OFFICE OF FAIR TRADING

Anticipated acquisition by Danaher Corporation of Linx Printing Technologies plc

The OFT's decision on reference under section 33 given on 21 December 2004

Please note square brackets indicate figures replaced by a range or excised at the request of the parties for reasons of commercial confidentiality.

PARTIES

1. **Danaher Corporation (Danaher)** is a diversified technology company which manufactures and markets industrial and consumer products in the areas of tools/components and process/environmental controls. It is headquartered in the USA. Danaher's industrial product identification business is carried out through its USA subsidiary, Videojet Technologies Inc. Danaher has a UK sales company, Videojet Technologies Ltd.
2. **Linx Printing Technologies plc (Linx)** manufactures and markets industrial coding and marking systems for product identification. Its main products are continuous inkjet (CIJ) printers, laser markers, label markers and consumables for printers. These are manufactured in the UK and China and are distributed worldwide. Linx's UK turnover in the last financial year was approximately £7.5 million.

TRANSACTION

3. On 6 October 2004, Danaher announced its intention to acquire Linx by means of a public bid for its outstanding share capital. The transaction was notified on 29 October 2004. The administrative deadline is 24 December 2004.

JURISDICTION

4. As a result of this transaction, Danaher and Linx will cease to be distinct. The parties have a combined share of supply in excess of 25 per cent in CIJ printers and laser

markers in the UK, so the share of supply test in section 23 of the Enterprise Act 2002 (the Act) is met. The OFT therefore believes that it is the case that arrangements are in progress or in contemplation which, if carried into effect, will result in the creation of a relevant merger situation.

RELEVANT MARKET

5. Both parties are active in the development, manufacture and sale of industrial printing/graphics systems and industrial product identification[1] ('IPI') systems.

6. Industrial printing/graphics systems print information, such as names and addresses, on newspapers, catalogues and other mailings. Danaher produces binary array inkjet printers for industrial printing/graphics applications. Although Linx also produces printers for industrial printing/graphics applications, it does not sell this equipment in the EU. This area of overlap is therefore not considered further as a distinct relevant product.

Product market

Levels of packaging

7. IPI systems are used to code information onto individual products and their packaging in a manufacturing environment. Coding can occur at three different levels of packaging:

   (i) Primary packaging – This involves the marking of the product itself, or its immediate packaging. For example, coding at the primary packaging level may involve the printing of lot codes, expiry dates or bar code information directly onto products such as beverage cans, pill bottles or glass bottles.

   (ii) Secondary packaging – This involves printing information onto secondary packaging such as cardboard boxes, shipping cartons/crates or other transport containers. At this level, printed characters will generally be larger and the coding will be done by slower machines than is the case for primary packaging. Information printed will typically include bar codes, lot codes or other shipping information.

   (iii) Tertiary packaging – This involves printing information, typically bar codes and shipping information, onto pallets. Like secondary coding,

[1] This includes the equipment, consumables, spare parts and servicing.

coding at this level is carried out by machines capable of printing larger characters than is the case for primary packaging.

Types of equipment

8. Four main categories of equipment are used in IPI systems. These are distinguished by the technologies used to mark the substrate:

   (i) inkjet printers transfer ink onto the substrate either by deflecting drops from a stream – CIJ printers,[2] or as and when required – Drop on Demand (DOD) inkjet printers;

   (ii) laser markers use a beam to mark the substrate with information;

   (iii) thermal printers, such as Thermal Transfer Overlay (TTO) printers use heat to mark the substrate; and

   (iv) contact printers, such as hot stamp and roller printers, transfer ink by direct contact with a substrate.

9. CIJ printers, laser markers and TTO equipment are known as variable technologies because they allow the information coded to be changed without stopping the production line.

Use of equipment in different applications

10. Danaher argues that all IPI systems and industrial printing/graphics systems are interchangeable and should be viewed as substitutes. However, evidence obtained by the OFT suggests that the demand for different types of equipment depends on the precise requirements of the applications.

[2] A further distinction can be made between CIJ printers depending on how many jets they use: standard or multiple (binary). Binary array CIJ printers are predominantly used in commercial printing. In the remainder of this decision, the term CIJ printer refers to standard CIJ printers used in the primary packaging sector.

11. Primary packaging essentially requires high speed printing of small characters onto a variety of substrates. The variable nature of CIJ printers and laser markers makes them best suited to these applications. This is reflected in the fact that CIJ printers and laser markers account for approximately 80 per cent of primary packaging applications.[3]

12. Secondary and tertiary packaging applications do not require the speed or ability to mark a range of substrates that primary coding does. They do, however, require printers capable of printing large, high resolution characters and codes. Printers used for these applications are typically thermal label printers and large character DOD inkjet printers.

13. Third parties confirmed that they do not consider TTO printers or printers used in secondary/tertiary packaging as appropriate substitutes for applications carried out by CIJ printers and laser markers.

Overlap between the parties

14. Danaher develops, manufactures and sells CIJ printers, laser markers and TTO printers (for primary packaging). In the EU, Linx is also active in the development, manufacture and sale of CIJ printers and laser marker systems (for primary packaging). Both parties supply consumables, services and spare parts for their products.

