

JUDGMENT OF THE COURT OF FIRST INSTANCE (Grand Chamber)

17 September 2007*

In Case T-201/04,

Microsoft Corp., established in Redmond, Washington (United States), represented by J.-F. Bellis, lawyer, and I. Forrester QC,

applicant,

supported by

The Computing Technology Industry Association, Inc., established in Oakbrook Terrace, Illinois (United States), represented by G. van Gerven and T. Franchoo, lawyers, and B. Kilpatrick, Solicitor,

DMDsecure.com BV, established in Amsterdam (Netherlands),

MPS Broadband AB, established in Stockholm (Sweden),

Pace Micro Technology plc, established in Shipley, West Yorkshire (United Kingdom),

* Language of the case: English.

Quantel Ltd, established in Newbury, Berkshire (United Kingdom),

Tandberg Television Ltd, established in Southampton, Hampshire (United Kingdom),

represented by J. Bourgeois, lawyer,

Association for Competitive Technology, Inc., established in Washington, DC (United States), represented by L. Ruessmann and P. Hecker, lawyers, and K. Bacon, Barrister,

TeamSystem SpA, established in Pesaro (Italy),

Mamut ASA, established in Oslo (Norway),

represented by G. Berrisch, lawyer,

Exor AB, established in Uppsala (Sweden), represented by S. Martínez Lage, H. Brokelmann and R. Allendesalazar Corcho, lawyers,

interveners,

Commission of the European Communities, represented initially by R. Wainwright, F. Castillo de la Torre, P. Hellström and A. Whelan, acting as Agents, and subsequently by F. Castillo de la Torre, P. Hellström and A. Whelan,

defendant,

supported by

Software & Information Industry Association, established in Washington, DC, represented by J. Flynn QC, C. Simpson and T. Vinje, Solicitors, and D. Paemen, N. Doodoo and M. Dolmans, lawyers,

Free Software Foundation Europe eV, established in Hamburg (Germany), represented by C. Piana, lawyer,

Audiobanner.com, established in Los Angeles, California (United States), represented by L. Alvizar Ceballos, lawyer,

European Committee for Interoperable Systems (ECIS), established in Brussels (Belgium), represented by D. Paemen, N. Dodoo and M. Dolmans, lawyers, and J. Flynn QC,

interveners,

APPLICATION for annulment of Commission Decision 2007/53/EC of 24 March 2004 relating to a proceeding pursuant to Article 82 [EC] and Article 54 of the EEA Agreement against Microsoft Corp. (Case COMP/C-3/37.792 — Microsoft) (OJ 2007 L 32, p. 23) or, in the alternative, annulment or reduction of the fine imposed on the applicant in that decision,

THE COURT OF FIRST INSTANCE
OF THE EUROPEAN COMMUNITIES (Grand Chamber),

composed of B. Vesterdorf, President, M. Jaeger, J. Pirrung, R. García-Valdecasas, V. Tiili, J. Azizi, J.D. Cooke, A.W.H. Meij, N.J. Forwood, E. Martins Ribeiro, I. Wiszniewska-Białecka, V. Vadapalas and I. Labucka, Judges,

Registrar: E. Coulon,

having regard to the written procedure and further to the hearing on 24, 25, 26, 27 and 28 April 2006,

gives the following

Judgment

Background to the dispute

- 1 Microsoft Corp., a company established in Redmond, Washington (United States), designs, develops and markets a wide variety of software products for different kinds of computing devices. Those software products include, in particular, operating systems for client personal computers ('client PCs'), operating systems for work group servers and streaming media players. Microsoft also provides technical assistance for its various products.

- 2 On 15 September 1998, Mr Green, a Vice-President of Sun Microsystems, Inc. ('Sun'), a company established in Palo Alto, California (United States) which supplies, in particular, servers and server operating systems, wrote to Mr Maritz, a Vice-President of Microsoft, as follows:

'We are writing to you to request that Microsoft provide [Sun] with the complete information required to allow Sun to provide native support for COM objects on Solaris.

We also request that Microsoft provide [Sun] with the complete information required to allow [Sun] to provide native support for the complete set of Active Directory technologies on Solaris.

We believe it is in the industry's best interest that applications written to execute on Solaris be able to seamlessly communicate via COM and/or Active Directory with the Windows operating systems and/or with Windows-based software.

We believe that Microsoft should include a reference implementation and such other information as is necessary to insure, without reverse engineering, that COM objects and the complete set of Active Directory technologies will run in full compatible fashion on Solaris. We think it necessary that such information be provided for the full range of COM objects as well as for the full set of Active Directory technologies currently on the market. We also think it necessary that such information be provided in a timely manner and on a continuing basis for COM objects and Active Directory technologies which are to be released to the market in the future.'

- 3 That letter will be referred to below as 'the letter of 15 September 1998'.

- 4 By letter of 6 October 1998, Mr Maritz replied to the letter of 15 September 1998. In his letter, he said:

'Thank you for your interest in working with Windows. We have some mutual customers using our products, and I think it is great you are interested in opening up your system to interoperate with Windows. Microsoft has always believed in helping software developers, including [its] competitors, build the best possible products and interoperability for [its] platform.

You may not realise that the information you requested on how to interoperate with COM and the Active Directory technologies is already published and available to you and every other software developer in the world via the Microsoft Developer Network (MSDN) Universal product. MSDN contains comprehensive information about the services and interfaces of the Windows platform and is a great source of information for developers interested in writing to or interoperating with Windows. In fact, Sun currently has 32 active licenses for the MSDN Universal subscription. Furthermore, as your company has done in the past, I assume you will be sending a significant number of people to attend our Professional Developers Conference in Denver October 11 — October 15, 1998. This will be another venue to get the technical information you are seeking in order to work with our systems technologies. Some of the 23 Sun employees that attend[ed] last year[']s conference should be able to provide you with their comments on the quality and depth of information discussed at these Professional Developers Conferences.

You will be pleased to know that there is already a reference implementation of COM on Solaris. This implementation of COM on Solaris is a fully supported binary available from Microsoft. Source code for COM can be licensed from other sources including Software AG. ...

Regarding the Active Directory, we have no plans to “port” [it] to Solaris. However, to satisfy our mutual customers there are many methods with varying levels of functionality in order to interoperate with the Active Directory. For example, you can use the standard LDAP to access the Windows NT Server Active Directory from Solaris.

If after attending [the Professional Developers Conference] and reading through all the public MSDN content you should require some additional support, our Developer Relations Group has account managers who strive to help developers who

need additional support for Microsoft's platforms. I have asked Marshall Goldberg, the Lead Program Manager, to make himself available should you need it ...'

- 5 Mr Maritz's letter of 6 October 1998 will be referred to below as 'the letter of 6 October 1998'.

- 6 On 10 December 1998, Sun lodged a complaint with the Commission pursuant to Article 3 of Council Regulation No 17 of 6 February 1962, First Regulation implementing Articles [81 EC] and [82 EC] (OJ, English Special Edition 1959-62, p. 87).

- 7 Sun's complaint related to Microsoft's refusal to give it the information and technology necessary to allow its work group server operating systems to interoperate with the Windows client PC operating system.

- 8 On 2 August 2000, the Commission sent Microsoft a first statement of objections ('the first statement of objections'), which related in effect to questions concerning the interoperability of Windows client PC operating systems and other suppliers' server operating systems (client/server interoperability).

- 9 Microsoft responded to the first statement of objections on 17 November 2000.

- 10 In the meantime, in February 2000, the Commission, acting on its own initiative, launched an investigation relating, particularly, to Microsoft's Windows 2000 generation of client PC and work group server operating systems and to the integration by Microsoft of its Windows Media Player in its Windows client PC operating system. The client PC operating system in the Windows 2000 range was intended for professional use and was called 'Windows 2000 Professional', whereas the server operating systems in that range were presented under the three following versions: Windows 2000 Server, Windows 2000 Advanced Server and Windows 2000 Datacenter Server.
- 11 That investigation concluded on 29 August 2001, when the Commission sent Microsoft a second statement of objections ('the second statement of objections'), in which it reiterated its previous objections concerning client/server interoperability. The Commission also addressed certain questions relating to interoperability between work group servers (server/server interoperability). In addition, the Commission raised a number of questions concerning the integration of Windows Media Player in the Windows client PC operating system.
- 12 Microsoft responded to the second statement of objections on 16 November 2001.
- 13 In December 2001, Microsoft sent the Commission a report containing the results and the analysis of a survey carried out by Mercer Management Consulting ('Mercer').
- 14 Between April and June 2003, the Commission conducted a wide-ranging market enquiry, sending a series of requests for information to a number of companies and associations pursuant to Article 11 of Regulation No 17 ('the 2003 market enquiry').

- 15 On 6 August 2003, the Commission sent Microsoft a third statement of objections, which was, according to the Commission, intended to supplement the two earlier statements of objections and to indicate the remedies it proposed to order ('the third statement of objections').
- 16 By letter of 17 October 2003, Microsoft responded to the third statement of objections.
- 17 On 31 October 2003, Microsoft sent the Commission a report containing the results and the analysis of two further surveys conducted by Mercer.
- 18 A hearing was held by the Commission on 12, 13 and 14 November 2003.
- 19 On 1 December 2003, Microsoft presented supplemental observations on the third statement of objections.
- 20 On 24 March 2004, the Commission adopted Decision 2007/53/EC relating to a proceeding pursuant to Article 82 [EC] and Article 54 of the EEA Agreement against Microsoft Corp. (Case COMP/C-3.37.792 — Microsoft) (OJ 2007 L 32, p. 23; 'the contested decision').

The contested decision

- 21 In the contested decision, the Commission finds that Microsoft infringed Article 82 EC and Article 54 of the Agreement on the European Economic Area (EEA) by twice abusing a dominant position.
- 22 The Commission first identifies three separate worldwide product markets and considers that Microsoft had a dominant position on two of them. It then finds that Microsoft had engaged in two kinds of abusive conduct. As a result it imposes a fine and a number of remedies on Microsoft.

I — *Relevant product markets and geographic market*

- 23 The contested decision identifies three separate product markets, namely the markets for, respectively, client PC operating systems (recitals 324 to 342 to the contested decision), work group server operating systems (recitals 343 to 401 to the contested decision) and streaming media players (recitals 402 to 425 to the contested decision).
- 24 The first market defined in the contested decision is the market for client PC operating systems. Operating systems are defined as ‘system software’ which controls the basic functions of the computer and enables the user to make use of the computer and run application software on it (recital 37 to the contested decision). Client PCs are defined as general-purpose computers designed for use by one person at a time and capable of being connected to a network (recital 45 to the contested decision).

- 25 As regards the second market, the contested decision defines work group server operating systems as operating systems designed and marketed to deliver collectively 'basic infrastructure services' to relatively small numbers of client PCs connected to small or medium-sized networks (recitals 53 and 345 to the contested decision).
- 26 The contested decision identifies, more particularly, three types of services. These are, first, the sharing of files stored on servers, second, the sharing of printers and, third, the administration of groups and users, that is to say, the administration of the means whereby those concerned can access network services (recitals 53 and 345 to the contested decision). This last type of services is that of ensuring that users have access to and make use of the network resources in a secure manner, first, by authenticating users and second, by checking that they are authorised to perform a particular action (recital 54 to the contested decision). The contested decision states that, in order to provide for the efficient storing and checking of group and user administration information, work group server operating systems rely extensively on 'directory service' technologies (recital 55 to the contested decision). The directory service included in Microsoft's Windows 2000 Server operating system is called 'Active Directory' (recital 149 to the contested decision).
- 27 According to the contested decision, the three types of services described above are closely interrelated in work group server operating systems. They may be broadly described as a 'single service', but viewed from two different perspectives, namely that of the user (file and print services) and that of the network administrator (group and user administration services) (recital 56 to the contested decision). The contested decision characterises those different services as 'work group services'.
- 28 The third market identified in the contested decision is the streaming media player market. Media players are defined as software products capable of reading audio and

video content in digital form, that is to say, of decoding the corresponding data and translating them into instructions for the hardware (for example, loudspeakers or a display) (recital 60 to the contested decision). Streaming media players are capable of reading audio and video content 'streamed' across the Internet (recital 63 to the contested decision).

- 29 As regards the relevant geographic market, the Commission finds in the contested decision, as stated at paragraph 22 above, that it has a worldwide dimension for each of the three product markets (recital 427 to the contested decision).

II — *Dominant position*

- 30 In the contested decision, the Commission finds that Microsoft has had a dominant position on the client PC operating systems market since at least 1996 and also on the work group server operating systems market since 2002 (recitals 429 to 541 to the contested decision).

- 31 As regards the client PC operating systems market, the Commission relies essentially on the following factors to arrive at that conclusion:

- Microsoft's market shares are over 90% (recitals 430 to 435 to the contested decision);

- Microsoft's market power has 'enjoyed an enduring stability and continuity' (recital 436 to the contested decision);

- there are significant barriers to market entry, owing to indirect network effects (recitals 448 to 464 to the contested decision);

- those network effects derive, first, from the fact that users like platforms on which they can use a large number of applications and, second, from the fact that software designers write applications for the client PC operating systems that are the most popular among users (recitals 449 and 450 to the contested decision).

³² The Commission states at recital 472 to the contested decision that that dominant position presents 'extraordinary features' in that Windows is not only a dominant product on the market for client PC operating systems but, in addition, is the '*de facto* standard' for those systems.

³³ As regards the work group server operating systems market, the Commission relies, in substance, on the following factors:

- Microsoft's market share is, at a conservative estimate, at least 60% (recitals 473 to 499 to the contested decision);

- the position of Microsoft's three main competitors on that market is as follows: Novell, with its NetWare software, has 10 to 25%; vendors of Linux products have a market share of 5 to 15%; and vendors of UNIX products have a market share of 5 to 15% (recitals 503, 507 and 512 to the contested decision);

- the work group server operating systems market is characterised by the existence of significant entry barriers, owing in particular to network effects and to Microsoft's refusal to disclose interoperability information (recitals 515 to 525 to the contested decision);

- there are close commercial and technological links between the latter market and the client PC operating systems market (recitals 526 to 540 to the contested decision).

³⁴ Linux is an 'open source' operating system released under the 'GNU GPL (General Public Licence)'. Strictly speaking, it is only a code base, called the 'kernel', which performs a limited number of services specific to an operating system. It may, however, be linked to other layers of software to form a 'Linux operating system' (recital 87 to the contested decision). Linux is used in particular as the basis for work group server operating systems (recital 101 to the contested decision) and is thus present on the work group server operating systems market in conjunction with Samba software, which is also released under the 'GNU GPL' licence (recitals 506 and 598 to the contested decision).

³⁵ 'UNIX' designates a number of operating systems that share certain common features (recital 42 to the contested decision). Sun has developed a UNIX-based work group server operating system called 'Solaris' (recital 97 to the contested decision).

III — *Abuse of a dominant position*

A — *Refusal to supply and authorise the use of interoperability information*

³⁶ The first abusive conduct in which Microsoft is found to have engaged consists in its refusal to supply its competitors with ‘interoperability information’ and to authorise the use of that information for the purpose of developing and distributing products competing with Microsoft’s own products on the work group server operating systems market, between October 1998 and the date of notification of the contested decision (Article 2(a) of the contested decision). That conduct is described at recitals 546 to 791 to the contested decision.

³⁷ For the purposes of the contested decision, ‘interoperability information’ is the ‘complete and accurate specifications for all the protocols [implemented] in Windows work group server operating systems and ... used by Windows work group servers to deliver file and print services and group and user administrative services, including the Windows domain controller services, Active Directory services and “group Policy” services to Windows work group networks’ (Article 1(1) of the contested decision).

³⁸ ‘Windows work group network’ is defined as ‘any group of Windows client PCs and Windows work group servers linked together via a computer network’ (Article 1(7) of the contested decision).

39 A 'protocol' is defined as 'a set of rules of interconnection and interaction between various instances of Windows work group server operating systems and Windows client PC operating systems running on different computers in a Windows work group network' (Article 1(2) of the contested decision).

40 In the contested decision, the Commission emphasises that the refusal in question does not relate to Microsoft's 'source code', but only to specifications of the protocols concerned, that is to say, to a detailed description of what the software in question must achieve, in contrast to the implementations, consisting in the implementation of the code on the computer (recitals 24 and 569 to the contested decision). It states, in particular, that it 'does not contemplate ordering Microsoft to allow copying of Windows by third parties' (recital 572 to the contested decision).

41 The Commission further considers that Microsoft's refusal to Sun is part of a general pattern of conduct (recitals 573 to 577 to the contested decision). It also asserts that Microsoft's conduct involves a disruption of previous, higher levels of supply (recitals 578 to 584 to the contested decision), causes a risk of elimination of competition on the work group server operating systems (recitals 585 to 692 to the contested decision) and has a negative effect on technical development and on consumer welfare (recitals 693 to 708 to the contested decision).

42 Last, the Commission rejects Microsoft's arguments that its refusal is objectively justified (recitals 709 to 778 to the contested decision).

B — *Tying of the Windows client PC operating system and Windows Media Player*

- 43 The second abusive conduct in which Microsoft is found to have engaged consists in the fact that from May 1999 to the date of notification of the contested decision Microsoft made the availability of the Windows client PC operating system conditional on the simultaneous acquisition of the Windows Media Player software (Article 2(b) of the contested decision). That conduct is described at recitals 792 to 989 to the contested decision.
- 44 In the contested decision, the Commission considers that that conduct satisfies the conditions for a finding of a tying abuse for the purposes of Article 82 EC (recitals 794 to 954 to the contested decision). First, it reiterates that Microsoft has a dominant position on the client PC operating systems market (recital 799 to the contested decision). Second, it considers that streaming media players and client PC operating systems constitute separate products (recitals 800 to 825 to the contested decision). Third, it asserts that Microsoft does not give consumers the opportunity to buy Windows without Windows Media Player (recitals 826 to 834 to the contested decision). Fourth, it contends that the tying in question restricts competition on the media players market (recitals 835 to 954 to the contested decision).
- 45 Last, the Commission rejects Microsoft's arguments to the effect that, first, the tying in question produces efficiency gains capable of offsetting the anti-competitive effects identified in the contested decision (recitals 955 to 970 to the contested decision) and, second, Microsoft had no interest in 'anti-competitive' tying (recitals 971 to 977 to the contested decision).

IV — *Fine and remedies*

- 46 In respect of the two abuses identified in the contested decision, a fine of EUR 497 196 304 is imposed (Article 3 of the contested decision).
- 47 Furthermore, the first paragraph of Article 4 of the contested decision requires that Microsoft bring an end to the infringement referred to in Article 2, in accordance with Articles 5 and 6 of that decision. Microsoft must also refrain from repeating any act or conduct that might have the same or equivalent object or effect to those abuses (second paragraph of Article 4 of the contested decision).
- 48 By way of remedy for the abusive refusal referred to in Article 2(a) of the contested decision, Article 5 of that decision provides as follows:
- ‘(a) Microsoft ... shall, within 120 days of the date of notification of [the contested decision], make the interoperability information available to any undertaking having an interest in developing and distributing work group server operating system products and shall, on reasonable and non-discriminatory terms, allow the use of the interoperability information by such undertakings for the purpose of developing and distributing work group server operating system products;
- (b) Microsoft ... shall ensure that the interoperability information made available is kept updated on an ongoing basis and in a timely manner;

(c) Microsoft ... shall, within 120 days of the date of notification of [the contested decision], set up an evaluation mechanism that will give interested undertakings a workable possibility of informing themselves about the scope and terms of use of the interoperability information; as regards this evaluation mechanism, Microsoft ... may impose reasonable and non-discriminatory conditions to ensure that access to the interoperability information is granted for evaluation purposes only;

...'

⁴⁹ By way of remedy for the abusive tying referred to in Article 2(b) of the contested decision, Article 6 of that decision orders Microsoft to offer, within 90 days of the date of notification of that decision, a full-functioning version of the Windows client PC operating system which does not incorporate Windows Media Player, although Microsoft retains the right to offer a bundle of the Windows client PC operating system and Windows Media Player.

⁵⁰ Last, Article 7 of the contested decision provides:

'Within 30 days of the date of notification of [the contested decision], Microsoft ... shall submit a proposal to the Commission for the establishment of a suitable mechanism assisting the Commission in monitoring [Microsoft's] compliance with [the contested decision]. That mechanism shall include a monitoring trustee who shall be independent from Microsoft ...

In case the Commission considers [Microsoft's] proposed monitoring mechanism not suitable it retains the right to impose such a mechanism by way of a decision.'

Proceedings for violation of United States antitrust law

- 51 In parallel with the Commission's investigation, Microsoft was the subject of an investigation for violation of the United States antitrust legislation.
- 52 In 1998, the United States of America, 20 States and the District of Columbia brought proceedings against Microsoft under the Sherman Act. Their complaints concerned the measures taken by Microsoft against Netscape's Internet Navigator and Sun's Java technologies. The States concerned also brought actions against Microsoft for violation of their own antitrust legislation.
- 53 After the United States Court of Appeals for the District of Columbia Circuit ('the Court of Appeals'), on appeal by Microsoft against the judgment of 3 April 2000 of the United States District Court for the District of Columbia ('the District Court'), had given its judgment on 28 June 2001, Microsoft reached a settlement with the United States Department of Justice and the Attorneys General of nine States ('the United States settlement') in November 2001, in which two types of commitment were given by Microsoft.
- 54 First, Microsoft agreed to draw up the specifications of the communication protocols used by the Windows server operating systems in order to 'interoperate', that is to say, to make them compatible with the Windows client PC operating systems and to grant third parties licences relating to those specifications on specific conditions.
- 55 Second, the United States settlement provides that Microsoft must allow original equipment manufacturers ('OEMs') and end users to activate or to eliminate access

to its middleware. Windows Media Player is one of the products in that category, as defined in the United States settlement. Those provisions are intended to ensure that suppliers of media software can develop and distribute products that function properly with Windows.

56 Those provisions were confirmed by a judgment of the District Court of 1 November 2002.

57 On 30 June 2004, the Court of Appeals, on appeal by the State of Massachusetts, affirmed the judgment of the District Court of 1 November 2002.

58 Pursuant to the United States settlement, the Microsoft Communications Protocol Program ('the MCPP') was set up in August 2002.

Procedure

59 By application lodged at the Registry of the Court of First Instance on 7 June 2004, Microsoft brought the present action.

60 By separate document lodged at the Court Registry on 25 June 2004, Microsoft lodged an application under Article 242 EC for suspension of operation of Article 4, Article 5(a) to (c) and Article 6(a) of the contested decision.

61 By order of 22 December 2004 in Case T-201/04 R *Microsoft v Commission* [2004] ECR II-4463, the President of the Court dismissed that application and reserved the costs.

62 By order of 9 March 2005, the President of the Fourth Chamber of the Court granted the following associations and companies leave to intervene in the proceedings in support of the form of order sought by Microsoft:

- The Computing Technology Industry Association, Inc. ('CompTIA');
- DMDsecure.com BV, MPS Broadband AB, Pace Micro Technology plc, Quantel Ltd and Tandberg Television Ltd ('DMDsecure and Others');
- Association for Competitive Technology, Inc. ('ACT');
- TeamSystem SpA and Mamut ASA;
- Exor AB.

