COMMISSION DECISION

of 26 July 2000

on the measure and State aid

implemented by Germany for the SICAN group and its project partners

(notified under document number C(2000) 2466)

(Only the German version is authentic)

(Text with EEA relevance)

(2001/46/EC)

THE COMMISSION OF THE EUROPEAN COMMUNITIES,

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

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

Having regard to Council Regulation (EC) No 659/1999 of 22 March 1999 laying down detailed rules for the application of Article 93 of the EC Treaty [1], and in particular Article 7 thereof,

Having regard to the Commission Decision of 11 March 1998 [2] to initiate the procedure laid down in Article 88(2) in respect of State aid C 20/98,

Having called on interested parties to submit their comments pursuant to those provisions [3],

Whereas:

I. PROCEDURE

(1) By letter dated 30 September 1996 a complaint was lodged with the Commission concerning a presumed EUR 150 million of State aid to SICAN, a firm located in Hannover, Lower Saxony.

(2) By letter dated 4 November 1996 the Commission asked Germany for information, which the Federal Government provided by letter dated 20 March 1997. In addition to this information, the Federal Government sent three separate messages informing the Commission that aid had been granted.

(3) The Federal Government provided additional information at a meeting on 2 December 1997 between representatives of Germany and of the Commission.

(4) By letter dated 26 May 1998 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 decision to initiate the procedure was published in the *Official Journal of the European Communities* [4]. The Commission invited interested parties to submit their comments on the aid, but received no such comments.

(6) Following the letter informing it of the initiation of the procedure, Germany sent the Commission additional information on the following dates: 21 July 1998, 14 September 1998, 24 November 1998, 11 January 1999, 17 February 1999, 3 March 1999, 27 April 1999, 15 June 1999 and 16 June 1999.

(7) Representatives of Germany and of the Commission held meetings on 30 September 1998 and 20 May 1999.

(8) On 2 February 2000 the Commission requested further information, which Germany provided by letter dated 15 March 2000.

II. DETAILED DESCRIPTION OF THE MEASURES AND OF THE PRESUMED AID

(9) On the basis of the information which the Commission had in its possession at the time of initiation of the procedure, the facts were as follows [5].

A. THE GROUP

(10) In 1989 the Government of the *Land* of Lower Saxony decided, within the framework of the European project 'JESSI', to set up, together with the Federal Government, SICAN as a strategic centre of competence for the key

[1] OJ L 83, 27.3.1999. p. 1.
[2] OJ C 307, 7.10.1998. p. 13.
[3] See footnote 2.
[4] See footnote 2.
[5] Detailed information is to be found in the Commission notice to the other Member States (initiation of the procedure in the SICAN case), see footnote 3.

technology of microelectronics and their utilisation in areas of industry and services in order to support and provide Lower Saxony enterprises with the necessary skills in the fields of telecommunications, consumer electronics, data technology, mechanical engineering and electrical engineering in applying microelectronics, by carrying out research projects together with or for them. Subsequently, the group was reorganised and acquired the structure that was to be its until 1998. While the enterprises of the SICAN group were organised as private limited companies (GmbHs), they were, according to the German authorities, set up to fulfil the public service task described above, and State influence is said to have been exercised through the supervisory organs of the parent company.

(11) The SICAN group was composed of a management holding company SICAN Beteiligungs-GmbH (hereinafter 'SIBEG'), two operating subsidiaries SICAN GmbH (hereinafter 'SICAN') and SICAN F&E-Betriebs-GmbH (hereinafter 'SIBET') and a company owning the assets of the group SICAN Anlagen Verwaltungs GmbH (hereinafter 'SIAG'). SIBEG was primarily owned by German and American companies. SICAN was a wholly owned subsidiary of SIBEG. The shares in SIBET were held by SIBEG (51 %) and Nord/LB and some German *Länder* (49 %). The only shareholder in SIAG was Nord/LB, as a result of which SIAG was indirectly state-owned.

(12) SICAN carried out more than 500 precompetitive development projects under contract to private customers between 1990 and 1998. SIBET is said to have been primarily non-profit oriented and not active in the market. It also carried out R & D projects but mostly at the stage of industrial research, in collaboration with partners from industry and research institutes. SIAG was non-profit oriented and owner of the assets of all SICAN companies (buildings, plant, software and other equipment). It placed these assets at the disposal of SICAN and SIBET and rendered services to these companies through its staff.

B. THE PRESUMED AID

(a) **Amounts granted**

(13) The procedure was initiated on the basis that more than EUR 100 million of public funding had been granted to the SICAN group between 1990 and 1998, the bulk of which was given to SIAG to finance the assets of the group and to cover operating costs.

(14) From 1990, the group received more than EUR 100 million of public funding from federal and *Land* sources. The lion's share went to SIAG to finance the assets of the group (EUR 57,5 million (DEM 113,74 million)) and for operating costs (EUR 5,92 million (DEM 11,71 million)). SIBET received EUR 31,76 million (DEM 62,79 million) for investment and R & D projects. SICAN received EUR 13,64 million (DEM 26,97 million) as start-up funding in 1990/1991 and has been self-supporting ever since.

(b) **Aid to project partners of SIBET and SICAN**

(15) As far as direct aid is concerned, EUR 5,11 million (DEM 10,11 million) was given to SIBET to be passed on as project funding to its collaboration partners (research institutes and industry). The maximum intensity for industrial partners was 50 %. The projects were claimed to qualify as industrial research. No direct project funding was given to partners of SICAN.

(16) As far as any indirect benefits to the partners of SIBET and SICAN are concerned, the German authorities claimed that SIBET and SICAN rendered their services, if not at market prices, then at least at full cost and hence did not pass on any indirect benefits to other enterprises.

