI:1. Japan maintained that the delays in the granting of export licences resulting from the monitoring of costs and export prices had occurred for purely administrative reasons and did not constitute restrictions within the meaning of Article XI:1, since no export licence had ever been denied for reasons related to export pricing.

104. The Panel examined the parties' contentions in the light of Article XI:1, the relevant part of which stated that:

"No prohibitions or restrictions other than duties, taxes or other charges, whether made effective through quotas ..., export licences or other measures, shall be instituted or maintained by any contracting party ... on the exportation or sale for export of any product destined for the territory of any other contracting party".

The Panel noted that this wording was comprehensive: it applied to all measures instituted or maintained by a contracting party prohibiting or restricting the importation, exportation or sale for export of products other than measures that take the form of duties, taxes or other charges.

105. The Panel noted that the CONTRACTING PARTIES had decided in a previous case that the import regulation allowing the import of a product in principle, but not below a minimum price level, constituted a restriction on importation within the meaning of Article XI:1 (BISD 25S/99). The Panel considered that the principle applied in that case to restrictions on imports of goods below certain prices was equally applicable to restrictions on exports below certain prices.

106. The Panel then examined the contention of the Japanese Government that the measures complained of were not restrictions within the meaning of Article XI:1 because they were not legally binding or mandatory. In this respect the Panel noted that Article XI:1, unlike other provisions of the General Agreement, did not refer to laws or regulations but more broadly to measures. This wording indicated clearly that any measure instituted or maintained by a contracting party which restricted the exportation or sale for export of products was covered by this provision, irrespective of the legal status of the measure.

107. Having reached this finding on the basis of the wording and purpose of the provision, the Panel looked for precedents that might be of further assistance to it on this point. It noted that the CONTRACTING PARTIES had addressed a case relating to the interpretation of Article XI:2(c) in the report of the Panel on "Japan - Restrictions on Imports of Certain Agricultural Products" (L/6253). Under Article XI:2(c), import restrictions might be imposed if they were necessary to the enforcement of "governmental measures" restricting domestic supplies. The complaining party argued in the earlier panel proceedings that some of the measures which Japan had described as governmental measures were in fact "only an appeal for private measures to be taken voluntarily by private parties" and could therefore not justify the import restrictions. Japan replied that "to the extent that governmental measures were effective, it was irrelevant whether or not the measures were mandatory and statutory", that the governmental measures "were effectively enforced by detailed directives and instructions to local

governments and/or farmers' organizations" and that "such centralised and mutually collaborative structure of policy implementation was the crux of government enforcement in Japan" (L/6253, paragraph 29). The Panel which examined that case had noted that "the practice of 'administrative guidance' played an important rôle" in the enforcement of the Japanese supply restrictions, that this practice was "a traditional tool of Japanese government policy based on consensus and peer pressure" and that administrative guidance in the special circumstances prevailing in Japan could therefore be regarded as a governmental measure enforcing supply restrictions. The Panel recognized the differences between Article XI:1 and Article XI:2(c) and the fact that the previous case was not the same in all respects as the case before it, but noted that the earlier case supported its finding that it was not necessarily the legal status of the measure which was decisive in determining whether or not it fell under Article XI:1.

108. The Panel recognized that not all non-mandatory requests could be regarded as measures within the meaning of Article XI:1. Government-industry relations varied from country to country, from industry to industry, and from case to case and were influenced by many factors. There was thus a wide spectrum of government involvement ranging from, for instance, direct government orders to occasional government consultations with advisory committees. The task of the Panel was to determine whether the measures taken in this case would be such as to constitute a contravention of Article XI.

109. In order to determine this, the Panel considered that it needed to be satisfied on two essential criteria. First, there were reasonable grounds to believe that sufficient incentives or disincentives existed for non-mandatory measures to take effect. Second, the operation of the measures to restrict export of semi-conductors at prices below company-specific costs was essentially dependent on Government action or intervention. The Panel considered each of these two criteria in turn. The Panel considered that if these two criteria were met, the measures would be operating in a manner equivalent to mandatory requirements such that the difference between the measures and mandatory requirements was only one of form and not of substance, and that there could be therefore no doubt that they fell within the range of measures covered by Article XI.1.

