COMMISSION DECISION

of 9 April 2002

on State aid measure C 86/2001 (ex N 334/2001) by which Germany plans to assist Infineon Technologies SC 300 GmbH & Co. KG

(notified under document number C(2002) 1346)

(Only the German text is authentic)

(Text with EEA relevance)

(2002/867/EC)

THE COMMISSION OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Community, and in particular the first subparagraph of Article 88(2) thereof,

Having regard to the Agreement on the European Economic Area, and in particular Article 62(1)(a) thereof,

Having called on interested parties to submit their comments in accordance with those provisions [1],

Whereas:

I. PROCEDURE

(1) By letter of 22 May 2001, received on 28 May 2001, Germany informed the Commission that it planned to grant Infineon Technologies SC 300 GmbH & Co. KG investment aid within the scope of the multisectoral framework for regional aid to large investment projects ('the multisectoral framework') [2]. The Commission registered the planned measure as aid measure N 334/01.

(2) By letter of 13 June 2001 the Commission confirmed that it had received the letter, but informed Germany that it considered the notification incomplete, and asked a number of supplementary questions. By letter of 18 June 2001 the Commission sought further information. Germany supplied further information in letters dated 3 July 2001, received on 5 July 2001, and 16 July 2001, received on 17 July 2001. On 17 August 2001 the case was discussed with representatives of the German authorities. By letter of 30 August the Commission asked Germany to expand the provisions on *ex post* monitoring in the notification. By letter of 19 September 2001 the Commission reminded Germany that it still had to supply further information. By letter of 24 September 2001, received on 25 September 2001, Germany supplied information which was incomplete. By letter of 1 October 2001 the Commission confirmed that it had received that letter and advised Germany that it still regarded the notification as incomplete. By letter of 22 October 2001, received on 23 October 2001, Germany supplied additional information. By letter of 26 October 2001 the Commission informed Germany that it considered the notification complete, and said it would it would adopt a final position within two months of the date of receipt of the letter completing the information.

(3) On 21 November 2001 Germany sent a last letter, received on 22 November 2001, arguing that the aid ought to be declared compatible with the common market under Article 87(3)(b) of the EC Treaty.

(4) On 30 November 2001 the Commission informed Germany that it had decided to initiate the procedure laid down in Article 88(2) of the EC Treaty in respect of the aid.

(5) The Commission's decision to initiate the procedure was published in the *Official Journal of the European Communities* [3]. The Commission there asked interested parties to submit comments.

([1]) OJ C 368, 22.12.2001, p. 2.
([2]) OJ C 107, 7.4.1998, p. 7.

([3]) See footnote 1.

(6) By letters of 10 January 2002, received on 14 January 2002, and 28 January 2002, received on 29 January 2002, Germany responded to the initiation of the procedure. By letter of 15 February 2002 the Commission sought additional information. Germany replied by letter of 27 February 2002, received on 28 February 2002. The Commission put further questions by letter of 21 March 2002, which Germany answered by letter of 24 March 2002, received on 25 March 2002.

(7) Three interested parties sent observations to the Commission, which the Commission forwarded to Germany for comment; Germany replied by letter of 18 February 2002, received on 19 February 2002.

(8) The undertaking concerned supplied additional information by letter of 7 March 2002, received on the same day.

II. DESCRIPTION

2.1. The recipient

(9) The recipient, Infineon Technologies SC 300 GmbH & Co. KG (SC 300), was founded in February 1998, and is an 87 %-owned subsidiary of Infineon Technologies AG, of Munich (Infineon). Infineon itself became a publicly quoted company in March 2000; it had been hived off from Siemens AG, taking Siemens's semiconductor business with it. The remaining shares in SC 300 are held 4 % by the private limited company M + W Zander Facility Engineering GmbH, through SC 300 Beteiligungs GmbH, of Stuttgart, and 9 % by the private limited company Leipziger Messe GmbH, which is controlled by the *Land* of Saxony and the City of Leipzig. Infineon's core business is semiconductors. Germany emphasises that Infineon is the only European undertaking competing on this market.

(10) Germany has supplied the following figures for Infineon's turnover and staffing in the years 1999 to 2001:

	Worldwide		(EUR million)		Workforce	
	EEA Germany	Turnover	Workforce Turnover	(EUR million)	Turnover (EUR million)	Workforce
1998/1999	4 237	24 541	2 444	15 543	1 241	12 352
1999/2000	7 283	27 210	3 259	16 603	1 612	13 522
2000/2001	5 671	33 813	3 005	21 821	1 745	16 814

(11) In the financial year 1997/1998 Infineon made a loss of EUR 775 million; in 1998/1999 it showed a profit of EUR 61 million; and in 1999/2000 it made a profit of EUR 1 126 million.