15. The main overlap between the parties is in the supply of CIJ printers and laser markers. These products will therefore be considered in greater detail below.[4]

CIJ printers v laser markers

16. Third parties indicated that laser markers are the main competitive technology to CIJ printers. Given the broad similarities between the two technologies in terms of speed, cost, quality of coding and the range of substrates on which they can print, customers

---

[3] In 2001, approximately 87% of worldwide equipment sales for primary product marking applications were CIJ printers, laser markers or TTO printers (OFT estimate based on previous submissions relating to this sector). The balance is carried out by older, non-variable contact technologies such as hot stamping, roller coding and DOD inkjet printers.

[4] A minor overlap arises in the supply of large character printers; this product accounts for [0-5]% of Linx's UK and EU revenues ([less than £500,000] in the UK). Linx's share of supply of large character printers in the EU is approximately [0-5]%. In view of the very small increment, the transaction will not have a signification effect on the supply of large character printers in either the EU or the UK.

will typically consider both options and choose the technology which best suits their application.

17. There are some printing applications where, given the specific marking characteristics of laser markers and CIJ printers, only one or the other will be considered. For example, laser markers cannot be used for printing on some types of plastic, while the use of inks makes CIJ printers unsuitable for some cosmetics and pharmaceutical applications.

18. On the whole, the two technologies will be interchangeable for a large number of applications. The OFT has received evidence of both large and small customers switching from CIJ printers to laser markers and vice versa.[5]

Consumables, servicing and spare parts

19. Customers indicated that their purchasing decision is not based on the coding equipment alone; the cost and quality of consumables, servicing and spare parts during the lifetime of the coding equipment are important criteria when purchasing CIJ printers and laser markers. This is because service and consumables, particularly for CIJ printers, make up a large proportion of the lifetime operation cost. Customers usually purchase consumables, spare parts and service from the original supplier of the IPI system.[6] It is therefore considered appropriate to include consumables, spare parts and servicing services as part of the relevant frame of reference.

Supply-side substitution

20. On the supply side, the different printing technologies have distinct production processes. IPI systems manufacturers cannot easily switch production from one type of printer to another. The fact that suppliers tend to specialise in manufacturing one printer and switch or expand to different technologies by acquiring existing firms is indicative of this.

Conclusion on product market

21. The appropriate frame of reference in this case is the supply of CIJ printers and laser markers, including consumables, spare parts and maintenance services. Depending on

---

5 Most switching is likely to occur once existing printers have reached the end of their lifecycle or if additional printers are required.

6 Consumables and maintenance services are also available from other suppliers. Some customers have developed in-house servicing capabilities by training engineers to maintain and service particular machines.

the particular application for which printing is intended, the market may be wider or narrower. In light of this the OFT has considered the effect the transaction will have on both markets. However, since the competitive effect of the transaction will be broadly similar whichever application is considered, there is no need to conclude on this point.

Geographic market

22. In 2003, imports accounted for £35.7 million, or 56 per cent, of UK CIJ printers and laser marker sales, while exports from the UK amounted to £134 million. Third parties contacted by the OFT indicated that there are no significant barriers to trade (although some small changes to software and safety features may be required) and that transport costs account for a small proportion of the overall price. Both large and small customers in the UK indicated that they have purchased printers from EU countries and would consider buying from any EU country, although some expressed reluctance to procure globally.

23. It is relatively easy for companies based outside the UK to begin supplying UK/EU customers. This is evidenced by the fact that that all major suppliers of IPI systems in the UK are also active elsewhere in Europe. All that is required is an organisation in the UK responsible for selling and supporting the equipment. A recent example is Hitachi, which entered the UK market by means of a distributor agreement with Euromark.

24. These factors are indicative of a geographic market wider than the UK and at least EU wide. Both EU and UK shares of supply will be considered below. However, given that the parties' EU and UK shares of supply do not differ significantly, there is no need to conclude on the relevant geographic market.

HORIZONTAL ISSUES

Market shares

25. UK and EU shares of supply in CIJ printers and laser markers of the merging parties, before and after the transaction, as well as those of their main competitors, are tabulated below. The shares of supply are based on best estimates provided by Danaher; they are calculated by value and include equipment, consumables, spare parts and service. The total value of sales in 2003 of CIJ printers and laser systems was [approximately £65 million] and [approximately £450 million] in the UK and EU respectively.

