

COMMISSION DECISION

of 24 May 2004

**relating to a proceeding pursuant to Article 82 of the EC Treaty and Article 54 of the EEA Agreement
against Microsoft Corporation**

(Case COMP/C-3/37.792 — Microsoft)

(notified under document number C(2004) 900)

(Only the English text is authentic)

(Text with EEA relevance)

(2007/53/EC)

On 24 March 2004, the Commission adopted a decision relating to a proceeding pursuant to Article 82 of the EC Treaty and Article 54 of the EEA Agreement. In accordance with the provisions of Article 21 of Regulation No 17⁽¹⁾, the Commission herewith publishes the names of the parties and the main content of the decision, having regard to the legitimate interest of undertakings in the protection of their business secrets. A non-confidential version of the full text of the decision can be found in the authentic languages of the case and in the Commission's working languages at DG COMP's Web site at http://europa.eu.int/comm/competition/index_en.html.

I. SUMMARY OF THE INFRINGEMENT

Addressee, nature and duration of the infringement

- (1) This Decision is addressed to Microsoft Corporation.
- (2) Microsoft Corporation has infringed Article 82 of the EC Treaty and Article 54 of the EEA Agreement by:
 - refusing to supply interoperability information and allow its use for the purpose of developing and distributing work group server operating system products, from October 1998 until the date of this Decision,
 - making the availability of the Windows Client PC Operating System conditional on the simultaneous acquisition of Windows Media Player (WMP) from May 1999 until the date of this Decision.

The relevant markets*PC operating systems*

- (3) Operating systems are software products that control the basic functions of a computer. 'Client Personal Computers' (PCs) are general-purpose computers designed for use by one person at a time and that can be connected to a computer network.
- (4) A distinction could be made between (i) operating systems for so-called 'Intel-compatible' PCs and (ii) operating systems for non-Intel-compatible PCs. 'Intel-compatible' in that context relates to a specific type of hardware

architecture. 'Porting' (that is to say, adapting) a non-Intel-compatible operating system (for example Apple's Macintosh) to run on Intel-compatible hardware is a long and costly process. However, the question of the inclusion of operating systems for Intel-compatible and non-Intel-compatible PCs in the definition of the relevant market can be left open since the difference will not be such as to alter the result of the assessment of Microsoft's market power.

- (5) Operating systems for handheld devices such as personal digital assistants (PDA) or 'intelligent' mobile phones and operating systems for servers cannot presently be regarded as competitive substitutes for client PC operating systems.
- (6) As regards supply-side substitutability, a software product that is not presently in the market for client PC operating systems would have to be substantially modified in order to adapt to the specific needs of consumers in that market. This entails a development and testing process that involves a substantial amount of time (often above one year) and expenses, and entails a substantial commercial risk. Furthermore, as is established when discussing Microsoft's dominance in the relevant market, such a new entrant would face significant barriers to entry.

Work group server operating systems

- (7) 'Work group server services' are the basic services that are used by office workers in their day-to-day work, namely sharing files stored on servers, sharing printers, and having

⁽¹⁾ OJ L 13, 21.2.1962, p. 204/62. Regulation as last amended by Regulation (EC) No 1/2003 (OJ L 1, 4.1.2003, p. 1).

their rights as network users 'administered' centrally by their organisation's Information Technology department. 'Work group server operating systems' are operating systems designed and marketed to deliver these services collectively to relatively small numbers of PCs linked together in small to medium-sized networks.

- (8) Evidence gathered by the Commission in the course of its investigation has confirmed that work group server services are viewed by customers as constituting a distinct set of services provided by servers. In particular, the provision of file and print services on the one hand and of group and user administration services on the other hand are closely interrelated: if there were no proper group and user administration, the user would not have efficient and secure access to file and print sharing services.
- (9) Work group servers (servers that run a work group server operating system) must be distinguished from high-end servers that are generally needed to support 'mission-critical' tasks, such as inventory control, airline reservations or banking transactions. Such tasks may involve the need to support storage of vast amounts of data and require maximum (often termed rock-solid) reliability and availability⁽²⁾. They are carried out by expensive machines (sometimes called enterprise servers) or by mainframes. By contrast, work group server operating systems are generally installed on less expensive computers.
- (10) However, not all low-end server machines are used as work group servers. For instance, low-end servers can also be installed at the 'edge' of networks and be specialised in web serving⁽³⁾, web caching⁽⁴⁾ or firewall⁽⁵⁾ to the exclusion of the core work group server services.
- (11) It should also be pointed out that whilst only file, print and group and user administration services constitute the core work group server services, work group server operating systems can be used to run applications, as is the case with other operating systems. These applications will often be

tightly linked to the provision of group and user administration services. Since work group server operating systems are as a rule used with inexpensive hardware, these applications will generally not require extremely high reliability.