2.2. The project

(12) The investment project is located in Dresden, in Saxony, which is an assisted area within the scope of Article 87(3)(a) of the EC Treaty.

(13) A fabrication plant is to be built for dynamic random access memories (DRAMs) with a line width of 0,14 μm and below, using 300 mm silicon disks, also known as 'wafers'. This will be the first production line in the world for memory chips on 300 mm wafers. In addition to the production line, SC 300 will also operate a pilot and development line with the facilities already existing in the plant.

(14) The project started in April 2000, and is to be completed by the end of 2003. Total output is ultimately to reach 5 000 wafer starts per week. The plant is to be built in two phases. Mass production began at the end of 2001, but is still substantially below final capacity. In the second phase, lasting until approximately the beginning of 2003, production capacity is to be raised to maximum. According to the information supplied this two-phase expansion is economically the most viable approach, especially because mass production of the new technology is still in the process of development.

(15) The DRAMs to be manufactured will have a storage capacity of 512 megabits and beyond. These DRAMs will gradually replace DRAMs with a capacity of 256 megabits or less. Infineon currently produces the lower-capacity DRAMs in Dresden, the United States of America and Taiwan.

(16) The move from the production of chips on 200 mm wafers to production on 300 mm wafers means that the number of chips per wafer (or productivity) will increase about 2,5 times. This is expected to reduce manufacturing costs per chip by 30 % to 40 %. The lower line width reduces production costs further. It also permits a smaller minimum feature size, enabling computer parts to be smaller and cheaper.

(17) The costs of the project can be broken down as follows:

(in EUR million)

Item	Total	Eligible
Land	[...] (*)	[...]
Buildings	[...]	[...]
Plant and machinery	[...]	[...]
Tools	[...]	[...]
Other	[...]	[...]
Total	1 106	1 106

(*) Business secret.

(18) The new project will increase Infineon's worldwide share of the market for DRAMs from 8 % in 1999 to 10 % in 2003, and its share of the market in semiconductors from 3,5 % in 1999 to 3,7 % in 2003.

(19) The notification stated that the investment would create 1 300 permanent jobs and safeguard 400 permanent jobs. Indirectly the project was expected to lead to the creation of 1 030 jobs in its own assisted region and an adjacent assisted region.

2.3. **Aid measures**

(20) The proposed assistance consists of investment aid in the form of a non-repayable grant amounting to EUR 88 073 million, to be granted in accordance with the 29th Outline programme under the Joint Federal Government/*Länder* Scheme for the improvement of regional economic structures (*Gemeinschaftsaufgabe 'Verbesserung der regionalen Wirtschaftsstruktur'*), a scheme which has been authorised by the Commission. An investment allowance of EUR 128,846 million is to be granted under the Investment Allowance Act 1999, a scheme likewise authorised by the Commission [4]. A guarantee is also to be given on a loan of EUR 450 million, covering 80 %, or EUR 360 million, once again under an authorised scheme [5]. On the basis of the information supplied by Germany the Commission calculates that the aid component in this guarantee is EUR 1,8 million. The total aid to the recipient amounts to EUR 218,718 million, which corresponds to 19,8 % of the eligible investment costs. The non-repayable grant is given only towards the first phase of construction.

2.4. **Grounds for initiation of formal enquiry**

(21) On 30 November 2001 the Commission informed Germany that it had decided to initiate the formal investigation procedure laid down in Article 88(2) of the EC Treaty with respect to the proposed aid to the project. The Commission doubted whether the planned aid intensity of 19,8 % was compatible with the maximum allowable aid intensity which has to be calculated in accordance with the multisectoral framework. In particular, the Commission had no reliable information that would enable it finally to determine the characteristics of the market, and it could not exclude the possibility that the market was in absolute decline. It doubted whether account could properly be taken of all of the research and development jobs claimed, because some might not be directly associated with the project. It questioned whether the number of jobs indirectly created which had been estimated by Germany could be used to assess the regional impact of the project.

(22) The Commission also doubted whether the project would qualify as a 'project of common European interest', which might allow it to be authorised under Article 87(3)(b) of the EC Treaty.

