

EN

***Case No COMP/M.4300 -
PHILIPS /
INTERMAGNETICS***

Only the English text is available and authentic.

**REGULATION (EC) No 139/2004
MERGER PROCEDURE**

Article 6(1)(b) NON-OPPOSITION
Date: 07/11/2006

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COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 07.11.2006

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In the published version of this decision, some information has been omitted pursuant to Article 17(2) of Council Regulation (EC) No 139/2004 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 Where possible the information omitted has been replaced by ranges of figures or a general description.

PUBLIC VERSION

MERGER PROCEDURE ARTICLE
6(1)(b)

To the notifying party

Dear Sir/Madam,

**Subject: Case No COMP/M.4300 - Philips/ Intermagnetics
Notification of 29/09/2006 pursuant to Article 4 of Council Regulation
No 139/2004¹**

I. INTRODUCTION

1. On September 29, 2006, the Commission received a notification of a proposed concentration pursuant to Article 4 and following a referral pursuant to Article 4(5) of Council Regulation (EC) No 139/2004 by which the Dutch company Koninklijke Philips Electronics N.V. (hereinafter referred to as “Philips” or “the notifying party”) acquires sole control of the US-based company Intermagnetics General Corporation (hereinafter referred to as “Intermagnetics”).

II. THE PARTIES

2. **Philips** markets a wide range of electronic products, including lighting products, domestic appliances, consumer electronics, semiconductors, and medical systems.
3. **Intermagnetics** is active in three main businesses: magnets used in magnetic resonance imaging; medical devices including radio-frequency coils, patient monitors, computer-

¹ OJ L 24, 29.1.2004 p. 1.

aided detection systems, functional magnetic resonance imaging; research into superconducting applications for energy technology.

III. THE CONCENTRATION

4. The operation consists of the acquisition of sole control by Philips of the whole of Intermagnetics, by way of purchase of all shares. It would therefore constitute a concentration within the meaning of Article 3(1)(b) of the Merger Regulation.

IV. COMMUNITY DIMENSION

5. The concentration does not have a Community dimension under Article 1 of the Merger Regulation. Intermagnetics, one of the two undertakings concerned, has a Community-wide turnover that is less than EUR 250 million. Furthermore, Intermagnetics' aggregate turnover does not reach EUR 25 million in three or more member states.
6. The Commission acquired jurisdiction to review the notified operation by means of referral under Article 4 (5) of the Merger Regulation. On August 1, 2006, the Commission received the referral request by means of a reasoned submission pursuant to Article 4(5) of the Merger Regulation. No Member State competent to examine the concentration under its national competition law (namely Austria, Estonia, Germany, Greece, Italy, Malta, Netherlands, Portugal, Slovakia and Spain) has expressed disagreement as regards the referral request. Consequently, the transaction is deemed to have a Community dimension pursuant to Article 4 (5) of the Merger Regulation.

V. COMPETITIVE ASSESSMENT

A. MARKET DEFINITION

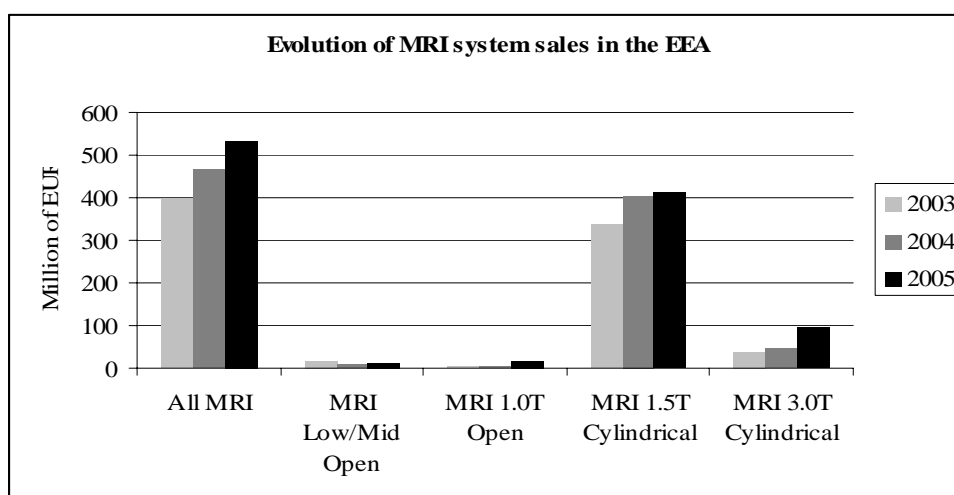
7. Philips supplies to hospitals and universities magnetic resonance imaging ("MRI") devices while Intermagnetics is not active in the production of MRI systems. There is thus no horizontal overlap on the MRI markets as such. Intermagnetics is also a producer of accessories to MRI equipment (functional MRI devices ("fMRI"), computer-aided Detection ("CAD") devices for MRI, and general ward patient monitors ("GW PM") for MRI) that are sold to hospitals, and for which the parties' activities overlap to a limited extent.
8. In addition, Intermagnetics is a supplier of some components of MRI systems (magnets and radio frequency ("RF") coils). The merger thus gives rise to a vertical relationship.

