EN

Case No COMP/M.2537 - PHILIPS / MARCONI MEDICAL SYSTEMS

Only the English text is available and authentic.

REGULATION (EEC) No 4064/89
MERGER PROCEDURE

Article 6(1)(b) NON-OPPOSITION
Date: 17/10/2001

Also available in the CELEX database
Document No 301M2537

Office for Official Publications of the European Communities
L-2985 Luxembourg

COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 17/10/2001

SG (2001) D/291821

In the published version of this decision, some information has been omitted pursuant to Article 17(2) of Council Regulation (EEC) No 4064/89 concerning non-disclosure of business secrets and other confidential information. The omissions are shown thus […]. Where possible the information omitted has been replaced by ranges of figures or a general description.

MERGER PROCEDURE
ARTICLE 6(1)(b) DECISION

PUBLIC VERSION

To the notifying parties

Dear Sir/Madam,

Subject: Case No COMP/M.2537 - Philips/Marconi Medical Systems
Notification of 14 September 2001 pursuant to Article 4 of Council Regulation No 4064/89

1. On 14 September 2001 the Commission received a notification of a proposed concentration pursuant to Article 4 of Council Regulation (EEC) No 4064/89[1] by which the Dutch company Koninklijke Philips Electronics N.V. ("Philips") proposes to acquire sole control of the radiology imaging equipment business (HCP[2]) and medical imaging equipment business (MIE[3]) of the British Marconi group, together called Marconi Medical Systems (MMS).

2. After examination of the notification, the Commission has concluded that the notified operation falls within the scope of Council Regulation No 4064/89 and does not raise serious doubts as to its compatibility with the common market and with the functioning of the EEA Agreement.

I. THE PARTIES

3. Philips is a multinational company active in the manufacture and sale of electronic products for domestic appliances and medical purposes. In the health care sector, Philips through its medical systems division PMS (Philips Medical Systems) manufactures, medical imaging equipment, in particular X-ray, computed tomography ("CT"), magnetic resonance ("MRI"), nuclear medicine ("NM") and ultrasound machines.

---

1 OJ L 395, 30.12.1989 p. 1; corrigendum OJ L 257 of 21.9.1990, p. 13; Regulation as last amended by Regulation (EC) No 1310/97 (OJ L 180, 9. 7. 1997, p. 1, corrigendum OJ L 40, 13.2.1998, p. 17).

2 Marconi Healthcare Products

3 Marconi Imaging Equipment

Rue de la Loi 200, B-1049 Bruxelles/Wetstraat 200, B-1049 Brussel - Belgium
Telephone: exchange 299.11.11
Telex: COMEU B 21877. Telegraphic address: COMEUR Brussels.

4. MMS is a wholly-owned subsidiary of Marconi plc comprising two main businesses: Marconi Imaging Equipment ("MIE") providing medical imaging systems and services for patient diagnosis and Marconi healthcare products ("HCP") engaged in the distribution of radiology imaging supplies outside the EEA.

II. THE OPERATION

5. Philips and Marconi entered into a Stock Purchasing Agreement on 3 July 2001 according to which Philips will acquire sole control over the whole of MMS' business by purchase of a majority of shares. As a result of the transaction Philips will thus exercise sole control over MMS. The proposed operation constitutes a concentration according to Article 3 (1) (b) of the Merger Regulation.

III. COMMUNITY DIMENSION

6. The companies fulfil the thresholds provided for in Article 1 (3) of the Merger Regulation. Their combined aggregate world-wide turnover is more than EUR 2,500 million (Philips: EUR 37,862 million; MMS: EUR 1,814 million). Their combined aggregate turnover in all Member States (except for Luxembourg) is more than EUR 100 million and their aggregate turnover in France, Germany and Italy is more then EUR 25 million each. Each of the companies concerned has an aggregate Community-wide turnover of more than EUR 100 million (Philips: EUR 14,699 million; MMS: EUR 210 million), but they do not achieve more than two-thirds of their aggregate Community-wide turnover within one and the same Member State. The notified operation therefore has a Community dimension. It does not constitute a co-operation case under the EEA Agreement pursuant to Article 57 of that Agreement.