III. **COMMENTS FROM INTERESTED PARTIES**

(23) The Commission received comments from two associations of downstream industries in which DRAMs are used, and from an independent association of European businesses and research institutes in the European circuit board industry. The comments were forwarded to Germany by letters of 22 and 24 January 2001. Germany replied by letter of 18 February 2002.

(4) Investitionszulagengesetz, aid measure C 72/98 (ex N 702/97), SG (98) D/12438, 30.12.1998, and SG (2001) D/28651, 2.3.2001.

(5) Federal Government and *Länder* direct guarantee scheme in the new *Länder* and East Berlin (*Programm für unmittelbare Bürgschaften des Bundes und der Länder in den neuen Bundesländern und Berlin Ost*), aid measure N 297/91, SG (91) D/1344, 15.7.1991, and aid measure E 24/95, SG (96) D/5500, 18.6.1996, and SG (98) D/54570, 11.11.1998.

(24) All three interested parties were in favour of the proposed aid. They stressed the importance of the European semiconductor industry and the significant role of the project in strengthening the competitiveness of the semiconductor and related industries.

(25) In a letter of 7 March 2002, SC 300 pointed out that prices for DRAMs were recovering, and that a further increase was expected. According to a business news service the market in DRAMs would increase by 55 % in 2002.

IV. COMMENTS FROM GERMANY

(26) In its comments on the initiation of the procedure Germany stressed the importance of the project. Infineon was the only producer of DRAMs in Europe, and the new 300 mm technology would give it a cost advantage over its competitors. Infineon expected the demand for memory chips (measured in bits) to grow by 50 % between 2001 and 2002.

(27) According to Germany, the market in DRAMs was characterised by pronounced cyclical fluctuations and strong discrepancies between the value and volume of the market. The competition factor should be set at 1, as there was no overcapacity and the market was not declining.

(28) Germany argued that there was no overcapacity at the aggregated NACE 32.10 level, and submitted relevant data. If the Commission were to consider that the capacity situation at this aggregated level did not adequately reflect the situation of the DRAM industry, Germany argued in the alternative that a subsector at a lower level could be considered. Data on capacity utilisation did not necessarily have to be based on the lowest NACE level in order to assess the competition factor. Germany provided figures to show that there was no overcapacity no matter how tightly the relevant subsector was defined. According to Germany, capacities for DRAMs were almost fully utilised (95 % to 100 %) in the years 1994 to 1999.

(29) In the event that the Commission did not agree to base its assessment of the competition factor on capacity utilisation data, Germany submitted that the market in DRAMs was not in decline. The multisectoral framework provided for a period of five years for the calculation of the average annual growth rate to assess the development of the market. For the project at issue here, therefore, the relevant period was 1996 to 2000, and the average annual growth over that period had been positive. In 1995, market volume in value terms had been exceptionally high. That year was not representative, and no account should be taken of it in the assessment of market developments.

(30) Germany submitted that when the Commission had decided to initiate the formal investigation procedure it had based its assessment of the market purely on the movement of apparent consumption in value terms. But apparent consumption in volume terms, measured in bits, had grown strongly over the period 1996 to 2000, at an average of 83,3 % per annum. Volume figures gave a better picture of the market position, because especially on markets such as the market in DRAMs, where prices fluctuated widely, value figures did not properly reflect market capacity. In value terms consumption was volatile, but expressed in bits it had been growing constantly. In earlier decisions taken under the multisectoral framework the Commission had considered consumption in volume terms too. Germany also argued that consumption figures in value terms were not meaningful, because they were distorted by subsidies given by the Korean Government.

(31) Germany submitted the latest forecasts for the DRAM market, which predicted an average annual growth rate of 17,7 % for the years 2001 to 2004.

(32) On the question of jobs created directly, Germany argued that all jobs related to research and development should be taken into account. The semiconductor industry was research-intensive, and the project at stake would implement a new production technology. A highly innovative project such as the 300 mm technology consequently required particularly heavy expenditure in research and development, not only before implementation, but also during the production period, in order to optimise the application of the new technology.

(33) On the question of the jobs created indirectly, Germany submitted that the total number of jobs created for every job created by the recipient itself was in the medium range. It was difficult to give precise figures for the jobs that would be created by suppliers and customers. Germany submitted statements of intent from SC 300 suppliers and customers according to which 729 jobs had already been created indirectly as a result of the project, and another 666 would be forthcoming.

(34) Germany therefore took the view that an assessment of the aid under the multisectoral framework should not lead to a reduction in the proposed aid intensity. If the Commission did not accept this view, Germany asked that the aid be authorised under Article 87(3)(b) of the EC Treaty. Germany considered that the four tests of applicability of that provision were satisfied.