1.1. Supply of MRI systems to end-users

9. MRI systems use magnets, radio frequency systems and computers to map the distribution of hydrogen molecules in the human body to produce three-dimensional computer-generated images of body organs.
10. MRI systems are based on nuclear magnetic resonance principles, according to which atoms of hydrogen submitted to a magnetic field resonate (that is, their level of energy changes when submitted to a magnetic field that oscillates at a very specific frequency).

MRI relies on the creation of two magnetic fields: a longitudinal static field created by a magnet², and an oscillating magnetic field³ generated by radio-frequency coils⁴. The notifying party explained that 95% of all MRI systems are sold to radiology departments of hospitals or radiology clinics.

11. There are several categories of MRI systems depending on the magnets: (i) cylindrical and open MRI systems and (ii) MRI systems with magnetic field of varying strength (for example, the typical intensity of a magnetic field for a cylindrical system ranges from 0.5T⁵ to 4T (sales of 7T MRI systems are still uncommon)⁶. The previous decision⁷ from the Commission dealing with MRI systems left open the exact scope of the relevant product markets.
12. As can be seen from the following graph, most sales of MRI systems concern 1.5T cylindrical systems (77% of all sales in value in 2005), while sales of 3T cylindrical systems are rising (18% of all sales in value in 2005)⁸:



13. Indeed, regarding the existence of systems with different magnetic field strengths, the notifying party explained that demand for lower field strength MRI systems has declined dramatically over the last five years. While all MRI systems are to a large extent capable of performing the same examinations (that is, scanning all parts of the anatomy), MRI systems with higher field strength allowing for better images and faster patient servicing are becoming more popular. As for open systems, they do not reach the same levels of

² This field is complemented by a gradient system that makes the intensity of the field vary in the space.

³ This field is orthogonal to the longitudinal field.

⁴ For a primer on the technologies involved in MRI systems, see for example: L.-O. Labeis & al., *Maîtriser la Résonance Magnétique Nucléaire en trois jours*, Bibliothèque des Ponts et Chaussées, Champs-Sur-Marne, 2001.

⁵ T stands for Tesla. The Tesla is the SI (Système International d'Unités) derived unit of magnetic flux intensity (or magnetic induction) to define the intensity of a magnetic field.

⁶ In addition, a minority of MRI systems are so-called dedicated systems for neuro, cardio and vascular imaging and include specific equipment and software.

⁷ Case COMP/M.2537 Philips/Marconi Medical Systems.

⁸ Graph based on estimates by the notifying party, annex 3 of the Form CO.

intensity as closed magnets, which means that closed magnets can achieve higher diagnostic performance. However, open magnets present the advantage to be adequate for obese or claustrophobic patients. The notifying party submits that the demand for open systems in Europe is lower than in other parts of the world, such as the United States.

14. As regards prices and costs, they can vary substantially from a system to another. The following table presents average prices implied by the market size (in volume and in value) estimates provided by the notifying party for the year 2005:

	Value (million EUR)	Volume	Price (million EUR)
All MRI	533	522	1.02
MRI Low/Mid Open	14	57	0.25
MRI 1.0T Open	18	15	1.21
MRI 1.5T Cylindrical	414	409	1.01
MRI 3.0T Cylindrical	94	51	1.84

The price of 3T cylindrical systems (nearly EUR 2 million) is therefore approximately twice as high as the price of 1.5T cylindrical systems (around EUR 1 million). Costs of production are very different from a system to another. For example, regarding the products manufactured by Philips, the production cost of a 1.5T cylindrical system amounts to EUR [<500,000] (including EUR [<200,000] cost of magnet⁹) where it reaches EUR [>750,000] (including EUR [>350,000] cost of magnet) for a 3T system.

15. For the purposes of the present transaction, however, the precise market definition of the relevant product markets in the field of MRI systems (open/closed and by field strength) can be left open as it does not alter the competitive assessment.
16. As regards the relevant geographic markets, the notifying party considers that the relevant geographic market for MRI systems is at least EEA-wide as suppliers of MRI systems generally supply the entire EEA area from only one production facility and the transport cost is negligible as a proportion of the sales price.
17. The previous decision of the Commission dealing with MRI systems found out that, on the demand-side, there were indications that the market(s) for the supply of MRI system may be national in scope, due to the existence of national distribution networks and the need for technical support and maintenance services. However, the decision ultimately left open the question.
18. The role of distribution, maintenance, and technical support is suggested by the differences in market shares of the main MRI system manufacturers across EEA countries: for example, Philips is very strong in the Netherlands ([50-60]% market share for all MRI systems) and in Italy ([45-55]%), but has more modest positions in Spain ([20-30]%) and in France ([25-35]%).