Streaming media players

- (12) Media players are client-side software applications, the core functionality of which is to decode, decompress and play (and further allow the processing of) digital audio and video files downloaded or streamed over the Internet (and other networks). Media players are also capable of playing back audio and video files stored on physical carriers such as CDs and DVDs.
- (13) As regards demand-side substitutability, classical playback devices such as CD and DVD players are not substitutes for media players as they offer a very limited subset of the media player functionalities. Media players which depend on third parties' proprietary technologies are, in contrast to Microsoft's WMP, RealNetworks' RealOne Player and Apple's QuickTime Player, not likely to constrain the third parties' behaviour. Media players unable to receive audio and video content streamed over the Internet are not substitutes for streaming media players since they do not satisfy specific consumer demand for streaming.
- (14) As regards supply-side substitutability, the significant necessary R&D investments, the protection of existing media technologies through IP rights and the indirect network effects characterising the market translate into entry barriers for developers of other software applications including non-streaming media players.

Dominance

PC operating systems

- (2) Reliability is the ability of an operating system to function for a long period of time without malfunctioning or having to be rebooted. Availability is the ability of an operating system to function for a long period of time without having to be taken out of service for routine maintenance or upgrades. Another aspect of availability is how fast an operating system can get back up and running after a failure has occurred.
- (3) A web server hosts web pages and makes them accessible through standard web protocols.
- (4) A cache is a place where temporary copies of web objects are kept. Web caching is therefore a way of storing web files for later re-use in a way that speeds up the access for the end user.
- (5) A firewall is a hardware/software solution that isolates organisations' computer networks and thereby protects them against external threats.
- (15) Microsoft has acknowledged that it holds a dominant position in the PC operating system market.
- (16) This dominant position is characterised by market shares that have remained very high at least since 1996 (90 % + in recent years), and by the presence of very high barriers to entry. These barriers to entry are in particular linked to the presence of indirect network effects. Indeed, the popularity of a PC operating system among users derives from its popularity among vendors of PC applications, which in turn choose to focus their development efforts towards the PC operating system which is most popular among users.

This creates a self-reinforcing dynamic that protects Windows as the *de facto* standard for PC operating systems (applications barrier to entry).

Work group server operating systems

(17) The Commission concludes that Microsoft has achieved a dominant position in the work group server operating system market. This conclusion rests in particular on the following findings:

- The Commission has examined a variety of data in order to measure Microsoft's market share in the work group server operating system market. All these datasets confirm that Microsoft holds by far the leading market share, which, under every measure, is above 50 %, and for most measures, is in the 60 % 75 % range.
- There are barriers to entry in the work group server operating system market. In particular, the easier it is to find technicians skilled in administering a given work group server operating system, the more customers are inclined to purchase that work group server operating system. In turn, however, the more popular a work group server operating system is among customers, the easier it is for technicians (and the more willing technicians are) to acquire skills related to that product. This mechanism can be formalised from an economic perspective in terms of network effects.
- There are strong commercial and technical associative links between the PC operating system market and the work group server operating system market. As a result, Microsoft's dominance over the PC operating system market has a significant impact on the adjacent market for operating systems for work group servers.

Refusal to Supply

(18) The Decision makes the following findings.