(35) Without the proposed aid measures SC 300 would not be able to carry out the investment project. The semiconductor industry was highly capital-intensive, and was characterised by high technological risks. In view of the financial and technological dimensions of the project it could not be expected that SC 300 would carry out the project without public assistance.

(36) The project was important both quantitatively and qualitatively. Infineon was the only European producer of DRAMs, a market dominated by non-European producers. It could maintain its position on the market only if it succeeded in applying the 300 mm technology, in which it was a step ahead of the competition, and which gave it a significant cost advantage over its competitors. The fact that for the first time a European producer was leading in innovation would give the semiconductor industry and its suppliers an opportunity to catch up with the leading economies.

(37) As regards the criterion of common European interest, Germany submitted that the implementation of the new 300 mm technology would improve fundamental production processes for semiconductors. The project would thus enhance the competitiveness and effectiveness of European industry. For equipment manufacturers it was of great importance that there should be a European DRAM producer. Owing to the close connection with related industries, the existence of a European DRAM producer favoured the development of those industries and of the semiconductor industry as a whole.

(38) For a project to qualify as being of common European interest, it was not necessary that more than one Member State be involved. A strengthening of the economic structure in one Member State could be in the Community interest if it enhanced the international competitiveness of European industry. The participation of several Member States was not indispensable.

(39) The DRAM industry was a strategic sector. The Commission had authorised State aid for research and development in the past. It would be contradictory to limit State aid now that this new technology was to be implemented.

(40) Germany therefore took the view that the proposed aid could be authorised under Article 87(3)(b).

(41) In its reply to the comments submitted by interested parties, Germany pointed out that they confirmed that European industry had an interest in the SC 300 project because of the expected synergies, which could lead to increased growth in European industry. The comments of the interested parties also showed that industry supported the proposed State aid.

V. **ASSESSMENT**

5.1. **Assessment under Article 87(3)(a) of the EC Treaty**

(42) The aid has been granted for a new investment in an assisted area within the scope of Article 87(3)(a) of the EC Treaty, and must be assessed as regional aid.

(43) The proposed aid amounts to EUR 218,718 million. This is above the notification threshold of EUR 50 million, so that the project is subject to the notification requirement laid down in the multisectoral framework, and has to be assessed accordingly.

(44) Before the proposed aid can be assessed, the multilateral framework requires that the relevant market be determined.

5.1.1. *The relevant market*

(45) The relevant product market to be referred to, in order to determine market share, comprises the product to which the investment project relates and any products regarded by customers or producers as substitutes.

(46) The investment involved here relates to the production of DRAMs. DRAMs belong to class 32.10 in the NACE nomenclature, which comprises the manufacture of electronic components. DRAMs are electronic components: they are semiconductors that store binary data. They are the most common type of semiconductor memory. Their main applications are in PCs and low-cost manufacturing.

(47) DRAMs can be differentiated according to their memory size, i.e. the quantity of data that can be stored on the chips. The size depends on the generation of the chips. The product is subject to rapid technological change, with a new generation arriving on the market every three or four years. DRAMs can also be differentiated according to the intended application (FPM DRAMs, EDO DRAMs, SDRAMs or RDRAMs), or the type of product in which they are to be installed.

(48) There are other types of chip, such as SRAMs (static random access memories), EPROMs (electrically programmable read-only memories), and flash memories. In general these perform functions different from DRAMs, and cannot be regarded as substitutes.

(49) DRAMs are commodity products whose specifications are standardised. Seen from the demand side, the same type of DRAM is available to customers from various suppliers around the world. New generations of DRAMs are targeted to compete with older ones. The preference of a customer for a specific type depends on the cost-performance relationship and the function of the DRAM in the finished product.

(50) Seen from the supply side, manufacturers can produce DRAMs with different capacities, because the technologies employed are similar. However, switching between different generations of DRAMs is in general not easy within a particular facility.

(51) The Commission accordingly considers that the relevant product market is the market in DRAMs ([6]). No separate NACE classification exists for this market.

(52) Turning to the relevant geographic market, it can be accepted that DRAMs are traded worldwide on the basis of the same classifications and marketing concepts. Transport costs are low, and there are no structural barriers to market entry. The Commission therefore considers that the relevant geographic market is the world.

5.1.2. *Multisectoral framework on regional aid*

(53) Under the multisectoral framework on regional aid, the Commission, in order to determine the maximum allowable aid intensity for a proposed aid project, must begin by identifying the maximum aid intensity (regional aid ceiling) which a company could obtain in the assisted area concerned within the context of the authorised regional aid scheme valid at the moment of the notification.