IV. COMPATIBILITY WITH THE COMMON MARKET

A. Relevant product markets

7. The proposed operation leads to overlaps between the parties in CT, MRI and NM. All three machines are generally used for diagnostic imaging and supplied mainly to hospital customers. The market investigation confirmed the parties' view that CT, MRI and NM both from a supply and demand side perspective are in different product markets. Each of them has a quite distinct focus and applies different technologies which makes it difficult for the customers to replace one machine with the other. CT is mainly used to detect abnormalities of the anatomy using X-rays generating computer images by indicating differing densities of body tissue. MRI reflects disorders of the central nervous system (neurology) using magnets, radio frequency systems and computers to map the distribution of hydrogen molecules in the body. NM uses radio-pharmaceuticals injected to the patient's blood-stream or ingested by the patient. NM is mostly used for oncology and cardiac examinations. To start production and sale of any of these three machines from scratch would require important investments up to 20 million Euro and take the producer between 2-5 years.

CT systems

8. The parties maintain that the overall CT market can be sub-divided into a segment for multi-slice and a segment for single-slice machines. The market investigation concluded that the general market trend is moving towards the exploitation of the multi-slice technology, which was introduced for the first time approximately 2-3 years ago. Multi-slice is an advanced CT technology using multiple detectors, which has led to significantly faster scan times, image reconstruction and better image quality than single-slice technology.

9. Single-slice machines and multi-slice systems as a rule do not fulfil the same needs and requirements since the latter allow for a higher patient throughput (which is a decisive factor in the buying decision of hospitals). In addition, there are a number of diagnostic functions which can only be performed by multi-slice machines (e.g. cardiac and abdominal applications).

10. Certain suppliers contacted in the market investigation suggested as technology advances newer CT machines will replace those at the top end resulting in a price erosion for previously high-end machines. Multi-slice technology (being available at present only for high-end products) will move down to the mid-range segment driving single-slice machines out of the market. Indeed, many hospitals confirmed that they would not any longer consider buying single slice machines when replacements are due. This attitude is again reflected at the supply-side: PMS for example has recently discontinued production of certain low-range single-slice machines. The major suppliers have concentrated their R&D efforts on the development of multi-slice machines. These trends could mean that the entire CT segment may be composed of multi-slice machines in the medium to short run. However, for the purpose of the present decision the question whether multi and single slice machines form part of the same or of different product markets can be left open since the operation assessed under both alternatives does not lead to serious doubts with regard to the creation or strengthening of a dominant position.

MRI systems

11. The parties argue that there is imperfect substitution between open and closed MRI systems given that the two systems are equipped with magnets and coils of different technologies. Closed systems use cylindrical magnets that surround the patient who is placed in a gantry. Open systems use non-cylindrical magnets and are open vertically or horizontally. They allow more direct access to the patient and are popular among physicians and patients who are concerned about exposure to claustrophobic conditions.

12. Apart from Siemens and GE who offer both closed and open systems one can observe a certain specialisation of production: PMS is hardly present in open systems while MMS has a very minor presence in closed systems. Hitachi and Toshiba concentrate on open systems and are hardly present in closed systems. According to the parties, market entry by a manufacturer of one type of system to start production of the other would take at least three years, which would be the time needed to design, test and produce the quantities required.

13. Demand for open systems in Europe (as opposed to the US) is at present much lower than for closed systems (closed systems: 367 million Euro in 2000; open systems: 17 million

Euro). For the customers there are also differences in the application of these two systems given that open systems have limits with regard to field strength (they can be used up to 0.7 Tesla for the time being while closed system may use 3.0 Tesla or more). Another difference is that, in contrast to closed systems, only a very small number of open systems are presently sold for interventional use.

14. For the purposes of the present decision, however, the question whether closed and open MRI systems are in the same or in different product markets can be left open since the operation assessed with both alternatives does not lead to serious doubts with regard to the creation or strengthening of a dominant position.