- Microsoft has refused to provide Sun with information enabling Sun to design work group server operating systems that can seamlessly integrate in the 'Active Directory domain architecture', a web of interrelated client PC-to-server and server-to-server protocols that organise Windows work group networks. It is noteworthy that, in order to allow Sun to provide for such seamless integration, Microsoft only had to provide specifications of the relevant protocols, that is to say, technical documentation, and not to give access to the software code of Windows, let alone to allow its reproduction by Sun. There are two further factual circumstances of the refusal at issue that must be pointed out. First, Microsoft's refusal to Sun is part of a broader pattern of conduct of refusing the relevant

information to any work group server operating system vendor. Second, Microsoft's refusal constitutes a disruption of previous levels of supply, since the analogous information for previous versions of Microsoft's products had been made available to Sun and to the industry at large, indirectly through a licence to AT&T.

- Microsoft's refusal risks eliminating competition in the relevant market for work group server operating systems because the refused input is indispensable for competitors operating in that market. Customer evidence confirms the link between on the one hand, the privileged interoperability that Microsoft's work group server operating systems enjoy with its dominant PC operating system, and on the other hand, their rapid rise to dominance (and the increasing uptake of the features of the Active Directory domain architecture that are incompatible with competitors' products). The Commission's investigation also shows that there is no actual or potential substitute to the refused input.
 - Microsoft's refusal limits technical development to the prejudice of consumers, in contradiction in particular with Article 82(b). If competitors had access to the refused information, they would be able to provide new and enhanced products to the consumer. In particular, market evidence shows that consumers value product characteristics such as security and reliability, although those characteristics are relegated to a secondary position due to Microsoft's interoperability advantage. Microsoft's refusal thereby indirectly harms consumers.
- (19) These circumstances of an exceptional nature lead to the conclusion that Microsoft's refusal constitutes an abuse of a dominant position incompatible with Article 82, unless it is objectively justified.
- (20) Microsoft's claimed justification for its refusal is that providing the information at stake and allowing competitors to use it in order to make compatible products would be tantamount to licensing intellectual property rights. The Commission did not take a position on the validity of Microsoft's general intellectual property claims, which could in any event only be ascertained on a case by case basis when Microsoft has prepared the relevant specifications. However, according to the jurisprudence, an undertaking's interest in exercising its intellectual property rights cannot in itself constitute an objective justification when exceptional circumstances such as the ones identified above are established.
- (21) The Commission investigated whether, under the specific circumstances of this case, Microsoft's proffered justification outweighed these exceptional circumstances and

concluded that Microsoft had not provided any evidence to that effect. In particular, an order to supply the relevant information could not lead to the cloning of Microsoft's product. The Commission also took account of the fact that disclosure of information of the kind refused by Microsoft was commonplace in the industry.

(22) Furthermore, the Commission drew inspiration from the undertaking made by IBM to the Commission in 1984 (the IBM Undertaking)⁽⁶⁾, and from the 1991 Software Directive⁽⁷⁾. Microsoft indeed recognises that the IBM Undertaking and the Software Directive provide useful guidance for the present case. The Commission concluded that an order to supply in the present case would be analogous to the IBM Undertaking, in that it would only relate to interface specifications. The Commission also concluded that the refusal at issue was a refusal to supply interoperability information, in the sense of the Software Directive. In that respect, the Commission noted that the Software Directive restricted the exercise of copyright over software (including exercise by non-dominant undertakings) in favour of interoperability, thereby stressing the importance of interoperability in the software industry. It also noted that the Software Directive explicitly provided that its provisions were without prejudice to the application of Article 82, in particular if a dominant undertaking refused to make information available which is necessary for interoperability.

(23) Microsoft further argued that its refusal to supply interoperability information could not be aimed at restricting competition in the work group server operating system market, because the company had no economic incentive to pursue such a strategy. The Commission rejected Microsoft's argument, noting that it was based on an economic model that did not fit the facts in this case and was inconsistent with the views expressed by Microsoft's executives in Microsoft internal documents obtained during the investigation.

Tying

(24) The Decision finds that Microsoft infringes Article 82 of the Treaty by tying WMP with the Windows PC operating system (Windows). The Commission bases its finding of a tying abuse on four elements: (i) Microsoft holds a dominant position in the PC operating system market; (ii) the Windows PC operating system and WMP are two separate products; (iii) Microsoft does not give customers a choice to obtain Windows without WMP; and (iv) this tying forecloses competition. In addition, the Decision rejects Microsoft's arguments to justify the tying of WMP.

⁽⁶⁾ Commission Case IV/29.479. The Commission suspended its investigation, which had started in the 1970s, following that undertaking by IBM.