(c) **Aid to SICAN and SIBET as such**

(17) As far as aid to SICAN and SIBET is concerned, beyond the direct funding mentioned in recital 15, advantages were transferred from SIAG to SICAN and SIBET through the billing of services rendered by SIAG. While SIAG billed SICAN and SIBET for the full cost of personnel services, the German authorities declared that the fees paid for the use of the assets owned by SIAG did not include depreciation costs or the EUR 5,92 million (DEM 11,71 million) that SIAG had received to cover operating costs.

(d) **Position of Germany**

(18) In Germany's view the aid granted for projects of SICAN and SIBET was in keeping with the Community framework for State aid for research and development [6] (R & D framework) since the average intensity never exceeded the intensities permissible under the framework.

(19) In addition, Germany had submitted three 'NN notifications' by letter dated 20 March 1997, which were described in greater detail in the notice on the initiation of the procedure.

[6] OJ C 45, 17.2.1996, p. 5.

(20) Finally, at the meeting on 4 December 1997, Germany's representatives asserted that aid to the project partners of the SICAN group could fall under a research and development scheme approved by the Commission, without specifying which aid scheme.

III. DECISION OF THE COMMISSION TO INITIATE THE PROCEDURE

(21) The Commission initiated the formal investigation procedure ([7]) because, on the basis of the information in its possession, it doubted whether the conditions of the R & D framework were fulfilled. In order to assess this, it would, *inter alia*, have been necessary to attribute the aid involved to specific research projects and then to determine the research stage and quantify the total amount of aid granted, so as to allow for a calculation and evaluation of the aid intensity involved and to demonstrate the necessity and the incentive effect of the aid. The German authorities had not provided the information that was needed in order to make such an assessment. In particular, they had not been able to demonstrate that the SICAN group applied a cost-accounting system which would have made it possible to guarantee that all services were rendered by the company to third parties at the market price or at full cost.

IV. COMMENTS FROM INTERESTED PARTIES

(22) The Commission received no comments from interested parties.

V. COMMENTS FROM GERMANY

(23) In response to the Commission's decision to initiate the Article 88(2) procedure, the German authorities provided extensive information which may be summarised as follows.

A. DIRECT AID TO PROJECT PARTNERS OF SIBET

(24) With regard to direct aid to project partners of SIBET, Germany emphasised that it was the aim of the industrial research projects carried out with collaboration partners to provide an incentive to apply microelectronics and thereby increase the level of skill of the collaboration partners through concrete research projects. Germany submitted lists showing that SIBET carried out 17 projects at the stage of industrial research. For these projects, collaboration partners received a total of DEM 9,73 million (EUR 4,97 million), of which DEM 2,7 million (EUR 1,38 million) went to public research institutes and DEM 7 million (EUR 3,58 million) to 15 industrial partners. Germany submitted project descriptions of those 15 projects as requested by the Commission and claimed that all projects had rightly been classified as industrial research. The listed individual amounts of aid granted to these 15 companies and the list of project costs incurred by them showed that the ceiling of 50% of project costs was not exceeded.

(25) Five project partners were not covered by the definition of small and medium-sized enterprise (SME) in accordance with the Community guidelines on State aid for small and medium-sized enterprises ([8]). In one case, the aid amount (below DEM 36 000 or EUR 18 406) was beneath the *de minimis* threshold as laid down in the Commission notice on the *de minimis* rule for State aid ([9]). For the other four companies, Germany provided information which was supposed to explain why the aid served as an incentive within the meaning of point 6 of the R & D framework for the company to carry out the research.

(26) The 15 projects are described below. Unless the name of the company is given, the recipient was an SME as defined by the Community.

(27) Project 1005:

A module for processing sensor data was developed which can perform a variety of functions and has very small physical dimensions. As a result, new technical functions can be carried out which considerably improve performance in mechanical engineering. This is therefore an industrial research project in which, through systematic exploration of the technologically innovative functions, the knowledge obtained can be used to improve existing mechanical engineering techniques considerably: for instance, in the machine tool industry, the module can be used to determine the degree of abrasion of diamond grinding discs and hence improve their utilisation (the discs are very expensive). In addition, unlike traditional methods, the electronics developed mean that various machine components and controls can be directly linked through the CAN bus.

Aid amounting to DEM 166 000 (EUR 84 874) was granted to the industrial cooperation partner. The aid intensity corresponded to 50% of the project costs incurred by the partner.

([7]) See footnote 2.

([8]) OJ C 213, 23.7.1996, p. 4.

([9]) OJ C 68, 6.3.1996, p. 9.

(28) Project 1006:

A new type of control system for CO_2 laser welding was developed which, by regulating the laser power, radically improves weld quality. This makes the whole welding process more efficient. Hitherto, optimum processing parameters had to be determined empirically through lengthy trials. The results of the project help directly to improve both the production process and the product quality. This is therefore an industrial research project in which the knowledge obtained by systematic exploration can be used to improve existing methods of CO_2 laser beam welding considerably. As a rule, a visual inspection of the processed work used to be necessary, but this can now be substantially reduced.

Aid amounting to DEM 117 000 (EUR 60 076) was granted to the industrial cooperation partner. The aid intensity corresponded to 50 % of the project costs incurred by the partner.

(29) Project 1008:

Radio microphones are used for the wireless transmission of high-grade audio signals in TV studios, televised theatre and concert halls. The transmission quality of existing analogue FM systems is of VHF-FM sound broadcasting standard, enhanced by a companding system. However, this will no longer be sufficient for future sound recording requirements (CD quality). In this industrial research project, a working model of a pioneering, completely digitised radio microphone system was developed, which provided the basis for the series production of a technically innovative product and hence meant that the knowledge acquired could be used to improve existing products considerably.

The developed transmission system has not been further developed to the stage of industrial use; rather, systematic knowledge and comprehensive, detailed knowledge has been accumulated by the partners, which are the basis for further developments.