NM systems

15. In NM the parties identify two relevant technologies: Gamma cameras and PET scanners. Gamma cameras provide views of the function of the organ imaged while tracing the path of a radio-pharmaceutical within the body. PET scanners produce computer images by means of detecting positron emission (and can detect lesions as small as 3 mm). While the former are primarily used for cardiac exams, the latter are mainly used for oncology exams (80%).

16. The market investigation showed that there is very limited demand-side substitution between Gamma cameras and PET scanners. Customers as a rule do not consider them as substitutable since they are used for completely different applications. Customers explained that the respective background support needed for the operation of these two systems is entirely different: while normal radio-pharmacy is sufficient for simple gamma cameras, PET requires a whole department including a cyclotron, specialised cyclotron personnel and trained radio-pharmacists. However, some suppliers still consider these products to be part of the same product market since they belong to the sector of diagnostic imaging based on isotopes.

17. For the purposes of the present decision, however, the question whether PET scanners and Gamma cameras are in the same or in different product markets can be left open since the operation assessed under both alternatives does not lead to serious doubts with regard to the creation or strengthening of a dominant position.

Distinction according to ranges/price categories[4]

18. CT products are supplied in different versions, basically as low, mid and high-end products (according to the price and performance of the product in question). This distinction, however, according to most suppliers does not reflect separate product markets since high-end CT products are replaced within relatively short time (2-3 years) by newer machines and thus moved down to the medium and low price categories (see also par. 10 above). For CT products, some customers answered that they would consider buying a higher range product if the difference in technology were fundamental.

4 In NM such as distinction would not be appropriate either since there are hardly any low and medium range products.

19. The parties further claim that no further distinction is appropriate between MRI systems of different magnetic field strengths (Tesla). In general, increased field strength means increased scope of application. Despite differences in the hardware components (e.g. magnet or gradient system) the parties maintain that all MRI systems can basically perform the same functions and images have the same diagnostic value. However, certain customers considered that the existing price differences between certain products (especially in MRI) would not for example allow them to substitute certain high-range for mid-range products.

Conclusion on the relevant product markets

20. In view of the above, the relevant product markets which will be assessed in the present decision are the markets for CT systems (both overall and separately for single and multi-slice machines), MRI systems (both overall and separately for closed and open systems of different field strengths) and for NM systems (both overall and separately for Gamma cameras and PET scanners).

B. Relevant geographic markets

Position of the parties

21. The parties view the geographic markets as being EEA-wide due to the absence of barriers to imports, the existence of a common legal framework (Medical Devices Directive[5]) and the fact that medical equipment is predominantly purchased through public tendering procedures, which are often subject to European procurement directives.

Results of the market investigation

22. The market investigation revealed a number of elements supporting the parties' view of the market as being EEA-wide considering that the major competitors are global companies with centralised production. Imports between EEA countries do not face any barriers since the sale of medical imaging equipment is subject to the Medical Devices Directive. Furthermore, transport costs do not play a significant role given the high product value, their share in the final product price is usually below 5%. Finally, suppliers offer the same or at least similar products all over the EEA.

23. On the demand side, however, there are also indications that markets for the products in question could still be national in that their distribution requires a local sales force and closeness to the customer (in particular with regard to after sales services). Customers in general attach great importance to a local presence of their suppliers. They do not only require them to have local sales offices and training facilities but also insist on support from maintenance engineers/teams to resolve problems quickly and promptly to reduce downtime. This makes is difficult for customers to bypass national distribution systems.

---

5 Council Directive 93/42/EEC of 14 June 1993 concerning medical devices; *Official Journal L 169 , 12/07/1993 P.1 -43*

Conclusion on the relevant geographic market

24. For the purposes of the present decision the final geographic market definition can be left open because, irrespectively of the market definition chosen, the result of the competitive assessment will not differ. The impact of the proposed operation will therefore be assessed both at an EEA-wide and national level.