⁹ Other costs are: cost of production labour, production overhead, royalties, distribution cost. See p.5 of the notifying party's submission dated October 26, 2006. These costs estimates are exclusive of RF coils. On average, according to the submission of the notifying party dated October 27, EUR [<100,000] have to be added to the overall cost to take into account the cost of RF coils.

19. However, even if some customers confirmed the importance of maintenance and technical support in their response to the Commission's request for information ("*after-sales service play a very important role in the acquisition of a system. Systems are almost always bought including maintenance contracts and technical support.*"¹⁰), the market investigation provided elements that, by contrast, suggest that the markets for (all type of) MRI systems could be at least EEA-wide. For example, the cost of setting a distribution network in a given country would not be a significant barrier to entry. Also there would be no significant competition differences among EEA countries as, "*within the EEA, the Medical Devices Directive has introduced a common legal framework for a wide range of medical devices and brought about a high level of harmonization and commonality across the EEA.*"¹¹ In any event, the exact geographic span of the product markets for MRI systems can be left open as it does not alter the competitive assessment.

1.2. Devices for MRI systems

1.3. - Market for the supply of MRI compatible GW PM to end-users

20. Patient monitors ("PM") are machines that take measurements of physiological parameters and are used to monitor the vital sign parameters of a patient (temperature, blood pressure, etc.). Sensors attached to the patient detect different parameters which are converted to electric signals displayed on a screen. PM are used in a broad range of medical interventions and are used together with other medical equipments.

21. In accordance with the Commission's conclusion in a previous case¹², the notifying party made the distinction among the following types of PM: (i) Perioperative monitors ("PO"), used in the operating rooms, (ii) Critical Care monitors ("CC"), used in areas where a high level of patient care is required and (iii) General Ward ("GW"), which are less complex and only measure basic parameters. The notifying party submits that each of these product areas constitutes a relevant product market.

22. Within the product market for GW PM, there are specific PM which can be used in an MRI environment. A PM for MRI must withstand the high magnetic field and the RF signals generated by the MRI systems. The notifying party does not consider that "MRI compatible GW PM" constitute a separate relevant product market as such GW PM perform the same functions as other GW PM and there would be no barrier to develop such MRI compatible GW PM.

23. The market investigation has to the contrary revealed that MRI-compatible monitoring demands a completely different design from regular GW PM, and that the main difficulty to start manufacturing MRI compatible monitors is the acquisition of the necessary know how: "*MRI compatible monitor is more difficult and costly to develop since manufacturer must take special MRI specific needs into account in each phase of development and manufacturing. MRI monitors also need to be tested and the design*

¹⁰ Article 11 request from the Commission to the University Hospital KULeuven, question 13, non-confidential version. See also response from Siemens, non-confidential version.

¹¹ Article 11 request from the Commission to the General Electric Company, question 13, non-confidential version. See also response from Siemens, non-confidential version.

¹² Case COMP/M.3083 GE / Instrumentarium.

validated with different magnets.”¹³ Accordingly, the cost of production of MRI compatible GW PM is much higher (up to EUR [>10,000]) than that of regular GW PM (up to EUR [<10,000])¹⁴. However, for the present case, it is not necessary to decide on the exact product market definition as it does not change the competitive assessment.

24. As regards the relevant geographic market, the notifying party considers that the markets for patient monitors (including MRI-compatible GW PM) are at least EEA-wide. However, in M.3083 GE/Instrumentarium, the Commission concluded that the geographic markets for CC and PO patient monitors are national. In any event, the exact definition of the relevant geographic market can be left open for the purposes of this case as it does not change the competitive assessment.

1.4. - Market for the supply of fMRI to end-users

25. To collect information on the brain functioning, an MRI scan is performed on the patient brains. Functional MRI (or fMRI) is a specific technique to analyze the brain images and the brain functioning. During an MRI scan, an fMRI subsystem may deliver certain stimuli (visual or auditory input for instance) to the brain. The MRI data obtained may then be visualised in different colours to analyze which parts of the brain are active at each moment. The mapping of the functional information of the brain by use of an MRI scanner is called fMRI. This technique is still experimental and demand is currently very volatile. The supply of fMRI to end-users could however be a relevant product market

26. As regards the relevant geographic market, the notifying party considers that the market for the supply of fMRI to end-users is world-wide. It is however not necessary to decide the geographic dimension of this market as it does not change the competitive assessment.

1.5. - Market for the supply of CAD for MRI systems to end-users

27. CAD is a package of software run on the computer workstation of an imaging device intended to help the radiologist with his diagnosis. CAD is used for various imaging modalities. An MRI system is already equipped with standard software to process the images and a CAD system can be added to provide more sophisticated imaging processing tools. According to the notifying party, the only commercial use of CAD systems in the MRI environment is currently for breast imaging and biopsy. Prices of CAD for MRI systems range from EUR [<50,000] to EUR [<100,000] depending on the features and the options of the features. CAD for MRI systems is a relatively new technology (with sales virtually limited to the US) but could be a relevant product market.