Aid amounting to DEM 362 691 (EUR 185 440) was granted to Sennheiser, the industrial cooperation partner. The aid intensity corresponded to 50 % of the project costs incurred by the partner.

With regard to the incentive effect, Germany stated that the project was technically pioneering at that time. Sennheiser's development department could not have carried out such a project to such a high technical standard without the financial support and the collaboration with a highly qualified project partner. Since the cooperation with a young company with little experience in the market segments presented a risk for Sennheiser which was difficult to assess (the project was one of the first ones of the SIBET group), it would certainly not have been carried out without the aid. The risk can also be seen from the fact that the development took considerably longer than originally envisaged.

(30) Project 1009:

The aim here was to develop a sensor system for registering excessive ozone concentrations, which can be caused by air-disinfection or odour-control equipment. The system was derived from a semiconductor gas sensor unit consisting of a new, microstructured semiconductor gas sensor, a microcontroller circuit and a voltage control for an air-disinfection unit. Similar systems are not available on the market at present. The system for regulating the ozone concentration is currently used for long-term measurements in air-conditioning systems. It represents a substantial improvement on commercially available systems. Thus the knowledge obtained from this industrial research project can be used to improve measuring methods and systems considerably.

Aid amounting to DEM 142 500 (EUR 72 859) was granted to the industrial cooperation partner. The aid intensity corresponded to 50 % of the project costs incurred by the partner.

(31) Project 1010:

In the field of broadband communications technology, synchronous digital hierarchy (SDH) has become the worldwide communications standard. In particular, SDH technology makes visual communication (e.g. videoconferences) and the linking of local computer networks possible. The ATM process utilised means that a broadband ISDN can be introduced which all existing and future services will make available to network customers via optical fibre. Among the other things developed in this project were key components for an ATM system. The results of the research make considerable improvements in ATM applications and systems possible. For instance, the hardware and software components developed form the basis for innovative products in multimedia applications.

Aid amounting to DEM 1 822 398,92 (EUR 931 777) was granted to Ericsson Eurolab, the industrial cooperation partner. The aid intensity corresponded to 50 % of the project costs incurred by the partner.

With regard to the incentive effect Germany stated that, when the project started and the aid was approved, Ericsson Telekom GmbH had roughly 185 employees. The company had been set up as a joint venture between Ericsson and FUBA, which holds 49% of the shares.

Through the broadly planned research project, both SIBET and the project partner got involved in an area of microelectronics which was new to them (deep submicron). Within the project, the partners primarily gained expertise which indirectly influenced the further development activities of the project partners, while the developed products did not allow for direct industrial use, but only served to prove, in principle, the feasibility of the envisaged objectives.

The industrial partner would not have carried out the project to the stated technological standard and with a cost share of roughly DEM 3,6 million, had not the aid amounting to DEM 1,8 million served as a financial incentive. The project was too remote from the general day-to-day business of Ericsson Eurolab.

The project resulted in the creation of additional jobs for qualified engineers in the R & D field, in particular in order to develop further the knowledge gained through the project.

(32) Project 1013:

Companies wishing to establish themselves on the world weighing-technology market are forced to offer a wide range of products in order to provide optimum solutions for their many different customers. The aim of the project was, by modularising the electronics, to shorten development times and reduce logistical expenditure. By using multichip module technology and ASIC developments, it was possible to develop a new generation of weighing and measuring products. The knowledge acquired helps to improve existing systems and methods considerably and can be utilised for the development of new products in this market segment.

Aid amounting to DEM 679 677,01 (EUR 347 513) was granted to Sartorius, the industrial cooperation partner. The aid intensity corresponded to less than 50% of the project costs incurred by the partner (DEM 1,4 million).

With regard to the incentive effect Germany stated that, within the project, basic knowledge for new techniques (modularisation of electronics, use of multichip modules and ASIC-developments) for use in electronic scaling was developed. The objective of this project went beyond the competence of Sartorius in R & D and therefore did not form part of the normal day-to-day business of the R & D department. Without aid, the industrial partner would not have envisaged such a far-reaching R & D project in this field, since the effort and the risk would have been too high.

For the project, scientists at Sartorius put in roughly 10 000 hours, corresponding to seven man years.

(33) Project 1014:

The brisk spread of mobile radio is leading to rapid generational change in terminal equipment and network hardware (base stations, aerials and repeaters) and, at the same time, to greater coverage. Repeaters bridge areas in which no direct radio contact between base and receiver is possible. The aim of the project was to develop a low-cost repeater system using new set-up and linking techniques. As well as flexible design, opportunities to reduce the costs of the entire system in the development stage and the later production stage were to be investigated at all operational units. By using new technologies and development methods, it was possible to improve current levels of performance in these areas substantially. Knowledge of new methods of developing the necessary components was acquired from this industrial research project, and the results can be used for designing new systems.

Aid amounting to DEM 701 664,50 (EUR 358 755) was granted to the industrial cooperation partner. The aid intensity corresponded to 50% of the project costs incurred by the partner.

(34) Project 1015:

Under this project, a low-cost, low-maintenance measuring and control system was developed for continuously recording water quality in canals. By using new, smart signal-processing algorithms (fuzzy logic and artificial neuron networks), the problem of determining water quality was reduced to magnitudes which were simple to measure. With this approach, an innovative method of controlling reservoirs was devised, making possible substantial savings in building costs and avoiding the need for extensions. This means that the knowledge acquired from this industrial research project can be used to make considerable improvements in both existing reservoirs and those still under construction.

Aid amounting to DEM 411 615,10 (EUR 210 455) was granted to the industrial cooperation partner. The aid intensity corresponded to 50% of the project costs incurred by the partner.