63 By the same order, the President of the Fourth Chamber of the Court granted the following associations and companies leave to intervene in the proceedings in support of the form of order sought by the Commission:

- Software & Information Industry Association ('SIIA');

— Free Software Foundation Europe eV ('FSFE');

— Audiobanner.com, trading as 'VideoBanner';

— RealNetworks, Inc.

64 By letters of 13 December 2004, 9 March, 27 June and 9 August 2005, Microsoft requested that certain confidential matters in the application, the defence, the reply, Microsoft's observations on the statements in intervention and the rejoinder not be communicated to the interveners. The applicant produced a non-confidential version of those procedural documents and only those non-confidential texts were furnished to the interveners referred to in paragraphs 62 and 63 above. Those interveners raised no objections in that regard.

65 The interveners referred to in paragraphs 62 and 63 above lodged their own statements in intervention within the prescribed period. The main parties submitted their observations on those statements in intervention on 13 June 2005.

66 By order of 28 April 2005 in Case T-201/04 *Microsoft v Commission* [2005] ECR II-1491, the President of the Fourth Chamber granted the European Committee for Interoperable Systems (ECIS) leave to intervene in the proceedings in support of the form of order sought by the Commission. As that association's application to intervene was lodged after expiry of the period referred to in Article 116(6) of the Rules of Procedure of the Court, it was ordered to submit its observations during the oral procedure, on the basis of the Report for the Hearing, with which it was provided.

- 67 By decision of the Plenary Conference of 11 May 2005, the case was referred to the Fourth Chamber, Extended Composition, of the Court of First Instance.
- 68 By decision of the Plenary Conference of 7 July 2005, the case was referred to the Grand Chamber of the Court of First Instance and assigned to a new Judge-Rapporteur.
- 69 By order of the President of the Grand Chamber of 16 January 2006, RealNetworks was removed from the case as intervener in support of the form of order sought by the Commission.
- 70 On 1 February 2006, the parties were invited by the Court to attend an informal meeting before the President of the Grand Chamber and the Judge-Rapporteur with a view to finalising the arrangements for the hearing. That meeting took place at the Court on 10 March 2006.
- 71 Upon hearing the Judge-Rapporteur, the Court of First Instance (Grand Chamber) decided to open the oral procedure and, pursuant to Article 64 of its Rules of Procedure, invited the main parties to produce certain documents and to answer a series of questions. They complied with those requests within the prescribed period.
- 72 The parties presented oral argument and their answers to the questions put by the Court at the hearing on 24, 25, 26, 27 and 28 April 2006.

73 At the hearing, Microsoft was requested by the Court to lodge a copy of the requests for information sent by the Commission in connection with the 2003 market enquiry, concerning the question of media players, and of the answers to those requests for information, and also of the reports containing the results and analysis of the surveys conducted by Mercer ('the Mercer reports'). Microsoft produced those various documents within the prescribed periods.

74 By letter from the Court of 3 May 2006, Microsoft was requested to produce a copy of the other requests for information issued by the Commission in connection with the 2003 market enquiry and of the replies to those requests. Microsoft complied with that request within the prescribed period.

75 The President of the Grand Chamber closed the oral procedure by decision of 22 June 2006.

Forms of order sought by the parties

76 Microsoft claims that the Court should:

— annul the contested decision;

— in the alternative, annul or substantially reduce the fine;

- order the Commission to pay the costs;

- order SIIA, FSFE and Audiobanner.com to pay the costs relating to their intervention.

77 The Commission contends that the Court should:

- dismiss the action;

- order Microsoft to pay the costs.

78 CompTIA, ACT, TeamSystem and Mamut claim that the Court should:

- annul the contested decision;

- order the Commission to pay the costs.

79 DMDsecure and Others claim that the Court should:

- annul Article 2(b), Article 4, Article 6(a) and Article 7 of the contested decision;

— order the Commission to pay the costs.

80 Exor claims that the Court should:

— annul Articles 2 and 4, Article 6(a) and Article 7 of the contested decision;

— order the Commission to pay the costs.

81 SIIA, FSFE, Audiobanner.com and ECIS contend that the Court should:

— dismiss the action;

— order Microsoft to pay the costs.

Law

82 It is appropriate to examine, first of all, the pleas relating to the forms of order seeking annulment of the contested decision and, next, those relating to the forms of order seeking annulment or a reduction of the fine.

I — *Forms of order seeking annulment of the contested decision*

83 The pleas in law which Microsoft puts forward in support of its application for annulment of the contested decision are centred on three issues, namely, first, the refusal to supply and authorise the use of interoperability information; second, the tying of the Windows client PC operating system and Windows Media Player; and, third, the obligation to appoint an independent monitoring trustee responsible for ensuring that Microsoft complies with the contested decision.

A — *Preliminary issues*

84 In its written pleadings, the Commission raises a number of issues relating to the extent of review by the Community Courts and the admissibility of a number of annexes to the application and the reply.

1. The extent of review by the Community Courts

85 The Commission claims that the contested decision rests on a number of considerations involving complex technical and economic assessments. It submits that, according to the case-law, the Community Courts can carry out only a limited review of such assessments (Case C-269/90 *Technische Universität München* [1991] ECR I-5469, paragraph 13; Joined Cases C-204/00 P, C-205/00 P, C-211/00 P, C-213/00 P, C-217/00 P and C-219/00 P *Aalborg Portland and Others v Commission* [2004] ECR I-123, paragraph 279; and Case T-28/03 *Holcim (Deutschland) v Commission* [2005] ECR II-1357, paragraphs 95, 97 and 98).

- 86 Microsoft, citing by way of example Case T-62/98 *Volkswagen v Commission* [2000] ECR II-2707, paragraph 43, responds that the Community Courts do not refrain from ‘conducting searching inquiries into the soundness of the Commission’s decisions, even in complex cases’.
- 87 The Court observes that it follows from consistent case-law that, although as a general rule the Community Courts undertake a comprehensive review of the question as to whether or not the conditions for the application of the competition rules are met, their review of complex economic appraisals made by the Commission is necessarily limited to checking whether the relevant rules on procedure and on stating reasons have been complied with, whether the facts have been accurately stated and whether there has been any manifest error of assessment or a misuse of powers (Case T-65/96 *Kish Glass v Commission* [2000] ECR II-1885, paragraph 64, upheld on appeal by order of the Court of Justice in Case C-241/00 P *Kish Glass v Commission* [2001] ECR I-7759; see also, to that effect, with respect to Article 81 EC, Case 42/84 *Remia and Others v Commission* [1985] ECR 2545, paragraph 34, and Joined Cases 142/84 and 156/84 *BAT and Reynolds v Commission* [1987] ECR 4487, paragraph 62).
- 88 Likewise, in so far as the Commission’s decision is the result of complex technical appraisals, those appraisals are in principle subject to only limited review by the Court, which means that the Community Courts cannot substitute their own assessment of matters of fact for the Commission’s (see, as regards a decision adopted following complex appraisals in the medico-pharmacological sphere, order of the President of the Court of Justice in Case C-459/00 P(R) *Commission v Trenker* [2001] ECR I-2823, paragraphs 82 and 83; see also, to that effect, Case C-120/97 *Upjohn* [1999] ECR I-223, paragraph 34 and the case-law cited; Case T-179/00 *A. Menarini v Commission* [2002] ECR II-2879, paragraphs 44 and 45; and Case T-13/99 *Pfizer Animal Health v Council* [2002] ECR II-3305, paragraph 323).

89 However, while the Community Courts recognise that the Commission has a margin of appreciation in economic or technical matters, that does not mean that they must decline to review the Commission's interpretation of economic or technical data. The Community Courts must not only establish whether the evidence put forward is factually accurate, reliable and consistent but must also determine whether that evidence contains all the relevant data that must be taken into consideration in appraising a complex situation and whether it is capable of substantiating the conclusions drawn from it (see, to that effect, concerning merger control, Case C-12/03 P *Commission v Tetra Laval* [2005] ECR I-987, paragraph 39).

90 It is in the light of those principles that the Court must examine the various pleas which Microsoft puts forward in support of its application for annulment of the contested decision.

2. Admissibility of the content of certain annexes

91 The Commission, supported on this point by SIIA, claims that in a number of annexes to the application and to the reply Microsoft relies on arguments not found in the actual body of those pleadings. On various occasions, moreover, Microsoft makes a general reference to reports annexed to its pleadings. The Commission further criticises the fact that certain expert opinions produced by Microsoft are based on information to which neither the Commission nor the Court had access, and contends that the Court cannot take account of those arguments, reports or expert opinions.

92 Microsoft asserts that the 'relevant passages of [the] application' contain the essential matters of fact and of law on which the action is based. According to the case-law, specific points in the text of the application can be supported and completed by references to specific passages in documents attached (order in

T-56/92 *Koelman v Commission* [1993] ECR II-1267, paragraph 21). Furthermore, the applicant submits that it took a deliberate decision to limit the number of annexes as it did not wish to make the file too bulky, that it is under no obligation to submit every document referred to in the footnotes in its annexes, that the Commission has copies of all the documents lodged during the administrative procedure and that it cannot be disputed that Microsoft is entitled to provide information to its experts.

93 At the informal meeting of 10 March 2006 (see paragraph 70 above), the Judge-Rapporteur drew Microsoft's attention to the fact that in certain annexes to its pleadings it seemed to rely on arguments not expressly set out in the actual body of those pleadings and questioned Microsoft on that point. As recorded in the minutes of that meeting, Microsoft replied that it was not 'claiming reliance on arguments ... which would not be expressly referred to in the application or in the reply'.

94 The Court recalls that, under Article 21 of the Statute of the Court of Justice and Article 44(1)(c) of the Rules of Procedure of the Court of First Instance, each application is required to state the subject-matter of the proceedings and a summary of the pleas in law on which the application is based. According to consistent case-law it is necessary, for an action to be admissible, that the basic matters of law and fact relied on be indicated, at least in summary form, coherently and intelligibly in the application itself. Whilst the body of the application may be supported and supplemented on specific points by references to extracts from documents annexed thereto, a general reference to other documents, even those annexed to the application, cannot make up for the absence of the essential arguments in law which, in accordance with the abovementioned provisions, must appear in the application (Case C-52/90 *Commission v Denmark* [1992] ECR I-2187, paragraph 17; orders in *Koelman v Commission*, cited in paragraph 92 above, paragraph 21, and Case T-154/98 *Asia Motor France and Others v Commission* [1999] ECR II-1703, paragraph 49). Furthermore, it is not for the Court to seek and identify in the annexes the pleas and arguments on which it may consider the action to be based, since the annexes have a purely evidential and instrumental function (Case T-84/96

Cipeke v Commission [1997] ECR II-2081, paragraph 34, and Case T-231/99 *Joyson v Commission* [2002] ECR II-2085, paragraph 154).

95 That interpretation of Article 21 of the Statute of the Court of Justice and Article 44(1)(c) of the Rules of Procedure of the Court of First Instance also applies to the conditions for admissibility of a reply, which according to Article 47(1) of the Rules of Procedure is intended to supplement the application (see, to that effect, Joined Cases T-305/94 to T-307/94, T-313/94 to T-316/94, T-318/94, T-325/94, T-328/94, T-329/94 and T-335/94 *Limburgse Vinyl Maatschappij and Others v Commission* [1999] ECR II-931, paragraph 40, not set aside on that point by the Court of Justice, on appeal, in Joined Cases C-238/99 P, C-244/99 P, C-245/99 P, C-247/99 P, C-250/99 P to C-252/99 P and C-254/99 P *Limburgse Vinyl Maatschappij and Others v Commission* [2002] ECR I-8375).

96 In the present case, the Court finds that in a number of documents annexed to the application and the reply, Microsoft puts forward legal or economic arguments not limited to supporting or supplementing matters of fact or of law expressly set out in the body of those procedural documents, but which introduce fresh arguments.

97 Furthermore, on a number of occasions Microsoft supplements the text of the application and of the reply on specific points by references to attached documents. However, certain of those references to an attached document are in general terms and therefore do not permit the Court to identify precisely the arguments that might be regarded as supplementing the pleas in law developed in the application or in the reply.

- 98 The Court notes, however, that while the Commission considers that there is no need to take account of the developments in those various annexes, it none the less comments on those developments in notes annexed to its own pleadings.
- 99 In accordance with the case-law referred to at paragraphs 94 and 95 above and with Microsoft's statement at the informal meeting of 10 March 2006 (see paragraph 93 above), the annexes referred to at paragraphs 96 to 98 above will be taken into consideration by the Court only in so far as they support or supplement pleas or arguments expressly set out by Microsoft or the Commission in the body of their pleadings and in so far as it is possible for the Court to determine precisely what are the matters they contain that support or supplement those pleas or arguments.
- 100 As regards the Commission's criticisms of the fact that Microsoft has not provided the information underlying certain expert opinions attached to its pleadings, it is sufficient to state that it is for the Court to appraise, where necessary, whether the assertions in those opinions are without probative value. If, in the absence of access to certain information, the Court should consider that those assertions do not have sufficient probative value, it will not take them into account.

B — *The refusal to supply and to authorise the use of interoperability information*

- 101 In this first issue, Microsoft relies on a single plea alleging infringement of Article 82 EC. This plea may be broken down into three parts. In the first part, Microsoft claims that the criteria which permit an undertaking in a dominant position to be compelled to grant a licence, as defined by the Community judicature, are not satisfied in this case. In the second part, Microsoft claims that Sun did not request

access to the 'technology' that the Commission ordered Microsoft to disclose and that the letter of 6 October 1998 cannot in any event be interpreted as containing an actual refusal on its part. Last, in the third part, Microsoft claims that the Commission does not properly take account of the obligations imposed on the Communities by the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) of 15 April 1994 (Annex 1 C to the Agreement Establishing the World Trade Organisation (WTO)) ('the TRIPS Agreement').

1. First part: the criteria on which an undertaking in a dominant position may be compelled to grant a licence, as defined by the Community judicature, are not satisfied in the present case

(a) Introduction

¹⁰² It may be useful first in this place to give a general outline of the positions taken by the main parties on the issue of the refusal to supply and authorise the use of interoperability information.

¹⁰³ According to the contested decision, Microsoft abused its dominant position on the client PC operating systems market by refusing, first, to supply Sun and other competitors with the specifications for protocols implemented in Windows work group server operating systems and used by the servers running those systems to deliver file and print services and group and user administration services to Windows work group networks and, second, to allow those various undertakings to use those specifications in order to develop and market work group server operating systems.

104 The Commission contends that the information to which Microsoft refuses access is interoperability information within the meaning of Council Directive 91/250/EEC of 14 May 1991 on the legal protection of computer programs (OJ 1991 L 122, p. 42). It claims, in particular, that that directive envisages interoperability between two software products as being the ability for them to exchange information and mutually to use that information in order to allow each of those software products to operate in all the ways contemplated (see, in particular, paragraph 256 of the first statement of objections, paragraph 79 of the second statement of objections and paragraph 143 of the third statement of objections). The Commission maintains that the concept of interoperability which Microsoft advocates is inaccurate (recitals 749 to 763 to the contested decision).

105 The Commission finds, on the basis of a series of factual and technical factors, that ‘the proper functioning of a Windows work group network relies on an architecture of client/server and server/server interconnections and interactions, which ensures a transparent access to the core work group server services (for Windows 2000/Windows 2003, this “Windows domain architecture” can be termed an “Active Directory domain architecture”)’ and that ‘[t]he common ability to be part of that architecture is an element of compatibility between Windows client PCs and Windows work group servers’ (recital 182 to the contested decision). The Commission describes that compatibility in terms of ‘interoperability with the Windows domain architecture’ (recital 182 to the contested decision) and maintains that such interoperability is ‘necessary for a work group server operating system vendor in order to viably stay on the market’ (recital 779 to the contested decision).

106 The Commission further contends that in order that Microsoft’s competitors can develop work group server operating systems capable of achieving such a degree of interoperability when the servers on which they are installed are added to a Windows work group, it is essential that they have access to information relating to interoperability with the Windows domain architecture (recitals 183 and 184 to the

contested decision). It maintains, in particular, that none of the five methods described by Microsoft of ensuring interoperability between operating systems supplied by different vendors constitutes a sufficient substitute for the disclosure of that information (recitals 666 to 687 to the contested decision).

107 Last, the Commission asserts that, according to the case-law, while undertakings are, as a rule, free to choose their business partners, under certain circumstances a refusal to supply by an undertaking in a dominant position may constitute an abuse of a dominant position within the meaning of Article 82 EC. It maintains that the present case presents a number of 'exceptional circumstances' which show that Microsoft's refusal to supply was an abuse, even on the strictest hypothesis — and therefore the one most favourable to Microsoft — that the refusal is regarded as a refusal to supply to third parties a licence relating to intellectual property rights (recitals 190 and 546 to 559 to the contested decision). The Commission maintains that it is entitled to take account of 'exceptional circumstances' other than those identified by the Court of Justice in Joined Cases C-241/91 P and C-242/91 P *RTE and ITP v Commission* [1995] ECR I-743 (*Magill*) and approved by the Court of Justice Case C-418/01 *IMS Health* [2004] ECR I-5039, but that in any event those exceptional circumstances are present in this case.

108 Microsoft has argued since the beginning of the administrative procedure that the concept of interoperability employed by the Commission in the present case is not consistent with the concept of 'full interoperability' envisaged by Directive 91/250 and that it does not correspond to the way in which undertakings organise their computer networks in practice (see, in particular, paragraphs 151 to 157 of the response of 16 November 2001 to the second statement of objections and pages 29 and 30 of the response of 17 October 2003 to the third statement of objections). It claims, in particular, that 'full interoperability is available to a developer of server operating systems when all the functionality of his program can be accessed from a Windows client operating system' (paragraph 143 of the response of 17 November 2000 to the first statement of objections; see also, to the same effect, pages 29 and 63

of the response of 17 October 2003 to the third statement of objections). Microsoft thus adopts what the Commission describes as a 'one-way' definition, whereas the Commission relies on a 'two-way relationship' (recital 758 to the contested decision).

- 109 In Microsoft's submission, the full interoperability referred to above may be achieved through the disclosure of interface information which it already provides, notably by its 'MSDN' product or the conferences which it organises for 'Professional Developers' or through certain other methods available on the market (see, in particular, paragraphs 12, 57 to 63, 73 to 83 and 147 of the response of 17 November 2000 to the first statement of objections; paragraphs 6, 72, 94 to 96, 148 and 149 of the response of 16 November 2001 to the second statement of objections; and page 31 of the response of 17 October 2003 to the third statement of objections).
- 110 Microsoft claims that the Commission's concept of interoperability means, on the other hand, that its competitors' operating systems must function in every respect as a Windows server operating system. That situation could be achieved only if those competitors were allowed to 'clone' its products, or some of their features, and if information on the internal mechanisms of its products were communicated to those competitors (see, in particular, paragraphs 7, 20, 27, 144 to 150 and 154 to 169 of the response of 17 November 2000 to the first statement of objections; paragraphs 158 to 161 of the response of 16 November 2001 to the second statement of objections; and pages 10 and 20 of the response of 17 October 2003 to the third statement of objections).
- 111 Microsoft maintains that a requirement that it disclose such information would amount to an interference with the free exercise of its intellectual property rights and with its incentive to innovate (see, in particular, paragraphs 162, 163 and 176 of the response of 16 November 2001 to the second statement of objections and pages 3, 10 and 11 of the response of 17 October 2003 to the third statement of objections).

- 112 Last, Microsoft submits that the present case must be appraised in the light of *Magill* and *IMS Health*, cited in paragraph 107 above, since the refusal must be analysed as a refusal to grant third parties a licence relating to intellectual property rights and because, accordingly, the contested decision implies compulsory licensing. It maintains, however, that none of the criteria which in its submission were exhaustively accepted by the Court of Justice in those judgments is satisfied in the present case. Microsoft concludes that the refusal at issue cannot be characterised as abusive and that the Commission cannot therefore order it to disclose the interoperability information. In the alternative, Microsoft relies on Case C-7/97 *Bronner* [1998] ECR I-7791 and submits that the criteria laid down in that judgment are not satisfied in the present case either.
- 113 In the second place, it is appropriate to describe the way in which Microsoft structures its argument in the first part of the plea and the way in which the Court will examine that argument.
- 114 Thus, before developing its actual reasoning (see title (d) of the first part, below), Microsoft puts forward a number of considerations concerning interoperability, which may be summarised as follows. First, it claims that there are five methods of achieving interoperability between Windows client PC and server operating systems and competing server operating systems. Second, it criticises the degree of interoperability required by the Commission in the present case (and claims, in essence, that the Commission's real intention is to allow Microsoft's competitors to 'clone' its own products or certain of their features) and also the scope of the remedy prescribed in Article 5 of the contested decision.
- 115 In addition to those various considerations, Microsoft puts forward a series of arguments in order to demonstrate that the communication protocols which it is required to disclose to its competitors pursuant to the contested decision are technologically innovative and that those protocols, or their specifications, are covered by intellectual property rights.

116 Microsoft's actual reasoning in the first part of this plea may be set out as follows:

- the present case must be appraised in the light of the various circumstances recognised by the Court of Justice in *Magill*, paragraph 107 above, and approved in *IMS Health*, cited in paragraph 107 above;

- the circumstances in which a refusal by an undertaking in a dominant position to grant third parties a licence covering intellectual property rights may be characterised as abusive are, first, where the product or service concerned is indispensable for carrying on a particular business; second, where the refusal is liable to exclude all competition on a secondary market; third, where the refusal prevents the emergence of a new product for which there is potential consumer demand; and, fourth, where the refusal is not objectively justified;

- none of those four circumstances is present in this case;

- as a subsidiary point, the criteria applicable are those recognised by the Court of Justice in *Bronner*, cited in paragraph 112 above, which correspond to the first, second and fourth circumstances referred to above and identified in *Magill* and *IMS Health*, cited in paragraph 107 above;

- nor, accordingly, is any of the three *Bronner* criteria, cited in paragraph 112 above, satisfied in the present case.

117 The Court will begin by examining Microsoft's allegations concerning the varying degrees of interoperability and the scope of the remedy prescribed in Article 5 of the contested decision. The applicant's arguments relating to the existence of five methods of achieving interoperability between its operating systems and its competitors' systems will be analysed when the Court examines what is claimed to be the indispensable nature of the interoperability information. The Court will then deal with Microsoft's arguments concerning the intellectual property rights which in its submission cover its communication protocols or the specifications for those protocols. Finally, the Court will appraise the actual reasoning which Microsoft develops in the first part of the plea and determine, first, the circumstances by reference to which Microsoft's impugned conduct must be analysed and, second, whether those circumstances are present in this case.

(b) The varying degrees of interoperability and the scope of the remedy prescribed in Article 5 of the contested decision

Arguments of the parties

118 Microsoft maintains, in essence, that the concept of interoperability on which the Commission bases its conclusion that the refusal to supply interoperability information constitutes an abuse of a dominant position and which serves as the basis for the remedy prescribed in Article 5 of the contested decision is incorrect.