110. On the first criterion, the Panel considered the background against which the measures operated. The Panel noted that the Government of Japan had formally concluded in September 1986 an Arrangement with the Government of the United States, one of the main provisions of which was for the Japanese Government to monitor costs and export prices to third country markets in order to prevent dumping. Following bilateral consultations, the Government of Japan assured the United States in April 1987 that it had taken "appropriate action to ensure that Japanese semi-conductor exports are being sold at not less than their costs in third country markets". In the light of this, the Panel considered that at least by April 1987, there would certainly have been no doubt in the minds of relevant Japanese producers and exporters that the Japanese Government had made an undertaking to the United States to ensure that a certain class of sales did not take place. They would also have known that any such action would have led to the Government of Japan being unable to fulfil a commitment which it had given to the United States, and therefore would have adverse consequences for Japan. They would also have been aware that the Government had the fullest information available to identify any producers or exporters selling at prices below costs.

111. The Panel considered that, in the above circumstances, the Japanese Government's measures did not need to be legally binding to take effect, as there were reasonable grounds to believe that there were sufficient incentives or disincentives for Japanese producers and exporters to conform. The Panel did not consider that these circumstances were, of themselves, sufficient to ensure compliance. Indeed, events showed that despite the existence of the Arrangement, a certain number of Japanese producers and exporters had pursued their original course of production and sales. What was required to ensure compliance were additional Government measures.

112. The Panel went on to consider the second criterion regarding the manner in which the measures operated in this case. To begin with, the Panel noted the Japanese Government's own description of its measures as provided to the United States in its Position Paper of April 1987, notably that "Japan exercised administrative guidance to achieve production cut-backs and adopted more stringent export licensing practises" and that "actions have been taken aimed at reducing supplies and squeezing out grey market transactions". It referred also to the measures taken as "recently-ordered production cut-backs", and that "the measures (i.e. those relating to production and export administration) taken by the Japanese Government have as their exclusive purpose and effect avoiding below cost sales of semi-conductors in third country markets".

113. The Panel further examined the structure and elements of the measures adopted. It noted that Japanese producers were required to submit detailed information on costs on a regular basis. It also noted the importance of the statutory requirement for exporters to supply information on export prices and of the heavy penalties attached for failure to comply with that requirement. The objective of identification in the monitoring measures was clear. For instance, in cases where the exporter was not a producer, the origin of the transaction had to be declared and identified. The Panel noted that this gave the Japanese Government a comprehensive basis for precise identification of the source of any below cost pricing. It also observed that any producer or exporter would have been aware that the Japanese Government would be in a position to have this information. The preparedness of the Japanese Government to request, and to continue requesting, for below cost sales to cease was also evident.

114. The Panel examined the operation of the supply and demand forecasts. It noted that MITI had instituted regular meetings of the Supply and Demand Forecasts Committee, involving producers, upon which its forecasts were drawn up. The Panel considered that the Government of Japan played a decisive role in the entire operation. Indeed it was stated by Japan that "the Japanese Government, in consideration of large inventories of products, made an attempt to restore balance in supply and demand." Thus in the first and second quarters of 1987, the Government of Japan compiled the supply and demand forecasts "to get production levels reflective of actual demand". The Panel recalled the statement quoted in paragraph 112 above concerning the production cut-backs and the avoidance of below cost sales of semi-conductors in third country markets. On the basis of these, the Panel considered that the Government of Japan had intervened to facilitate the reduction of the production levels of semi-conductors through the operation of the supply and demand forecasts. The Panel further considered that if Japanese producers and exporters were subject to any measure restricting the exportation or sale for export of semi-conductors, they would have to adjust their production levels accordingly. The Panel therefore considered that the operation of the supply and demand forecasts had facilitated the reduction of the production levels, strengthening the effectiveness of the other measures adopted.

115. The Panel then considered whether the operation of the measures was essentially dependent on Government action. The complex of measures was, in the Panel's view, so dependent. The period between September 1986 and January 1987 gave an interesting indication of how Japanese firms were disposed to operate where they were subject to less constraint. It was apparent that they had been prepared to produce and sell up to a quantity which included what was later termed "false demand" in the context of the revised supply or demand forecast in February 1987. The Panel considered that the disposition to produce and sell was what the Government of Japan by its complex of measures intended to control, by the strengthening of the monitoring measures, lowering of the minimum export amount requiring an export licence to 50,000 yen, requests to producers not to export at prices below company-specific costs, and the revisions of the supply and demand forecasts.