(35) Project 1016:

In the automobile components supply industry, sensor systems with very specific qualities are needed which are not freely available on the market, or not at suitable prices. The trend today is clearly towards integrated sensor and system solutions which can be manufactured using semiconductor mass production technology. Suitable signal transmission techniques and control of sensor balancing are critical if the sensors are to be usable. In the project, a sensor signal amplifier for use in motor vehicles was developed which could be adapted to sensor components; its design was miniaturised to save space. With the module that was developed, any sensor component can be balanced quickly, reliably and cheaply using a resistance bridge. Sensors have previously been balanced using individual resistances with a narrow tolerance range, which are subsequently soldered manually into the electronics. By using the modules and processes developed in this project, a clear improvement in costs and quality could be achieved compared with traditional sensor-balancing methods. The knowledge acquired in this industrial research project is extremely useful for the optimisation of existing, and the development of new, procedures.

Aid amounting to DEM 666 739 (EUR 340 898) was granted to Wabco, the industrial cooperation partner. The aid intensity corresponded to 50% of the project costs incurred by the partner.

With regard to the incentive effect, Germany stated that the project served to develop a method which avoids the expensive calibration of sensors through use of intelligent circuits. The results of the research were to be converted into a functional ASIC model.

The technological standard of the project went far beyond the capabilities of Wabco's R & D department. It was the first time SIBET had entered into such a technically demanding commitment in the area of the development of integrated circuits for use in vehicles, for which a particularly high degree of reliability is expected due to the additional difficulties resulting from in-vehicle operation. The high technical risk is evident from the fact that the ASIC developed on the basis of the knowledge gained in this project has never been ready to go into production and has never been used in a modified or more highly developed form in any of the company's products and hence has not been put to any direct commercial use.

Against this background it is clear that, had not a considerable amount of aid been granted to the industrial project partner, the project would have been less ambitious and probably would never have been finished owing to the difficulties which kept arising during the course of the project. It follows directly from this that the knowledge and know-how gained during the project, important as it is to future developments, would not have become available until later, if at all.

The project absorbed considerable capacity within the electronics development department of the industrial partner, as is to be expected with skilling measures.

(36) Project 1019:

The testing of integrated circuits during development and before incorporation into the final product is becoming increasingly important as far as quality and costs are concerned. Rapid advances in microelectronics require the continual improvement and extension of tester hardware. The development of test heads which have to be continually adapted to the increasing frequencies of the components to be tested is an essential task if competitive microelectronic components are to be developed and tested in this field. In this project, a high-performance test head was developed using modern assembly technology and bonding methods. Also developed was an integrated circuit which can quadruple the performance of testers currently available on the market. The principal users of the test head can work with optimised testing procedures and so improve the efficiency of their development and production divisions. Development times can be shortened and reject rates reduced. Thus the knowledge acquired from the research process can be used to go some way towards optimising existing methods and systems. At the same time, the requirements associated with an industrial research project are fully satisfied.

Aid amounting to DEM 423 950 (EUR 216 762) was granted to the industrial cooperation partner. The aid intensity corresponded to 50% of the project costs incurred by the partner.

(37) Project 1023:

A module which ensures anti-trapping was developed for motor vehicle window-opening mechanisms, especially for windows which close automatically. In addition to the anti-trapping function, the control module developed makes it possible to determine the window position by measuring the motor power supply without an additional sensor system. This results in

lower unit cost and cheaper installation. Current designs cannot easily be fitted with an anti-trapping device that meets all requirements, because their controls (using relays and mechanical limit switches) are too simple or because they need an additional sensor system. Consequently, the product developed in this project is a substantial improvement on existing solutions. As befits an industrial research project, the experience and results acquired can be used to improve existing methods considerably and, at the same time, as a basis for a completely new technology in the field of motor vehicle window-operating mechanisms.

Aid amounting to DEM 549 495,82 (EUR 280 952) was granted to the industrial cooperation partner. The aid intensity corresponded to 50% of the project costs incurred by the partner.

(38) Project 1024:

Monitoring intracranial pressure in hydrocephalus patients is an essential aspect of neurosurgery, as regards both post-operative care and the treatment of accident victims. A pressure sensor with signal processing was developed to measure the intracranial pressure between the cerebral membrane and the skull bone. An implantable telemetric data and energy transmission device supplements the sensor system. In addition, at a further stage, the telemetric pressure measuring unit will be fitted with an actively adjustable valve to allow controlled run-off of the cerebral fluid into the abdominal cavity. The medical engineering product resulting from this project substantially improves and simplifies existing monitoring and measuring techniques as far as both doctor and patient are concerned. The knowledge acquired can be used to improve existing methods of measuring intracranial pressure considerably and, at the same time, to develop new medical engineering products; it justifies the classification as an industrial research project.

Aid amounting to DEM 477 003 (EUR 243 887) was granted to the industrial cooperation partner. The aid intensity corresponded to 50% of the project costs incurred by the partner.

(39) Project 1025:

With the progressive integration of microelectronic circuits and systems, multichip modules (MCMs) are becoming increasingly important. Multichip modules contain various electronic components (chips and sensors), very densely packed on a substrate. The comparatively high value of an MCM requires not only function control but also fault diagnosis so that a defect can be repaired. It is currently possible to test MCMs only with special solutions. The aim of the project is to make it possible to test MCMs using available testing systems and to develop special test methods so as to reduce testing costs. The availability of the software and mechanical components developed opens up a completely new product field. The industrial research project has resulted in hardware and software components which can supplement commercial testing systems and which make it economically viable to change to testing mixed analogue/digital systems. These can be used to improve existing processes considerably and, at the same time, as a basis for developing new processes and systems in this field. Accordingly, the requirements of an industrial research project are satisfied.

Aid amounting to DEM 236 683,26 (EUR 121 014) was granted to the industrial cooperation partner. The aid intensity corresponded to 50% of the project costs incurred by the partner.