(54) In the area in which SC 300 is located the maximum aid intensity for large undertakings splits into two rates, 28 % and 35 % gross. The 35 % intensity is available only on certain conditions: higher rates of aid may be granted in justified special cases, on application by a *Land*, and with the approval of the subcommittee of the Planning Committee, towards measures with a high structural impact in areas exposed to international competition in respect of business location ([7]).

(55) Germany has not indicated whether these conditions are met here. As SC 300 is a large undertaking, the Commission presumes that the authorised maximum aid intensity (R) in this case is 28 %. The planned gross aid intensity of 19,8 % is therefore within the admissible ceiling for a large undertaking in the region.

(56) The Commission has then to adjust the 28 % percentage figure in accordance with three specific assessment factors in order to calculate a maximum allowable aid intensity for the project in question: these are the competition factor (T), the capital-labour factor (I), and the regional impact factor (M).

The competition factor (T)

(57) The authorisation of aid to companies operating in sectors which are in structural overcapacity poses particular risks for the distortion of competition. Any capacity expansion which is not compensated by capacity reductions elsewhere will exacerbate the problem of structural overcapacity. The sector or subsector to be considered will be established at the lowest available segmentation of the NACE classification.

(58) The lowest available NACE code including the manufacture of DRAMs is class 32.10, which covers the manufacture of electronic components of all kinds. Germany has provided figures for capacity utilisation in this NACE class, and has argued that there is no overcapacity. But DRAMs account for only a small part of NACE class 32.10, and capacity utilisation at this aggregated level does not provide an adequate picture of the situation on the market in DRAMs.

([6]) The relevant product market was defined in the same way in the Commission Decision in Hitachi/NEC Case IV/M 0044, Decision of 3.5.2000 (OJ C 153, 1.6.2000, p. 8).

([7]) OJ C 340, 27.11.1999, p. 8.

(59) As mentioned in recital 28, Germany argues that the subsector need not necessarily correspond to a level in the NACE nomenclature. But footnote 13 to point 7.7 of the multisectoral framework states that 'the sector or subsector will be established at the lowest available segmentation of the NACE classification'. The lowest available segmentation of the NACE classification is NACE code 32.10. As explained in recital 58, capacity data for this aggregated level are not sufficient to allow a determination of the capacity position on the market in DRAMs, which is considered to be the relevant product market. The Commission therefore takes the view that the assessment of the competition factor should not take account of an analysis of the capacity position.

(60) Point 3.4 of the multisectoral framework states that 'In the absence of sufficient data on capacity utilisation, the Commission will consider whether the investment takes place in a declining market.' A market is considered to be 'declining' if, over the last five years, the average annual growth rate of apparent consumption of the product in question is more than 10 % below the annual average of EEA manufacturing industry as a whole, unless there is a strong upward trend in the relative growth rate of demand for the product. A market is 'absolutely declining' if the average annual growth rate of apparent consumption over the last five years is negative.

(61) As explained in recitals 45 to 51, the relevant product market is considered to be the market in DRAMs, as there is only limited substitutability between different types of memory chip. DRAMs are traded on a world-wide basis, so that the relevant geographic market is global.

(62) The market share of SC 300 and Infineon does not exceed 40 % of the relevant market, nor will it exceed this percentage as a result of the new investment. In 1999 Infineon's share of the DRAMs market was 8 %. In 2003, when the project has been completed, Infineon and SC 300 are expected to have a share of 10 %.

(63) Germany has submitted the following figures for apparent consumption of DRAMs in the world from 1995 to 2000, based on data provided by an independent research institute, VLSI Research Inc.:

	1995	1996	1997	1998	1999	2000	Average annual growth rate
Value (EUR billion)	31,952	20,101	17,594	12,514	19,431	31,285	– 0,42 %

(64) According to these figures, the average annual growth in apparent consumption on the DRAMs market in the years 1995 to 2000 was –0,42 %. In the preceding period, i.e. from 1994 to 1999, the rate was likewise negative, at –1,3 %. This would lead to the conclusion that the market in DRAMs is in absolute decline.

(65) Germany argues that in order to assess the movement of apparent consumption the Commission should consider a period of five years, i.e. 1996 to 2000, rather than a six-year period. But the multisectoral framework refers to the average annual growth rate of the last five years. It has therefore been the Commission's practice to look at apparent consumption over six years, so as to be able to calculate five growth rates ([8]).