116. The Panel also considered that the series of statements quoted in paragraph 112 above were relevant in this context. In addition to these, the Panel noted that Japan had stated in the proceedings of the Panel that "although monitoring by MITI was limited in scope, it was still meaningful because MITI

represented a neutral and objective figure overseeing the entire industry while taking into account costs and prices among competing companies in Japan. Monitoring also helped to stamp out suspicion among companies that others were cheating or resorting to dumping". Japan had further stated that "if the semi-conductor manufacturers were to pursue their own profits and ignore MITI's concern, the whole dumping prevention mechanism would collapse", and that "the administration presents (firms) with objective facts and considerations and others that are usually not obtainable by one firm alone". The Panel considered that these statements concerning the way in which the Government exercised its authority were a further confirmation of the fact that the Government's involvement was essential to the prevention of sales below company-specific costs.

117. All these factors led the Panel to conclude that an administrative structure had been created by the Government of Japan which operated to exert maximum possible pressure on the private sector to cease exporting at prices below company-specific costs. This was exercised through such measures as repeated direct requests by MITI, combined with the statutory requirement for exporters to submit information on export prices, the systematic monitoring of company and product-specific costs and export prices and the institution of the supply and demand forecasts mechanism and its utilization in a manner to directly influence the behaviour of private companies. These measures operated furthermore to facilitate strong peer pressure to comply with requests by MITI and at the same time to foster a climate of uncertainty as to the circumstances under which their exports could take place. The Panel considered that the complex of measures exhibited the rationale as well as the essential elements of a formal system of export control. The only distinction in this case was the absence of formal legally binding obligations in respect of exportation or sale for export of semi-conductors. However, the Panel concluded that this amounted to a difference in form rather than substance because the measures were operated in a manner equivalent to mandatory requirements. The Panel concluded that the complex of measures constituted a coherent system restricting the sale for export of monitored semi-conductors at prices below company-specific costs to markets other than the United States, inconsistent with Article XI.1.

118. The Panel then reverted to the issue raised by the EEC concerning the delays of up to three months in the issuing of export licences that had resulted from the monitoring of costs and export prices of semi-conductors destined for contracting parties other than the United States. It examined whether the measures taken by Japan constituted restrictions on exportation or sale for export within the meaning of Article XI:1. It noted that the CONTRACTING PARTIES had found in a previous case that automatic licensing did not constitute a restriction within the meaning of Article XI:1 and that an import licence issued on the fifth working day following the day on which the licence application was lodged could be deemed to have been automatically granted (BISD 25S/95). The Panel recognized that the above applied to import licences but it considered that the standard applicable to import licences should, by analogy, be applied also to export licences because it saw no reason that would justify the application of a different standard. The Panel therefore found that export licensing practices by Japan, leading to delays of up to three months in the issuing of licences for semi-conductors destined for contracting parties other than the United States, had been non-automatic and constituted restrictions on the exportation of such products inconsistent with Article XI:1.

119. The Panel examined the data on export prices provided by the two parties, by the United States and by interested parties. It noted that these prices were influenced by a large number of factors, including the elasticity of demand for the final product, the seasonal demand and the product life cycle of the particular type of semi-conductors, exchange fluctuations, initiation of anti-dumping investigations and other factors. It was therefore understandable that these data did not present a clear picture, but the Panel noted that there was some evidence to indicate that the export price of Japanese semi-conductors had risen after the measures had been taken, especially for 256K DRAMs and 256K EPROMs.

120. The Panel then considered Article VI and arguments advanced by the two parties concerning that Article. Having found Japan to have acted inconsistently with Article XI:1, the Panel examined Japan's contention that its measures, being designed to prevent dumping, were justified by the spirit of Article VI, which condemned dumping. The Panel noted that Article VI:1 declared that dumping was to be condemned if it caused or threatened material injury to an established industry or materially retarded the establishment of an industry and that Article VI:2 allowed contracting parties to levy a duty on dumped products, subject to certain specified conditions. The provision was silent on actions by exporting countries. The Panel therefore found that Article VI did not provide a justification for measures restricting the exportation or sale for export of a product inconsistently with Article XI:1.

121. The Panel proceeded to examine the contention of the EEC that the measures maintained by Japan to prevent dumping were contrary to Article VI because that provision gave the exclusive right of preventing dumping to the importing countries. The Panel noted that Article VI provided importing countries with the right to levy anti-dumping duties subject to certain specific conditions but was silent on actions by exporting countries.