28. As regards the relevant geographic market, the notifying party considers that the market for the supply of CAD for MRI systems to end-users is world-wide. It is however not necessary to decide the geographic dimension of this market as it does not change the competitive assessment.

¹³ Article 11 request from the Commission to Spacelabs Healthcare, question 10, non-confidential version.

¹⁴ Estimates of the notifying party.

OEM markets

29. The magnet and the RF coils of an MRI system are its key components¹⁵. As Intermagnetics is a major supplier of magnets and RF coils, the merger therefore gives rise to a vertical link with respect to these two products and the supply of MRI systems.

1.6. - Market for the supply of magnets to OEMs

30. According to the notifying party, a bore magnet accounts for [<50] % of the total cost of an MRI system and produces the static background field for imaging.¹⁶ Just as there are MRI systems of different field strength and shape (open/cylindrical), the same distinctions apply for magnets.

31. Magnets are either produced internally by MRI systems producers (called “Original Equipment producers” or OEMs) or by third parties and the magnets configurations are then controlled by performance specifications developed by MRI system suppliers. The design of each magnet is thus specific for each individual imaging system. The notifying party considers that the relevant product market is constituted by all types of magnets used in MRI systems as suppliers typically offer a broad range of magnets. The precise market definition can, however, be left open as it does not modify the competitive assessment.

32. As regards the relevant geographic market, the notifying party considers that the market for the supply of magnets is worldwide in scope as companies have centralized production for the global supply of magnets and there are no barriers to trade. The market investigation did not allow the Commission to reach any conclusion on this question. However, it can be left open as it does not modify the competitive assessment.

1.7. - Market for the supply of RF coils to OEMs

33. RF coils are devices made of loops of wire that transmit and receive MR signals¹⁷. They are used with MRI systems to provide images of specific areas of the body (neck, wrist, ankle, etc). Each RF coil is manufactured to the MRI systems OEM manufacturer’s specifications so that it works with the MRI system. According to the notifying party, a new MRI system is typically sold with 6-8 coils and RF coils need to be replaced over the life of the MRI system (typically 1 per year)¹⁸. OEM of MRI systems can either manufacture RF coils internally or source them from an external supplier. The decision

¹⁵ Other components are the gantry, the gradient system, the processing computer and the system software.

¹⁶ In addition, high field magnets rely usually on superconductive technology while low field magnets can be permanent or resistive magnets.

¹⁷ However, it should be noted that RF coils can be transmit/receive coils (T/R), receive only coils (R), and transmit only coils (T).

¹⁸ It should be however noted that, in Europe, sales of replacement RF coils are under the control of the MRI system producer and thus there is no independent aftermarket for RF coils.

to manufacture internally or to source externally RF coils hinges on performance, availability, and cost (development cost vs. expected sales)¹⁹.

34. As RF coils suppliers generally offer a broad range of RF coils and as there is no particular specificity of demand for each type of RF coil, the notifying party submitted that all RF coils for MRI systems belong to the same relevant product market.
35. However this claim has been nuanced by the market investigation. While market participants generally recognized that RF coil suppliers strive to provide a complete range of portfolio, “*most coil producers effectively specialize in certain types of coils based on their ability to produce high performing products for the region of interest. Invivo [Intermagnetics] specializes in coils used to help image the extremities*”²⁰. Thus, it has to be acknowledged that the OEM market for RF coils is strongly differentiated all the more as a supplier that would be willing to start producing a coil that does not exist in its current portfolio of products would face important hurdles as this would take up to several years²¹. In any case, the definition of narrower product markets would not change the assessment of the present case.
36. As regards the relevant geographic markets, the parties consider that the market for the supply of RF coils is worldwide in scope as companies have centralized production for the global supply of RF coils and there are no barriers to trade. The question can however remain open as it does not change the competitive assessment of the present case.

B. COMPETITIVE ASSESSMENT

Horizontal overlaps and conglomerate issues

37. The only horizontally affected markets are the markets for CAD for MRI systems and the possible market for GW Patient Monitors. As for conglomerate effects, they regard the market for CAD for MRI systems and the market for MRI compatible GW Patient Monitors. It should however be noted that the size of these markets is very small compared to that of MRI systems:^{22 23}

	Size of the EEA market (MEUR)
MRI systems	[450-650]
MRI GW Monitors	[<10]

¹⁹ Article 11 request from the Commission to the General Electric Company, question 41, non-confidential version; Article 11 request from the Commission to Siemens, question 41, non-confidential version.

²⁰ Article 11 request from the Commission to the General Electric Company, question 47, non-confidential version. See also response from Siemens, non-confidential version.