119 Microsoft emphasises that 'interoperability occurs along a continuum' and that 'it is not an absolute standard'.

120 While '[t]here may well be a minimum level of interoperability that is required for effective competition', that level is not difficult to achieve and there are various ways to achieve interoperability in the sense of 'having operating systems supplied by different vendors work well together'.

121 Microsoft contends that in the contested decision the Commission adopts a wholly different concept of interoperability from the one set out in Directive 91/250 and used in practice by undertakings when they organise their computer networks. The Commission imagines that it is possible for a server operating system produced by one of Microsoft's competitors to 'function in all respects' like a Windows server operating system (that is to say, to achieve 'perfect substitutability' or 'plug replaceability'). In fact, that level of interoperability could be achieved only if Microsoft's competitors were authorised to 'clone' its products or certain features of those products. Two server operating systems are able to interoperate in the sense of exchanging information with each other or providing services to each other without necessarily having to be 'exactly the same'. It is thus important to distinguish the concept of 'interoperability' from the concepts of 'cloning' or 'duplication'.

122 In support of its assertions, Microsoft refers to a report by two computer experts which it had attached to its response of 16 November 2001 to the second statement of objections, in which those experts explain the concepts of 'tight coupling' and 'loose coupling' and also explain why efforts to achieve 'tight coupling' with software products from different designers have failed (annex A.9.2 to the application). Those efforts have failed for both technical and business reasons.

123 Microsoft also states that during the administrative procedure it produced 50 statements from undertakings, both public and private, operating in all industry sectors and from what were then the various Member States. In their statements,

those undertakings attest to the high level of interoperability between Windows client and server operating systems and its competitors' server operating systems, due to the use of methods already available on the market. Furthermore, the Mercer reports show that an undertaking's choice of server operating system is not dictated by concerns about interoperability with Windows client and server operating systems.

124 In the reply, when introducing the reasoning designed to show that its communication protocols are protected by intellectual property rights, and also in its answer to one of the written questions put to it by the Court, Microsoft makes a series of allegations concerning the scope of the remedy prescribed in Article 5 of the contested decision. By those allegations, Microsoft also raises the question of the level of interoperability required by the Commission in the present case.

125 Thus, in the reply, Microsoft claims that there is an inconsistency between the remedy and the 'standard of interoperability' employed by the Commission in the contested decision for the purpose of assessing the relevance of the 'alternative means of interoperability'. In its answer to one of the written questions put by the Court, Microsoft asserts that the scope of the disclosure obligation prescribed by Article 5 of the contested decision has been given different interpretations by the Commission.

126 On that last point, Microsoft observes that, at recital 669 to the contested decision, the Commission states that 'open industry standards fall short of enabling competitors to achieve the same degree of interoperability with the Windows domain architecture as Windows work group server operating systems do'. Microsoft also observes that, at recital 679 to the contested decision, the Commission states that 'Novell's "clientless" work group server operating systems cannot use the full capabilities of the Windows client PCs and work group servers in

the same way that [Windows] work group server operating systems can'. Microsoft concludes from those statements that the Commission initially envisaged interoperability as being the capability for its competitors to make their products work in exactly the same way as Windows server operating systems. The Commission thus envisages that there be a quasi identity between Windows server operating systems and its competitors' server operating systems.

127 In order for the degree of interoperability thus advocated by the Commission to be achieved (a degree which Microsoft refers to variously as 'plug replacement', 'plug-replaceability', 'drop-in', 'functional equivalent' and 'functional clone'), Microsoft would have to disclose much more information than that referred to in Article 5 of the contested decision, notably information on the internal mechanisms of its server operating systems (including 'algorithms and decision rules').

128 Microsoft submits that the Commission adopted a second approach and advocated a narrow interpretation of Article 5, taking the view that that article required the applicant to license to its competitors only 'on the wire' communication protocols. In support of that assertion, Microsoft relies on the fact that at the hearing in the interim measures proceedings the parties which had then been granted leave to intervene in support of the form of order sought by the Commission stated that they were not interested in obtaining access to information about the internal mechanisms of the Windows server operating systems. Furthermore, the Commission confirmed in the defence and the rejoinder that it did not propose to allow Microsoft's competitors to 'clone' the file and print services or group and user administration services delivered by the Windows server operating systems. However, the thousands of pages of specifications which Microsoft communicated to the Commission pursuant to the contested decision will none the less allow its competitors to copy certain 'features' of its products that it developed through its own research and development efforts. Thus, for example, by having access to the DRS (Directory Replication Service) protocol, third parties would be able to reverse-engineer other parts of the Windows server operating system that use Active Directory.

129 Taking a third approach, in October 2005, and thus several months after the closure of the written procedure in the present case, the Commission again interpreted Article 5 of the contested decision as meaning that the information that Microsoft was to disclose must allow its competitors to create 'functional equivalents' of the Windows server operating systems or, in other words, systems that were 'perfectly substitutable' for those systems. Microsoft again asserts that such an interpretation of Article 5 requires that it give access to information on the internal mechanisms of its Windows server operating systems.

130 At the hearing, Microsoft discussed the 'multimaster replication' mechanism at length and, in that context, submitted arguments to the same effect as those set out above.

131 Microsoft explained that in the past directory services were executed by a single server which was very large and very expensive. Nowadays those services are generally carried out by a multitude of small, less expensive servers situated in different places and linked in an ensemble which Microsoft illustrated on various slides shown at the hearing by a 'blue bubble'. Microsoft submitted that the software installed on the servers forming part of that 'blue bubble' and involved in supplying directory services must share the same internal logic so that the servers are able to work together as though they were a single unit. Each of those servers must, in effect, presume that the others will react in exactly the same way in response to a given request. Furthermore, the communications between servers operating under a given operating system within the 'blue bubble' are of a very special nature.

132 The multimaster replication mechanism allows any change made to the data contained on a server acting as a domain controller within the 'blue bubble' (for

example, a change in a user's password) to be automatically replicated on all the other servers acting as domain controller and belonging to the same 'blue bubble'.

133 The first company to succeed in developing such a mechanism was Novell, in 1993. However, the mechanism in its NetWare server operating system allows only a maximum of 150 domain controllers to function in a perfectly synchronised manner within a 'blue bubble', whereas the mechanism used by Active Directory in the Windows 2000 Server system can deal with several thousand domain controllers simultaneously.

134 With further reference to the multimaster replication mechanism, Microsoft reiterated that the contested decision was designed to allow its competitors to develop server operating systems containing 'functional equivalents' of its own Windows server operating systems. The decision intended, in particular, that servers implementing directory services on which a non-Microsoft server operating system is installed would be able to replace, within a 'blue bubble', existing servers on which a Windows server operating system using Active Directory is installed. In order for such a result to be capable of being achieved, however, non-Microsoft server operating systems would have to function in exactly the same way — and therefore share the same internal logic — as Windows server operating systems using Active Directory. That would be possible only if Microsoft's competitors had information relating to the internal mechanisms of its server operating systems, including certain algorithms, namely information going well beyond interoperability information within the meaning of the contested decision.

135 Multimaster replication could not therefore intervene between servers operating under operating systems from different suppliers. For example, a server on which a

Sun operating system is installed could not be placed within a 'blue bubble' containing servers operating under a Novell operating system or using Active Directory. Microsoft explained, however, that since Active Directory relies on standard protocols such as LDAP (Lightweight Directory Access Protocol), it is capable of functioning, within the same computer network, with the directory services provided by its competitors' server operating systems. It makes no difference whether that interoperability operates between two separate servers or between one server and a group of servers within a 'blue bubble'.

136 The Commission rejects Microsoft's claims.

137 It begins by referring to the definition of 'interoperability information' and 'protocols' in Article 1(1) and (2) of the contested decision. According to the decision, Microsoft is required to provide technical documentation, called 'specifications', which describes those protocols in detail. The specifications show 'how to format the messages, when to originate them, how to interpret them, cope with incorrect messages, etc.'. It is essential to distinguish that technical documentation from the source code of Microsoft's products, and a competitor wishing to write a server operating system which 'understands' Microsoft's protocols will have to ensure that its product includes source code that implements the protocol specifications. However, two programmers implementing the same protocol specifications will not write the same source code and their programs will perform differently (recitals 24, 25, 698 and 719 to 722 to the contested decision). From that point of view, protocols may be compared with a language whose syntax and vocabulary are the specifications, in so far as the mere fact that two persons learn the syntax and vocabulary of the same language does not guarantee that they will use it in the same way. Furthermore, 'the fact that two products provide their services through compatible protocols says nothing about how they provide the services'.

138 The Commission asserts that Microsoft advocates a narrow definition of the concept of interoperability, and one that is incompatible with Directive 91/250. It refers to recitals 749 to 763 to the contested decision and observes that Microsoft adduces no new argument by comparison with the assertions already made during the administrative procedure. At the hearing, the Commission stated that it had relied on that directive not only in order to demonstrate the importance of interoperability in the software sector, but also for the purpose of appraising the concept of interoperability.

139 The Commission also recognises that there is a whole range of possible degrees of interoperability between PCs running Windows and work group server operating systems and that ‘some interoperability’ with the Windows domain architecture is already possible. It did not fix *a priori* a given level of interoperability which is indispensable to the maintenance of effective competition on the market but, following its investigation, it established that the degree of interoperability that competitors could achieve using the available methods was too low to enable them to remain viably on the market. The Commission refers to the section of the contested decision in which it shows that ‘interoperability is the key factor driving the uptake of Microsoft’s work group server operating systems’ (recitals 637 to 665 to the contested decision) and observes that it became apparent that those methods ‘did not permit the level of interoperability required by customers [to be achieved] in an economically viable manner’.

140 In the rejoinder, the Commission contends that, in the contested decision, it does not conclude that it is indispensable that Microsoft’s competitors be allowed to reproduce its ‘interoperability solutions’. What matters is that they are able to achieve an equivalent degree of interoperability by their own innovative efforts.

141 Last, the Commission submits that, contrary to Microsoft’s contention, the contested decision is not designed to enable non-Microsoft server operating systems to function in all respects like a Windows server operating system and,

consequently, to permit its competitors to 'clone' the features of its products. The contested decision is in fact intended to enable those competitors to develop products which 'w[ould] function differently [but would be] able to understand the messages conveyed by Microsoft's relevant products'. Furthermore, the interoperability information that Microsoft must disclose to its competitors under the contested decision will not enable them to create exactly the same products as Microsoft's products.

142 On that point, the Commission stated at the hearing that it was necessary to distinguish the concept of 'functional equivalent' from that of 'functional clone'. A 'functional equivalent' is not a system operating identically to the Windows work group server operating system which it replaces but rather a system that can provide the appropriate response to a specific request under the same conditions as that Windows operating system and can make a Windows client PC or server react to its messages in the same way as if they came from that Windows operating system.

143 The Commission submits that 'tight coupling' and 'loose coupling' are not clearly-defined technical terms, especially in the field of operating systems software. In any event, it does not agree that the 'tightly-coupled interface details' referred to in the report in annex A.9.2 are innovative.

144 The Commission has already discussed the customer statements submitted by Microsoft during the administrative procedure, at recitals 357, 358, 440 to 444, 511, 513, 595, 602, 628 and 707 to the contested decision. Those statements, which date back to 2000 and 2001, relate in essence to undertakings which had to a large extent adopted Windows as the 'standard' for their work group networks. As for the Mercer reports, the Commission submits that it has already stated at recital 645 to the contested decision that the data analysed in those reports suggest precisely the opposite of what Microsoft claims.

- 145 The Commission proceeds to reject the argument which Microsoft derives from the alleged inconsistency between the remedy prescribed in Article 5 of the contested decision and the standard of interoperability used in the decision to appraise the relevance of the 'alternative means of interoperability'.
- 146 The Commission professes to find it difficult to understand the meaning of that argument. In the excerpts from recitals 669 and 679 to the contested decision which Microsoft cites, the Commission does not reject certain alternatives to disclosure of interoperability information on the ground that those alternatives do not permit the 'cloning' of Microsoft's products, or certain features of those products, but merely notes that those alternatives 'provide a lesser degree of interoperability with Microsoft's dominant products (a lesser ability to access the features of [those] products) than Microsoft's own offering enjoys'. What is at stake, therefore, is the ability to 'work with' the Windows environment.
- 147 It is clear from recitals 568 to 572, 740 and 749 to 763 to the contested decision, moreover, that the decision concerns only disclosure of interface specifications. Microsoft does not substantiate to the requisite legal standard its assertion that, by having access to its communication protocols specifications, third parties would be able to reverse engineer other parts of the Windows server operating system that use Active Directory.
- 148 At the hearing, the Commission disputed the merits of the assertions which Microsoft made on the basis of the multimaster replication mechanism. It confirmed that the contested decision was intended to ensure, in particular, that servers running a work group server operating system produced by one of Microsoft's competitors would be able to form part of a 'blue bubble' consisting of servers on which a Windows work group server operating system is installed and that, accordingly, the disclosure obligation prescribed in Article 5 of the contested decision would also cover information on communications between servers within

that 'blue bubble'. However, it rejected Microsoft's assertion that that purpose could be achieved only by providing access to information on the internal mechanisms of its products.

¹⁴⁹ SIIA emphasises the crucial role that interoperability plays in the software sector. There is no doubt that consumers place great significance on the fact that computer programs are interoperable with the quasi-monopolistic products represented by Windows client PC operating systems. In normal competitive circumstances, software developers have every incentive to favour interoperability between their products and their competitors' products and to disclose interoperability information. They thus compete on the basis of 'normal' factors such as price and product security, processing speed or innovative functionality. Microsoft, on the other hand, uses its quasi-monopoly position on certain markets to leverage that position into adjacent markets. More specifically, Microsoft restricts its competitors' capacity to achieve interoperability with its 'quasi-monopolistic' products by failing to comply with industry standard protocols, by making 'minor (and unnecessary) additions' to them and by then refusing to disclose information about those 'extended protocols' to its competitors.

¹⁵⁰ SIIA also disputes Microsoft's assertion that the contested decision seeks to allow Microsoft's competitors to develop server operating systems that function in all respects like a Windows server operating system. The purpose of the contested decision is to allow non-Microsoft work group server operating systems to interoperate with Windows client PC and work group server operating systems in the same way as Windows work group server operating systems do.

Findings of the Court

151 In the various arguments set out at paragraphs 118 to 135 above, Microsoft raises two main issues: first, the degree of interoperability required by the Commission in the present case; and, second, the scope of the remedy prescribed in Article 5 of the contested decision.

152 Those two issues are intrinsically linked, since, as is apparent in particular from recital 998 to the contested decision, the purpose of the remedy is to require Microsoft to disclose what in the Commission's contention it has abusively refused to disclose, and to disclose it both to Sun and to its other competitors. The scope of the remedy must therefore be assessed in the light of the abusive conduct in which Microsoft is found to have engaged, which depends in particular on the degree of interoperability envisaged by the Commission in the contested decision.

153 For the purpose of deciding those issues, the Court will begin by reviewing a series of factual and technical findings made in the contested decision. It was on the basis of its examination of, in particular, the way in which Windows work group networks are organised and the links between the various operating systems within those networks that the Commission evaluated the degree of interoperability required in the present case and thus concluded that access to the interoperability information was indispensable. The Court will also define at the outset the nature of the information at which the contested decision is directed.

— Factual and technical findings

154 At recitals 21 to 59, 67 to 106 and 144 to 184 to the contested decision, the Commission makes a series of factual and technical findings concerning the products and technologies concerned.

155 The Court notes at the outset that Microsoft does not, in effect, dispute those various findings. To a large extent, moreover, they are based on statements made by Microsoft during the administrative procedure (especially in its responses to the three statements of objections) and also on documents and reports published on its Internet site. Furthermore, the technical presentations by the parties' experts at the hearing, including Microsoft's, confirm the substance of those findings.

156 In the first place, the Commission, after observing that the word 'interoperability' could be used in different contexts by technicians and lent itself to different uses, cites, first of all, the 10th, 11th and 12th recitals in the preamble to Directive 91/250 (recital 32 to the contested decision).

157 Those recitals read as follows:

'... the function of a computer program is to communicate and work together with other components of a computer system and with users and, for this purpose a logical and, where appropriate, physical interconnection and interaction is required to permit all elements of software and hardware to work with other software and hardware and with users in all the ways in which they are intended to function;

... the parts of the program which provide for such interconnection and interaction between elements of software and hardware are generally known as "interfaces";

... this functional interconnection and interaction is generally known as “interoperability”; ... such interoperability can be defined as the ability to exchange information and mutually to use the information which has been exchanged’.

158 The Commission then states that Microsoft criticises it for adopting in the present case a concept of interoperability that goes beyond what is contemplated by Directive 91/250. None the less, the Commission and Microsoft are agreed that ‘interoperability is a matter of degree and that various software products in a system “interoperate” (at least partially) when they are able to exchange information and mutually to use the information which has been exchanged’ (recital 33 to the contested decision).

159 In the second place, the Commission observes that nowadays computers increasingly operate in conjunction with other computers in a network. Depending on the specific tasks that they want to carry out, client PC users use both the computing capability of their own client PC and at the same time the capabilities of the various types of more powerful ‘multi-user’ computers, namely ‘servers’, which they access indirectly through their client PCs (recital 47 to the contested decision). In order to ensure easy and efficient access to network ‘resources’, the applications must be distributed across several computers, each of which hosts different components that ‘interoperate’, and the computers linked within the network must be integrated into a consistent ‘distributed computing system’ (recital 48 to the contested decision). Last, ‘[s]uch a system would ideally make the complexity of the underlying hardware and software “transparent” (that is to say, invisible) to the user and distributed applications alike, so that users and applications can easily find their way through this complexity in order to access computing resources’ (recital 48 to the contested decision).

160 In the third place, the Commission emphasises that the present case focuses on ‘work group server services’, namely the basic infrastructure services used by office workers in their day-to-day work (recital 53 to the contested decision). It identifies, more particularly, the following three types of services: first, the sharing of files stored on servers; second, the sharing of printers; and, third, the administration of groups and users. The third type of services involves in particular ensuring secure access to network resources and the secure use of those resources, notably, first by authenticating users and then by checking that they have the right to perform a particular action (recital 54 to the contested decision).

161 Those different services, moreover, are closely interrelated and may in fact to a large extent be regarded as ‘one and the same ... service’, but viewed from two different perspectives, namely that of the user (file and print services) and that of the network administrator (group and user administration services) (recitals 56 and 176 to the contested decision). Although Microsoft maintains in its reasoning relating to the elimination of competition that the Commission adopted an ‘artificially narrow’ definition of the relevant product market by including only the three types of services referred to above (see paragraphs 443 to 449 below), it does not dispute the existence of such links between those services.

162 In the light of those factors, the Commission defines ‘work group server operating systems’ as operating systems designed and marketed to deliver file and print services, and also group and user administration services, collectively to relatively small numbers of client PCs linked together in small to medium-sized networks (recitals 53 and 345 to the contested decision). In order to store and query the group and user administration information effectively, those operating systems generally rely on ‘directory service’ technologies (recital 55 to the contested decision).

- 163 In the fourth place, the Commission examines the way in which interoperability is achieved in 'Windows work group networks' (recitals 144 to 184 to the contested decision), namely 'group[s] of Windows Client PCs [on which a Windows client PC operating system is installed] and Windows Work Group Servers [on which a Windows work group server operating system is installed] linked together via a computer network' (Article 1(7) of the contested decision).
- 164 To that end, the Commission focuses on Microsoft's 'Windows 2000' generation of operating systems, while observing that the essential characteristics of those systems are similar to those of the next generation of systems (namely the 'Windows XP Home Edition' and 'Windows XP Professional' operating systems for client PCs and the 'Windows 2003 Server' operating system for servers) (footnote 182 to the contested decision).
- 165 First, the Commission sets out a series of considerations concerning the group and user administration services (recitals 145 to 157 to the contested decision). Within the Windows work group networks, the 'Windows domains' lie at the core of the provision of those services; the Commission characterises those domains as 'administrative units' whereby the Windows work group server operating systems administer client PCs and work group servers (recitals 145 and 146 to the contested decision). In particular, each 'resource' (computer, printer, user, application, etc.) in a Windows domain has one 'domain account', which defines its identity for the whole domain, and within the same Windows domain there is a 'single user logon', in the sense that when the user logs on to a domain resource (generally his client PC) he is 'recognised' by all the other resources in the same domain and does not need to enter his name and password again (recital 146 to the contested decision).
- 166 The Commission emphasises the importance of the role played within the Windows domains by servers known as 'domain controllers', in contrast to other servers,

which are known as ‘member servers’ (recital 147 to the contested decision). Domain controllers are responsible for storing domain accounts and the related information. In other words, they act as ‘switchboard operators’ of the Windows domain (recital 147 to the contested decision).

¹⁶⁷ The Commission emphasises, more particularly, the key role played by Active Directory and the changes which the introduction of that ‘full-fledged directory service’ to the Windows 2000 Server operating system has made to the way in which domain controllers relate to each other in Windows 2000 domains by comparison with the earlier Windows operating systems, namely those of the Windows NT generation (recital 149 to the contested decision).

¹⁶⁸ The Windows NT 4.0 operating system had primary domain controllers and backup domain controllers. In that system, changes to domain accounts could be made only by the primary domain controller and were then periodically and automatically propagated to all backup domain controllers. In a Windows 2000 domain, on the other hand, all domain controllers operate as ‘peers’, so that it is possible to make changes to domain accounts on any of them, those changes then being automatically propagated to the other domain controllers (recital 150 to the contested decision). Those operations are carried out by means of new synchronisation protocols, which are different from those used by the Windows NT 4.0 operating system.

¹⁶⁹ Another new feature of Windows 2000 domains is that they can be organised hierarchically, with ‘trees’ of Windows 2000 domains linked to each other by automatic trust relationships, while several ‘trees’ can then be linked by trust relationships in a ‘forest’ (recital 151 to the contested decision). Windows 2000

domain controllers can be set up as 'global catalog servers', which means that they store not only information on the resources available on the domains which they control but also a 'summary' of all the resources available in the 'forest', namely the 'Global Catalog'. The data stored in the global catalog are updated by various protocols.

170 The Commission goes on to explain that the move from Windows NT technology to Windows 2000 technology has also entailed changes with respect to the security architecture of Windows work group networks (recitals 152 to 154 to the contested decision). In particular, in the Windows 2000 domain authentication is based on the 'Kerberos' protocol and no longer on the NTLM (NT LAN Manager) protocol, which provides a series of advantages as regards connection speed, mutual authentication and trust management. The 'Key Distribution Centre' foreseen by the Kerberos protocol 'is integrated with other Windows 2000 security services running on the domain controller and uses the domain's Active Directory as its security account database' (recital 153 to the contested decision). However, the Kerberos protocol implemented in the Windows 2000 Professional and Windows 2000 Server operating systems is not the standard version developed by the Massachusetts Institute of Technology (MIT), but a version 'extended' by Microsoft (recitals 153 and 154 to the contested decision).