122. The Panel further examined the contention of the EEC that the measures by the Japanese Government were in violation of the most-favoured-nation provision of Article I because the Third Country Market Monitoring system was applied not to all exports but only to those to selected countries. The Panel, having found the Japanese measures to be inconsistent with Article XI:1, did not consider it necessary to make a finding on whether or not their administration was contrary to Article I:1. The Panel considered that, once a measure had been found to be inconsistent with the General Agreement whether or not it was applied discriminatorily, the question of its non-discriminatory administration was no longer legally relevant. The Panel noted that another Panel had also refrained from examining the alleged discriminatory aspects of a restriction after having found it to be inconsistent with Article XI (BISD 30S/140).

123. The Panel then turned to the contention of the EEC that the measures by the Japanese Government were contrary to Article XVII:1(c), according to which "no contracting party shall prevent any enterprise under its jurisdiction from acting in accordance with the general principles of non-discriminatory treatment prescribed in [the General] Agreement". The Panel considered that, once a measure had been found to be inconsistent with a specific provision of the General Agreement, it was no longer meaningful to address the question of whether or not the measure was also contrary to principles underlying that Agreement and therefore the Panel, having already found the Japanese measures to be inconsistent with Article XI, did not consider it necessary to examine them in the light of Article XVII:1(c).

#### B. Access to the Japanese Market

124. The Panel then turned to the EEC's allegation that the measures taken by the Japanese Government to improve access to the Japanese market favoured United States' products and therefore contravened Article I. It examined the activities conducted by the Japanese Government to promote sales of foreign semi-conductors and the contents of the MITI "guidance" to users and importers in this regard, in the context of the Arrangement between Japan and the United States. It took into consideration other related elements, such as trade figures and the retaliatory measures taken by the United States against Japan.

125. The Panel noted the Japanese statement that its policy was to improve access to its semi-conductor market on a non-discriminatory basis and that the Japanese Government had denied that it granted preferential market access to the producers of the United States. It further noted the statement by the United States in the Panel proceedings that there was no secret understanding on preferential access for US companies and that the subject of preferential access had never been discussed during the negotiations leading to the conclusion of the Arrangement. The Panel examined the Arrangement and



concluded that nothing in it would prevent Japan from implementing its market opening provisions on a most-favoured-nation basis. The Panel also examined the contents of the MITI "guidance" to users and importers in this regard and could not detect any evidence of preferences accorded to United States products. Import statistics supplied by Japan showed that the growth of sales of semi-conductors in Japan from sources other than the United States had been higher than that of the sales originating in the United States. It also noted the announcement by the United States' authorities on the retention of sanctions against certain Japanese goods on the grounds that United States' sales in the Japanese market had not increased as expected.

126. The Panel noted the EEC's argument that, unless preferential treatment was involved, there was no need for two governments to enter into a formal bilateral arrangement. The Panel considered this argument not valid as there were bilateral agreements which provided for non-discriminatory treatment. The Panel noted that the EEC had also argued that Japan's commitment under the Arrangement with the United States to take measures in respect of "foreign capital affiliated" companies in Japan could be taken as an indication of an intent to favour imports from the United States because there was only one such company and that was of United States' origin. The Panel did not consider that argument to be decisive: no evidence had been submitted to it demonstrating that companies from other countries were prevented from establishing themselves in Japan on the same terms as the United States company. It also noted the EEC argument that the general perception of the Japanese users and importers of semi-conductors might, under these special circumstances, be that they were expected to accord preference to United States products and would do so accordingly. The Panel considered this as a conjecture which therefore did not provide facts as evidence that preferences were accorded.

127. Taking into account all of the above, the Panel found that the information submitted to it did not demonstrate that the Japanese measures to improve access to its market for semi-conductors favoured United States products inconsistently with Article I of the General Agreement.

#### C. Transparency

128. The Panel considered the contention of the EEC that the measures applied to exports of semi-conductors to third countries and the measures to improve access to the Japanese market lacked transparency and therefore contravened Article X. The Panel felt, however, that the present case did not call for a decision on that point. The measures under examination had been found to be inconsistent with Article XI. At issue was thus their elimination or bringing them into conformity with GATT, not their publication.

129. As for the measures to improve access to the Japanese market, the Panel, on the basis of the evidence analysed in paragraphs 125 and 126 above, was unable to identify any measure constituting a requirement, restriction or prohibition on imports required to be published by Article X.

#### D. Nullification and Impairment

130. The Japanese measures relating to exports of semi-conductors to third country markets had been found to be inconsistent with Article XI:1. They were therefore, according to GATT practice, presumed to have nullified or impaired the benefits accruing to the EEC under the General Agreement (BISD 26S/216).