⁽⁷⁾ Council Directive 91/250/EEC (OJ L 122, 17.5.1991, p. 42).

(25) Microsoft does not dispute that it holds a dominant position in the PC operating system market.

(26) The Commission Decision finds that streaming media players and PC operating systems are two separate products (rejecting Microsoft's argument that WMP is an integral part of Windows). The Decision first sets out that although Microsoft has been tying its media player with Windows for some time, there remains today separate consumer demand for stand-alone media players, distinguishable from demand for PC operating systems. Secondly, a number of vendors develop and supply media players on a stand-alone basis. Thirdly, Microsoft itself develops and distributes versions of its WMP for other PC operating systems. Finally, Microsoft promotes WMP in direct competition with third party media players.

(27) As regards the third tying element, the Decision finds that Microsoft does not give customers a choice to obtain Windows without WMP. PC manufacturers must license Windows with WMP. If they want to install an alternative media player on Windows, they can only do so in addition to WMP. If a user buys Windows in a retail store, the same considerations apply. The Decision considers Microsoft's arguments that customers need not pay 'extra' for the WMP and that they need not use it to be irrelevant in the context of determining whether there is coercion under Article 82 of the Treaty.

(28) The Decision then explains why tying in this particular case is liable to foreclose competition. The Decision sets out that the tying of WMP to Windows affords Microsoft unmatched ubiquity of its media player on PCs worldwide. The relevant evidence reveals that other distribution means are second best. By tying WMP to Windows, Microsoft can offer content providers and software developers that support the Windows Media technologies the ability to rely on the Windows monopoly to reach almost all PC users worldwide. Evidence shows that supporting several media technologies generates additional costs. As such, WMP's ubiquitous presence induces content providers and software developers to rely primarily on Windows Media technology. Consumers will in turn prefer to use WMP, since a wider array of complementary software and content will be available for that product. Microsoft's tying reinforces and distorts these 'network effects' to its advantage, thereby seriously undermining the competitive process in the media player market. Evidence shows that WMP usage increases due to tying, while other media players are rated more highly in terms of quality by users. Market data as regards media player usage, format usage, as well as content offered by web sites point to a trend in favour of usage of WMP and the Windows Media formats to the detriment of the main competing media players (and media player technologies). Whilst the Decision highlights

this trend in favour of WMP and the Windows Media format, the Decision also emphasises that, on the basis of the case law of the Court, the Commission is, in particular, not required to prove that competition has already been foreclosed or that there is a risk of the elimination of all competition to establish a tying abuse. Otherwise, antitrust scrutiny in certain software markets would come too late as evidence of market impact could only be demonstrated once the market had 'tipped'.

- (29) Finally, the Decision discusses Microsoft's arguments to justify the tying of WMP, in particular the alleged efficiencies of tying WMP to Windows. With regard to alleged distribution efficiencies, the Commission rejects Microsoft's argument that tying lowers transaction costs for consumers by reducing time and confusion through having a set of default options in a personal computer 'out-of-the-box'. The benefit of having a media player pre-installed along with the client PC operating system does not require that Microsoft selects the media player for consumers. PC manufacturers can ensure that consumer demand for pre-installed media players of their choice is met. The Decision also finds that Microsoft has not put forward any technical efficiency for which 'integration' of WMP would prove to be a precondition. The tying of WMP rather shields Microsoft from effective competition from potentially more efficient media player vendors, which could challenge its position, thus reducing the talent and capital invested in innovation in respect of media players.

II. REMEDIES

Refusal to Supply

- (30) The Decision orders Microsoft to disclose the information that it has refused to supply and to allow its use for the development of compatible products. The disclosure order is limited to protocol specifications, and to ensuring interoperability with the essential features that define a typical work group network. It applies not only to Sun, but to any undertaking that has an interest in developing products that constitute a competitive constraint to Microsoft in the work group server operating system market. To the extent that the Decision might require Microsoft to refrain from fully enforcing any of its intellectual property rights, this would be justified by the need to put an end to the abuse.
- (31) The conditions under which Microsoft shall disclose the information and allow the use thereof must be reasonable and non-discriminatory. The requirement for the terms imposed by Microsoft to be reasonable and non-discriminatory applies in particular to any remuneration that

Microsoft might charge for supply. For example, such remuneration should not reflect the strategic value stemming from Microsoft's market power in the PC operating system market or in the work group server operating system market. Furthermore, Microsoft may not impose restrictions as to the type of products in which the specifications may be implemented, if such restrictions create disincentives to compete with Microsoft, or unnecessarily restrain the ability of the beneficiaries to innovate. Finally, the terms imposed by Microsoft in the future must be sufficiently predictable.