171 Last, the changes brought about by the move from Windows NT technology to Windows 2000 technology and Active Directory include the fact that a number of functions are integrated both in the Windows 2000 Professional operating system and in the Windows 2000 Server operating system, in order to simplify the administration of Windows client PCs in Windows domains (recitals 155 to 157 to the contested decision). Those functions — the Commission cites, more particularly, the 'Group Policy' and 'Intellimirror' functions — are 'significantly enhanced', or even available solely, in a Windows 2000 domain managed from a Windows 2000 domain controller using Active Directory (recital 156 to the contested decision). The Commission notes that, according to Microsoft, '[Group Policy was] a feature of

Windows 2000 ... that allow[ed] administrators centrally to manage collections of users, computers, applications and other network resources instead of managing [those] objects on a one-by-one basis'. Groups may be defined locally for a given computer or defined for the whole Windows domain, while Intellimirror, which is available only in a Windows 2000 domain, allows users to have their 'working environment' (data, software, etc.) available with their personal settings, whether they are connected to the network or not and wherever they are on the network (recital 157 to the contested decision).

172 Second, the Commission sets out a series of considerations concerning file and print services (recitals 158 to 164 to the contested decision).

173 In particular, modern work group server operating systems provide support for 'distributed file systems' and at the end of the 1990s Microsoft marketed such a system, called 'Dfs' (Distributed File System), in the form of an add-on that could be installed on client and server PCs running Windows NT 4.0. Windows 2000 is the first generation of Microsoft products to include native support for Dfs both on the client PC and the work group server side (recitals 161 to 163 to the contested decision).

174 Under Windows 2000, Dfs may be installed either in 'stand-alone' mode or 'domain-based' mode, but the latter mode, which provides a number of advantages in terms of 'intelligent' retrieval of the Dfs information from client PCs, is available only in Windows domains and is enhanced by the presence of domain controllers running Active Directory (recital 164 to the contested decision).

175 Third, the Commission explains that Microsoft has developed its own set of distributed object-based system technologies, encompassing COM (Component Object Model) and DCOM (Distributed Component Object Model) technologies (recital 166 to the contested decision). Those two technologies are closely interrelated and COM, which is implemented in both Windows client PC operating systems and Windows work group server operating systems, links those two operating systems into a consistent platform for distributed applications (recital 166 to the contested decision). In its response to the third statement of objections, Microsoft stated that 'COM [was] fundamental to the architecture of Windows operating systems, with the result that many interfaces in Windows [were] COM-based' (recital 167 to the contested decision). More particularly, many interactions between client PCs and the Active Directory service in Windows work group servers involve COM/DCOM. Furthermore, the 'DCOM protocol' is involved in client/server communications whereby Windows servers deliver authentication services or file services to Windows client PCs (recital 167 to the contested decision).

176 Fourth, the Commission explains that in many ways Microsoft encourages 'natural migration' from its Windows NT operating systems to its Windows 2000 operating systems, both by its customers and by software developers (recitals 168 to 175 to the contested decision).

177 Thus, in a Windows domain it is possible to 'upgrade' computers using previous versions of Windows by having them 'migrate' to Windows 2000 without using Active Directory. However, customers can take full advantage of the 'upgrade' only by installing a Windows 2000 domain running Active Directory in 'native mode', which means that all the domain controllers in the domain concerned 'migrate' to Windows 2000 and Active Directory. The work group servers of the domain which do not act as domain controllers must also be compatible with Windows 2000 (which assumes, in particular, that they implement the Kerberos protocol, in the version extended by Microsoft). When a Windows 2000 domain is installed in 'mixed mode' (when the primary domain controller has 'migrated' to Windows 2000

but some of the backup domain controllers are still running Windows NT), the user does not benefit from all the advanced features of the Windows 2000 domain. In particular, the user must forego most of the additional flexibility that Active Directory brings to the management of groups of users. Once the user switches his primary controller to native mode he can no longer use as a domain controller a server that is interoperable only with the Windows NT 4.0 generation of Microsoft products (including work group servers running non-Microsoft systems).

178 Software developers are strongly encouraged by Microsoft to use the new features of the Windows operating systems, in particular Active Directory, notably by means of the certification programmes which it has set up (recitals 171 to 175 to the contested decision).

179 Fifth, the Commission draws a series of conclusions (recitals 176 to 184 to the contested decision).

180 It reiterates, first of all, that in Windows technologies file and print services and group and user administration are delivered to users of Windows client PCs as a 'set of interrelated services'. By way of illustration, the Commission states that, in a Windows 2000 domain, 'the server message block (SMB) client and server underlying [Dfs], [DCOM], LDAP authentication, ... all use [Microsoft] Kerberos automatically for authentication' (recital 176 to the contested decision). Furthermore, besides authentication, the authorisation process depends on the ability to create, modify and interpret 'Access Control Lists' (ACL), which involves

communication with the domain controllers of the domain (recital 176 to the contested decision).

181 Next, the Commission states that, in order to be able to deliver their services ‘transparently’ to client PC users, Windows work group servers use specific pieces of software code in the Windows client PC operating system (recital 177 to the contested decision). In that regard, the Commission observes, in particular, that Microsoft stated that ‘Dfs [had] a local component that [would] run even if a Windows 2000 Professional client [PC] [was] operating in standalone mode’ and that ‘Windows 2000 Professional contain[ed] a client code that [could] be used to access Active Directory’ (recital 177 to the contested decision). Quoting the author of a work entitled ‘Understanding Active Directory Services’ published by Microsoft Press, the Commission also states that ‘Active Directory is completely — often invisibly — integrated into the [Windows client PC]’ (recital 177 to the contested decision).

182 The Commission emphasises that it is important, however, that the interconnection and interaction involving the Windows 2000 Professional source code should not be viewed solely as being intended to enable a particular Windows work group server to communicate with a particular Windows client PC. It is more accurate to describe that interconnection and that interaction in terms of interoperability within a computer system encompassing several Windows client PCs and several Windows work group servers, all linked together in a network. Interoperability within such a computer system thus has two inseparable components, namely client/server interoperability and server/server interoperability (recital 178 to the contested decision).

183 In many cases, moreover, there is 'symmetry between server/server and client/server interconnection and interaction' (recital 179 to the contested decision). The Commission mentions, by way of example, the fact that the same 'application program interface' (API), namely 'ADSI' (Active Directory Service Interface), is implemented both on Windows 2000 Professional and Windows 2000 Server to handle access to Active Directory domain controllers. A further example given by the Commission is the fact that, in a Windows domain, the Kerberos protocol, as extended by Microsoft, is used for authentication both between a Windows client PC and a Windows work group server and between several Windows work group servers.

184 In certain circumstances, 'servers will query other servers on behalf of a client PC' (recital 180 to the contested decision). By way of example, the Commission mentions, in particular, 'Kerberos delegation', a functionality present in the Windows 2000 Server operating system which allows a server to borrow the identity of a client PC and to request a service from another server on behalf of that client PC. Thus servers quite frequently address requests to other servers and therefore act as client PCs (see also footnote 51 to the contested decision).

185 Some client/server communications build on the expectation that certain server/server communications have already taken place. In particular, when a client PC running Windows 2000 Professional queries the domain controller in a Windows 2000 domain, the client PC will expect 'some preparatory coordination to have taken place between the domain controllers running Windows 2000 Server' (recital 181 to the contested decision). According to the Commission, '[that] includes, for example, both the fact that domain controllers will hold a full copy of the Active Directory data, which are kept updated through synchronisation protocols[,] and the fact that Global Catalog servers are able to store information about computers of the forest that are outside their domain, which is possible through various Global Catalog-

related products' (recital 181 to the contested decision). In such a situation, the server/server communication is 'logically linked' to the client/server communication, since it occurs in preparation for the client/server communication.

186 It follows from all of the foregoing matters — which Microsoft does not substantially contest and the correctness of which was largely confirmed by the technical presentations made at the hearing — that, as the Commission correctly observes at recital 182 to the contested decision, Windows work group networks rely on an 'architecture' of both client/server and server/server interconnections and interactions and that that 'architecture' — which the Commission characterises as 'Windows domain architecture' — ensures 'transparent access' to the main services provided by work group servers.

187 Those various factors also show that, as found at various points in the contested decision (see, in particular, recitals 279 and 689 to the contested decision), those interconnections and interactions are closely interlinked.

188 In other words, the proper functioning of the Windows work group networks relies both on client/server communication protocols — which, by their nature, are implemented both in Windows client PC operating systems and in Windows work group server operating systems — and on server/server communication protocols. As the Commission explained at the hearing, for numerous tasks, server/server communication protocols appear, in fact, as 'extensions' of the client/server communication protocols. In certain cases, a server acts as a client PC vis-à-vis another server (see paragraph 184 above). Likewise, while it is true that certain communication protocols are implemented only in Windows work group server

operating systems, the fact remains that, from a functional point of view, they are linked to the client PCs. The Commission refers on that point, without being contradicted by Microsoft, to the Global Catalog-related protocols and to the synchronisation and replication protocols between domain controllers.

189 The Court therefore finds that the Commission is quite correct to conclude that ‘the common ability to be part of [the Windows domain architecture] is a feature of compatibility between Windows client PCs and Windows work group servers’ (recital 182 to the contested decision).

190 Finally, it is necessary to bear in mind the major role played by directory services on the work group server operating systems market. Microsoft itself observes in the reply that on that market ‘the directory service is a key competitive feature responsible in large part for the success of particular products’ and emphasises, in particular, that ‘Active Directory is ... at the heart of Windows server operating systems’, after stating that ‘[f]or both file and print services and user and group administration services, it [is] important to know with precision which user [is] entitled to access which network resources’.

191 Active Directory logs all network object information and allows it to be administered centrally. It fully integrates administration and user authentication and access control functionalities and thus ensures the security of the information. In addition, Active Directory uses the multi-master replication mechanism.

— The nature of the information referred to in the contested decision

192 The first abusive conduct in which Microsoft is found to have engaged is its refusal to supply the interoperability information to its competitors and to allow its use for the purpose of developing and distributing work group server operating system products between October 1998 and the date of the contested decision (Article 2(a) of the contested decision).

193 By way of remedy for that refusal, the Commission ordered Microsoft, *inter alia* (Article 5(a) of the contested decision), to do the following:

‘Microsoft ... shall, within 120 days of the date of notification of [the contested decision], make the interoperability information available to any undertaking having an interest in developing and distributing work group server operating system products and shall, on reasonable and non-discriminatory terms, allow the use of the interoperability information by such undertakings for the purpose of developing and distributing work group server operating system products[.]’

194 It is appropriate to bear in mind the way in which the Commission defined and assessed the principal concepts of relevance to the present issues.

195 Thus, in Article 1(1) of the contested decision, it defines ‘interoperability information’ as ‘the complete and accurate specifications for all the protocols [that are] implemented in Windows work group server operating systems and that are used by Windows work group servers to deliver file and print services and group

and user administration services, including the Windows domain controller services, Active Directory services and Group Policy services, to Windows work group networks’.

196 ‘Protocols’ are described by the Commission as rules of interconnection and interaction between various pieces of software within a network (recital 49 to the contested decision). More specifically, the protocols at issue in the present case are defined as ‘a set of rules of interconnection and interaction between various instances of Windows work group server operating systems and Windows client PC operating systems running on different computers in a Windows work group network’ (Article 1(2) of the contested decision).

197 The Court notes that Microsoft does not contest the Commission’s concept of ‘protocols’. On the contrary, in the application Microsoft itself describes protocols as enabling ‘computers connected via a network to exchange information to accomplish predefined tasks’. Indeed, in a report by one of its experts, Mr Madnick, annexed to the applicant’s observations on the statements in intervention, the applicant draws a distinction between two categories of communication protocols, depending on whether they are ‘simple’ or ‘complex’ and mentions the DRS protocol as coming within the second category (annex I.3 (Madnick, ‘Response to Mr Ronald S. Alepin’s Annex on Interoperability and the FSFE’s Submission’)). However, in making that distinction Microsoft does not seek to challenge the correctness of the definition referred to above, but only to establish that complex protocols govern interactions between various similar elements of a network which deliver a joint service in close coordination and that they ‘reveal’ much more detailed and more valuable information than simple protocols.

198 ‘Specifications’ are not defined in the operative part of the contested decision. However, it is common ground that specifications take the form of detailed technical documentation, which, indeed, reflects the way in which that concept is generally understood in the computer industry.

199 At recital 24 to the contested decision, the Commission states that it is important to distinguish the concept of ‘specifications’ from the concept of ‘implementation’, in the sense that ‘[a] specification is a description of what the software product must achieve, whereas the implementation relates to the actual code that will run on the computer’ (see, to the same effect, recital 570 to the contested decision). In other words, specifications describe the interfaces by means of which a given element of a computer system can use another element of the same system. They describe, in particular, and in a very abstract manner, what functionalities are available and the rules which allow those functionalities to be called up and received.

200 At recital 571 to the contested decision, the Commission states that it is possible to provide interface specifications without disclosing implementation details, and that it is common practice to do so in the computer industry, especially when open interoperability standards are adopted (see also, on that point, recital 34 to the contested decision). In its statement in intervention, SIIA puts forward arguments to the same effect.

201 A number of factors confirm the correctness of those different assertions. First, the practice to which the Commission refers is supported by a set of examples — not disputed by Microsoft — which are mentioned in the contested decision, namely the ‘POSIX 1’ specifications (recitals 42 and 88 to the contested decision), the ‘Java’ specifications (recital 43 to the contested decision), the specifications of the ‘Kerberos version 5’ protocol (recital 153 to the contested decision), the specifications of the ‘NFS’ (Network File System) protocol developed by Sun

(recital 159 to the contested decision) and the ‘CORBA’ specifications drawn up by the Object Management Group (recital 165 to the contested decision). Second, as the Commission states at recital 571 to the contested decision, under the MCPP set up pursuant to the United States settlement, licensees are not granted access to Microsoft’s source code, but to specifications of the relevant protocols.

202 Nor does Microsoft call in question, other than quite incidentally, the above-mentioned distinction between the concepts of ‘specifications’ and ‘implementation’, as it merely makes a general reference in footnote 74 to the application to an opinion drawn up by its experts Mr Madnick and Mr Nichols, which was submitted to the Commission during the administrative procedure and is annexed to the application (annex A.12.2 to the application). For the reasons stated at paragraphs 94 and 97 above, the Court considers that it cannot take that opinion into account. Furthermore and in any event, the argument in that opinion is largely based on an incorrect premiss, namely, that the degree of interoperability required by the Commission in the present case means that Microsoft’s competitors must be capable of reproducing or ‘cloning’ Microsoft’s products or certain of their functionalities (see paragraphs 234 to 239 below).

203 The Court notes, moreover, that in the contested decision the Commission expressly states that the abusive refusal to supply imputed to Microsoft concerns only the specifications of certain protocols and not the source code (see, in particular, recitals 568 to 572 to the contested decision).

204 To the same effect, the Commission emphasises on a number of occasions that it is not its intention to order Microsoft to disclose its source code to its competitors. Thus, at recital 999 to the contested decision, it states that ‘the term “specifications” makes clear that Microsoft should not be required to disclose its own implementation of [those] specifications, that is to say, its own source code’. Likewise, it observes at recital 1004 to the contested decision that the decision ‘does not contemplate compulsory disclosure of Windows source code as [that] is not

necessary to achieve the development of interoperable products'. At the same recital, the Commission states that '[t]he disclosure order should concern the interface specifications only'.

205 In an opinion entitled 'Innovation in Communication Protocols that Microsoft is ordered to license to its server operating system competitors', enclosed as annex C.4 to the reply, Mr Lees, one of Microsoft's experts, himself draws a distinction between 'the protocols used for communications between servers and ... the algorithms/decision rules that operate internally on each server', before observing that it is the protocols that have to be disclosed pursuant to Article 5 of the contested decision. In his opinion, Mr Lees focuses on the DRS protocol, used for the multimaster replication mechanism, and states that it represents one of numerous protocols to which Microsoft grants its competitors access in application of the contested decision.

206 It follows that the information to which the contested decision refers constitutes a detailed technical description of certain rules of interconnection and interaction that can be used within the Windows work group networks to deliver work group services. That description does not extend to the way in which Microsoft implements those rules, namely, in particular, to the internal structure or to the source code of its products.

— The degree of interoperability required by the Commission in the contested decision

207 The Commission adopted a two-stage approach in determining whether the information at issue was indispensable. It first examined the degree of interoper-

ability with the Windows domain architecture that the work group server operating systems supplied by Microsoft's competitors must achieve in order for those competitors to be able to remain viably on the market. It then proceeded to determine whether the interoperability information to which Microsoft refused access was indispensable to the attainment of that degree of interoperability.

208 The Court will examine below the degree of interoperability required by the Commission in the contested decision. At this stage, however, it will not examine the question as to whether the Commission was justified in concluding that Microsoft's competitors could viably remain on the market only if their products were capable of achieving that degree of interoperability. That question, together with the other aspects of the Commission's reasoning as described above, will be appraised when the Court examines what the Commission alleges to be the indispensable nature of the information at issue (see paragraphs 369 to 436 below).

209 It is appropriate, first of all, to summarise briefly the arguments of the main parties.

210 Microsoft shares the Commission's view that 'interoperability is a matter of degree' (recital 33 to the contested decision).

211 It contends, however, that the degree of interoperability required by the Commission in the present case is inappropriate in that it goes beyond the concept of 'full interoperability' envisaged by Directive 91/250. That concept — which Microsoft also describes as 'multivendor interoperability' — requires only that different developers' operating systems are capable of 'functioning correctly' together.

- 212 More specifically, Microsoft claims that the Commission's real intention is that competing operating systems for servers should function in every respect as a Windows server operating system. It refers variously to 'plug replacement', 'plug-replaceability', 'drop-in', 'functional equivalent' and 'functional clone', and asserts that such a degree of interoperability could be achieved only if it allowed its competitors to 'clone' or to 'reproduce' its products (or features of those products) and communicated to those competitors information on the internal workings of its products.
- 213 Last, Microsoft maintains that multivendor interoperability may be achieved by the methods already available on the market.
- 214 The Court notes that Microsoft's position as thus described corresponds to the position which it maintained throughout the administrative procedure.
- 215 Thus, in its response of 17 November 2000 to the first statement of objections, Microsoft states that the degree of interoperability apparently required by the Commission is not consistent with Community law and does not exist on the market. Relying, more particularly, on the 10th recital (in the English and French versions) to Directive 91/250, the applicant submits that 'full interoperability is available to a developer of server operating systems when all of the functionality of his program can be accessed from a Windows client operating system' (paragraph 143 of the response; see also recital 751 to the contested decision). The applicant maintains that the Commission wrongly defines interoperability much more broadly when it considers that, for there to be interoperability between two software products, all the functionalities of both products must function correctly. That, in Microsoft's contention, is tantamount to requiring 'plug-replaceability' or 'cloning' (paragraph 144 of the response). Microsoft criticises the fact that the Commission thus subscribes to the position of Sun, according to which it should be possible to replace, within the computer network of an undertaking composed of client PCs running Windows, a server running Windows 2000 by a server with a Solaris operating system, without that entailing a reduction in the functionalities to which

users have access (paragraphs 145 and 162 of the response). In order to achieve full interoperability, it is sufficient that Microsoft should disclose the interfaces exposed by the Windows client PC operating systems which developers of competing server operating systems need in order to make the functionalities of those systems available to users of Windows client PCs.

216 Likewise, in its response of 16 November 2001 to the second statement of objections, Microsoft, reiterating, in effect, the same reasoning which it had developed in its response to the first statement of objections, claims that the Commission's criticisms are based on an 'incorrect definition of interoperability' (paragraphs 149 to 163 of the response). It repeats, in that regard, that Directive 91/250 does not require 'plug-replaceability' but full interoperability, and that the disclosure of information which it already makes is sufficient to achieve that.

217 In its response of 17 October 2003 to the third statement of objections, Microsoft again adopts the same effective line of reasoning and reiterates that the Commission considers that its competitors must have access to all the information necessary to be able to create 'copies of the Windows server operating systems' and that it thus treats interoperability in the same way as 'cloning' (pages 29 to 32 of the response). It contends that 'interoperability contemplates the availability of sufficient information about the interfaces exposed by Windows client [PC] and server operating systems to enable competitors' products to work with those Windows client [PC] and server operating systems in all the ways [in which] the competitors' products were intended to function' (page 29 of the response). Likewise, Microsoft states that it 'has agreed with the Commission from the outset that a competition law issue could potentially arise if competitors were unable to develop server operating systems whose functionality is fully accessible from Windows client [PC] operating systems' (page 63 of the response). It claims that the Commission did not, however, establish the existence of such an issue in any of its three statements of objections.

- 218 The Commission contends that the concept of interoperability employed in the contested decision is consistent with that envisaged by Directive 91/250. In particular, it rejects Microsoft's 'one-way' interpretation of that concept.
- 219 The Commission accepts that a certain degree of interoperability with the Windows domain architecture is already possible, but claims that it is clear from its investigation that the degree of interoperability that can be achieved using the available methods is too low to enable Microsoft's competitors to remain viably in the market (footnote 712 to the contested decision).
- 220 In the Windows work group server networks, client/server and server/server interoperability are closely interlinked and, in order that full interoperability can be achieved between a Windows client PC and a non-Microsoft server operating system, Microsoft must give access both to the client/server communication protocols and to the server/server communication protocols (recitals 177 to 182 and 689 to the contested decision), including those which are 'pure' server/server protocols, that is to say, protocols which are not implemented on the client PC which are but 'functionally related to the client PC' (recitals 277, 567 and 690 to the contested decision).
- 221 The Commission denies that the contested decision envisages that Microsoft's competitors should develop products functioning in all respects like a Windows server operating system. In fact, the decision is intended to enable 'competing products [to] be created that w[ould] function differently, whilst being able to understand the messages conveyed by Microsoft's relevant products'. Thus, the interoperability information at issue will be used by Microsoft's competitors not to develop exactly the same products as Microsoft's, but to develop improved products, with 'added value'.

- 222 In the first place, the Court finds that it follows from the foregoing considerations that Microsoft and the Commission disagree as to whether the concept of interoperability employed in the contested decision is or is not compatible with that envisaged by Directive 91/250.
- 223 At recitals 749 to 763 to the contested decision, the Commission sets out in detail the grounds on which it believes that Microsoft's 'one-way' interpretation of the concept of interoperability is incorrect.
- 224 The Court notes, first of all, that in its written submissions, Microsoft does not advance any argument capable of casting doubt on the Commission's assessment in that regard. It merely asserts, with reference to certain passages in its responses to the second and third statements of objections, that '[t]he contested decision adopts a wholly different notion of interoperability [from] the one set forth in ... Directive [91/250]' (paragraph 95 of the application).
- 225 Next, the Court finds that the concept of interoperability employed in the contested decision — according to which interoperability between two software products means the capacity for them to exchange information and to use that information mutually in order to allow each of those software products to function in all the ways envisaged — is consistent with that envisaged in Directive 91/250.
- 226 Thus, as the Commission explains at recitals 752 to 754 and 759 and 760 to the contested decision, the 10th recital to Directive 91/250 — whether in the English or the French version — does not lend itself to the 'one-way' interpretation advocated by Microsoft. On the contrary, as the Commission quite correctly emphasises at recital 758 to the contested decision, the 10th recital to Directive 91/250 clearly

shows that, by nature, interoperability implies a ‘two-way’ relationship in that it states that ‘the function of a computer program is to communicate and work together with other components of a computer system’. Likewise, the 12th recital to Directive 91/250 defines interoperability as ‘the ability to exchange information and mutually to use the information which has been exchanged’.