²¹ Article 11 request from the Commission to the General Electric Company and to Siemens, question 53, non-confidential version. See also response from Siemens, non-confidential version.

²² The market for the supply of functional MRI system to end-users is not affected by the transaction. Philips makes limited sales of fMRI as add-ons to its MRI systems.

²³ The EEA-level size of the market for GW PM is EUR [<50] million.

MRI Compatible GW monitors

38. Intermagnetics is only active in the field of MRI Compatible GW PM, for which its market share in the EEA reached [30-40]% in 2005. Philips is active in the production and sale of regular GW PM but not of MRI Compatible GW PM. Consequently, the markets for MRI Compatible GW PM are not affected by the operation.
39. However, if, contrary to what the market investigation suggested, the relevant product market included any kind of GW PM, the transaction would give rise to affected national markets, i.e. the German (Intermagnetics: [15-25]%; Philips: [0-5]%), Italian (Intermagnetics: [25-35]%; Philips: [5-10]%), and Spanish (Intermagnetics: [5-10]%; Philips: [15-25]%) markets (the market would not be affected at the EEA level). These overlaps do not give rise to competition concerns for several reasons. First, the overlaps and post-merger market position of the new entity are relatively modest. Second, even if all GM PM are included in the same market, the important differences between MRI-compatible GW and PM and other GW PM have to be taken into account and entail that Philips' and Intermagnetics' products are not close substitutes. Finally, the new entity will still face the competition of important suppliers, such as GE ([30-40]% in Germany, [25-35]% in Italy, [30-40]% in Spain), Welch Allyn ([15-25]% in Germany, [20-30]% in Italy, [30-40]% in Spain), and Datascope ([5-10]% in Germany, [10-20]% in Italy, [5-15]% in Spain).
40. No competitors of Philips on the market for MRI systems have raised concerns related to potential conglomerate effects and the fact that the new entity will be active both in the marketing of MRI systems and MRI compatible GW monitors. Indeed, as submitted by the parties and confirmed by the market investigation²⁴, MRI Compatible GW PM are not indispensable for MRI systems users and only a small proportion of MRI systems are used in conjunction with MRI Compatible GW PM. Second, there are alternative suppliers of MRI Compatible GW PM (MedRad, Schiller, MIPM and GE). Third, the market investigation has also confirmed the claim made by the notifying party that the purchase of MRI compatible GM monitors is disconnected from the purchase of MRI systems as "*MRI compatible GW monitors are functioning completely separately from the MRI units and hence there is no compatibility problem*"²⁵. For this reason, any attempt of the new entity to leverage its position as a supplier of MRI systems to foreclose competitors on the market for MRI compatible GW monitors seems equally unlikely.

CAD for MRI systems

41. On the market for CAD used with MRIs, Intermagnetics' market share currently reaches [75-85]% in the EEA and [35-45]% worldwide, the remaining competitors are Confirma and CAD Sciences. Most CAD for MRI systems are sold in the US: according to the notifying party, in 2005, [250-350] CAD for MRI systems (EUR [10-20] million) were

²⁴ Many customers do not have MRI compatible GW PM.

²⁵ Article 11 request from the Commission to the Department of radiology AZ Sint-Jan Brugge AV, question 33.

sold in the world, thereof only <10 units were sold in Europe. The transaction gives however rise to a potential horizontal overlap as, pre-merger, Philips is planning to enter CAD software for MRIs, as it is currently developing a CAD system for MRI used to (...). Consequently, the possible market for CAD for MRI systems is affected.

42. The removal of Philips as a potential competitor will not lead to a competitive issue. First, this market is only emerging with very few sales. Second, Philips' product is at an early stage of development. The launch of Philips' MRI CAD product is expected to occur (...). Finally, Philips' strategy is to offer its MRI CAD product (...). It would therefore have a different positioning from Intermagnetics, Confirma, and CAD Sciences who seek to sell MRI CAD products to end-users equipped with any system.
43. Competitors of Philips on the market for MRI systems have expressed no concerns related to MRI CAD products and possible conglomerate effects. However, one competitor of Intermagnetics has expressed the concern that the transaction might be anticompetitive on the market for the supply of MRI CAD systems as the new entity will be able to bundle MRI CAD systems with MRI systems: this would divert expense budgets away from necessary product development to price reductions and marketing related expenses.
44. However, the Commission is of the view that such a bundling strategy, if it occurs, is not likely to be anti-competitive. In the short term, as put by Intermagnetics' competitor, this might lead to price decreases. Furthermore, as regards longer term effects such as the innovation pace, Philips would have introduced its own MRI CAD system and the company would have been able to eventually bundle its CAD systems with MRI systems. Consequently, any long-term effect would have likely been the same absent the merger. Finally, it appears that some customers prefer to have bundled offers instead of two independent offers: *“the transaction would have a positive effect, since the [MRI CAD] products would then be specifically designed for Philips' products, which would enable us, in case of problem, to have only one point of contact to fix the issue.”*²⁶
45. Consequently, the Commission considers that the proposed transaction is not likely to significantly impede effective competition in the Common market.