(40) Project 1026:

An electronic unit was developed for controlling filling processes which use high-speed force flow packers. The fuzzy control technology makes it possible to regulate difficult processes. Where force flow packers are installed, the optimum adjustment of the filling process is particularly difficult using current technology. The solution devised in the project made it possible to fill sacks more quickly, even using different fillers. Quicker, automatic set-up is also possible when the force flow packer is initially installed, with the advantage that a sudden change in the characteristics of the filler can be recognised, the prescribed weight for filled sacks can be achieved more successfully and burst sacks can be avoided. The results will substantially improve the production process and existing automatic filling machines; among other things, this justifies the project's classification as an industrial research project.

Aid amounting to DEM 258 050 (EUR 131 938) was granted to the industrial cooperation partner. The aid intensity corresponded to 50% of the project costs incurred by the partner.

(41) Project 1027:

The processing of materials by laser will become increasingly important in many areas of manufacturing industry. Lasers allow very high processing quality and speeds. In this project an on-line error-detection system was developed for cutting and welding metal sheet. It speeds up processing time considerably and makes a decisive contribution to quality assurance. The error-detection system developed can be used to improve existing laser systems considerably and as an effective basis for the development of new processes in this field.

Aid amounting to DEM 35 261,31 (EUR 18 028) was granted to VW AG, the industrial cooperation partner. The aid intensity corresponded to 25% of the project costs incurred by the partner. The aid falls under the *de minimis* rule ([10]).

(42) Finally, Germany made clear that the aid to the partners had not, as asserted at the meeting on 4 December 1997, been granted on the basis of an approved R & D scheme of the *Land* of Lower Saxony.

B. INDIRECT AID TO CUSTOMERS OF SICAN AND SIBET

(43) One reason for the initiation of the procedure was that Germany had not substantiated its claim that, in so far as SICAN and SIBET pursued market activities, they charged their customers the full cost of their services, taking into account all aid granted to the group. In particular, Germany could not demonstrate that SICAN had a cost-accounting system enabling it to determine the relevant costs for each individual project. Doubts therefore remained as to whether indirect advantages, which could also be considered State aid, had been passed on to customers.

(44) Following the initiation of the procedure Germany confirmed that, apart from performing a public service task, SICAN and SIBET at the same time pursued market activities. SICAN carried out 793 precompetitive development projects under contract to companies, while SIBET carried out 233 such projects.

(45) On the basis of the attribution of costs to different categories, the study presented by Germany calculates the costs per productive hour for SICAN employees. When establishing the costs incurred by SICAN and SIBET, the depreciation for use of the equipment owned by SIAG is taken into account as an advantage received by SICAN and SIBET and is divided between the public service task and the market activities as well. On the basis of the examination of contracts with third parties, the study concludes that third parties were billed at least at full-cost prices.

C. CONSULTANCY SERVICES TO COMPANIES

(46) Consultancy services to companies were provided free of charge but in accordance with the *de minimis* rule.

D. AID TO THE SICAN GROUP ([11])

(47) Germany stated that the total amount of aid granted was DEM 206 million (EUR 105 million), of which SIBET received DEM 74,5 million (EUR 38 million), SIAG DEM 104 million (EUR 53 million) and SICAN, as already indicated, DEM 26,9 million (EUR 14 million).

(48) With regard to the SICAN group, Germany stated that the public funding of SICAN would not constitute State aid since the group, while partly carrying out market-oriented activities, would for the most part fulfil a task of general public interest.

(49) The task of general public interest can be described more specifically as follows: while the overall objective was to provide companies in the region with the skills needed in order to participate in the JESSI programme, it was proposed to train university graduates in microelectronics in order to enable them to participate in JESSI and similar programmes. Such training was provided as of 1993. It was directed primarily at postgraduate students, PhD students and students in microelectronics. During the training, trainees were employed by the SICAN group on a short-term basis, but were not under contract to a future employer. Trainees received practical project training, which was provided by the regular staff members of the SICAN group, mostly SICAN and SIBET.

(50) NIGAN e. V. was founded in 1993 specifically to recruit and train trainees (PhD students, students about to take their diplomas, student trainees) and to support the further education of engineers and scientists in microelectronics. While it was NIGAN that designed and organised the training programmes for postgraduate trainees, most of the training, which was done on the project, was carried out by SICAN and SIBET.

([10]) See footnote 9.

([11]) Including potential aid to SIBEG shareholders through the training of future employees of those shareholders.

(51) The overall number of trainees in the SICAN group was as follows:

	1993	1994	1995	1996	1997	1998	Total
No of trainees	209	185	215	360	314	156	1 439
Average period in months	5	5,5	6,3	5,3	5,2	6,3	
No of regular staff (posts)	114	103	152	247	205	312	

From 1993 until 1998, the total number of trainees in SICAN was 831, while 435 trainees received training in SIBET. For SICAN and SIBET alone, this gives a total number of 1 266 trainees. In addition, a smaller number of trainees (173) was allocated to other entities in the group.

(52) Since the cost-calculation system of SICAN at that time did not distinguish between costs incurred in the fulfilment of the public service task and costs incurred for market activities, Germany engaged a consultancy firm to carry out such a distinction retrospectively based on the documentation provided by the SICAN group. The costs of the respective activities were separately determined and compared with the public funding received. The years 1993, 1995 and 1998 were subjected to particularly close scrutiny. In April 1999 Germany submitted a study on the allocation of costs and the corresponding allocation of the State funding received.

(53) On the basis of the study's findings, Germany asserts that it can now state positively that all the public funding received by the SICAN group was employed in its entirety for funding the task of general common interest and thus did not constitute State aid within the meaning of Article 87(1) of the EC Treaty.

(54) For the staff members involved in the training activity, a certain percentage of their working hours was attributed to providing training. The working hours of trainees were regarded partly as productive work for the SICAN group and partly as training.

(55) When establishing the costs incurred by SICAN and SIBET, the depreciation for use of the equipment owned by SIAG was taken into account as a benefit received by SICAN and SIBET and was divided between the public service task and the market activities.