227 In any event, it must be borne in mind that what is at issue in the present case is a decision adopted in application of Article 82 EC, a provision of higher rank than Directive 91/250. The question in the present case is not so much whether the concept of interoperability in the contested decision is consistent with the concept envisaged in that directive as whether the Commission correctly determined the degree of interoperability that should be attainable in the light of the objectives of Article 82 EC.

228 In the second place, the Court observes that the Commission assessed the degree of interoperability by reference to what, in its view, was necessary in order to enable developers of non-Microsoft work group server operating systems to remain viably on the market (see, in particular, footnote 712 and recital 779 to the contested decision).

229 The correctness of that approach is not open to dispute. Article 82 EC deals with the conduct of one or more economic operators involving the abuse of a position of economic strength which enables the operator concerned to hinder the maintenance of effective competition on the relevant market by allowing it to behave to an appreciable extent independently of its competitors, its customers and, ultimately, consumers (Joined Cases C-359/96 P and C-396/96 P *Compagnie maritime belge transports and Others v Commission* [2000] ECR I-1365, paragraph 34). Furthermore, whilst the finding of a dominant position does not in itself imply any criticism of the undertaking concerned, that undertaking has a special responsibility, irrespective of the causes of that position, not to allow its conduct to impair genuine undistorted competition on the common market (Case 322/81 *Michelin v Commission* [1983] ECR 3461, paragraph 57, and Case T-228/97 *Irish*

Sugar v Commission [1999] ECR II-2969, paragraph 112). Should it be established in the present case that the existing degree of interoperability does not enable developers of non-Microsoft work group server operating systems to remain viably on the market for those operating systems, it follows that the maintenance of effective competition on that market is being hindered.

230 It follows from the contested decision that, by adopting that approach and taking as its basis a factual and technical analysis of the products and technologies concerned and also of the way in which interoperability is achieved in Windows work group networks, the Commission concluded that, in order to be capable of competing viably with Windows work group server operating systems, competing operating systems had to be able to interoperate with Windows domain architecture on an equal footing with Windows work group server operating systems (see to that effect, in particular, recitals 182 and 282 to the contested decision).

231 The interoperability thus required by the Commission has two indissociable components, namely client/server interoperability and server/server interoperability (recitals 177 to 182 and 689 to the contested decision).

232 The Commission also maintains that when a non-Microsoft work group server operating system is installed on a Windows work group server network, it must be capable not only of delivering all its functionalities to Windows client PCs but also of using all the functionalities offered by those client PCs.

233 In the light of those various factors, the Commission maintains, in particular, that a server running a non-Microsoft work group server operating system must be capable of acting as a domain controller, and not merely as a member server, within a Windows domain using Active Directory and, accordingly, be capable of participating in the multimaster replication mechanism with the other domain controllers.

234 The Court finds that, contrary to Microsoft's claim, it cannot be inferred from the degree of interoperability thus required by the Commission that the Commission intends in reality that non-Microsoft server operating systems must function in every respect like a Windows server operating system and, accordingly, that Microsoft's competitors must be in a position to 'clone' or 'reproduce' its products or certain features of those products.

235 The assertions thus made by Microsoft are founded on a misreading of the contested decision.

236 The Court observes, in that regard, that, according to recital 1003 to the contested decision, the objective of the decision is to 'ensure that Microsoft's competitors can develop products that interoperate with the Windows domain architecture natively supported in the dominant Windows client PC operating system and hence viably compete with Microsoft's work group server operating system'.

237 As the Commission explained in greater detail at the hearing, the attainment of that objective assumes that non-Microsoft work group server operating systems are capable of receiving a specific message from a Windows client PC or work group server operating system and giving the required response to that message on the

same conditions as a Windows work group server operating system and also of enabling Windows client PC or work group server operating systems to react to that response just as though it came from a Windows work group server operating system.

238 In order for such operations to be practicable, it is not necessary that non-Microsoft work group server operating systems should function internally in exactly the same way as Windows work group server operating systems.

239 Those various considerations are not vitiated by the passages from recitals 669 and 679 to the contested decision cited by Microsoft (see paragraph 126 above). In the first passage, the Commission merely states that the degree of interoperability with the Windows domain architecture that may be achieved by non-Microsoft work group server operating systems using standard protocols is lower than that achieved by Windows work group server operating systems. In the second passage, the Commission states only that non-Microsoft work group server operating systems are capable of using the functionalities of Windows client PC and work group server operating systems only to a lesser degree than Windows work group server operating systems.

240 In the same way Microsoft's assertion that the contested decision intends that its competitors should develop exactly the same products as Windows work group server operating systems must be rejected. As the Court will explain in greater detail at paragraphs 653 to 658 below, in its examination of the circumstance relating to the appearance of a new product, the aim pursued by the Commission is to remove the obstacle for Microsoft's competitors represented by the insufficient degree of interoperability with the Windows domain architecture, in order to enable those

competitors to offer work group server operating systems which differ from Microsoft's on important parameters such as, in particular, security, reliability, processing speed or the innovative nature of certain functionalities.

241 The Court also notes that, as Microsoft itself expressly acknowledges in its written submissions (see, for example, paragraphs 14 and 48 of the reply), its competitors will not be in a position to develop products which are 'clones' or reproductions of Windows work group server operating systems by having access to the interoperability information at which the contested decision is aimed. As stated at paragraphs 192 to 206 above, that information does not relate to Microsoft's source code. In particular, Article 5 of the contested decision does not require Microsoft to disclose implementation details to its competitors.

242 Furthermore, as will also be explained in greater detail at paragraph 658 below, when the Court examines the circumstance relating to the new product, Microsoft's competitors would have no interest in developing exactly the same work group server operating systems as Microsoft's.

243 Nor can the Court accept Microsoft's claim that it follows from the undertakings' statements which it produced during the administrative procedure that there is already a high degree of interoperability between Windows client PC and server operating systems and non-Microsoft server operating systems, owing to the use of methods already available on the market.

244 On that point, it is sufficient to observe that the statements in question have already been fully examined in the contested decision (see, in particular, recitals 357, 358, 440 to 444, 511, 513, 595, 598, 602, 628, 702 and 707 to the contested decision) and that Microsoft puts forward no specific argument capable of establishing that the Commission's assessment of those statements is flawed. In essence, as the Commission states at recital 707 to the contested decision, those statements relate to organisations which had, to a large extent, adopted a 'Windows solution' for their work group networks.

245 Microsoft's claim that the Mercer reports show that an undertaking's choice of server operating system is not dictated by its interoperability with Windows client PC and server operating systems is incorrect, as will be explained in greater detail at paragraphs 401 to 412 below.

— The scope of Article 5(a) of the contested decision

246 Article 5(a) of the contested decision applies to the complete and accurate specifications of all the protocols implemented in Windows work group server operating systems and used by the servers on which those systems are installed in order to deliver work group services to Windows work group server networks.

247 As established in the technical and factual findings made at paragraphs 154 to 191 above, the proper functioning of the Windows work group networks relies on an 'architecture' of both client/server and server/server interconnections and interactions.

248 Thus the Commission states, at recital 999 to the contested decision, that the disclosure obligation imposed by the decision ‘includes both direct interconnection and interaction between a Windows work group server and a Windows client PC, as well as interconnection and interaction between a Windows work group server and a Windows client PC that is indirect and passes through another Windows work group server’.

249 The specifications that Microsoft is required to draw up and disclose to its competitors relate to client/server communication protocols, which are implemented both in Windows client PC operating systems and in Windows work group server operating systems, and also to server/server communication protocols.

250 It is clear that the information which Microsoft is required to disclose to its competitors pursuant to Article 5(a) of the contested decision must, in particular, enable computers running non-Microsoft work group server operating systems to assume, within a Windows domain using Active Directory, the role of member server or that of domain controller and, accordingly, to participate in the multimaster replication mechanism. The remedy prescribed by Article 5(a) therefore relates, specifically, to communications between servers within the ‘blue bubble’.

251 The scope of Article 5 of the contested decision, as thus defined, derives from a series of recitals to that decision, notably recitals 194 to 198, 206, 564 and 690 to the contested decision.

252 Thus, at recitals 194 to 198 to the contested decision, the Commission mentions, among other examples of interoperability information that Microsoft refuses to

disclose either to Sun or to its competitors, certain information relating to the replication mechanism used by Active Directory.

253 At recital 206 to the contested decision, the Commission expressly rejects Microsoft's assertion in its response of 16 November 2001 to the second statement of objections that 'the replication and Global Catalog features of Active Directory do not bear on interoperability'. The Commission explains, on that point, that 'a domain controller in an Active Directory domain (native mode) replicates the data stored in Active Directory with the data stored in the Active Directory of other domain controllers through certain synchronisation protocols.' It also observes that, by means of other protocols whose specifications constitute interoperability information, Global Catalog data are exchanged between domain controllers in the 'forest'.

254 Likewise, where recital 564 to the contested decision mentions the fact that Microsoft 'persisted in its refusal' after receiving Sun's complaint and the three statements of objections adopted by the Commission, it refers to recital 194 et seq. to the contested decision.

255 Furthermore, at recital 690 to the contested decision, the Commission explains that the CPLC 'does not address the broader issue that is at stake in this case', in particular because it does not cover protocols that are 'pure' server/server protocols but that are functionally related to the client PC, including 'replication protocols or Global Catalog exchange of data'.

256 In addition, Microsoft interprets Article 5(a) of the contested decision in the same way. Thus, in the application, in order to demonstrate the innovative nature of the communication protocols in respect of which it is required to communicate

information to its competitors, it relies specifically on the multimaster replication mechanism used by Active Directory (see, in particular, the opinion of Mr Campbell-Kelly, 'Commentary on Innovation in Active Directory', in annex A.20 to the application). Likewise, in the reply, it relies mainly, for that purpose, on the DRS protocol, which is used by Active Directory to achieve, inter alia, replication functions (see, in particular, the opinion of Mr Lees cited at paragraph 205 above). In his opinion, Mr Lees explains that the DRS protocol created by Microsoft incorporates a series of new features, namely 'it can combine updates from many servers simultaneously; it is integrated with the standard Domain Naming Service (DNS) protocol (for naming) and the Kerberos protocol (for mutual authentication); it transmits information describing the way a particular company has architected its directory service; it [transmits] information about the role that particular servers play in managing the directory service; and it automatically communicates directory updates between servers'. Mr Lees states that the DRS protocol is just one of many communication protocols that Microsoft is required to disclose to its competitors pursuant to the contested decision. He also identifies the following protocols: Microsoft Remote Procedure Call (MSRPC), Network Authentication ('Kerberos extensions'), Dfs and File Replication Service (FRS).

257 Last, the scope as thus defined in Article 5 of the contested decision also covers the information to which Sun had requested access in its letter of 15 September 1998. As the Court will explain in greater detail at paragraphs 737 to 749 below, by its request Sun sought, in particular, that its Solaris work group server operating system should be able to act as a fully compatible domain controller in the Windows 2000 work group networks or as a member server (in particular as a file or print server) that was fully compatible with the Windows domain architecture.

258 Furthermore, Microsoft's contention that the scope of the remedy prescribed in Article 5(a) of the contested decision is not consistent with the 'interoperability standard' used by the Commission in assessing the relevance of the 'alternative interoperability methods' (see paragraphs 125 to 129 above) must be rejected as unfounded.

- 259 That contention is based on the misconception that the Commission considers interoperability to be the capability for Microsoft's competitors to make their work group server operating systems work in exactly the same way as Windows operating systems and seeks to enable those competitors to 'clone' those systems (see paragraphs 234 to 242 above).
- 260 Contrary to Microsoft's assertion, moreover, the position which the Commission defends in its written submissions concerning the degree of interoperability required in the present case and the scope of the remedy prescribed by Article 5(a) of the contested decision is perfectly consistent with the position which it adopted in the contested decision. Nor is Microsoft entitled to rely on any statements which may have been made by the interveners at the hearing in the interlocutory proceedings as the basis for ascribing a specific interpretation of the contested decision to the Commission. It must be borne in mind that, according to the case-law, the lawfulness of a Community measure must be assessed on the basis of the matters of fact and of law existing at the time when the measure was adopted (Joined Cases 15/76 and 16/76 *France v Commission* [1979] ECR 321, paragraphs 7 and 8, and Joined Cases T-177/94 and T-377/94 *Altmann and Others v Commission* [1996] ECR II-2041, paragraph 119).
- 261 Last, the arguments based on the multimaster replication and the 'blue bubble' which Microsoft put forward at the hearing must also be rejected as unfounded.
- 262 By those arguments, Microsoft attempts to show that the objective of the contested decision can be achieved in full only if Microsoft discloses to its competitors certain information on the internal mechanism of its server operating systems and, in particular, of the algorithms, that is to say, information going beyond that defined in

that decision. Microsoft's essential argument is that, in order for a domain control running under a non-Microsoft work group server operating system to be capable of being placed in a 'blue bubble' composed of domain controllers using a Windows work group server operating system employing Active Directory, those different operating systems must share the same internal logic.

263 First, Microsoft fails to demonstrate that, in order to function together within the 'blue bubble', its work group server operating systems and those of its competitors must necessarily have the same internal logic.

264 Second, the applicant also fails to demonstrate that even if such identity of internal logic were required, this would necessarily mean that Microsoft had to communicate to its competitors information relating to the internal mechanisms of its products and, in particular, to the algorithms. It must be borne in mind, on that point, that in an opinion annexed to the reply, one of Microsoft's experts, commenting on the DRS protocol used for the multimaster replication mechanism, himself draws a distinction between 'protocols used for communications between servers' and the 'algorithms/decision rules that operate internally on each server', before stating that it is the protocols that have to be disclosed pursuant to Article 5 of the contested decision (see paragraph 205 above).

265 Third, as regards the 'Intersite Topology' algorithm which Microsoft mentioned specifically at the hearing, it is quite possible that, as the Commission also submitted at the hearing, competitors need only be in a position to implement an algorithm giving the same result as that algorithm. In other words, Microsoft would not be required to give any information about the implementation of that algorithm in its

work group server operating systems, but could merely give a general description of that algorithm, leaving it to its competitors to develop their own implementation of it.

266 The Court thus concludes from the foregoing that there is no inconsistency between the scope of Article 5(a) of the contested decision and the 'interoperability standard' required by the Commission in that decision.

(c) The assertion that Microsoft's communication protocols are protected by intellectual property rights

Arguments of the parties

267 Microsoft first of all puts forward a series of arguments designed to demonstrate that its communication protocols are technologically innovative. Communication protocols are often developed in connection with the performance of specific tasks by server operating systems and are intimately linked with the way in which those tasks are performed. Licensing those communication protocols therefore necessarily means providing competitors with information about the internal features of the server operating systems with which those communication protocols are used. In addition, a large number of engineers and significant financial resources are used in developing and improving communication protocols.

268 Microsoft emphasises, more particularly, the innovative nature of Active Directory, after first observing that directory services constituted an essential aspect of

competition on the work group server operating systems market. In that regard, the applicant refers to a note drafted by one of its experts, Mr Campbell Kelly, in which the author describes the innovations which Active Directory presents and, in particular, 'its method of replicating itself across different server computers in a computing network' (annex A.20 to the application). Microsoft also refers to the opinion of Mr Lees, in annex C.4 to the reply (see paragraphs 205 and 256 above), in which the author describes the innovative aspects of one of the protocols used by Active Directory, namely the DRS protocol, in respect of which Microsoft considers that it is required to provide information to its competitors pursuant to the contested decision. Last, Microsoft refers to annex C.8.1 to the reply, in which one of its engineers, Mr Hirst, describes a series of specifications relating to the multimaster replication mechanism used by Active Directory which Microsoft claims it is required to draw up pursuant to the contested decision.

269 Next, Microsoft puts forward numerous arguments in order to demonstrate that its communication protocols are protected by intellectual property rights.

270 In the first place, it submits that the innovative aspects of those communication protocols are patentable. Microsoft has obtained several patents for those protocols in Europe and the United States and some 20 patent applications are pending there. Furthermore, two opinions (annex A.21 to the application and annex C.6 to the reply) given by Mr Knauer, a lawyer specialising in patent law, support the assertion that Article 5 of the contested decision requires the compulsory grant of patent licences.

271 In the second place, Microsoft contends that the specifications of the server/server communication protocols that it is required to draw up and disclose to its competitors in application of the contested decision are copyright.

272 In the reply, Microsoft examines the question of copyright from two distinct angles. First, it refers to the concepts of 'forced creation' and 'forced publication', and claims that if the contested decision had not ordered it to do so, it would not have developed the specifications in question or licensed them to its competitors. Second, relying on Article 4 of Directive 91/250, it raises the question of the 'adaptation or alteration of copyright works'. The applicant maintains, in particular, that a competitor which uses the specifications to make its server operating system interoperate with the portions of Windows server operating systems that provide work group services will not be creating a 'distinct work'.

273 In the third place, Microsoft claims that the communication protocols are valuable trade secrets. In particular, it makes its client/server communication protocols available only under licence agreements that impose confidentiality and recognise the applicant's status as owner of the technology. It claims that trade secrets are a form of industrial property and that their protection is a matter for national law. Last, it refutes the Commission's notion that an undertaking suffers less damage when it discloses a business secret than when it is required to allow infringement of its patents or copyright.

274 Microsoft concludes that the requirement that it license the specifications of its communication protocols to its competitors would deprive it of the benefits of its research and development efforts which it devotes to the design and improvement of the communication protocols. It would also reduce the incentive for it and its competitors to invest in communication protocols.

275 The Commission disputes the various arguments set out at paragraphs 267 to 274 above.

276 First of all, it rejects Microsoft's assertion that the communication protocols in question are innovative and its assertion that licensing those protocols entails providing information about the 'internals' of its work group server operating systems. In particular, the documents prepared by Mr Lees (annex C.4 to the reply) and Mr Hirst (annex C.8.1 to the reply) do not demonstrate that the information in question includes 'any intrinsically valuable invention'. The Commission refers to two notes drafted by its consultant, OTR (annexes D.2 and D.3 to the rejoinder), which comment on Mr Lees' and Mr Hirst's documents, and explains why the ideas and principles underlying the applicant's communication protocols are not new.

277 Next, the Commission rejects Microsoft's argument that, first, the communication protocols are protected by intellectual property rights and, second, the contested decision involves compulsory licensing.

278 In the first place, the Commission claims that Microsoft does not demonstrate that the alleged innovations presented by the communication protocols in question are covered by a patent. Furthermore, a number of factors demonstrate that Microsoft's refusal was not justified by considerations associated with patent protection. More particularly, it was only at the end of the administrative procedure, or a few weeks before the adoption of the contested decision, and at the Commission's insistence, that Microsoft identified a patent (patent EP 0669020).

279 In the second place, the Commission rejects Microsoft's assertions concerning copyright. While the specifications at which the contested decision is aimed may, as such, be covered by copyright, it does not follow that the use of the information 'thus documented' when it is implemented in an operating system constitutes a breach of copyright. The implementation of a specification is not a copy, but results in a clearly distinct work. Furthermore, the question whether the specifications are

covered by copyright is by nature purely incidental, since what is central to the present case is the obligation imposed on Microsoft to disclose information and to authorise its use, which necessarily involves the drafting of a document. Last, Microsoft put forward two new arguments relating to copyright in the reply (see paragraph 272 above), which, in the Commission's submission, must be declared inadmissible pursuant to Article 48(2) of the Rules of Procedure and are in any event unfounded.

280 In the third place, the Commission acknowledges that the information that Microsoft is required to disclose pursuant to the contested decision has thus far been kept secret from its competitors on the work group server operating systems market. However, it is by no means obvious that Microsoft is correct to equate those 'trade secrets' with intellectual property rights 'created by law'. The case-law on compulsory licensing does not as such apply to trade secrets and the protection that such secrets enjoy under national law is normally more limited than that given to copyright or patents. While there may be a presumption of legitimacy of a refusal to license an intellectual property right 'created by law', the legitimacy under competition law of a refusal to disclose a secret which exists solely as a result of a unilateral business decision depends more on the facts of the case and, in particular, the interests at stake. In the present case, the value of the 'secret' concerned lies not in the fact that it involves innovation but in the fact that it belongs to a dominant undertaking.

281 SIIA puts forward essentially the same arguments as the Commission does on this point and contends that Microsoft does not demonstrate that the contested decision infringes its intellectual property rights or entails compulsory licensing.

282 FSFE claims that the ‘technology’ which Microsoft refuses to disclose to its competitors is neither new nor innovative. Microsoft has a policy of adopting pre-existing protocols and then making minor and pointless changes to them with the aim of preventing interoperability. FSFE refers, in particular, to the following protocols: CIFS/SMB (Common Internet File System/Server Message Block), DCE/RPC (Distributed Computing Environment/Remote Procedure Call), Kerberos 5 and LDAP.

Findings of the Court

283 Although the parties devoted lengthy argument, both in their written pleadings and at the hearing, to the question of the intellectual property rights which cover Microsoft’s communication protocols or the specifications of those protocols, the Court considers that there is no need to decide that question in order to resolve the present case.

284 The arguments which Microsoft derives from the alleged intellectual property rights cannot, as such, affect the lawfulness of the contested decision. The Commission did not take a position on the merits of those arguments but adopted the decision on the assumption that Microsoft was able to rely on such rights in the present case. In other words, it proceeded on the premiss that, so far as it relates to the interoperability information, the conduct at issue in the present case might not be a mere refusal to supply a product or a service indispensable to the exercise of a specific activity but a refusal to license intellectual property rights, and thus chose the strictest legal test and therefore the one most favourable to Microsoft (see paragraphs 312 to 336 below). The Commission did not therefore decide whether or not Microsoft’s impugned conduct constituted a refusal to grant a licence or whether or not the remedy prescribed by Article 5 of the contested decision entailed compulsory licensing.

285 Thus, at recital 190 to the contested decision, the Commission states that during the administrative procedure Microsoft relied on the existence of intellectual property rights and the fact that the interoperability information at issue constituted trade secrets. The Commission notes that it is not excluded that Microsoft relied on those rights to prevent Sun from implementing the specifications in question in its own products. It also acknowledges that it is possible that those specifications contain innovations and constitute trade secrets. More generally, the Commission observes that it cannot be excluded that ordering Microsoft to disclose the interoperability information to third parties and to allow them to use it will interfere with the free exercise of its intellectual property rights. It reiterates that last consideration at recital 546 to the contested decision. In footnote 249 to the contested decision, the Commission explains that '[i]n any case, since the relevant specifications are not available for scrutiny, it is not possible for the Commission to determine to what extent Microsoft's claims relating to various intellectual property rights are justified'.