Vertical links

46. While Intermagnetics is not active on the markets for the supply of MRI systems to end-users, Philips had, in 2005, a [30-40]% market share in the EEA for all MRI systems, the main competitors being Siemens ([40-50]%) and GE ([15-25]%)²⁷. Thus, Philips, GE, and Siemens account for [>95]% of the sales of MRI systems in Europe.
47. Furthermore, Intermagnetics holds market share significantly higher than 25% (at least at the EEA level) on the OEM markets for the supply of magnets and RF coils. Consequently, the following markets are vertically affected by the transaction: the

²⁶ Article 11 request from the Commission to the Institut und Poliklinik für Diagnostische Radiologie, Uniklinik Köln, question 29: *“Eine Zusammenführung der Unternehmen würde einen positiven Effekt bedeuten, da die Produkte dann spezifisch für die Philipsgeräte abgestimmt wären und wir bei Fehlfunktionen lediglich einen Ansprechpartner zur Wiederherstellung der Funktionalität hätten”*.

²⁷ The remaining [0-5]% is to be ascribed to Hitachi, which, according to the notifying party, only sells open systems.

upstream OEM markets for the supply of magnets and coils, and the downstream markets for the supply of MRI systems to end-users.

Magnets and MRI systems

48. Philips is the only major MRI manufacturer to source magnets from an external supplier. In 2005, it sourced approximately 90% (for a value of EUR [50-150] million) of its needs in magnets from Intermagnetics²⁸:

	Number of magnets purchased	Share of total need
In-house production	[45-65]	[<10]%
Intermagnetics	[485-505]	[>80]%
Siemens	[10-30]	[<5]%
Magnex	[0-5]	[<1]%
Total	[550-580]	

From these figures, it is clear that customer foreclosure leading to the weakening of other suppliers of magnets and to the reduction of the ability of MRI systems manufacturers to compete in the foreseeable future appears very unlikely as all major manufacturers produce magnets internally. Furthermore, if the new entity decides after the merger to source magnets completely internally, the loss of sales for the magnet suppliers of Philips, Magnex and Siemens, would be limited to respectively 3 and 19 magnets (together around EUR [5-15] million), which is marginal compared to the annual need for magnets for MRI systems in the world ([2500-3000] in 2005²⁹).

49. As for potential input foreclosure, it should be noted that, since 2003, Intermagnetics has sold around 99%³⁰ of its magnet production to Philips. Hence, with respect to magnets, Intermagnetics and Philips have had virtually an exclusive commercial relation for years—accordingly, the notifying party submitted that one rationale for the transaction is to internalize Philips’ supply chain. Given that, according to the notifying party, Siemens³¹ and GE, the main MRI system manufacturers besides Philips, source their magnets internally, the current sales of Intermagnetics to Philips give the former a

²⁸ Form CO, p. 33. This ratio has been stable since 2003. (...).

²⁹ Form CO, p. 34.

³⁰ The remaining of Intermagnetics’ production (1%) is sold to Aurora Imaging Technology, which is a niche market player focusing on 1.5T dedicated MRI breast imaging scanners (as opposed to whole-body MRI systems). Aurora makes no sales in the EEA and has expressed its confidence that the merger would not cause any anti-competitive effect.

³¹ However, according to the notifying party Siemens procures 7T magnets from an external supplier (form CO, p. 37). This supplier is different from Intermagnetics. In any case, given that sales of 7T systems are currently marginal, this external procurement has no impact on the competitive analysis of the market for the supply of magnets to OEM of MRI systems.

very strong market position on the market for supply of magnets to OEMs of MRI systems³².

50. However any risk of input foreclosure can be excluded as Intermagnetics has been selling its magnets virtually exclusively to Philips for years and as major players source their magnets internally so that no important market players in the MRI system markets could be deterred from competing effectively by any foreclosure behaviour of the new entity.
51. In short, as explained by one competitor with respect to the market for the supply of magnets to OEMs of MRI systems, “*there is no effect from this concentration. The close relationship between Philips and Intermagnetics has existed for years, with Intermagnetics supplying magnets for all of Philips’ systems. GE healthcare has not used Intermagnetics as a source of magnets for years.*”³³
52. Consequently, the Commission considers that the proposed transaction is not likely to lead to customer or input foreclosure with regard to the sales of magnets for MRI systems.