(56) Germany confirmed that, while fulfilling a task of general common interest, SICAN and SIBET pursued at the same time market activities. While for SIBET this market activity was less significant, for SICAN it soon accounted for the major part of its activities.

(57) In Germany's view, inasmuch as the SICAN group carried out a task of general interest, it has to be regarded as a public non-profit research and training establishment. In the case of the industrial research carried out by SIBET, the results were published and made available to companies on non-discriminatory terms, as can be seen from the publication lists and examples of publications submitted by Germany.

(58) Germany concludes that the SICAN group has, for its non-market activities, to be considered a public research institute and the public funding received cannot be classed as State aid within the meaning of Article 87(1) of the EC Treaty.

(59) At the Commission's request Germany provided information on any profits made by SIBET. The detailed calculations show that SIBET did not make any profits. The results of the group as a whole were balanced or slightly positive, except for 1995 and 1997 when the group made a loss.

(60) Germany submitted lists showing that SIBET carried out 17 projects at the industrial research stage at a total cost of DEM 43,2 million (EUR 22,09 million). In addition, it carried out 233 projects at the precompetitive development stage with a total contract value of DEM 13,3 million (EUR 6,80 million).

(61) Germany also submitted a list with titles and contract values of the 793 precompetitive development projects carried out by SICAN under contract to companies, the total contract value being DEM 147 million (EUR 75,16 million).

(62) With regard to the professional future of persons who had previously received training within the SICAN group, Germany presented the following information at the Commission's request.

(63) Of the 510 engineers newly employed by the SICAN group between 1991 and 1997, 195 had previously benefited from skilling measures under the supervision of NIGAN. In such cases, the initial salary of the employee reflected the professional experience which the former trainee had acquired during the training process. Employment did not always directly follow the training measure. Only in a few cases did the employee continue to work on the same project as that on which he had previously been trained.

(64) There has never been a contractual obligation for NIGAN trainees to work within the SICAN group for a certain period of time once the training was finished. Former trainees sought employment according to the options which the market offered. Therefore, the vast majority of them joined other companies without any regional limitation. As far as could be established by Germany, seven former trainees have joined shareholders of SIBEG.

E. PRIVATISATION OF THE GROUP

(65) In 1998 the public service task was ended and the group was completely privatised. Four private companies became the shareholders of the SIBEG holding company.

VI. **ASSESSMENT**

(66) As already indicated, the procedure was initiated because there was insufficient information on which to base a proper assessment as to whether the aid in question was compatible with the applicable State aid rules. The additional information obtained from Germany following the initiation of the procedure now leads to the following assessment.

A. DIRECT AID TO PROJECT PARTNERS OF SIBET

(67) With regard to aid which was channelled through the SICAN group to project partners of SIBET, the Commission concluded that the SICAN group was managing a scheme on behalf of the State which consisted in financing industrial research projects. The aid granted to the project partners of SIBET constitutes State aid in that it strengthens the position of the recipients in comparison with competitors. The aid thereby has a potential effect on trade between Member States. It falls under Article 87(1) of the EC Treaty.

(68) It is obvious that no derogation provided for in Article 87(2) and (3) other than Article 87(3)(c) under research and development can be applicable in the present case. The aid does not fall under Article 87(2). It is neither regional State aid, nor aid to promote the execution of an important project of common European interest or to remedy a serious disturbance in the economy of a Member State or to facilitate the development of certain economic activities (except research and development) or to promote culture and heritage conservation. In any case, the German Government never invoked these derogations.

(69) The aid might therefore qualify for exemption under Article 87(3)(c) of the EC Treaty if all the conditions of the Community framework for State aid for research and development ([12]) are met. On the basis of the information provided by Germany following the initiation of the procedure, the Commission concludes, however, that this is not the case for all the projects in question. With regard to the eligible costs of the projects, the Commission has no doubts that the conditions of the R & D framework are met. With regard to the research stage, the resulting maximum permissible aid intensity and the incentive effect, the following may be said about each individual project.

(70) Project 1005:

With regard to project 1005, the Commission concludes that a part of the project included the development of a data-treatment module which can be used industrially for mechanical engineering applications. The project therefore goes beyond precompetitive development ([13]).

([12]) See footnote 6.
([13]) See Annex I, third indent, of the abovementioned framework.

Consequently, the project does not fall within the stage of industrial research ([14]) and cannot even be regarded as precompetitive development. The granting of the aid was thus incompatible with the common market.

(71) Project 1006:

The German authorities have failed to demonstrate that the project is effectively industrial research. Indeed, in the project description it is stated that the results of the project contributed directly to the improvement of industrial processes and in particular of 'existing methods of CO_2 laser-beam welding'. The project therefore goes up to the point where it can be used industrially. The Commission finds therefore that the project goes beyond the stage of precompetitive development ([15]).

Consequently, the project does not fall within the stage of industrial research ([16]) and cannot even be regarded as precompetitive development. The granting of the aid was thus incompatible with the common market.

(72) Project 1008:

This project went up to the point where, according to the German authorities, 'a working model of a pioneering, completely digitised radio microphone system was developed, which provided the basis for the series production of a technologically innovative product'. It thus appears that the results of the project can be almost directly used for industrial production. The Commission regards the project as falling within the stage of precompetitive development. Accordingly, the aid intensity of 50 % was not justified ([17]).

Sennheiser is a leading producer of high-quality microphones. It started developing and marketing wireless microphones for TV and radio studios back in the 1950s ([18]). In a context of continuing changeover from analogue technologies to digital technologies ([19]), it is highly probable that Sennheiser would have embarked on a research project involving digitised radio microphone systems even without State aid. Against this background the Commission takes the view that the aid was not necessary as an incentive to the recipient to carry out the project ([20]). Nor can the partnership between Sennheiser and SIBET justify Sennheiser's not carrying out the research project unaided. Pursuant to point 6.5 of the R & D framework the Commission attributes particular importance to proof of an incentive effect when assessing aid for individual, close-to-the-market research projects undertaken by large firms, as is the case here.