C. Assessment

25. There are essentially three different kinds of competitors active on the EEA market for CT, MRI and NM: Firstly, there are the global players GE, Siemens and Philips, diversified groups, who are active in all EEA countries and across the globe and who offer a complete range of medical imaging equipment (that is, machines and systems used for diagnostic imaging purposes): These three players together account for approximately 80% of the diagnostic imaging market. Secondly, there are the mid-tier players who are supplying the full range but focus on regions outside the EEA such as MMS, Toshiba or Hitachi. In the EEA these players are often concentrating on the supply of certain products (e.g. Toshiba focuses on CT and cardiovascular imaging). Thirdly, there are the niche specialists who are active only in one or two specific markets like for example the Italian company Esaote (strong in ultrasound and niche markets of MRI), Bruker (originally a German enterprise) specialising in ultra-high-field MRI systems or Shimadzu, a Japanese manufacturer, who has only a limited presence in single slice CT in the EEA.

Market shares pre- and post merger

26. The combined market shares of the parties after the concentration in the EEA would be the following:

2000, source: notification[6]

	PMS	MMS	PMS/ MMS	GE	Siemens	Toshiba	others
All MRI	[30-35]	[0-5]	***[35-40]***	[20-25]	[35-40]	[0-5]	[0-5]
MRI open	[0-5]	[35-40]	***[35-40]***	[5-10]	[25-30]	[20-25]	[0-5]
MRI closed	[35-40]	[0-5]	***[35-40***	[20-25]	[35-40]	[0-5]	[0-5]
MRI 1.0T (closed)	[35-40]	[0-5]	***[35-40***	[15-20]	[40-45]	0	[0-5]
MRI 1.5 T (closed)	[35-40]	[0-5]	***[35-40***	[20-25]	[35-40]	[0-5]	
MRI <1.0T (closed)	[65-70]	[5-10]	***[75-80]***	[20-25]	0	[0-5]	
All CT	[5-10]	[15-20]	***[20-25]***	[25-30]	[30-35]	[10-15]	[0-5]
Single-slice	[15-20]	0	***[15-20]***	[35-40]	[10-15]	[25-30]	[0-5]

6 Figures were broadly confirmed through the market investigation.

Multi-slice	0	[20-25]	***[20-25]***	[25-30]	[30-35]	[15-20]	
Overall NM	[10-15]	[10-15]	***[20-25***	[25-30]	[30-35]		
NM: Gamma cameras	[10-15]	[10-15]	***[20-25***	[25-30]	[40-45]		
NM: PET scanners	[10-15]	0	***[10-15]***	[15-20]	[65-70]		

27. In CT systems, the parties after the concentration will remain the third largest player after market leader Siemens and GE. There are no overlaps in multi slice CTs where PMS is not present at all. The same is the case for single-slice machines, where MMS is not present. The parties will reinforce their position in Gamma cameras and on the overall NM market but remain third largest provider while Siemens is the leader controlling [40-45%] of the total market. There are also no overlaps in PET scanners, since MMS has no presence in this market.

28. The operation in overall MRI will close the gap between PMS/MMS and its next largest competitor Siemens, who will both have around [35-40%] after the operation. The parties will be leaders in open MRI but the market share increment arising from the operation is however minor ([0-5%]). In overall MRI the increment is more significant ([5-10%]). In closed MRI machines the increment will be very small since MMS has a very small presence. The same is basically true for the different segments according to field strengths except for MRI below 1.0 T, but this segment has been discontinued by MMS. In any event, the competitive behaviour of the parties given the presence of the two other strong players and of Toshiba will be sufficiently restrained even after the operation.

29. Taken at a national level the parties have combined market shares exceeding 35% in the following products/countries:

2000, source: notification[7]

	All CT	CT single slice	All MRI	MRI closed	NM gamma cameras[8]
Italy	[35-40]	[40-45]	[50-55]	[50-55]	[35-40]
Austria			[50-55]	[50-55]	
Greece			[50-55]	[50-55]	
Belgium			[50-55]		[50-55]
Denmark			[35-40]		[50-55]
UK					[45-50]
NL			[65-70]		
S			[60-65]		

7 Figures were broadly confirmed through the market investigation

8 Figures for the overall NM market are not significantly different.

30. Philips/Marconi will obtain or strengthen a leading position in all the countries mentioned above. However, there are still two or three other strong players left in the market (like Siemens, GE, Toshiba), who have the possibility to compete on an equal footing. Furthermore, in small markets like for example Austria, Belgium or Denmark, the high market shares of the parties result from the sale of one or two machines per year to one or two large customers. In case one of these customers decided to switch the parties' market position would be considerably weaker.