Table 1: Shares of supply by value for CIJ printers and laser systems (2003)

Company	UK				EU			
	Total Market[7] %	CIJ%	Laser Markers %	**CIJ and laser Systems%**	Total Market %	CIJ%	Laser Markers %	**CIJ and laser Systems%**
Danaher	[0-10]	[10-20]	[10-20]	[10-20]	[10-20]	[20-30]	[10-20]	[20-30]
Linx	[0-10]	[10-20]	[10-20]	[10-20]	[0-10]	[0-10]	[0-10]	[0-10]
Combined	[10-20]	[20-30]	[20-30]	[20-30]	[10-20]	[30-40]	[10-20]	[20-30]
Domino	[10-20]	[20-30]	[20-30]	[20-30]	[0-10]	[10-20]	[10-20]	[10-20]
Markem	[10-20]	[20-30]	[0-10]	[20-30]	[0-10]	[0-10]	[0-10]	[10-20]
Imaje	[0-10]	[0-10]	[0-10]	[0-10]	[0-10]	[10-20]	[0-10]	[0-10]
Others[8]	[50-60]	[10-20]	[40-50]	[20-30]	[60-70]	[30-40]	[60-70]	[40-50]

Source: Danaher

26. In CIJ printers and laser markers, the parties will have an estimated combined share of supply of [20-30] per cent in the UK with an increment of [10-20] per cent. In the EU this figure is [20-30] per cent with an increment of [1-10] per cent. Following the transaction, the merged entity will continue to face competition from at least two competitors with a market presence similar to its own. The three largest competitors, Domino, Imaje and Markem, are sizeable multinational companies which are active on a global level. There are also a number of smaller companies (approximately 11) that will continue to constrain the merged entity's behaviour. These include companies such as Hitachi, ITW and EBS.

27. A similar picture emerges when one considers CIJ printers. On this analysis, the parties would have an estimated combined share of supply of [20-30] per cent in the UK, with an increment of [10-20] per cent, and [30-40] per cent in the EU, with an increment of [1-10] per cent. Following the transaction, the estimated market presence of competitors would be similar to that for CIJ printers and laser markers combined.

---

7 The total market for industrial product identification solutions at all levels of packaging (primary, secondary, tertiary) and printing/graphics systems including equipment, related consumables, spare parts and servicing).

8 The parties estimate that there are approximately 11 companies in the 'others' column for CIJ and laser systems.

28. The parties' combined share of supply for laser markers is lower than for CIJ printers ([20-30] per cent in the UK and [10-20] per cent in the EU).

29. If one were to consider a wider frame of reference, e.g. printers used at all levels of packaging and industrial printing/graphics systems, the parties would have estimated shares of supply of less than [1-10] per cent and the increment resulting from the transaction would be [1-10] per cent and [1-10] per cent for the EU and UK respectively.

30. The estimated shares of supply for Linx and Danaher in the markets discussed have not varied significantly between 2001 and 2003.

Barriers to entry and expansion

31. Danaher estimated the cost of entry into the UK for a new supplier of CIJ printers to be [under £2 million] (this cost includes equipment for production, sales, manufacture and service infrastructure). Danaher estimates that an existing supplier would require [under £500,000] for marketing and set-up costs to enter the UK market, since the only requirement would be to find a UK distributor to offer sales and maintenance services. Entry with a laser offering would be less expensive because the components are readily available

32. Third parties contacted by the OFT suggested that a new company without the requisite technical expertise and know-how would find it costly to enter the market given the large R&D investment that would be required. Even companies which manufacture inkjet print heads or laser tubes, such as Xaar or Hewlett Packard, would find it difficult to enter the market since they do not have the requisite expertise in the manufacture of CIJ printers and laser markers.

33. Danaher has cited a number of recent new entrants both at the UK and EU level. This entry has tended to be from established companies or their subsidiaries, already possessing expertise, rather than companies which have recently started up.

Buyer power

34. The main end users of IPI systems range from large multinationals, such as Nestlé and Unilever, to small businesses. Customers contacted by the OFT indicated that they can exert a fair degree of buyer power with respect to equipment and particularly consumables; several customers cited instances when they have been able to obtain significant discounts on new machines. Several customers contacted by the OFT

stated that they had achieved significant discounts on ink supply and consumables.

35. Generally, customers have good knowledge of the competing IPI technologies and products in the market. Larger customers tend to be sophisticated and have a specialised purchasing unit for IPI systems.

36. Finally, the nature of competitive bidding gives the customer a degree of buyer power, not least because there are a large number of suppliers bidding for each contract.[9]

VERTICAL ISSUES

37. This case raises no substantive vertical issues.

THIRD PARTY VIEWS

38. Third parties contacted by the OFT were unconcerned by this transaction

ASSESSMENT

39. The parties overlap in the supply of IPI systems, in particular CIJ printers and laser markers, in the UK. The merged entity will continue to face competition from several strong global companies and a number of smaller suppliers. The main customers of the merged entity tend to be large, sophisticated companies that have considerable buyer power, not only because of their size, but also because of the number of suppliers in the market. While differing views were put forward on barriers to entry, there is evidence of recent new entry in the UK. Third parties contacted by the OFT did not consider that this transaction raised competition concerns.

40. Consequently, the OFT does not believe that it is or may be the case that the merger may be expected to result in a substantial lessening of competition within a market or markets in the United Kingdom.

DECISION

41. This merger will therefore **not be referred** to the Competition Commission under section 33(1) of the Act.

[9] Approximately 65-75% of IPI system purchasing decisions are carried out through a competitive tender process.