(66) Germany has submitted the most recent forecast of the future development of the DRAMs market provided by an independent research institute ([9]):

	2001	2002	2003	2004	Average annual growth rate
Value (EUR billion)	12,502	12,919	16,748	20,559	18,1 %

([8]) See Wacker Chemie, State aid measure N 783/2000, Commission Decision of 8.5.2001, Kronoply, State aid measure N 813/2000, Commission Decision of 3.7.2001, and Hamburger AG, State aid measure C 72/2001, Commission Decision of 2.10.2000, OJ C 342, 5.12.2001, p. 9.

([9]) WSTS, fourth quarter forecast update (February 2002).

(67) Despite the serious difficulties being experienced at present, the outlook for the DRAMs market is positive. Latest forecasts expect apparent consumption of DRAMs to grow in value by an average of 18,1 % in the years 2001 to 2004. According to this forecast, however, apparent consumption in 2004 would still be below the level of the year 2000. Another study considered by the Commission predicts an even stronger upward tendency in future, with apparent consumption exceeding the level of 2000 in 2003 and 2004.

(68) The market in DRAMs is highly cyclical and characterised by strong fluctuations. Average annual growth rates in value terms differ significantly depending on the period considered. In the period 1993 to 2000 the average annual growth rate of apparent consumption, expressed in terms of value, was positive, at 14,66 % per year. Despite a drastic fall in apparent consumption between 2000 and 2001, the average annual growth measured from 1993 to 2001 was still just positive, at 0,51 %.

(69) The wide fluctuations on the market in DRAMs are due mainly to the fact that prices are extremely volatile. The DRAM production process is characterised by relatively high sunk costs and low marginal costs. As a consequence, prices can move in a very wide range, as companies can produce DRAMs profitably as long as their marginal costs are covered. To look at the development of apparent consumption only in value terms, therefore, may give an inadequate picture of the market in DRAMs.

(70) Apparent consumption expressed in terms of volume, that is to say measured in units sold, has in recent years seen steady and substantial growth. From 1995 to 2000 the average annual growth rate was 10 %, and from 1994 to 1999 it was 11 %.

(71) Over the long term DRAM prices have shown a downward trend. But this does not seem to be a consequence of overcapacity in the industry, although it is true that stocks have sometimes built up to a high level, and prices have collapsed as a result. Production costs have fallen considerably in recent years. The falls in prices have thus been caused by constant improvements in the efficiency of production resulting from the reduction in the line width and routine changes in wafer diameter, from one inch in the 1970s to 300 mm today. The yield has also improved constantly, as manufacturers have sought to reduce the number of non-functioning circuits and to increase the number of working circuits on the wafer.

(72) When it initiated the procedure the Commission said that it had not got sufficient reliable information to be able finally to determine the exact characteristics of the market for the purpose of setting the correct competition factor.

(73) The Commission accordingly concludes that the market should be considered to be in relative decline, rather than in absolute decline. This is confirmed by the fact that capacities have been used nearly to the full in recent years, with capacity utilisation rates significantly above the average for manufacturing as a whole. The Commission therefore sets the competition factor at 0,75.

The capital-labour factor (I)

(74) For highly capital-intensive projects the multisectoral framework provides for a 'capital-labour factor' which is intended to adjust the maximum allowable intensity so as to give an advantage to projects that make a genuine and better contribution to reducing unemployment by creating or safeguarding a relatively higher number of jobs. This factor also takes account of any distorting effects of the aid on the price of the final product.

(75) The multisectoral framework expressly provides that jobs safeguarded are to be considered only where it is shown that they are directly associated with the investment project, would require a significant amount of retraining, and would otherwise no longer exist when the project goes into production.

(76) In the case at issue the number of jobs created would be 1 300, and the number safeguarded would be 400. They break down as follows:

	Jobs safeguarded	New jobs	Total
Management	9	1	10
Business administration	11	28	39
Production control	9	12	21
Production operators	177	584	761
Production maintenance	64	204	268
Production engineers	62	87	149
Process development	35	64	99
Automation/IT/CIM	18	32	50
Facilities		59	59
Technology, quality, product engineering	15	90	105
Technology development		102	102
Environmental protection		6	6
Logistics		31	31
TOTAL	400	1 300	1 700

(77) The jobs to be safeguarded are related to SC 300's existing pilot and development line. According to Germany, if the new project were not carried out, SC 300 would not continue its activities, the equipment would be sold, and the jobs would be lost. The jobs safeguarded are therefore directly associated with the project. The Commission understands that a large part of these jobs are in research and development work for ordinary product development.