The Commission therefore concludes that the incentive effect of the aid has not been suitably proven and the granting of the aid was accordingly incompatible with the common market.

(73) Project 1009:

The Commission concludes that the project falls within the definition of industrial research ([21]). Since the aid was granted to an SME, the Commission assumes, as it may pursuant to point 6.4 of the framework, that the aid provided a necessary incentive for the firm to undertake the research.

The granting of the aid was thus compatible with the common market.

(74) Project 1010:

The Commission concludes that the project falls within the definition of industrial research ([22]). The results of the project have been suitably published, and the incentive effect has been reasonably justified. The granting of the aid was thus compatible with the common market.

(75) Project 1013:

The Commission concludes that the project included the development of new scaling and weighing devices and therefore went beyond the stage of precompetitive development ([23]). The aid is thus incompatible with the common market.

([14]) See Annex I, second indent, of the abovementioned framework.
([15]) See Annex I, third indent, of the abovementioned framework.
([16]) See Annex I, second indent, of the abovementioned framework.
([17]) See point 5.5, second paragraph, of the abovementioned framework.
([18]) See http://www.sennheiser.com/Image/im1bX001.htm.
([19]) See www.infowin.org/ACTS/ANALYSYS/PRODUCTS/THEMATIC/MMB/02/digital.htm: 'Digital broadcasting is set to displace analogue broadcasting, for both radio and TV, in the coming years' (copyright 'ACTS Information Window' — 1997; published on the website of the Advanced Communications Technology and Services programme, known simply as ACTS, one of the specific programmes of the 'Fourth Framework Programme of European Community activities in the field of research and technology development and demonstration (1994 to 1998)').
([20]) See point 6.3 of the abovementioned framework.
([21]) See Annex I, second indent, of the abovementioned framework.
([22]) See Annex I, second indent, of the abovementioned framework.
([23]) See Annex I, third indent, of the abovementioned framework.

(76) Project 1014:

The Commission concludes that the project was not effectively industrial research. In its view, it included the development of a commercial product ('a low-cost repeater system') and therefore went beyond the stage of precompetitive development ([24]). The aid is thus incompatible with the common market.

(77) Project 1015:

The Commission concludes that the project was not effectively industrial research. In particular, it does not appear that new knowledge that could meaningfully be used for the development of new products, processes or services was acquired during the project. The aid intensity of 50% was therefore not justified ([25]).

However, the project encompasses the development of an innovative control system based on new and relatively complex signal-processing techniques. The Commission therefore concludes that the aid qualifies as precompetitive development ([26]).

Since the recipient was an SME, it would have been permissible to grant aid amounting to 35% of project costs (25% basic aid intensity ([27]) plus a 10 percentage points bonus for SMEs ([28])). Since the aid was granted to an SME, the Commission assumes, as it may pursuant to point 6.4 of the framework, that the aid provided a necessary incentive for the firm to undertake the research.

The aid amount exceeding an aid intensity of 35% is incompatible with the common market.

(78) Project 1016:

The Commission concludes that the project falls within the definition of industrial research ([29]). The incentive effect has been reasonably justified ([30]). The aid can therefore be considered compatible with the common market.

(79) Project 1019:

The Commission concludes that the project falls within the definition of industrial research ([31]). Since the aid was granted to an SME, the Commission assumes, as it may pursuant to point 6.4 of the framework, that the aid provided a necessary incentive for the firm to undertake the research. The granting of the aid can thus be considered compatible with the common market.

(80) Project 1023:

The Commission concludes that the project was not effectively industrial research: on the contrary, an anti-trapping module for motor vehicle window-opening mechanisms has been developed up to a stage which appears to be very close to market introduction. Consequently, the activity carried on under the project does not fall within the definition of R & D. The granting of the aid to the recipient was therefore incompatible with the common market.

(81) Project 1024:

The Commission concludes that the project falls within the definition of industrial research ([32]). Since the aid was granted to an SME, the Commission assumes, as it may pursuant to point 6.4 of the framework, that the aid provided a necessary incentive for the firm to undertake the research. The aid can thus be considered compatible with the common market.

(82) Project 1025:

The Commission concludes that the project falls within the definition of industrial research. Since the aid was granted to an SME, the Commission assumes, as it may pursuant to point 6.4 of the framework, that the aid provided a necessary incentive for the firm to undertake the research. The granting of the aid was thus compatible with the common market.

([24]) See Annex I, third indent, of the abovementioned framework.
([25]) See point 5.5 of the abovementioned framework.
([26]) See annex I, third indent, of the abovementioned framework.
([27]) See point 5.5 of the abovementioned framework.
([28]) See point 5.10.1 of the abovementioned framework.
([29]) See Annex I, second indent, of the abovementioned framework
([30]) See point 6 of the abovementioned framework.
([31]) See Annex I, second indent, of the abovementioned framework.
([32]) See Annex I, second indent, of the abovementioned framework.

(83) Project 1026:

The Commission concludes that the project was not effectively industrial research. In particular, it does not appear that new knowledge that could be useful for the development of new products, processes or services was acquired during the project. The aid intensity of 50% was therefore not justified ([33]).

However, the project encompasses the design of an innovative control system based on new and relatively complex techniques, such as 'fuzzy logic'. The Commission therefore concludes that the aid qualifies as precompetitive development ([34]).

Since the recipient was an SME, it would have been permissible to grant aid amounting to 35% of project costs (25% basic aid intensity ([35]) plus a 10 percentage points bonus for SMEs ([36])). Since the aid was granted to an SME, the Commission assumes, as it may pursuant to point 6.4 of the framework, that the aid provided a necessary incentive for the firm to undertake the research.

The aid amount exceeding 35% is incompatible with the common market.