RF coils and MRI systems

53. While, according to the notifying party, GE and Siemens source externally respectively [40-60]% and [10-30]% of their RF coils, Philips produces approximately [50-70]% of its needs in RF coils internally. Its main external supplier is Intermagnetics (for a value of EUR [<50] million in 2005). These shares are stable over time as it requires time and a rather long-time cooperation to develop RF coils geared to a given MRI system:

	Number of coils purchased	Share of total need
In-house production	[>5000]	[50-60]%
Intermagnetics	[<5000]	[25-35]%
GE	[<1000]	[5-10]%
MedRad	[<500]	[0-5]%
Total	[<10000]	

Any customer foreclosure that would result in the reduction of the ability of MRI systems manufacturers (GE and Siemens) to compete in the foreseeable future can be excluded. As can be seen from the table, MedRad makes only marginal sales to Philips and if the new entity decides to stop procuring coils externally (which is unlikely since none of the MRI systems manufacturers produce coils completely internally), the effect would be minimal.

³² Virtually 100% at the EEA level since Siemens produce internally its magnets so that Philips is the only client.

³³ Article 11 request from the Commission to the General Electric Company, question 39, non-confidential version.

54. Regarding potential input foreclosure, Intermagnetics sells RF coils to all major manufacturers of MRI systems (Philips, GE, Siemens) as well as to other smaller players such as Hitachi and Toshiba³⁴:

	Number of coils sold	Share
Philips	[2000-3000]	[25-35]%
GE	[3000-4000]	[40-50]%
Siemens	[1000-2000]	[15-25]%
Hitachi	[0-5000]	[0-5]%
Toshiba	[0-500]	[0-5]%
Total	[8000-9000]	

55. According to the notifying party's estimates, these figures would give a world-wide market share to Intermagnetics of [50-60]% ([65-75]% at the EEA level) on the market for the supply of RF coils to OEM of MRI systems. The figures collected in the course of the market investigation suggests that this share is even higher and could be greater than [70-80]% at the worldwide level.

56. The notifying party explained that input foreclosure as a result of the transaction was unlikely as it would not make economic sense for the new entity to stop selling coils to OEMs and third party customers.³⁵ To support its argument, the notifying party explains that the sale of MRI systems is currently not profitable for Philips as the gross profit margin³⁶ in Europe is not high ([0-20]% according to the notifying party's submissions³⁷), the incremental margin amounts to [10-30]%³⁸, and the operation profit margin is [...]. By contrast, the sale of RF coils is highly profitable and Intermagnetics makes a gross profit margin of [50-60]% on OEM sales of RF coils.

57. From this figures, it can be approximately evaluated whether stopping the supply of RF coils to competitors would be immediately profitable for the new entity: the RF coils sales of Intermagnetics to OEMs other than Philips amount to EUR [>30] million³⁹ and its gross profit to around EUR [10-20] million. To make up for the loss of revenues

³⁴ The discrepancy between the number of coils purchased by Philips in the first table and the number of coils sold by Intermagnetics to Philips in the second one comes from the fact that Intermagnetics' financial year ends on May 29.

³⁵ Form CO pp. 43-44.

³⁶ Taking into account variable selling expenses such as warranty cost and sales or dealer commission.

³⁷ The sales of MRI systems in the EEA in 2005 amounted to EUR [170-190] million, and entailed a gross profit of EUR [10-20] million. This implies a gross profit margin of [5-10]%.

³⁸ That is, when there is a change in gross profits elicited by a change in turnover, the ratio between the change in gross profits over the change in turnover.

³⁹ USD[30-50] million.

generated by OEM sales of RF coils, the new entity would therefore need to make extra profits related to the sale of MRI systems of EUR [10-30] million. Given that the price of MRI systems is around EUR 1 million and the incremental margin on a new system sold is [10-30]%⁴⁰, this would require the new entity to sell every year [50-150] extra MRI systems per year. This is very significant as it represents [10-30]% of the EEA market (and [0-10]% of the worldwide market), while there is no guarantee that this strategy would be successful given that GE and Siemens are both able to produce RF coils.

58. Furthermore, the contracts between Intermagnetics and Siemens, and between Intermagnetics and GE makes it difficult for the new entity to foreclose its competitors in the near future. Indeed, the current term of the Siemens-Intermagnetics agreement, during which Intermagnetics [...]⁴¹. Also, if Intermagnetics is no longer able to honor its contract, it will have to provide Siemens [...]. As for GE, the term of the contract has been extended [...], while [...]⁴². Furthermore, if Intermagnetics stops manufacturing the products supplied to GE under the agreement, it must grant GE [...]. These provisions seem enough to give a sufficient level of guarantee that Intermagnetics will continue to provide the existing portfolio of RF coils to GE in the near future.⁴³
59. As regards the longer term, it appears that MRI system manufacturers can switch from a supplier to another supplier or even to internal production in a reasonable period of time. This means that short term profits expected from foreclosure behaviour are likely to be outweighed by the lack of effect of such a strategy after 2 years. For example, regarding the 1.5T head array used in every 1.5T Siemens system, Siemens produced internally from 1990 to 2000. Then it decided to source a more advanced product from Intermagnetics in 2000 and Intermagnetics started the production of this coils for Siemens in 2002. Conversely, in 2004, Siemens introduced a new 1.5T head array coil and subsequently, the sales of Intermagnetics to Siemens fell from [>150] units in 2003 to [<50] units in 2005.
60. A similar example can be provided with GE and a 1.5T breast array coil. Intermagnetics was the first coil company to identify MR breast imaging as an emerging clinical application and first introduced it in 1999. Sales of this specific coil from Intermagnetics to GE reached [>450] units in 2004. However, in late 2004, GE introduced an internally developed breast array for use on the GE 1.5T MRI scanner and subsequently, the sales of Intermagnetics to GE fell to [...] units in 2005, and [<200] units in 2006⁴⁴.