The operation does not seem to remove the closest competitor

31. After the operation MMS will disappear as an independent provider of CT, MRI and NM systems. According to a study submitted by the parties[9], however, the operation will not remove the closest substitutes for these three systems. The study is based on tender win and loss data covering the period between 1/1/2000 and year-to-date 2001 and concludes that Philips' closest rivals for most CT, MRI and NM segments are Siemens and GE.

32. For CT the study showed that that for […]% of all projects won by PMS, Siemens was second placed whereas for […]% of projects won by PMS, GE was ranked second. In only […]% of all cases MMS was second placed. On the other hand the study revealed that […]% of all projects lost by PMS since 2000 were won by Siemens, […]% by GE and […]% by MMS. This data suggests that Siemens and GE are PMS' closest competitors in CT in Europe.

33. For MRI the study showed that for […]% of all projects won by PMS, Siemens was second placed whereas for […]% of projects won by PMS, GE was ranked second. In only […]% of all cases MMS was second placed. On the other hand the study revealed that […]% of all projects lost by PMS since 2000 were won by Siemens, […]% by GE and […]% by MMS. This data suggests that Siemens and GE are PMS' closest competitors in MRI in Europe.

34. For NM the study[10] showed that […]% of all projects lost by PMS since 2000 were won by Siemens, […]% by GE and […]% by MMS. This data suggests that Siemens and GE are PMS' closest competitors in NM in Europe.

Customers face limited switching costs

35. The market investigation showed that there are no significant hurdles for customers to switch between different suppliers. The main costs involved in switching relate to the training and instruction of the physicians who operate the machines and, in some cases (for instance if a more modern machine is acquired), construction of a new hardware base at the hospital. The costs associated with the training of the physicians are in most cases assumed by the suppliers themselves and are included in the product price. The costs of

---

9 The study was carried out by NERA (National Economic Research Associates) and covers the period from 1 January 2000 to Year-to-date 2001. The following data were used: Date of bid/PMS product in bid/Value of PMS bid and price/Won or lost/Date of win or loss decision/Who came second with which product and price/Who won with what product and price.

10 There was only a very limited number of win data available for NM in Europe. Moreover, the number of projects in NM is considerably smaller than in CT and MRI.

the installation (usually carried out by building companies) of new imaging systems are modest compared to the actual purchase price.

36. The market investigation further revealed that the costs associated with the replacement of a system or the purchase of an additional system are largely similar, regardless of whether a customer purchases the new machine from the supplier of his current system or from a different supplier. A large majority of customers confirmed that they face identical costs whether they switch to a new machine from their incumbent or to a machine from a competing supplier.

37. The parties submit that suppliers lose on average almost half of their previous installed base customers when the latter seek new equipment. The NERA study (see above) concludes that customers in fact do often switch supplier (in CT win/loss data suggest that customers switch in […]% of all deals, in MRI they switch in over […]% of all cases). The study concludes that installed base effects, that is, advantages of the incumbent supplier, do not in general have a decisive impact on the customer's purchasing decision.

38. According to the study, in only […]% of all deals which took place in CT between 2000 and 2001 (involving both replacement *and* new demand) customers replaced the installed machines with a new machine of the same supplier. The study concluded that installed base effects are stronger for Siemens and GE ([…]% and […]% respectively) than for PMS and MMS ([…]% and […]% respectively). Taking replacement deals only, […]% of PMS products were replaced with new PMS models, whilst the rest was replaced by competitors' products.

39. In MRI the data submitted in the study show that in only […]% of all deals which took place in MRI between 2000 and 2001 (involving both replacement and new demand) the customers replaced the installed machine with a new machine of the same supplier. The installed base effects regarding replacements are strongest for PMS ([…]%), followed by Siemens ([…]%) and GE ([…]%). Compared to CT, however, new demand (that is, not replacement deals but additional acquisitions) is much stronger in MRI: new deals account for [a majority]% of all transactions between 2000 and 2001.