- (32) Microsoft must disclose the relevant protocol specifications in a timely manner, that is to say, as soon as it has produced a working and sufficiently stable implementation of these protocols in its products.

Tying

- (33) Concerning the tying abuse, the Decision orders Microsoft to offer to end users and OEMs for sale in the EEA a full-functioning version of Windows which does not incorporate WMP. Microsoft retains the right to offer a bundle of Windows and WMP.
- (34) Microsoft must refrain from using any means which would have the equivalent effect of tying WMP to Windows, for example by reserving privileged interoperability with Windows to WMP, by providing selective access to Windows APIs, or by promoting WMP over competitors' products through Windows. Microsoft is also prevented from giving OEMs or users a discount conditional on their obtaining Windows together with WMP, or *de facto*, financially or otherwise, removing or restricting OEMs' or users' freedom to choose the version of Windows without WMP. The unbundled version of Windows must not be less performing than the version of Windows which comes bundled with WMP, regard being had to WMP's functionality which, by definition, will not be part of the unbundled version of Windows.

III. FINES

Basic amount

- (35) The Commission considers that the infringement constitutes by its nature a very serious infringement of Article 82 of the EC Treaty and Article 54 of the EEA Agreement.
- (36) Furthermore, the pattern of exclusionary leveraging behaviour engaged in by Microsoft has a significant impact on the markets for work group server operating systems and for streaming media players.

- (37) For the purposes of assessing the gravity of the abuses, the markets for client PC operating systems, for work group server operating systems and for media players are EEA-wide in scope.
- (38) The initial amount of the fine to be imposed on Microsoft to reflect the gravity of the infringement should be, in light of the above circumstances, EUR 165 732 101. Given Microsoft's significant economic capacity⁽⁸⁾, in order to ensure a sufficient deterrent effect on Microsoft, this figure is adjusted upwards by a factor of two to EUR 331 464 203.
- (39) Finally, the basic amount of the fine is increased by 50 % to take account of the duration of the infringement (five and a half years). The basic amount of the fine is therefore set at EUR 497 196 304.

Aggravating and attenuating circumstances

- (40) There are no aggravating or attenuating circumstances relevant to this Decision.

⁽⁸⁾ Microsoft is currently the largest company in the world by market capitalisation (see <http://news.ft.com/servlet/ContentServer?pagename=FT.com/StoryFT/FullStory&c=StoryFT&-cid=1051390342368&p=1051389855198> and <http://specials.ft.com/spdocs/global5002003.pdf> — the Financial Times 'World's largest Companies', updated on 27 May 2003, printed on 13 January 2004). According to the same measure, Microsoft has held a consistently high ranking in the list of the world's largest companies by market capitalisation, being the largest in 2000, the fifth largest in 2001, and the second largest in 2002 (see <http://specials.ft.com/ln/specials/global5002a.htm> (for 2000, printed on 24 January 2003), <http://specials.ft.com/ft500/may2001/FT36H8Z8KMC.html> (for 2001, printed on 24 January 2003), <http://specials.ft.com/ft500/may2002/FT30M8IPX0D.html> (for 2002, printed on 24 January 2003)). Microsoft's resources and profits are also significant. Microsoft's Securities and Exchange Commission filing for the US fiscal year July 2002 to June 2003 reveals that it possessed a cash (and short-term investment) reserve of USD 49 048 million on June 30, 2003. As regards profits, this Securities and Exchange Commission filing indicates that in US fiscal year July 2002 to June 2003, Microsoft earned profits of USD 13 217 million on revenues of USD 32 187 million (profit margin of 41 %). For the Windows PC client PC operating system product during this period ('Client' product segment), Microsoft earned profits of USD 8 400 million on revenues of USD 10 394 million (profit margin of 81 %).