286 Furthermore, at recitals 1003 and 1004 to the contested decision, the Commission, in describing the scope of the remedy for Microsoft's refusal, states, first, that the remedy applies only to interface specifications and not to the source code and, second, that the intention is that Microsoft's competitors be authorised to implement the disclosed specifications in their work group server operating systems. Thus, it states, inter alia, that 'the specifications should also not be reproduced, adapted, arranged or altered, but should be used by third parties to write their own specification-compliant interfaces' (recital 1004 to the contested decision). The Commission concludes that, '[i]n any event, to the extent that [the contested decision] might require Microsoft to refrain from fully enforcing any of its intellectual property rights, [that] would be justified by the need to put an end to the abuse' (recital 1004 to the contested decision).

287 In its written pleadings, the Commission puts forward arguments to the same effect. Thus, in the rejoinder, it describes as 'misleading' Microsoft's assertion in the reply that 'the [contested decision] requires [it] to grant a licence to whatever [intellectual

property rights] may be necessary to implement the specifications in its own products'. The Commission explains, first of all, that 'the [contested decision] requires Microsoft to grant the right to use the specifications for the purposes of building interoperable products' and that '[t]o the extent that [that] may limit Microsoft's ability to fully enforce certain of its [intellectual property rights], [it] will be justified by the need to put the infringement to an end'. The contested decision 'does not take a position as to whether Microsoft's [intellectual property rights] are affected or not'. The Commission goes on to state that it is not to be inferred, however, that Microsoft's refusal is justified by the exercise of intellectual property rights or that compulsory licensing is involved in the present case. Nor is there any evidence in the case file or in the application that that is so or, in particular, that 'competitors need a licence to certain Microsoft [intellectual property rights] in order to achieve interoperability with the Windows domain architecture'.

288 Furthermore, the Commission confirmed, in answer to one of the written questions put by the Court, that the contested decision did not establish that the interoperability information was not covered by a patent or by copyright or, on the contrary, that it was. There was no need to decide that issue since, in any event, 'the conditions for finding an abuse and for imposing the remedy [prescribed by Article 5 of the contested decision] were satisfied whether or not the information is protected by any patent or copyright'.

289 It follows from the foregoing considerations that the appraisal of the merits of the first part of the plea must proceed on the presumption that the protocols in question, or the specifications of those protocols, are covered by intellectual property rights or constitute trade secrets and that those secrets must be treated as equivalent to intellectual property rights.

290 The central issue to be resolved in this part of the plea therefore is whether, as the Commission claims and Microsoft denies, the conditions on which an undertaking in a dominant position may be required to grant a licence covering its intellectual property rights are satisfied in the present case.

(d) The specific arguments invoked in support of the first part of the plea

(i) The circumstances by reference to which the abusive conduct must be analysed

Arguments of the parties

291 Microsoft, supported by CompTIA and ACT, maintains primarily that the first issue must be assessed in the light of the criteria recognised by the Court of Justice in *Magill*, cited in paragraph 107 above, and reiterated in *IMS Health*, cited in paragraph 107 above.

292 In support of that argument, Microsoft reiterates, in the first place, that Article 5 of the contested decision implies the compulsory licensing of its communication protocols, which are technologically innovative and are covered by intellectual property rights.

293 In the second place, Microsoft interprets the Commission's argument as set out at paragraph 302 below as meaning that the Commission considers that it is not required to apply those tests where 'technological tying' is involved. In Microsoft's submission, that argument finds no support in Case T-83/91 *Tetra Pak v Commission* [1994] ECR II-755, upheld on appeal in Case C-333/94 P *Tetra Pak v Commission* [1996] ECR I-5951 (*Tetra Pak II*), on which the Commission relies.

294 In the third place, Microsoft rejects the arguments whereby the Commission seeks to show that the circumstances of the present case can be distinguished from the circumstances of *IMS Health*, cited in paragraph 107 above.

295 First, *IMS Health* involved strong network effects and it was precisely because of those effects that the 1 860 brick structure created by IMS Health was considered to be an industry standard. Furthermore, in the contested decision the Commission did not rely on the argument that, by refusing to 'allow compatibility', Microsoft was acting contrary to the public-policy objectives defined in Directive 91/250. In any event, vague public policy considerations cannot provide a ground for ordering an undertaking to grant licences. Last, Microsoft claims that Directive 91/250 does not establish any positive obligation to disclose information.

296 Second, Microsoft rejects the Commission's assertion that Microsoft used its market power on the client PC operating systems market to conquer the work group server operating systems market. Neither the contested decision nor the defence indicates clearly what market power Microsoft is supposed to have used or the way in which that power was exercised.

297 Third, Microsoft contends that the Commission's assertion that Microsoft disrupted previous levels of supply is wrong both in fact and in law and that it fails to take account of the principles laid down in *Bronner*, cited in paragraph 112 above. The applicant never provided Sun or any other supplier of competing operating systems with a licence on the specifications of its communication protocols. It licensed a network technology to AT&T in 1994 which allowed the development of a product called 'Advanced Server for UNIX' (AS/U) and a number of AS/U-based products were created by leading UNIX suppliers, including Sun's 'PC NetLink'. Although the applicant and AT&T agreed in 2001 not to extend the licensing agreement to include new technology, the 'AS/U technology' and the products based on it remain available. The fact that the applicant thus licensed a specific technology to AT&T more than 10 years ago cannot mean that it is required to license all related technologies, including communication protocols, for the indefinite future.

298 Fourth, Microsoft observes that, at recital 577 to the contested decision, the Commission states that 'Microsoft's refusal to supply Sun is part of a broader conduct of not disclosing interoperability information to work group server operating systems vendors'. It contends that the pattern of conduct thus attributed to it corresponds to '[the application] on a non-discriminatory basis [of] a policy that virtually all technology companies adopt to protect the fruits of their research and development efforts' and that such conduct cannot constitute an 'exceptional circumstance' within the meaning of *Magill* and *IMS Health*, cited in paragraph 107 above.

299 In the alternative, Microsoft, supported by CompTIA and ACT, submits that, should the Court find that no intellectual property right is at stake in the present case, the applicable criteria would be those recognised by the Court of Justice in *Bronner*, cited in paragraph 112 above, which correspond to the first, second and fourth criteria in *IMS Health*, cited in paragraph 107 above, as set out at paragraph 116 above.

300 Last, Microsoft, CompTIA and ACT claim that none of the four criteria of *IMS Health*, cited in paragraph 107 above, and, consequently, none of the three criteria of *Bronner*, cited in paragraph 112 above, is satisfied in this case.

301 The Commission, supported by SIIA and FSFE, contends primarily that, even if the Court should find that the refusal at issue was justified by the exercise of intellectual property rights and that the contested decision entails compulsory licensing, it would not follow that the present problem must automatically be assessed against the criteria established by the '*IMS Health* case-law'.

302 In that connection, the Commission maintains, in the first place, that the 'exceptional circumstances' rule laid down in the case-law cannot apply 'as such, and without further qualification' to a refusal to disclose trade secrets that has the effect of 'technologically tying' a separate product with a dominant product.

303 In the second place, the Commission claims that *IMS Health*, cited in paragraph 107 above, does not establish an exhaustive list of exceptional circumstances. In that judgment, as in *Magill*, cited in paragraph 107 above, the Court of Justice defined the conditions on which a decision ordering compulsory licensing could be adopted, in the light of the specific circumstances of those cases. Thus, in *IMS Health*, cited in paragraph 107 above, the Court of Justice merely established a list of criteria which it was 'sufficient' to satisfy. In reality, in order to determine whether the conduct of an undertaking in a dominant position which refuses to supply constitutes an abuse, the Commission must examine the entire range of factors surrounding that refusal and in particular the economic and regulatory background to it.

304 In the third place, the Commission lists the factors which distinguish the circumstances of the present case from those of *IMS Health*, cited in paragraph 107 above, and which permit the conclusion that Microsoft's refusal constitutes an abuse of a dominant position.

305 First, the Commission observes that the contested decision has the particular feature that it deals with a refusal to supply interoperability information in the software industry. The decision aims to permit the development of products that are compatible with Microsoft's products whereas the precedents cited by Microsoft concern situations in which the 'protected product' was to be incorporated in competitors' products for reasons which went beyond ensuring mere compatibility between two distinct products. Furthermore, those precedents do not concern the specific problems raised in sectors where network effects are pervasive. Unlike the sector concerned in the present case, the economic sectors concerned in those precedents were not 'sectors where the [legislature] has clearly recognised that compatibility was favourable to society in general'. More particularly, the Commission, referring to recitals 745 to 763 to the contested decision, recalls the importance which the Community legislature ascribed to interoperability, notably in the context of Directive 91/250, and also the position taken by the legislature, namely that disclosure of information for interoperability purposes is beneficial for society as a whole.

306 Second, the Commission invokes the fact that the present issue involves a supplier in a dominant position which uses its market power on a particular market, in this case the client PC operating systems market, to eliminate competition on a neighbouring market, namely the work group server operating systems market, 'thereby increasing the barriers to entry in its original market and securing an additional monopoly rent'. That situation reinforces the harm to consumers that results from the restriction of the development of new products.

307 Third, the Commission submits that the present issue concerns a supplier in a dominant position which disrupts previous levels of supply (recitals 578 to 584 to the contested decision). Microsoft's initial policy was to disclose interoperability information, not to retain it, which, among other things, helped Microsoft to introduce its own work group server operating systems on the market and did not

discourage it from innovating. However, once its 'server products' were sufficiently established on the market, Microsoft changed its strategy and chose to foreclose its competitors by refusing to give them access to that information (recitals 587, 588 and 637 et seq. to the contested decision).

308 The Commission maintains that Microsoft cannot deny having disrupted its previous levels of supply. First of all, the agreement between Microsoft and AT&T, which allowed AT&T to develop AS/U, involved the disclosure not only of interoperability information of the type at issue in the contested decision, but also of additional information. Next, the Commission contends that the fact that the AS/U technology is still available is irrelevant. The Commission refers to recitals 580 to 583 to the contested decision and submits that the disclosures made 'in the context of AS/U' are now outdated, as Microsoft modified the relevant protocols in subsequent versions of Windows. Last, the Commission contends that Microsoft's assertion that the fact that it licensed a specific technology to AT&T more than 10 years ago cannot oblige it to license all related technologies for the indefinite future is irrelevant to the approach taken in the contested decision. The question of the disruption of previous levels of supply is treated in that decision not as an abuse in itself but as one factor relevant to the assessment of Microsoft's refusal to supply (recital 578 et seq. to the contested decision).

309 In the fourth place, the Commission does not claim that the mere fact that a refusal to license an intellectual property right is part of a general pattern of conduct is in itself an 'exceptional circumstance' sufficient to render that refusal abusive. It merely contends that the fact that Sun is not the only competitor to which Microsoft has refused access to the interoperability information is a circumstance relevant to the assessment of the compatibility of Microsoft's conduct with Article 82 EC.

310 The Commission submits that Microsoft's alternative argument, that the present case must be examined by reference to the criteria established in *Bronner*, cited in paragraph 112 above, cannot be upheld. *Bronner* concerned access to an infrastructure that had required significant investment, and if it should be established that the information at issue in the present case is not protected by intellectual property rights, but consists of purely arbitrary combinations of messages, that judgment would surely not be a 'relevant point of comparison'.

311 In the alternative, the Commission, supported by SIIA and FSFE, claims that, even on the assumption that the lawfulness of the contested decision, in so far as it relates to the first issue, must be assessed against the criteria recognised by the Court of Justice in *IMS Health*, cited in paragraph 107 above, those criteria are satisfied in the present case.

Findings of the Court

312 It must be borne in mind that Microsoft's argument is that its refusal to supply interoperability information cannot constitute an abuse of a dominant position within the meaning of Article 82 EC because, first, the information is protected by intellectual property rights (or constitutes trade secrets) and, second, the criteria established in the case-law which determine when an undertaking in a dominant position can be required to grant a licence to a third party are not satisfied in this case.

313 It must also be borne in mind that the Commission contends that there is no need to decide whether Microsoft's conduct constitutes a refusal to license intellectual property rights to a third party, or whether trade secrets merit the same degree of

protection as intellectual property rights, since the strict criteria against which such a refusal may be found to constitute an abuse of a dominant position within the meaning of Article 82 EC are in any event satisfied in the present case (see paragraphs 284 to 288 above).

314 While Microsoft and the Commission are thus agreed that the refusal at issue may be assessed under Article 82 EC on the assumption that it constitutes a refusal to license intellectual property rights, they disagree as to the criteria established in the case-law that are applicable in such a situation.

315 Thus, Microsoft relies, primarily, on the criteria laid down in *Magill* and *IMS Health*, cited in paragraph 107 above, and, in the alternative, on those laid down in *Bronner*, cited in paragraph 112 above.

316 The Commission, on the other hand, contends that an ‘automatic’ application of the criteria laid down in *IMS Health*, cited in paragraph 107 above, would be ‘problematic’ in this case. It maintains that, in order to determine whether such a refusal is abusive, it must take into consideration all the particular circumstances surrounding that refusal, which need not necessarily be the same as those identified in *Magill* and *IMS Health*, cited in paragraph 107 above. Thus it explains at recital 558 to the contested decision, that ‘[t]he case-law of the European Courts ... suggests that the Commission must analyse the entirety of the circumstances surrounding a specific instance of a refusal to supply and must take its decision [on the basis of] the results of such a comprehensive examination’.

317 At the hearing, the Commission, questioned on this issue by the Court, confirmed that it had considered in the contested decision that Microsoft’s conduct presented three characteristics which allowed it to be characterised as abusive. The first consists in the fact that the information which Microsoft refuses to disclose to its

competitors relates to interoperability in the software industry, a matter to which the Community legislature attaches particular importance. The second characteristic lies in the fact that Microsoft uses its extraordinary power on the client PC operating systems market to eliminate competition on the adjacent work group server operating systems market. The third characteristic is that the conduct in question involves disruption of previous levels of supply.

318 The Commission contends that in any event the criteria recognised by the Court of Justice in *Magill* and *IMS Health*, cited in paragraph 107 above, are also satisfied in this case.

319 In response to those various arguments, the Court observes that, as the Commission rightly states at recital 547 to the contested decision, although undertakings are, as a rule, free to choose their business partners, in certain circumstances a refusal to supply on the part of a dominant undertaking may constitute an abuse of a dominant position within the meaning of Article 82 EC unless it is objectively justified.

320 The Court of Justice thus considered that a company in a dominant position on the market in raw materials which, with the aim of reserving such raw materials for the purpose of manufacturing its own derivatives, refused to supply a customer which was itself a manufacturer of those derivatives, and was therefore likely to eliminate all competition on the part of that customer, abused its dominant position within the meaning of Article 82 EC (Joined Cases 6/73 and 7/73 *Commercial Solvents v Commission* [1974] ECR 223; see, concerning a refusal to supply a service, Case 311/84 *CBEM* [1985] ECR 3261).

321 In Case 238/87 *Volvo* [1988] ECR 6211, the Court of Justice, on a reference for a preliminary ruling under Article 234 EC, was asked whether the refusal by a car manufacturer which was the proprietor of a design right covering car body panels to license third parties to supply products incorporating the protected design must be considered to be an abuse of a dominant position within the meaning of Article 82 EC. In its judgment, the Court of Justice emphasised that the right of a proprietor of a protected design to prevent third parties from manufacturing and selling or importing, without his consent, products incorporating the design constitutes the very subject-matter of his exclusive right. The Court of Justice concluded (paragraph 8) that ‘an obligation imposed upon the proprietor of a protected design to grant to third parties, even in return for a reasonable royalty, a licence for the supply of products incorporating the design would lead to the proprietor thereof being deprived of the substance of his exclusive right, and that a refusal to grant such a licence cannot in itself constitute an abuse of a dominant position’. The Court of Justice added, however, that ‘the exercise of an exclusive right by the proprietor of a registered design in respect of car body panels [might] be prohibited by Article [82 EC] if it involve[d], on the part of an undertaking holding a dominant position, certain abusive conduct such as the arbitrary refusal to supply spare parts to independent repairers, the fixing of prices for spare parts at an unfair level or a decision no longer to produce spare parts for a particular model even though many cars of that model [were] still in circulation, provided that such conduct [was] liable to affect trade between Member States’ (paragraph 9).

322 In *Magill*, cited in paragraph 107 above, the Court of Justice, on appeal, had also been called upon to adjudicate on the question of the refusal by a dominant undertaking to license a third party to use an intellectual property right. That case concerned a decision in which the Commission had found that three television companies had abused their dominant position on the market represented by their respective weekly programme listings and the market for the television guides in which those listings were published by relying on their copyright in those listings to prevent third parties from publishing complete weekly guides to the programmes broadcast by the various different television channels. The Commission had therefore ordered those television companies to supply their advance weekly programme listings to each other and to supply them to third parties on request and

on a non-discriminatory basis and to permit reproduction of those listings by those third parties. The Commission had also stipulated that any royalties requested by the television companies should they choose to grant reproduction licences should be reasonable.

323 In *Magill*, cited in paragraph 107 above (paragraph 49), the Court of Justice, referring to *Volvo*, cited in paragraph 321 above, stated that 'the exclusive right of reproduction form[ed] part of the author's rights, so that refusal to grant a licence, even if it is the act of an undertaking holding a dominant position, cannot itself constitute abuse of a dominant position'. Still with reference to *Volvo*, cited in paragraph 321 above, the Court of Justice explained, however, that 'the exercise of an exclusive right by the proprietor may, in exceptional circumstances, involve abusive conduct' (paragraph 50).

324 The Court of Justice considered that the following circumstances were relevant for the purpose of establishing that the conduct of the television companies in question was abusive. In the first place, their refusal concerned a product (the television channels' weekly programme listings) the supply of which was indispensable to the exercise of the activity in question (the publication of a complete weekly television guide) (paragraph 53). In the second place, the refusal prevented the appearance of a new product, a comprehensive weekly guide to television programmes, which the television companies in question did not offer and for which there was a potential consumer demand, which constituted an abuse under Article 82(b) EC (paragraph 54). In the third place, the refusal was not justified (paragraph 55). Finally, in fourth place, the television companies, by their conduct, had reserved to themselves a secondary market, the market for weekly television guides, by excluding all competition on that market (paragraph 56).

325 In *Bronner*, cited in paragraph 112 above, the Court of Justice, on a reference for a preliminary ruling under Article 234 EC, had been requested to rule on whether the refusal by a press group holding a very large share of the daily newspaper market in

Austria, and operating the only nationwide newspaper home-delivery scheme in Austria, to allow the publisher of a rival newspaper to have access to that scheme for appropriate remuneration, or to allow that publisher to purchase certain complementary services from the group, constituted an abuse of a dominant position contrary to Article 82 EC.

326 In its judgment (paragraph 38), the Court of Justice first of all observed that although in *Commercial Solvents v Commission* and *CBEM*, cited in paragraph 320 above, it had held that the refusal by an undertaking holding a dominant position on a given market to supply an undertaking with which it was in competition on a neighbouring market with raw materials and services respectively, which were indispensable to carrying on the rival's business, constituted an abuse, it had done so to the extent that the conduct in question was likely to eliminate all competition on the part of that undertaking.

327 Next, the Court of Justice stated (paragraph 39) that at paragraphs 49 and 50 of *Magill*, cited in paragraph 107 above, it had held that the refusal by the owner of an intellectual property right to grant a licence, even if it is the act of an undertaking holding a dominant position, cannot in itself constitute abuse of a dominant position, but that the exercise of an exclusive right by the proprietor may, in exceptional circumstances, involve an abuse.

328 Last, the Court recited the exceptional circumstances which it had established in *Magill*, cited in paragraph 107 above, and stated (paragraph 41):

‘[E]ven if that case-law on the exercise of an intellectual property right were applicable to the exercise of any property right whatever, it would still be necessary, for [that] judgment to be effectively relied upon in order to plead the existence of an abuse within the meaning of Article [82 EC] in a situation such as that which forms

the subject-matter of the ... question, not only that the refusal of the service comprised in home delivery be likely to eliminate all competition in the daily newspaper market on the part of the person requesting the service and that such refusal be incapable of being objectively justified, but also that the service in itself be indispensable to carrying on that person's business, inasmuch as there is no actual or potential substitute in existence for that home-delivery scheme.'

329 In *IMS Health*, cited in paragraph 107 above, the Court of Justice again ruled on the conditions in which a refusal by an undertaking holding a dominant position to grant to a third party a licence to use a product protected by an intellectual property right might constitute abusive conduct within the meaning of Article 82 EC.

330 The Court of Justice first of all confirmed (paragraph 34), with reference to *Volvo*, cited in paragraph 321 above, and *Magill*, cited in paragraph 107 above, that, according to settled case-law, the exclusive right of reproduction formed part of the rights of the owner of an intellectual property right, so that refusal to grant a licence, even if it is the act of an undertaking holding a dominant position, cannot in itself constitute abuse of that position. The Court of Justice also observed (paragraph 35) that it was clear from that case-law that exercise of an exclusive right by the owner might, in exceptional circumstances, involve abusive conduct. Next, after reciting the exceptional circumstances found to exist in *Magill*, cited in paragraph 107 above, the Court held (paragraph 38) that it followed from that case-law that, in order for the refusal by an undertaking which owns a copyright to give access to a product or service indispensable for carrying on a particular business to be treated as abusive, it was sufficient that three cumulative conditions be satisfied, namely, that that refusal prevents the emergence of a new product for which there is a potential consumer demand, that it is unjustified and that it is such as to exclude any competition on a secondary market.

331 It follows from the case-law cited above that the refusal by an undertaking holding a dominant position to license a third party to use a product covered by an intellectual property right cannot in itself constitute an abuse of a dominant position within the meaning of Article 82 EC. It is only in exceptional circumstances that the exercise of the exclusive right by the owner of the intellectual property right may give rise to such an abuse.

332 It also follows from that case-law that the following circumstances, in particular, must be considered to be exceptional:

- in the first place, the refusal relates to a product or service indispensable to the exercise of a particular activity on a neighbouring market;

- in the second place, the refusal is of such a kind as to exclude any effective competition on that neighbouring market;

- in the third place, the refusal prevents the appearance of a new product for which there is potential consumer demand.

333 Once it is established that such circumstances are present, the refusal by the holder of a dominant position to grant a licence may infringe Article 82 EC unless the refusal is objectively justified.

334 The Court notes that the circumstance that the refusal prevents the appearance of a new product for which there is potential consumer demand is found only in the case-law on the exercise of an intellectual property right.