(84) Project 1027:

The aid was granted in accordance with the *de minimis* rule and was therefore not subject to notification ([37]).

B. INDIRECT AID TO CUSTOMERS OF SICAN AND SIBET

(85) On the basis of the new information in its possession, the Commission concludes that no indirect aid was transferred to customers of SICAN or SIBET, but that these customers were billed at least at full-cost prices, whereby not only the direct funding but also all indirect advantages received through SIAG were taken into account in the underlying retrospective cost calculation.

C. CONSULTANCY SERVICES TO COMPANIES

(86) These services, provided in accordance with the *de minimis* rule, did not have to be notified.

D. AID TO THE SICAN GROUP ([38])

(87) While Germany had, from the outset, claimed that SICAN had been set up to fulfil a task of general public interest, this task was originally described as that of supporting and providing with skills Lower Saxony enterprises by carrying out research projects together with or for them. No information describing in concrete terms this task of general public interest was provided which would have explained more precisely which additional activities, apart from the cooperation as a research partner, had been triggered by that task and had been carried out with a view to fulfilling that task.

(88) On the basis of the detailed information subsequently provided, the Commission concludes that the activities of the SICAN group did in fact comprise what may be regarded in part as a task carried out in the general public interest.

(89) In particular as regards the training provided to a large number of short-term employees, the Commission considers that it would not have been in the commercial interest of a firm to train so many university graduates who stayed with the company for an average period of some six months only. Following the training period, it was intended that the trainees should leave SICAN again. Germany indicated that a number of former trainees, 195, worked within the SICAN group after finishing their training. While this may represent a considerable proportion of engineers newly employed by the SICAN group, the Commission maintains that the number of trainees was, in any case, far too high in comparison with the permanent SICAN personnel for the training to be considered a useful selection mechanism for future employees which would have provided an indirect advantage for the SICAN group ([39]).

(90) In any case, the starting salary of the employee reflected the professional experience which the former trainee had acquired in the training process and in most cases

([33]) See point 5.5 of the abovementioned framework.
([34]) See Annex I, third indent, of the abovementioned framework.
([35]) See point 5.5 of the abovementioned framework.
([36]) See point 5.10.1 of the abovementioned framework.
([37]) See Commission notice on the *de minimis* rule (footnote 10).
([38]) Including potential aid to SIBEG shareholders through the training of future employees of those shareholders.
([39]) See paragraph 51.

the employee did not continue to work on the project on which he had been trained. Since at the time of the training trainees were not yet under contract to microelectronics firms, the Commission furthermore concludes that the training programme was not carried out with the ultimate aim of finding suitable employees for specific firms, in particular those holding shares in SIBEG. This conclusion is borne out by the fact that it could only be established that seven former trainees joined shareholders of SIBEG at a later stage. From the fact that the vast majority of trainees joined employers without any regional limitation it can furthermore be concluded that the option to employ former trainees did not result in a particular benefit for companies in Lower Saxony.

(91) It can therefore be concluded that in principle the training and the organisational and administrative activities connected with it were carried out in the general public interest and did not form part of the economic activities of SICAN. As far as this activity is concerned, the SICAN group functioned like a training centre and did not pursue a market activity. It follows that, as far as public funding was used to finance the carrying-out of the task of general public interest, it does not constitute State aid.

(92) Since the SICAN group did not have a cost-accounting system distinguishing between costs incurred in fulfilling this task of general public interest and costs incurred for market activities, the additional question arises whether the necessary classification of tasks as falling into one or other category can now be done retrospectively. In the Commission's view, this cannot be ruled out per se. The method applied by the consultancy firm to make such a distinction retrospectively is acceptable. The detailed figures presented show that the costs incurred in carrying out the public service task did not exceed the funding received. The Commission therefore concludes that the funding of the activity carried out in the public interest does not constitute State aid and that the market activities of the SICAN group were not financed through State aid.

VII. **CONCLUSIONS**

(93) The Commission finds that Germany has implemented the aid in question in infringement of Article 88(3) of the Treaty,

HAS ADOPTED THIS DECISION:

Article 1

1. The aid granted to industrial project partners of SIBET constitutes State aid. This aid was granted unlawfully.

2. The aid which Germany granted to industrial project partners of SIBET is compatible with the common market as far as projects 1009, 1010, 1016, 1019, 1024 and 1025 are concerned.

3. For the following projects, the aid which Germany granted to industrial project partners of SIBET is incompatible with the common market:

Project 1005: aid amounting to DEM 166 000

Project 1006: aid amounting to DEM 117 500

Project 1008: aid amounting to DEM 362 691

Project 1013: aid amounting to DEM 679 677,01

Project 1014: aid amounting to DEM 701 664,50

Project 1023: aid amounting to DEM 549 495,82

For project 1015 the aid amount exceeding an aid intensity of 35 % (DEM 123 484,53) is incompatible with the common market.

For project 1026 the aid amount exceeding an aid intensity of 35 % (DEM 85 515) is incompatible with the common market.

Article 2

The measure which Germany implemented in favour of the SICAN group does not constitute State aid within the meaning of Article 87(1) of the EC Treaty.

Article 3

1. Germany shall take all necessary measures to recover from the recipients the aid referred to in Article 1(3) and unlawfully made available to them.

2. Recovery shall be effected without delay and in accordance with the procedures of national law provided that they allow the immediate and effective execution of the decision. The aid to be recovered shall include interest from the date on which it was at the disposal of the recipients until the date of its recovery. Interest shall be calculated on the basis of the reference rate used for calculating the grant-equivalent of regional aid.

Article 4

Germany shall inform the Commission, within two months of notification of this Decision, of the measures taken to comply with it.

Article 5

This Decision is addressed to the Federal Republic of Germany.

Done at Brussels, 26 July 2000.

For the Commission
Pedro SOLBES MIRA
Member of the Commission