40. The market investigation confirmed that most customers usually do not meet any incentives to stay with their incumbent supplier. They are normally well-informed with regard to prices and technological innovations and usually contact a number of different suppliers comparing their offers. The investigation confirmed that suppliers that originally supplied the installed equipment are not in a significantly better position than their competitors.

The market is a tendering market and driven by technological innovation

41. CT, MRI and NM products are in most cases purchased by way of national or European tendering procedures. Customers reported that on average there were four suppliers competing for contracts relating to these products. Furthermore, some customers confirmed that tight reimbursement regimes and hospital budgets have a disciplinary effect on product prices.

42. The investigation also showed that product price is not the only competition criteria, but that reliability, quality and high level of customer service are more crucial elements for

the customer's choice. A very essential competition criteria, if not the most important one, is the ability of a supplier to offer highly innovative solutions for CT, MRI and NM products. The investigation concluded that for the products in question technological innovation is a crucial parameter of competition. Customers put great emphasis on the technological performance of their suppliers' machines when deciding over new acquisitions. This situation has an important influence on competition. Customers reported that diagnostic imaging machines of today will be much more advanced in performance and scope of application than the machines of an earlier generation but could be purchased for a similar price, that is, the customers consider that they get more value for their money. One customer for example explained that the spiral version in CT years ago was only available on top-range systems while it now can be installed even on low cost systems; similarly, in MRI in the past years anigo exams could be performed only with top-range systems, while now it is possible to receive anigo images with relatively low priced machines.

43. These conclusions seem to support the parties' view that machines which are today at the high-end of the spectrum will in short term be moved down to lower segments as price erosion takes place with the introduction of new technologies. The parties submit that because of the high significance of technological innovation market positions of the parties and their competitors are not in general stable but tend to fluctuate over time. This conclusion was supported by the market investigation since suppliers explained that for example in CT the introduction of multi-slice machines redefined high-end products around 2-3 years ago. Market shares of the suppliers who were able to offer this new technology showed an upward trend. The investigation also confirmed that PMS is lagging behind its main competitors in the development of multi-slice CT machines.

The operation will not create or strengthen collective dominance

44. After the operation, the three leading players Siemens, GE and PMS together will have almost 100% of the overall MRI and NM market and around 85% of the overall CT market in the EEA. The situation is similar in a number of national markets mentioned in the table in par. 31. In CT, Toshiba has a strong presence and can be regarded as a viable alternative to the three leading players.

45. The general market characteristics in diagnostic medical imaging products, in particular the strong impact of technological innovation in growth markets, fluctuating market shares of the three leading firms, a downward trend in product prices and the increasing cost containment of hospitals across the EEA do not seem to be conducive to collective dominance or co-ordinated effects between the big three (GE, Siemens, Philips).

46. Moreover, it seems that customers tend to switch supplier quite regularly without facing significant switching hurdles. Most customers such as public hospitals and university clinics are rather sophisticated buyers with non-negligible buyer power. Since in many cases hospitals face increasing budget-restraints they require their suppliers to offer improved diagnostic imaging equipment for the same price. If prices were to be increased by the global players or quality of service were to deteriorate, these customers would in many cases consider mid-tier players like Toshiba. There are also two other global players active in the EEA, Hitachi[11] and Shimadzu, which have currently a very small

[11] Hitachi for instance was the company who first introduced the open type MRI.

presence in Europe concentrating on niche markets. It can be expected that these players would consider expanding their presence in CT, MRI or NM if prices were to be raised by the three leading firms. As already explained above, technological innovation has an important impact on market positions and market shares of the leading players may erode as new innovative technologies are introduced to the market.

IV. CONCLUSION

47. For the above reasons, the Commission has decided not to oppose the notified operation and to declare it compatible with the common market and with the EEA Agreement. This decision is adopted in application of Article 6(1)(b) of Council Regulation (EEC) No 4064/89.

For the Commission

Romano PRODI
President