(78) The capital-labour ratio is significantly lower than in two other projects in the semiconductor industry. According to Germany this is partly the result of the integration of engineering activities and jobs linked to research and development activities. When it initiated the procedure the Commission said it doubted whether all jobs in research and development could be taken into account, as they might not be directly associated with the project.

(79) In the comments it put forward following the initiation of the procedure, Germany explained the high number of jobs in research and development. Germany also confirmed that SC 300 was not receiving any State aid towards R&D. The Commission therefore concludes that all of the 1 700 direct jobs claimed by Germany can be taken into account in the calculation of the capital-labour factor. The capital-labour factor for an investment of EUR 1 106 million which would directly create or safeguard 1 700 jobs corresponds to EUR 650 588 per job, and can therefore be set at 0,8.

The regional impact factor (M)

(80) The regional impact factor reflects the economic benefit to the assisted area. The Commission considers that job creation can be taken as an indicator of the contribution of an investment project to regional development. Capital-intensive investments may indirectly create jobs in the assisted area or in an adjacent assisted area; 'job creation' here refers to jobs created directly by the project and jobs created by first-tier suppliers and customers.

(81) The notification stated that the jobs created indirectly as a result of the investment were estimated at 1 030, mainly among suppliers. They broke down as follows:

	Indirectly created jobs
Supply of 300 mm silicon wafers	600
Reclaiming of 300 mm test wafers	100
Extension of infrastructure (safety, cleaning, catering)	12
Supply of materials	40
Maintenance of equipment	90
Transport	30
Building infrastructure	50
TOTAL	1 030

This figure of 1 030 was revised in the most recent information supplied by Germany.

(82) A new plant was originally to be constructed by [...] to deliver 300 mm disks to SC 300, and this was expected to create 600 indirect jobs. When it initiated the procedure the Commission said it doubted whether this project would be carried out, and argued that no account could be taken of the 600 jobs which were allegedly to be created there.

(83) [...] currently has two production sites in Germany, in Burghausen and Freiberg. In Freiberg it runs production lines for 150 mm and 200 mm wafers. Germany states that Freiberg city council has recently agreed to the development plan for the extension of the plant. Germany has also submitted a letter of intent from [...]. Germany argues that there is no reason to doubt that the project will be carried out.

(84) In the letter of intent [...] it states that the SC 300 project will lead to the creation of 120 jobs. According to Germany, this figure is based on the assumption that 20 % of [...]'s output will be delivered to SC 300. SC 300 has given [...] express confirmation of this figure, but it should be regarded as a minimum. It is fair to assume

that [...] will deliver at least 50 % of its output to SC 300, which would mean that the number of jobs indirectly created would be 300. For legal reasons SC 300 was unable to give [...] an express undertaking to take this quantity, so that the figures in the letter of intent are too low. The Commission takes the view that for the assessment of the regional impact account can be taken of 120 jobs created by [...].

(85) Germany has also submitted a letter of intent from [...], a company which already supplies SC 300, and plans to set up a new plant for reclaiming test wafers. Reclaiming is a process for recycling wafers that are used at various points for monitoring the DRAM production process, and which can be reused. Recycling silicon wafers is worthwhile because they are very expensive. Most recycled wafers are used once again as test wafers. In the notification Germany said that 100 jobs would be created in the reclaiming of test wafers. According to the most recent information supplied, [...] would create 130 indirect jobs. Germany states that 95 of these are attributable to the SC 300 project. The Commission takes the view that for the assessment of the regional impact account can be taken of 95 indirect jobs created by [...].

(86) Germany originally indicated that 330 jobs would be created indirectly by the extension of the infrastructure, the supply of materials, transport and building maintenance. In letters of 29 January 2002, 27 February 2002 and 25 March 2002, Germany expressed the opinion that the number of jobs indirectly created in these areas would be 1 145, and submitted statements of intent from 53 firms which were customers of or suppliers to SC 300. Germany stated that 729 of these jobs had already been created, and another 416 were expected.

(87) The number of jobs to be created in infrastructure is 224. This comprises jobs related to safety, catering and cleaning. As mass production has already begun, and the majority of the employees are already at work, 150 of these jobs have already been created.

(88) The number of jobs expected to be created in the supply of materials is 174. This comprises the supply of gas, water, electricity and the chemicals needed for the production process, the associated preparatory processing and logistics. Of these 122 jobs have already been created.