⁴⁰ However, it is likely that through the merger this incremental margin will increase thanks to the efficiency gains made from the vertical integration of the supply of magnets and coils.

⁴¹ In addition, Siemens [...].

⁴² Moreover, GE [...]. As regards pricing, Intermagnetics [...].

⁴³ See concern expressed by GE in Article 11 request from the Commission to the General Electric Company, question 65, non-confidential version. See also response from Siemens, non-confidential version. Siemens has expressed no concerns related to this vertical integration.

⁴⁴ Intermagnetics expects [...].

61. Furthermore, OEMs of MRI systems can purchase coils from other coil manufacturers, such as Medrad, a company owned by the German company Bayer.⁴⁵ The notifying party explained that “*Medrad has the intellectual property, the technologists (RF engineers, including George Mischek, who personally holds a number of RF coil related patents) and the financial resources to increase this business rapidly if it decides to do so, both by expanding output of currently produced coils and by adding new coils.*” The credibility of Medrad as an alternative supplier is confirmed by GE in its answer to the market investigation as it explains that Medrad is a supplier comparable to Intermagnetics: “*Intermagnetics and Medrad are all coil suppliers that can produce high channel count coils on a high volume*”.
62. All these elements suggest that any foreclosure by the new entity—provided it would have the ability to do so—would have short-lived benefits (if any) and would harm the new entity’s profitability on the longer run. This is also true if the new entity decided after the current contracts with Siemens and GE expire to increase prices significantly: RF coils represent [<20] % of the total cost of MRI systems but Siemens and GE produce internally a large part of their needs. Thus, such a pricing policy would have an impact on less than [5-15] % of the cost structure of GE and Siemens. Furthermore, as explained above, GE and Siemens would be able to react by switching supplier. This means that the new entity would possibly be able to make greater profits in the first two years but would then lose its customers. Thus, the net present value of such a pricing strategy is likely to be negative.
63. This lack of incentive to foreclose is further exemplified by the takeover of USA Instruments by GE in 2003. After the transaction, GE continued to provide coils to its competitors and currently, Philips still buys coils from USA Instruments.
64. This analysis does not significantly change if one takes into account that Intermagnetics tends to specialize in the production of some type of coils, such as coils for extremities, brain coils, and breast coils. First, according to the notifying party’s estimates, coils such as breast RF coils are included in only [40-60] % of new MRI systems so that any foreclosure behaviour would be limited to a segment of the market for MRI systems. Furthermore, as shown from the examples mentioned above, OEMs are able to produce in-house the desired coils and can switch supplier. Again, the experience of the takeover by GE of USA Instruments shows that the incentives to foreclose are minimal: USA Instruments has in its portfolio coils that it is the only one to provide to OEMs (such as 3T cardiac array coils). While USA Instruments is now part of GE, it nevertheless supplies Philips (and other competitors) with these specific coils.

Coordination issues

65. After the merger, the three main market players in the EEA (Siemens, GE, and Philips) will have a similar cost structure and will be all vertically integrated, in particular with respect to the provision of magnets. However, this increased degree of symmetry as

⁴⁵ The notifying party also suggested that other RF coils manufacturers like Mayo, ScanMed, and Nova Medical can supply OEMs but the market investigation suggested that these manufacturers cannot be compared to Intermagnetics or Medrad as they are lower volume producers and are not currently capable of producing a wide product range at high volumes.

result of the merger between the firms active in the supply of MRI systems is not likely to lead to coordination. First, given the high degree of technology and innovation involved in MRI systems, there is the introduction of new products regularly. Second, the notifying party explained that Siemens, GE and Philips have different focus in their marketing strategies: GE differentiates with a primary focus on customer relationship, with secondary focus on cost, and a third focus on technology. Siemens focuses first on technology, second on cost, and third on customer relationship. Finally, Philips focuses first on technology, then on customer relationship and finally on cost. These differences in focus have broadly been confirmed by the market investigation.

66. Thus, the different positioning of the three companies, as well as the high degree of innovation on the market makes the economic environment of the market rather complex and it is therefore very unlikely that the merger will make it possible for market players to reach a common understanding on the terms of any kind of coordination.

VI. CONCLUSION

67. 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 (EC) No 139/2004.

For the Commission
(signed)
Neelie KROES
Member of the Commission