335 Finally, it is appropriate to add that, in order that a refusal to give access to a product or service indispensable to the exercise of a particular activity may be considered abusive, it is necessary to distinguish two markets, namely, a market constituted by that product or service and on which the undertaking refusing to supply holds a dominant position and a neighbouring market on which the product or service is used in the manufacture of another product or for the supply of another service. The fact that the indispensable product or service is not marketed separately does not exclude from the outset the possibility of identifying a separate market (see, to that effect, *IMS Health*, cited in paragraph 107 above, paragraph 43). Thus, the Court of Justice held, at paragraph 44 of *IMS Health*, cited in paragraph 107 above, that it was sufficient that a potential market or even a hypothetical market could be identified and that such was the case where the products or services were indispensable to the conduct of a particular business activity and where there was an actual demand for them on the part of undertakings which sought to carry on that business. The Court of Justice concluded at the following paragraph of the judgment that it was decisive that two different stages of production were identified and that they were interconnected in that the upstream product was indispensable for supply of the downstream product.

336 In the light of the foregoing factors, the Court considers that it is appropriate, first of all, to decide whether the circumstances identified in *Magill* and *IMS Health*, cited in paragraph 107 above, as described at paragraphs 332 and 333 above, are also present in this case. Only if it finds that one or more of those circumstances are absent will the Court proceed to assess the particular circumstances invoked by the Commission (see paragraph 317 above).

(ii) The indispensable nature of the interoperability information

Arguments of the parties

337 Microsoft maintains that the interoperability information required by the contested decision is not indispensable to the activity of supplier of work group server operating systems. A particular technology cannot be characterised as indispensable if it is 'economically viable' for the competitors of the undertaking in a dominant position to develop and market their products without having access to that technology.

338 Microsoft contends that the contested decision contains an error of law and an error of fact on that point.

339 It submits, in the first place, that the error of law lies in the fact that the Commission used an inappropriate, extraordinary and absolute standard when 'examining whether competition could exist'. The applicant refers to recitals 176 to 184 to the contested decision and submits that the Commission considers that non-Microsoft server operating systems must be able to communicate with Windows client PC and server operating systems in exactly the same way that Windows server operating systems do: yet the case-law does not require that such 'optimal access' to the market be granted.

340 In the reply, Microsoft criticises the fact that the Commission assessed the requisite degree of interoperability by reference to what was necessary to enable its competitors to remain viable on the market. The concept of interoperability used by the Commission at recitals 666 to 687 to the contested decision is unreasonable in

that it implies 'virtual identity' between Windows server operating systems and competing operating systems. Microsoft refers to the passages from recitals 669 and 679 to the contested decision reproduced at paragraph 126 above and submits that, if such a concept had to be accepted, 'any technology would be indispensable'. Furthermore, the only justification put forward in the contested decision for the assertion that such a 'level' of interoperability is required if competitors are to remain in viable conditions on the market is that access to the specifications at issue might enable competitors to avoid having users 'log on twice' (recital 183 to the contested decision). That justification is inadequate, since, first, multiple vendors already provide 'single sign on' solutions; second, having to log on twice is plainly an alternative solution (even if it is marginally less advantageous); and, third, the remedy prescribed in Article 5 of the contested decision goes far beyond what is necessary to resolve that minor problem.

341 Also in the reply, and after referring to the arguments set out at paragraphs 125 to 128 above and reiterating that the remedy prescribed in Article 5 of the contested decision will not permit its competitors to develop products that are 'virtually identical' to Windows server operating systems, Microsoft claims that the Commission has failed to show a causal link between the 'non-availability' of specifications for its communication protocols and the supposed inability of competitors to remain viably on the market.

342 In its observations on the statements in intervention, Microsoft denies that industry and consumers require 'plug replaceability' and asserts that such a requirement goes far beyond the 'test of indispensability' laid down by the Court of Justice in *Bronner*, cited in paragraph 112 above, and *IMS Health*, cited in paragraph 107 above. In particular, the applicant's competitors 'do not need Active Directory', since their server operating systems have their own directory services which can provide work group services to Windows client PC and server operating systems.

343 In the second place, Microsoft contends that the contested decision is vitiated by an error of fact in so far as the Commission fails to take account of the fact that several work group server operating systems are present on the market. Undertakings in Europe continue to maintain different types of computer networks, in that their operating systems are supplied by different distributors.

344 During the administrative procedure, Microsoft submitted reports in which computer scientists describe 'the ways in which interoperability could be achieved in computing networks'. The responses to the Commission's requests for information confirm that interoperability between different types of operating systems is common in computer networks in Europe. Thus, 47% of companies which responded to those requests for information stated that they used non-Microsoft server operating systems to supply file and print services to Windows client PC operating systems. Similar proof exists in respect of user and group administration services. Microsoft reiterates that the Mercer reports demonstrate that undertakings do not feel that their choice of servers is constrained by interoperability concerns.

345 Microsoft also asserts that interoperability between non-Microsoft server operating systems and Windows client PC and server operating systems can be achieved by five different methods. Each of those methods constitutes an alternative to disclosure of the communication protocols at issue and allows those different operating systems to 'work well together'. Admittedly, the 'perfect substitutability' that the Commission considers essential cannot be obtained by those various methods, but they do make it possible to achieve the 'minimum level of interoperability ... required for effective competition'.

346 The five methods to which Microsoft refers are as follows: first, the use of standard protocols such as TCP/IP (Transmission Control Protocol/Internet Protocol) and HTTP (Hyper Text Transfer Protocol); second, the addition of a software code to a Windows client PC or server operating system in order to allow that operating system to communicate with a non-Windows server operating system using communication protocols specific to that non-Microsoft operating system; third, the addition of a software code to a non-Microsoft server operating system in order to allow it to communicate with a Windows client PC or server operating system using communication protocols specific to Windows operating systems; fourth, the use of a server operating system as a 'bridge' between two different sets of communication protocols; and, fifth, the addition of a 'block' of software code to all the client PC and server operating systems in a given network to achieve interoperability by means of communications between the different 'blocks' of software code.

347 Microsoft further submits that the evidence which the Commission assembled during the administrative procedure shows that those methods work in practice for Linux and for the other work group server operating systems. Distributors of Linux products have constantly increased market share on the work group server operating systems market without having access to the specifications of Microsoft's communication protocols. Microsoft refers to sections D and E of a report by Evans, Nichols and Padilla (annex C.11 to the reply) and further submits that Linux products will continue to gain ground on Windows server operating systems. It is generally acknowledged that Linux is a serious competitor to Microsoft and that the 10 largest suppliers of servers costing under USD 25 000 offer work group servers running Linux.

348 CompTIA and ACT put forward arguments which are essentially the same as Microsoft's.

349 CompTIA criticises, in particular, the fact that the Commission considers that non-Windows work group server operating systems must achieve a level of interoperability with the Windows client PC operating systems that is 'as good as that achieved by Microsoft itself'.

350 ACT refers to Microsoft's arguments on this point in its written pleadings and submits that there are several methods of ensuring sufficient interoperability between the operating systems of different suppliers. It also has concerns that the Commission's interpretation of the indispensability criterion will have negative effects on innovation.

351 The Commission claims that Microsoft's disclosure of the interoperability information is indispensable if its competitors are to continue to compete on the work group server operating systems market.

352 It contends, in the first place, that Microsoft's allegation of an error of law rests on a misrepresentation of the Commission's position and on confusion between different questions analysed in the contested decision. The indispensability criterion entails an examination of the degree of interoperability necessary to remain as a viable competitor on the market and of whether the withheld information is the only economically viable source for achieving that degree of interoperability.

353 The Commission emphasises that the information that Microsoft refuses to disclose is 'functionally related to the client PC' and explains that the indispensability of that information derives from the importance for work group server operating systems of

interoperability with client PCs (recitals 383 to 386 to the contested decision) and from Microsoft's quasi-monopoly on the client PC operating systems market.

354 The Commission analysed the indispensability criterion, as defined in the case-law, at recitals 666 to 686 to the contested decision and examined whether there were alternative solutions to disclosure of the relevant information that would enable undertakings to compete viably with Microsoft on the work group server operating systems market.

355 The Commission observes that in Microsoft's view the mere existence of inefficient interoperability solutions that allow competitors to achieve only *de minimis* market penetration shows that the indispensability criterion is not satisfied. Such an argument cannot be accepted, as that criterion must be assessed against the aim of preserving an effective competitive structure that benefits consumers. The question is whether the information that Microsoft refuses to disclose is indispensable to any competitor seeking to carry on business on the relevant market 'as a viable competitive constraint and not as a *de minimis* player who has effectively left the market for a "niche" position'.

356 In the rejoinder, the Commission makes clear that its position is that a dominant undertaking is not entitled to compromise effective competition on a secondary market by abusively refusing to allow its competitors access to an 'input' necessary for their viability. If there is no alternative to the input to which access is refused that could allow competitors to exercise effective competitive pressure on the dominant undertaking on the secondary market, it is then clear that the input is indispensable to the maintenance of effective competition.

357 Also in the rejoinder, the Commission reiterates that there is a whole range of possible degrees of interoperability between Windows PCs and work group server operating systems. The Commission did not fix *a priori* a given level of interoperability that is indispensable for the maintenance of effective competition on the market, but based its findings on the manifestly unsatisfactory nature of the alternative methods which Microsoft's competitors had already used and which 'did not permit the level of interoperability required by customers in an economically viable manner'. The Commission again denies having taken into account a degree of interoperability achieving the 'virtual identity' to which the applicant refers, and submits that what is indispensable is not that Microsoft's competitors be allowed to reproduce the interoperability solutions implemented by Microsoft but that they be able to achieve 'an equivalent degree of interoperability by their own innovative efforts'. Last, the Commission observes that at recitals 590 to 692 to the contested decision it examines the 'severe consequences' which the limited degree of interoperability with Windows client PC operating systems has for competitors and customers. In particular, Microsoft's conduct has the effect of progressively ousting all its competitors from the work group server operating systems market, even though some of them originally had a significant commercial or technical advantage over Microsoft on that market (recitals 587 and 668 to the contested decision).

358 In the second place, the Commission rejects the allegations of an error of fact.

359 First, it is not demonstrated that the solutions proposed by the computer scientists in the reports produced by Microsoft during the administrative procedure are commercially viable alternatives to disclosure of interoperability information.

360 Second, the argument which Microsoft derives from the responses to the Commission's requests for information is not relevant in so far as 'it means that interoperability with smaller players is enough, or that some interoperability already exists'. In reality, Microsoft overlooks the fact that its competitors entered the work group server operating systems market before Microsoft began to distribute products of that type. The fact that the information at issue is indispensable if Microsoft's competitors are to be able to continue to represent a competitive constraint for Microsoft's products means that those competitors will be gradually eliminated from the market. That fact that their elimination is not yet complete does not show that the indispensability criterion is not fulfilled, since the essential thing is whether the information is indispensable in order to remain as a viable competitor on the market.

361 Third, by its reference to the five alternative methods of achieving interoperability between the operating systems supplied by different distributors Microsoft does not contest the findings made on that point in the contested decision but merely asserts that those methods are 'feasible' and that they allow its own products and its competitors' products to 'work well together'.

362 The Commission recalls that it has already examined those methods in the contested decision and, in particular, the question whether reverse engineering might constitute an alternative to disclosure of the interoperability information (recitals 683 to 687 to the contested decision), and it demonstrated that they do not constitute 'viable substitutes' to disclosure of the interoperability information at issue.

363 Fourth, the Commission rejects Microsoft's allegation that the analysis in the contested decision is contradicted by the entry and alleged growth of Linux on the work group server operating systems market.

364 First of all, the figures for Linux '[do] not represent the penetration of the market by a single operator but rather the best efforts of a number of competing vendors who build upon Linux (Red Hat, Novell/SuSE, IBM, Sun, etc.)'. The respective market shares of those competing distributors are therefore 'miniscule'.

365 The Commission proceeds to criticise the findings in section D of the Evans, Nichols and Padilla report in annex C.11 to the reply; it asserts that:

- as stated, in particular, at recitals 487 to 490 to the contested decision, the data from International Data Corporation (IDC) used by those experts in drafting that report are approximate and are therefore not on their own appropriate for assessing market development;

- that 'applies *a fortiori* as regards quite marginal annual changes relative to the overall size of the market';

- there is no proof that Linux's market share of 6.75% of units sold, which Microsoft calculates using an extrapolation factor concerning all servers, applies to the work group server operating systems market;

- the two examples of responses to the 2003 market enquiry to which the experts refer in order to demonstrate that it is possible to use, in relation to Linux, interoperability solutions based on reverse engineering are not representative in

that the entities concerned are two of only three entities, out of a total of more than 100 which participated in that market enquiry, that 'made a non-insignificant use of Linux/Samba';

- the experts provide no information on how the four other methods which Microsoft claims can ensure interoperability between operating systems supplied by different distributors could have allowed the alleged expansion of Linux on the market during the period covered by the abuse consisting in the refusal to supply.

³⁶⁶ Likewise, the Commission criticises the findings in section E of that report. It claims that:

- it has already rejected, at recitals 605 to 610 to the contested decision, the arguments which Microsoft bases on IDC's projections and the results of the third Mercer survey;
- IDC tends to overestimate its projections of Linux's market share of the 'networking' and 'file/print' subcategories;
- the migration from the Windows NT operating systems to the Linux operating system mentioned in the Meryll Lynch report of 8 March 2004 (annex 7 to annex C.11 to the reply) is likely to be a one-off phenomenon, as Windows NT is 'an outdated product that is no longer supported by Microsoft';

- the Yankee Group report of 25 May 2004 (annex 9 to annex C.11 to the reply) relates to server operating systems in general and not to work group server operating systems, and is therefore largely irrelevant in the present case;

- the Forrester Research report of 27 May 2004 (annex 10 to annex C.11 to the reply) is not primarily concerned with work group server operating systems and contains findings which contradict Microsoft's argument, notably the finding that 92% of those questioned will use Active Directory in 2006.

³⁶⁷ SIIA submits essentially the same arguments as the Commission. It maintains that it is essential for competition on the merits in the software industry that work group server operating systems suppliers are able to achieve interoperability with Microsoft's quasi-monopolistic products 'on a level playing field'. In order to be able to compete effectively on the market, those suppliers must have access to the interoperability information at issue.

³⁶⁸ SFE rejects the argument which Microsoft bases on the five alternative methods of ensuring interoperability. It claims that, '[t]echnically, all these ways describe realistic scenarios', but that they 'have a fundamental omission: [a]uthentication'. Microsoft has 'tightly coupled' its Windows client PC operating systems with its own '[a]uthentication servers', so that it is simply impossible to separate the authentication task from the other tasks carried out by Windows work group servers.

Findings of the Court

369 As already pointed out at paragraph 207 above, the Commission adopted a two-stage approach in determining whether the information at issue was indispensable, in that, first of all, it considered what degree of interoperability with the Windows domain architecture non-Microsoft work group server operating systems must achieve in order for its competitors to be able to remain viably on the market and, second, it appraised whether the interoperability that Microsoft refused to disclose was indispensable to the attainment of that degree of interoperability.

370 Microsoft claims that that reasoning is incorrect in law and in fact.

— The alleged error of law

371 Microsoft's arguments concerning the Commission's supposed error of law relate to the first stage of its reasoning.

372 Microsoft takes issue first of all with the degree of interoperability required by the Commission in the present case: it contends, in substance, that the Commission's position effectively requires that its competitors' work group server operating systems be able to communicate with Windows client PC and server operating systems in exactly the same way as Windows server operating systems do. The applicant reiterates that that degree of interoperability implies virtual identity between its systems and its competitors' systems.

373 Those assertions must be rejected.

374 The Court has already defined, at paragraphs 207 to 245 above, the degree of interoperability which the Commission required in the contested decision. The Court observed, in particular, that the Commission had concluded that, in order to be able to compete viably with Windows work group server operating systems, competitors' operating systems must be able to interoperate with the Windows domain architecture on an equal footing with those Windows systems (see paragraph 230 above). The Court has held that interoperability, as thus envisaged by the Commission, had two indissociable components, client/server interoperability and server/server interoperability and that it implied in particular that a server running a non-Microsoft work group server operating system could act as domain controller within a Windows domain using Active Directory and, consequently, would be able to participate in the multimaster replication mechanism with the other domain controllers (see paragraphs 231 and 233 above).

375 The Court has also already found that, contrary to Microsoft's contention, by requiring such a degree of interoperability the Commission did not intend that non-Microsoft work group server operating systems should function in every respect as a Windows work group server operating system and, accordingly, that the applicant's competitors could develop work group server operating systems that were identical, or even 'virtually identical', to the applicant's (see paragraphs 234 to 242 above).

376 Next, Microsoft criticises the fact that the Commission appraised the requisite degree of interoperability according to what in its view was necessary to allow designers of non-Microsoft work group server operating systems to remain viably on the market.

377 It is sufficient to observe, in that regard, that the Court has already confirmed, at paragraph 229 above, the correctness of the approach thus adopted by the Commission.

378 Finally, Microsoft claims that it is not necessary for its competitors' work group server operating systems to attain the degree of interoperability required by the Commission in order for them to be able to remain viably on the market.

379 It must be emphasised that the Commission's analysis of that question in the contested decision is based on complex economic assessments and that, accordingly, it is subject to only limited review by the Court (see paragraph 87 above).

380 It follows from the considerations set out below that Microsoft has not demonstrated that the Commission's analysis is manifestly incorrect.

381 In that regard, it must be observed, in the first place, that Microsoft has not established that the Commission's finding that 'interoperability with the client PC operating system is of significant competitive importance in the market for work group server operating systems' (recital 586 to the contested decision) is manifestly incorrect.

382 On the contrary, a number of factors confirm the correctness of that finding.

383 Thus, as may be seen from the technical explanations of the relevant products at recitals 21 to 59 to the contested decision and also from the explanations given by the parties' experts at the hearing, it is necessary to bear in mind that, by nature, computer programs do not function in isolation, but are designed to communicate and function with other computer programs and hardware, especially in network environments (see also, at paragraph 157 above, the 10th recital in the preamble to Directive 91/250).

384 Furthermore, within the computer networks installed in organisations, the need to be able to function together is particularly pressing in the case of client PC operating systems and work group server operating systems. As the Commission emphasises at recital 383 to the contested decision, and as the Court has already observed at paragraph 161 above, file and print services and group and user administration services are intimately connected to the use of client PCs and are provided to users of client PCs as a set of interconnected tasks. As the parties' expert witnesses explained at the hearing, in computer networks the relationship between work group servers and client PCs is 'stimulated' or 'provoked' by actions or requests originated by client PC users, such as, in particular, the entry of a name and password, the creation of a file or a request to print a document. The Commission was likewise correct to find, at recital 532 to the contested decision, that '[c]lient PCs and work group servers represent nodes in a computer network and are therefore physically linked with each other'. Last, it must be borne in mind that one of the essential functions of work group server operating systems is specifically the administration of client PCs.

385 Furthermore, as stated at recitals 383 to 386 to the contested decision, certain results of the Mercer surveys confirm the importance of the interoperability of work group server operating systems with client PC operating systems. Apart from the results of the second and third Mercer surveys, which are more specifically

concerned with Windows client PCs and which will be examined at paragraphs 401 to 412 below, the first Mercer survey shows that the ease with which a product can be integrated in an existing or planned future computer environment is one of the main factors which IT executives take into account when deciding what products to purchase. It follows from a comparison of certain results of that survey with certain results of the third Mercer survey, moreover, that the importance of interoperability with client PC operating systems is more clear-cut for work group server operating systems than for other types of server products (recital 386 to the contested decision).

³⁸⁶ In the second place, the Court considers that the interoperability of work group server operating systems with client PC operating systems is even more important in the case of Windows client PC operating systems.

³⁸⁷ Microsoft's dominant position on the client PC operating systems market exhibits, as the Commission states at recitals 429 and 472 to the contested decision, 'extraordinary features', since, notably, its market shares on that market are more than 90% (recitals 430 to 435 to the contested decision) and since Windows represents the 'quasi-standard' for those operating systems.

³⁸⁸ As the Windows operating system is thus present on virtually all client PCs installed within organisations, non-Windows work group server operating systems cannot continue to be marketed if they are incapable of achieving a high degree of interoperability with Windows.

389 In the third place, the Court observes that, according to the contested decision, it is important that non-Windows work group server operating systems can interoperate not only with Windows client PC operating systems but also, more generally, with the Windows domain architecture.

390 More specifically, the Commission considers that, in order to be able to be viably marketed, non-Windows work group server operating systems must be capable of participating in the Windows domain architecture — which consists of an ‘architecture’ of both client/server and server/server interconnections and interactions, closely interlinked (see paragraphs 179 to 189 above) — on an equal footing with Windows work group server operating systems. That means, in particular, that a server running a non-Microsoft work group server operating system is able to act as domain controller within a Windows domain using Active Directory and, consequently, is capable of participating in the multimaster replication mechanism with the other domain controllers.

391 The Court therefore finds that Microsoft has not established that that assessment is manifestly incorrect.

392 In that regard, the Court finds first, that, in light of the very narrow technological and privileged links that Microsoft has established between its Windows client PC and work group server operating systems, and of the fact that Windows is present on virtually all client PCs installed within organisations, the Commission was correct to find, at recital 697 to the contested decision, that Microsoft was able to impose the Windows domain architecture as the ‘*de facto*’ standard for work group computing’ (see, to the same effect, recital 779 to the contested decision, where the Commission states, *inter alia*, that the quasi-monopoly that Microsoft has held on the client PC operating systems market for many years enables it to ‘determine to a

large extent and independently of its competitors the set of coherent communications rules that will govern the *de facto* standard for interoperability in work group networks’).

393 Second, as the Commission states at recital 637 to the contested decision, various sources of evidence, such as Microsoft’s own marketing documents, reports by industry analysts, evidence obtained during the 2003 market enquiry and the Mercer surveys, show that interoperability with the Windows environment is a factor that plays a key role in the uptake of Windows work group server operating systems.

394 Thus, at recitals 638 to 641 to the contested decision, the Commission describes various facts which demonstrate that, for marketing purposes, Microsoft systematically uses interoperability with the Windows environment as a key marketing argument for its work group server operating systems. Those facts are not disputed by Microsoft.

395 Likewise, at recitals 642 to 646 to the contested decision, the Commission refers to certain results of the 2003 market enquiry in order to demonstrate that interoperability with the Windows environment plays a key role in the decisions taken by the organisations questioned on the purchase of work group server operating systems.

396 In the application, Microsoft merely asserts that organisations do not choose server operating systems for reasons linked with their interoperability with Windows operating systems and makes a global reference to certain documents annexed to

the application (annex A.12.1 to the application (Matthews, ‘The Commission’s Case on Microsoft’s Interoperability: An Examination of the Survey Evidence’), and annex A.22 to the application (Evans, Nichols and Padilla, ‘The Commission Has Failed to Address Major Flaws in the Design, Conduct, and Analyses of Its Article 11 Inquiries’)). For the reasons set out at paragraphs 94 to 99 above, the Court cannot take those annexes into account.

³⁹⁷ In any event, the Court finds that the abovementioned results of the 2003 market enquiry confirm the correctness of the Commission’s case.