(89) A further 438 jobs are expected to be created in equipment maintenance. Of these, 282 have already been created. Germany has stated that these jobs involve activities relating to the maintenance of the equipment installed in the factory. Servicing of this kind is necessary because the operation of semiconductor factories is characterised by a constant turnover in production plant and components.

(90) In the transport of raw materials and inputs, 21 jobs have already been indirectly created. Another 13 indirect jobs are to be created here.

(91) For the maintenance of the building infrastructure, Germany expects a total of 275 jobs indirectly created. These jobs arise out of regular work that has to be done to preserve the quality of the building infrastructure, including such things as IT services, operation and maintenance of electrical systems, ventilation and clean-room installations, and work related to the management of the building. Of these jobs 121 have already been created.

(92) The multisectoral framework provides that for the assessment of the regional impact of a project jobs created indirectly by first-tier suppliers and customers in response to the aided investment can be taken into account. In this context a 'job' means a permanent full-time job or its part-time equivalent.

(93) Germany has confirmed that the indirect jobs satisfy these tests. In explanation of the fact that a large proportion of the indirect jobs has already been created, even though the plant will be working at full capacity only at the beginning of 2003, Germany says that the building work was completed in April 2001. After that the initial phase or 'ramp up' began. At that stage the plant and machinery was installed in order to begin test and pilot production; this was done in early summer 2001. Mass production started in December 2001.

(94) On the basis of the information provided by Germany, the Commission takes the view that the calculation of jobs indirectly created is a fair one. The Commission concludes that the number of jobs indirectly created in response to the aided programme will be 1 360. As compared with the 1 700 jobs created or safeguarded directly, the degree of indirect job creation is therefore medium (between 50 % and 100 %), and the Commission accordingly sets the regional impact factor at 1,25.

Maximum allowable aid intensity

(95) For these reasons, the maximum allowable aid intensity is to be calculated as follows: 28 % × 0,75 × 0,8 × 1,25 = 21 % gross. The aid of EUR 218 718 million which Germany plans to grant to SC 300 towards its investments in Dresden, Saxony, equivalent to an aid intensity of 19,8 % gross, is therefore within the maximum allowable aid intensity calculated in accordance with the multisectoral framework on regional aid.

5.1.3. Ex post *monitoring*

(96) In view of the sensitive nature of the large mobile investments involved, it is essential that a mechanism exists which helps to ensure that the level of aid actually disbursed conforms with the Commission Decision.

(97) For each aided project approved by the Commission under the multisectoral framework, therefore, the Commission requires either that any aid contract between the relevant authority of the Member State and the aid recipient contains a reimbursement provision in the event of non-compliance with the contract, or that the final significant payment of the aid (e.g. 25 %) will be made only when the Commission, on the basis of information from the recipient provided by the Member State, is satisfied that execution of the project is in compliance with the Commission decision and within 60 working days has indicated its agreement or raised no objections to the final payment of the aid.

(98) The Commission notes that the proposed decision to grant aid to SC 300 contains a provision providing for reimbursement in the event that the recipient infringes the decision granting the aid.

(99) The Commission notes that the final significant payment of the aid (25 %) will be made only when SC 300 has shown the German authorities that the project has been carried out in conformity with the Commission Decision.

(100) The Commission also notes that the undertaking given by Germany concerning *ex post* monitoring complies with the obligations laid down in point 6 of the multisectoral framework. In particular, Germany has undertaken to supply a copy of the decision to grant the aid, an annual report on the project, and the other information and documents referred to in point 6.4 of the multisectoral framework.

5.2. **Article 87(3)(b) of the EC Treaty**

(101) In the event that the Commission does not authorise the proposed aid intensity of 19,8 %, Germany relies alternatively on Article 87(3)(b) of the EC Treaty, and argues that the establishment of the chip factory is a project of common European interest. However, as aid of the planned intensity of 19,8 % is within the maximum allowable aid intensity calculated in accordance with the multisectoral framework on regional aid, there is no need to consider the question of the common European interest any further here.

VI. **CONCLUSIONS**

(102) On these grounds the Commission concludes that the aid satisfies the tests of compatibility with the common market,

HAS ADOPTED THIS DECISION:

Article 1

The state aid amounting to EUR 218 717 884 which Germany plans to grant to Infineon Technologies SC 300 GmbH & Co. KG is compatible with the common market.

Article 2

This Decision is addressed to the Federal Republic of Germany.

Done at Brussels, 9 April 2002.

For the Commission

Mario MONTI

Member of the Commission