131. The Panel had not found that the measures relating to the access to the Japanese market were inconsistent with the provisions of the General Agreement. The Panel noted that the EEC had alleged that, even if the Japanese measures relating to exports and imports of semi-conductors were considered to be consistent with the General Agreement, they nullified or impaired benefits accruing to the EEC under the General Agreement and impeded the attainment of objectives of the General Agreement within

the meaning of Article XXIII. According to the dispute settlement procedures adopted on 28 November 1979 (BISD 26S/216), a contracting party claiming that benefits accruing to it under the General Agreement had been nullified or impaired as a result of a measure consistent with the General Agreement would be called upon to provide a detailed justification. The Panel considered that the evidence submitted by the EEC relating to access to the Japanese market did not permit it to identify any measure by the Japanese Government that put EEC exporters of semi-conductors at a competitive disadvantage vis-à-vis those of the United States and that might therefore nullify or impair benefits accruing to the EEC under the General Agreement and impede the attainment of objectives of the General Agreement within the meaning of Article XXIII.

## VIII. CONCLUSIONS

132. On the basis of the findings set out above, the Panel reached the following conclusions:

A. The requests not to export semi-conductors at prices below company-specific costs to contracting parties other than the United States which the Japanese Government addressed to Japanese producers and exporters of semi-conductors, combined with the statutory requirement for exporters to submit information on export prices and the systematic monitoring of company and product-specific costs and export prices by the Government, backed up with the use of supply and demand forecasts to impress on manufacturers the need to align their production to appropriate levels, constituted a coherent system restricting the sale for export of monitored semi-conductors at prices below company-specific costs to markets other than the United States, inconsistent with Article XI:1. The Panel suggests that the CONTRACTING PARTIES recommend that Japan bring its measures relating to the sale for export of semi-conductors to contracting parties other than the United States into conformity with the General Agreement.

B. The delays of up to three months in the issuing of export licences that resulted from the monitoring of costs and export prices of semi-conductors destined for contracting parties other than the United States constituted restrictions on exportation inconsistent with Article XI:1. The Panel suggests that the CONTRACTING PARTIES note that Japan had changed in November 1987 its export procedures to avoid such delays.

C. The evidence submitted to the Panel did not demonstrate that Japan's measures to improve access to its market for semi-conductors discriminate in favour of products originating in the United States. The Panel suggests that the CONTRACTING PARTIES take note of the statement of the Japanese Government that its policy was to improve the access to the Japanese market for semi-conductors in conformity with the General Agreement's most-favoured-nation principle.

APPENDIX I

256K DRAMS

Dollars  
Europe  
US  
Japan

1987                    J        F        M        A        M        J        J        A        S

APPENDIX I (Cont'd)

256 K EPROMS

Dollars  
Europe  
US  
Japan

1987                    J        F        M        A        M        J        J        A        S

APPENDIX I (Cont'd)

128 K EPROMS

Dollars  
Europe  
US  
Japan

1987                    J        F        M        A        M        J        J        A        S

APPENDIX I (Cont'd)

PRICES OF CERTAIN SEMI-CONDUCTORS (1984 PRICE = 100)

The open columns for the three years 1984-1986 show the average price levels in Europe for each year. For 1987 the open column is the price level forecast by Dataquest early in 1987. This open column plus the black column superimposed shows the actual price at July 1987. Thus the black column is the anomalous price increase, which could be explained by MITI production and price control activity.

256 KDRAMS				256 K EPROMS				128 K EPROMS			
1984	1985	1986	1987	1984	1985	1986	1987	1984	1985	1986	1987

APPENDIX II

EXPORT PRICE (EUROPE)

256K DRAM (yen)

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	Sept. 1986	Oct.	Nov	Dec	Jan 1987	Feb.	Mar	Apr.	May	Jun	Jul	Aug
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Export Price (Europe)	285,7	290,2	330,1	285,7	307,3	301,5	279,5	299,3	257,4	279,4	244,5	297,
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256 K EPROM (yen)

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	Sept. 1986	Oct.	Nov	Dec	Jan 1987	Feb	Mar	Apr.	May	Jun	Jul	Aug
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Export Price (Europe)	473,8	465,7	463,0	462,4	437,8	428,1	476,2	432,5	398,8	380,8	419,6	488,9
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Note: These are the export prices of representative products selected from many kinds of products categorized as 256K DRAMs and 256K EPROMs. Since they are export prices, they do not include freight, insurance and local selling expenses. Sale prices may show different trend.

APPENDIX II (Cont' d)

EXPORT PRICE (EUROPE)

YEN

Sept. 1986	Oct.	Nov	Dec	Jan 1987	Feb	Mar	Apr.	May	Jun	Jul	Aug
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\*\*\* 256 K DRAM \*\*\*

APPENDIX II (Cont' d)

EXPORT PRICE (EUROPE)

YEN

Sept. 1986	Oct.	Nov	Dec	Jan 1987	Feb	Mar	Apr.	May	Jun	Jul	Aug
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\*\*\* 256 K EPROM \*\*\*

APPENDIX III

European Pricing Data  
(US dollars)\*

<u>Date</u>	<u>DRAMs</u>			<u>EPROMs</u>	
	<u>64K</u>	<u>256K</u>	<u>1Mb</u>	<u>128K</u>	<u>256K</u>
29/8/86	1,00	2,50	n.c.	2,90	4,50
15/9	1,00	2,50	n.c.	2,90	4,50
30/9	0,87	1,88	n.c.	n.c.	n.c.
24/10	0,80	2,10	n.c.	2,55	3,75
8/12	0,80	1,75	n.c.	2,55	3,75
22/12	0,90	2,30	n.c.	2,55	3,75
12/1/87	0,90	2,30	n.c.	2,55	3,75
26/1	0,90	2,30	n.c.	2,55	3,75
9/2	0,90	1,90	n.c.	2,55	3,75
23/2	0,90	1,90	n.c.	2,55	3,75
9/3	0,90	1,90	n.c.	2,55	3,75
23/3	0,90	1,90	n.c.	2,55	3,75
6/4	0,90	1,90	n.c.	2,55	3,75
20/4	0,90	2,15	n.c.	2,55	3,75
4/5	n.c.	2,15	16,00	2,55	3,75
18/5	n.c.	2,15	16,00	3,51	5,00
1/6	n.c.	2,35	16,00	3,51	5,00
15/6	n.c.	2,50	16,00	3,75	5,10
29/6	n.c.	2,50	16,00	3,75	5,10
*					
27/7	n.c.	2,50	16,00	3,75	5,10
10/8	n.c.	2,50	16,00	3,75	5,10
24/8	n.c.	2,50	16,00	3,75	5,10
7/9	n.c.	2,70	16,00	3,75	5,10
21/9	n.c.	2,50	16,00	3,75	5,10
5/10	n.c.	2,75	17,60	3,75	5,10

<u>Date</u>	<u>SRAM</u>			<u>MICROPROCESSORS</u>		
	<u>64k</u>	<u>256k</u>	<u>68000</u>	<u>8086</u>	<u>8051</u>	<u>Z80</u>
8/12/86	n.c.	n.c.	7,80	7,50	3,20	0,90
22/12	n.c.	n.c.	7,80	7,50	3,20	0,90
12/1/87	n.c.	n.c.	7,80	7,50	3,20	0,90
26/1	n.c.	n.c.	7,80	7,50	3,20	0,90
9/2	n.c.	n.c.	7,80	7,50	3,20	0,90
23/2	n.c.	n.c.	7,80	7,50	3,20	0,90
9/3	n.c.	n.c.	7,80	7,50	3,20	0,90
23/3	n.c.	n.c.	7,80	7,50	3,20	0,90
6/4	n.c.	n.c.	7,80	7,50	3,20	0,90
20/4	n.c.	n.c.	0,80	7,50	3,20	0,90
4/5	n.c.	10,00	7,80	7,50	3,20	0,90
18/5	n.c.	10,00	7,80	7,50	3,20	0,90
1/6	n.c.	10,00	7,80	7,50	3,20	0,90
15/6	n.c.	10,00	7,80	7,50	3,20	0,90
29/6	n.c.	n.c.	7,80	7,50	3,20	0,90
*						
27/7	n.c.	n.c.	7,80	7,50	3,20	0,90
10/8	2,25	8,50	7,80	7,50	3,20	0,90
24/8	2,25	8,50	7,80	7,50	3,20	0,90
7/9	2,25	8,50	7,80	7,50	3,20	0,90
21/9	2,25	8,50	7,80	7,50	3,20	0,90
5/10	2,25	8,50	7,80	7,50	3,20	0,90

\*DQ Monday Report - Regional Historical Contract Prices; DATAQUEST