³⁹⁸ Thus, during that enquiry, the Commission requested the entities questioned to indicate whether they had already implemented (or decided to implement) Active Directory in the majority of the Windows domains in their computer network (question 15). It also requested the entities who answered that question in the affirmative, that is to say, 61 entities out of 102, to indicate from a list of factors those which had been important in their decision to implement Active Directory (question 16). Of those 61 entities, 52 (approximately 85.2%) mentioned as being such a factor the fact that ‘Active Directory offers a better integration with Windows workstations — including applications running on the client PC or integrated into the client PC (e.g. Outlook, Office) than competing directory services’ or the fact that ‘Active Directory is required by applications used in [their] organisation’ (question 16). On the other hand, only 17 entities (approximately 27.9%) mentioned one of the following factors as having been important in their decision to implement Active Directory: ‘Active Directory offers a better integration with Web services than competing directory services’; ‘Active Directory is a more mature product than competing directory services’; and ‘Active Directory offers a better compliance and quality of implementation of directory standards than competing directory services’.

399 Likewise, the entities taking part in the 2003 market enquiry were also asked whether they relied primarily on Windows servers to provide file and print services (question 13). If so, they were to state whether certain interoperability factors set out in that question had been important in their decision to make use of such servers. Of the 77 entities who answered that question, 58 (approximately 75.3%) mentioned at least one of the factors in question.

400 In footnote 101 to the application and also in footnote 68 to the reply, Microsoft suggests, while merely making a general reference to the arguments in certain annexes (annex A.22 to the application and section A of annex C.13 to the reply (Evans, Nichols and Padilla, 'Response to the Commission's Annex B.6 Regarding Its Article 11 Inquiries')), that a number of the questions put by the Commission in connection with the 2003 market enquiry were 'flawed' or 'biased'. The Court considers that that argument cannot be accepted. Apart from the fact that such a global reference to annexes cannot be accepted, for the reasons stated at paragraphs 94 to 99 above, the Court finds that Microsoft's argument is intrinsically contradictory in that, in the parts of its pleadings to which the footnotes concerned relate, the applicant specifically relies, in support of its own case, on certain results of the 2003 market enquiry.

401 Contrary to Microsoft's contention, moreover, the results of the second and third Mercer surveys lead to the same conclusions as the 2003 market enquiry as regards the importance for consumers of interoperability with Windows operating systems.

402 Thus, in its second survey, Mercer, citing the same interoperability-related factors as those set out in question 13 of the 2003 market enquiry (see paragraph 399 above), asked a number of IT executives whose organisations mainly used Windows

operating systems to supply file and print services to indicate whether one or more of those factors had played a key role in the decision to adopt those operating systems, giving those factors a mark on a scale of 1 (low importance) to 5 (high importance). Of the 134 IT executives concerned, 99 (or approximately 73.9%) stated that at least one of those factors had played such a role. Furthermore, it is significant that 91 IT executives (or approximately 67.9%) awarded a mark of 4 out of 5 to at least one of those factors.

403 In the same survey, the IT executives questioned had also been invited to evaluate the role played by 21 different factors in their purchasing decisions concerning operating systems for the execution of file and print services, giving those factors a mark on a scale of 0 (no importance) to 5 (high importance). The factor 'interoperability with (Windows) work stations' received an average mark of 3.78 and was placed in fourth position, behind the factors 'reliability/availability' (average mark 4.01), 'available functions and availability of help (internal or external)' (average mark 3.93) and 'security' (average mark 3.80).

404 The results of the second Mercer survey also show that when the IT executives concerned were asked to evaluate the role played by 18 factors in their decisions concerning the acquisition of directory services, they gave the factor 'interoperability with (Windows) work stations' an average mark of 3.94 (first position).

405 In the third Mercer survey, the IT executives were asked to evaluate the role played by 13 different factors in their decisions concerning the acquisition of work group server operating systems by giving those factors a mark on a scale from 0 (no importance) to 5 (high importance). In response to that request, the factor 'interoperability with Windows work stations' received an average mark of 4.25.

While it is true that that factor was only placed in second position, between 'reliability/availability of the server operating system' (average mark 4.47) and 'integrated security in the server operating system' (average mark 4.04), the fact remains that the results which it obtained show that to a very large extent the decisions of purchasers of work group server operating systems are dictated by considerations to do with interoperability with Windows client PCs.

⁴⁰⁶ It is true that in the third Mercer survey the IT executives were also invited to evaluate the relative importance of each of the 13 factors referred to in the preceding paragraph and that, on that basis, the gap between 'reliability/availability of the server operating system' (in first place, with 34%) and 'interoperability with Windows work stations' (in second place, with 9%) is much wider. However, those results must be qualified, because, as the Commission explains at recitals 643 and 659 to the contested decision, interoperability is a factor which influences other factors that purchasers take into consideration when choosing a work group server operating system. Thus, purchasers may believe that a non-Microsoft work group server operating system has disadvantages in relation to security or processing speed, whereas, in reality, those disadvantages are attributable to a lack of interoperability with Windows operating systems (see the two examples given by the Commission in footnote 786 to the contested decision). Those purchasers thus have a tendency to underestimate the importance of interoperability with Windows.

⁴⁰⁷ The results of the third Mercer survey are also important in so far as they show that Microsoft's manifest and increasing lead over its competitors on the work group server operating systems market (see the examination of the circumstance relating

to the elimination of competition at paragraphs 479 to 620 below) is to be explained not so much by the merits of its products as by its interoperability advantage.

408 Furthermore, the IT executives concerned were requested not only to evaluate the relative importance of 13 different factors in their decisions concerning the acquisition of work group server operating systems (see paragraph 406 above), but also to evaluate, for each of those factors, the respective performances of Linux, NetWare, UNIX and Windows operating systems.

409 In fact, for ‘reliability/availability of the server operating system’, which had been considered the most important factor (with 34%) by the IT executives questioned, Windows obtained the lowest average mark (3.63). UNIX systems came first by a significant margin (average mark 4.55), followed by Linux (average mark 4.10) and NetWare (average mark 4.01).

410 Likewise, Windows obtained the lowest average mark for its performance for ‘integrated security in the server operating system’ (average mark 3.14), far behind UNIX (average mark 4.09), NetWare (average mark 3.82) and Linux (average mark 3.73), although that factor plays a very important role in the organisations’ decisions concerning the acquisition of work group server operating systems (see paragraph 405 above). Those results are all the more revealing since, as stated at paragraph 406 above, purchasers have a tendency to believe that problems are security-related when, in reality, they are the consequence of a lack of interoperability with Windows systems.

- 411 On the other hand, it is striking to note that, as regards performances relating to 'interoperability with Windows work stations', Windows was awarded the highest average mark (average mark 4.87) of all the average marks given to the different server operating systems concerned for each of the 13 factors used by Mercer. It is in relation to that factor, moreover, that the gap between Microsoft and its competitors' operating systems is widest, since NetWare obtained an average mark of 3.78, Linux an average mark of 3.43 and UNIX an average mark of 3.29.
- 412 On the same subject, the Court notes that, as the Commission quite correctly states at recital 662 to the contested decision, if the average marks given to Linux, NetWare, UNIX and Windows for each of the 13 factors concerned with the percentage of 'relative influence' attributed to those factors are weighted, and if the weighted marks are added up, it is UNIX that gets the highest result, followed, first, by Windows and then, with close results that are not significantly lower than Windows' results, by Linux and NetWare.
- 413 Third, the Court observes that, at recital 183 to the contested decision, the Commission asserts that '[w]hen a [non-Windows] work group server is added to a Windows work group network, the degree of interoperability with the Windows domain architecture that such a work group server is able to achieve will have an impact on the efficiency with which that work group server delivers its services to the users of the network'.
- 414 The Court considers that the correctness of this assertion is confirmed by the contested decision in a number of respects. The decision refers to a series of problems which Microsoft's competitors' work group server operating systems encounter because they cannot interoperate with the Windows domain architecture to the same degree as can Windows work group server operating systems.

415 A first example given by the Commission is the fact that, if a work group server does not interoperate sufficiently with the ‘security architecture’ of the Windows work group network, the user might be required to log on twice if he wishes to have access to both ‘Windows-based resources’ and ‘resources offered by ... work group servers [using competing operating systems]’ (recital 183 to the contested decision). In its pleadings, Microsoft does not deny that that problem exists, but merely attempts to minimise it (see paragraph 340 above). Indeed, the Court takes note of the fact that at the hearing, one of Microsoft’s expert witnesses himself underlined the risks that multiple user names and passwords created for network security and the disadvantages, in terms of efficiency and productivity, due to the fact that users had to enter several user names and passwords.

416 Another example is set out at recital 196 to the contested decision, where the Commission reproduces a statement made by Microsoft in its response of 16 November 2001 to the second statement of objections, namely that ‘more policy-based [user group] management is possible if a Windows 2000 Professional client is attached to a Windows 2000 server running Active Directory than if it is running in standalone mode or is part of a non-Windows 2000 domain or realm’.

417 At recital 240 to the contested decision, the Commission states that, more than a year after the launch of Windows 2000, Microsoft had still not fully disclosed the updated CIFS/SMB specification to its competitors. In footnote 319, the Commission correctly states that even if Microsoft had disclosed the updated specification, that would not have been sufficient to ensure ‘proper administration of the file service’.

418 It is also appropriate to cite the factors which the Commission quite correctly identifies concerning the ADSI interface developed by Microsoft to enable software writers to access the LDAP protocol which supports Active Directory (recitals 243 to

250 to the contested decision). In particular, the Court notes the limitations of the 'ADSI provider' developed by Novell (recital 250 to the contested decision).

419 At recitals 251 to 266 to the contested decision, the Commission explains that Microsoft introduced a 'proprietary' extension to the Kerberos standard protocol and that the work group server operating systems which run the 'unextended' version of that security protocol encounter authorisation problems when they work in a Windows environment (see also footnote 786 to the contested decision). It should be borne in mind that the Kerberos protocol, as modified by Microsoft, offers advantages as regards, in particular, faster connection and efficiency (see recital 152 to the contested decision and paragraph 170 above).

420 At recitals 283 to 287 to the contested decision, the Commission correctly explains that the 'directory synchronisation tools' to which Microsoft refers allow the directory services in its competitors' systems to achieve only limited synchronisation with Active Directory. It emphasises, in particular, that those tools 'only synchronise a limited part of the information contained in a directory' and that they 'do not suppress the need to manage the users, permissions, group memberships and security policies separately for the Windows work group servers and the non-Microsoft work group servers' (recital 285 to the contested decision).

421 It follows from all of the foregoing considerations that Microsoft has not established that the Commission made a manifest error when it considered that non-Microsoft work group server operating systems must be capable of interoperating with the Windows domain architecture on an equal footing with Windows work group server operating systems if they were to be marketed viably on the market.

422 The Court also concludes from those considerations that the absence of such interoperability with the Windows domain architecture has the effect of reinforcing Microsoft's competitive position on the work group server operating systems market, particularly because it induces consumers to use its work group server operating system in preference to its competitors', although its competitors' operating systems offer features to which consumers attach great importance.

— The alleged error of fact

423 The arguments which Microsoft derives from the Commission's alleged error of fact are of two types.

424 In the first place, Microsoft claims that the Commission's case is contradicted, first, by the fact that several work group server operating systems are present on the market and by the heterogeneous nature of computer networks within undertakings in Europe and, second, by the fact that, even though they do not have access to the interoperability information at issue, distributors of Linux products have recently entered the market and have consistently gained market share.

425 The Court considers that the first of those arguments is not sufficient to call in question the validity of the Commission's argument.

426 First of all, contrary to Microsoft's contention, interoperability considerations play a key role in decisions concerning the acquisition of work group server operating systems (see paragraphs 381 to 412 above).

427 Also, the third Mercer survey shows that 'interoperability with Windows work posts' is the factor in respect of which the gap between Microsoft's work group server operating system and its competitors' systems is the widest (see paragraph 411 above).

428 Next, as will be explained in greater detail at paragraphs 569 to 582 below, Microsoft's competitors, with the exception of distributors of Linux products, had been present on the work group server operating systems market for several years before Microsoft began to develop and market such systems. While it is true that on the date of adoption of the contested decision those competitors were still present on the market, the fact remains that their market share fell significantly as Microsoft's share increased rapidly, notwithstanding the fact that some of them, particularly Novell, had a considerable technological advantage over Microsoft. The fact that competition is eliminated gradually and not immediately does not contradict the Commission's argument that the information at issue is indispensable.

429 In fact, as the Commission stated in answer to one of the written questions put by the Court, the fact that Microsoft's competitors were able to continue to sell work group server operating systems during the years immediately preceding the adoption of the contested decision is explained in part by the fact that at that time there was still, within organisations, a not insignificant basis of client PCs using a Windows operating system belonging to a range of products predating the Windows 2000 range (see recitals 441 to 444 to the contested decision). For example, the table at recital 446 to the contested decision shows that in 2001 the Windows 98,

Windows Millennium Edition (Windows Me) and Windows NT client PC operating systems were still being licensed in significant numbers. It is precisely with the Windows 2000 operating systems that interoperability problems arose in a particularly acute manner for Microsoft's competitors (see paragraphs 571 to 573 below). At the same time, there was also a non-negligible installed base of work group servers using Windows NT operating systems, which caused fewer interoperability problems than the systems which succeeded them. It must be borne in mind, in that regard, that organisations modify their work group server networks only once in a period of several years, and do so only incrementally (see recital 590 to the contested decision).

430 The second argument referred to at paragraph 424 above, based on the entry and growth of Linux products on the work group server operating systems market, must also be rejected.

431 First of all, as the Commission explains at recitals 487 and 488 to the contested decision, and as the Court will explain at paragraphs 502 and 553 below, the IDC data on which Microsoft relies to describe the evolution of the position of Linux products on the market present certain flaws. Those data come from a database which IDC established by identifying eight main categories of tasks (or 'workloads') carried out within organisations and distinguishing a number of 'sub-categories' within those main categories. The two tasks most closely related to the work group tasks referred to by the contested decision, namely file and print sharing and user and user group administration, are those known, respectively, as 'file/print sharing' and 'networking' (recital 486 to the contested decision). However, the tasks within those two sub-categories are not a perfect match for the services which constitute the work group server operating systems market. What is more, a number of those tasks can be performed with a much lower level of interoperability between client

PCs and servers than the work group tasks identified by the Commission and are therefore more likely than the latter tasks to be carried out by non-Microsoft operating systems.

432 Next, account must be taken of the fact that the growth of Linux products on the work group server operating systems market was only modest during the years immediately preceding the adoption of the contested decision. When those Linux products were used in conjunction with Samba software (developed with the use of reverse engineering) they could attain a certain degree of interoperability with Windows operating systems. However, that degree of interoperability was significantly reduced following the launch of the Windows 2000 generation. Thus, in October 2003 — that is to say, several months after Microsoft had already begun to market the Windows 2003 server operating system, which had succeeded the Windows 2000 server system — the degree of interoperability that Linux products had managed to achieve enabled them to act only as member servers within a domain using Active Directory (see recitals 296 and 297 to the contested decision).

433 Finally, as will be explained in greater detail at paragraphs 595 to 605 below, the projected growth of Linux products on the work group server operating systems market is lower than Microsoft claims and will come about to the detriment not of Microsoft's systems but, in particular, of Novell's systems and the systems of distributors of UNIX products.

434 In the second place, Microsoft claims that the Commission failed to take account of the fact that several methods other than the disclosure of the information at issue ensure sufficient interoperability between different suppliers' operating systems.

435 On that point, it is sufficient to observe that Microsoft itself has recognised, both in its written pleadings and in answer to a question put to it at the hearing, that none of its recommended methods or solutions made it possible to achieve the high degree of interoperability which the Commission correctly required in the present case.

436 It follows from all of the foregoing considerations that Microsoft has not demonstrated that the circumstance that the interoperability information was indispensable was not present in this case.

(iii) Elimination of competition

Arguments of the parties

437 Microsoft submits that the refusal at issue is not such as to exclude all competition on a secondary market, namely, in this case, the work group server operating systems market.

438 In support of that assertion, Microsoft claims, in the first place, that the Commission applied a test that was wrong in law.

439 Microsoft observes that, at recital 589 to the contested decision, the Commission refers to a mere 'risk' of elimination of competition on the market. In cases dealing with compulsory licensing of intellectual property rights, on the other hand, the

Court has always ascertained whether the refusal in question was 'likely to eliminate all competition' and required, in that regard, 'something close to certainty'. The Commission therefore ought to have applied a stricter test, namely the test of a 'high probability' of eliminating effective competition. Contrary to the Commission's contention, the words 'risk', 'possibility' and 'likelihood' do not mean the same thing.

440 Microsoft further submits that the reference in the contested decision to *Commercial Solvents v Commission* and *CBEM*, cited in paragraph 320 above, is irrelevant. Those cases did not involve a refusal to license intellectual property rights. In each of those cases, moreover, the prospect of eliminating competition was immediate and real, as there were no alternative sources of supply.

441 In the second place, Microsoft claims that the Commission's argument that competition on the server operating systems market could be eliminated owing to its refusal to disclose its communication protocols to its competitors is contradicted by market conditions. The applicant reiterates, first, that it is commonplace for undertakings in Europe to have heterogeneous computer environments composed of Windows client PC and server operating systems and non-Microsoft server operating systems and, second, that the Mercer reports show that enterprise customers base their decisions relating to the purchase of operating systems on a range of criteria such as reliability, scalability and applications compatibility and do not consider the criterion of interoperability with Windows client PC operating systems to be a determinative criterion.

442 Microsoft also observes that, six years after the alleged refusal to supply, there were still numerous competitors on the work group server operating systems market, including IBM, Novell, Red Hat and Sun, and a number of suppliers of Linux

products. The applicant reiterates that Linux is a recent entrant to the market and has grown rapidly and that it is an incontrovertible fact that Linux products, either on their own or together with Samba products or with Novell's Nterprise server software, compete directly with Windows server operating systems in performing a wide range of tasks, including the provision of work group services to Windows client PC operating systems. Furthermore, IDC, which describes itself as the premier global market intelligence and advisory group in the information technology and telecommunications industries, estimated that there was no risk of competition being eliminated. IDC's projections indicate that over the period 2003 to 2008 Microsoft's share of the market for work group server operating systems used on servers costing under USD 25 000 will remain virtually stable, whereas Linux's share will double.

443 In the third place, Microsoft criticises the Commission's 'artificially narrow' definition of the second product market.

444 Microsoft contends that '[c]ompetition with Windows server operating systems is even more vigorous' if the definition also covers tasks other than the provision of file and print services and user and group administration services that Windows server operating systems can perform.

445 Microsoft observes that the Commission does not deny that the basic version of its Windows Server 2003 operating system enables a wide range of tasks to be performed, many of which are outside the second product market as defined in the contested decision. According to the Commission's approach, the same Windows server operating system is inside the relevant market when it provides file and print services to Windows client PC operating systems and is outside the market when it provides proxy services or firewall services to those same operating systems.

446 Microsoft maintains that the Commission is not entitled to rely on the fact that its Windows Server 2003 operating system is marketed in different versions at different prices to support its assertion that the basic version of that system is in a different market from the other versions of the same system. The 'more expensive' versions of that system provide the same work group services as the basic version.

447 In the reply, Microsoft expands somewhat on its complaint relating to the incorrect definition of the second product market. It states, first of all, that on the market for server operating systems in general it has a market share of around 30%. Next, it asserts that '[n]o one in the industry uses the term "work group server" in the way the Commission has used it to define [that product market]' and that when 'industry observers' occasionally do refer to 'work group servers' they generally include servers that perform a wide range of tasks, including 'Web, database and application serving'. Last, it claims that none of the major server vendors on the market sells work group servers that are limited to performing the tasks identified by the Commission.

448 Microsoft also rejects the explanations which the Commission sets out in the defence to justify its definition of the market. First of all, Microsoft states that '[v]endors do not charge different people different prices for the same server operating system edition depending on how they will use it'. Next, it denies that the server operating systems considered by the Commission to be 'work group server operating systems' are 'optimised' to provide work group services: the IDC data on which the Commission relied when calculating market share show that, with the sole exception of Novell's NetWare, '[those] operating systems spend far more time devoted to non-work group tasks than to work group [tasks]'. Last, the applicant asserts that '[t]he cost of modification in many cases would be zero [and] in the other cases ... would be negligible'.

449 Furthermore, Microsoft refers generally to two reports by Evans, Nichols and Padilla, in annex A.23 to the application and annex C.12 to the reply.

450 In the fourth place, Microsoft, in the reply, criticises the methodology used by the Commission to calculate the market share of operators on the second product market, which consists in taking into account only the time which server operating systems spend in performing work group tasks and only sales of server operating systems costing under USD 25 000. That leads to the absurd consequence that ‘a copy of an operating system is counted as [being] both inside and outside the market, depending on the tasks it is performing at any given time’ and provides no ‘relevant information about dominance’.

451 CompTIA claims, first of all, that the Commission applied the wrong legal standard when ascertaining whether Microsoft’s refusal involved a mere ‘risk of elimination of all effective competition’ when it ought to have examined whether that refusal gave rise to the likelihood that all competition would be eliminated from the secondary market. Next, CompTIA asserts that the evidence in the file does not demonstrate that that refusal was likely to have such a consequence. It emphasises, in particular, the ‘growing success’ of Linux.

452 ACT emphasises the very close link between the indispensability criterion and the ‘elimination of competition’ criterion. It claims, in particular, that the contested decision is contradictory in so far as, on the one hand, it recognises that up to 40% of the work group server operating systems market is held by competitors who are able to provide substitute products without having had access to the interoperability information and, on the other, it states that competition on that market is impossible without such access because the information is indispensable.

453 ACT also disputes the Commission's argument that there is no need to take into account competition by *de minimis* players. It also criticises the fact that the Commission relies on a mere 'risk' of elimination of competition, and emphasises that Linux's position on the market continues to grow.

454 The Commission asserts that the applicant's refusal creates a risk that all effective competition on the secondary market for work group server operating systems will be eliminated.

455 In the first place, the evidence analysed at recitals 585 to 692 to the contested decision clearly shows that there is a 'high likelihood' that that risk will be 'realised in the near future'. The Commission refers to recital 700 to the contested decision and submits that if Microsoft's conduct remains unfettered, there is a serious risk that its competitors' products will be confined to a 'niche' existence or will not be profitable at all.

456 The Commission contends that the *Commercial Solvents v Commission* and *CBEM* cases, cited in paragraph 320 above, provide valuable guidance for the purpose of assessing Microsoft's conduct in the light of Article 82 EC, even though those cases did not involve a refusal to license intellectual property rights. In that context, the expressions 'risk', 'possibility' and 'likelihood' used by the Court of Justice in its case-law on abusive refusals to supply have the same meaning.

457 The Commission submits that most of Microsoft's arguments are based on the incorrect premiss that the Commission must establish that competition has already been eliminated or, at least, that its elimination is imminent. The Commission

demonstrated in the contested decision that ‘the degree of interoperability that can be achieved on the basis of Microsoft’s disclosures is insufficient to enable competitors to stay viably on the market’ (footnote 712 to the contested decision). Microsoft has not adduced evidence that that conclusion is vitiated by a manifest error of assessment.

458 In the second place, the Commission deals with the arguments which Microsoft bases on the facts observed on the market.

459 It states, first of all, that ‘the risk of elimination of all competition was already present in 1998, as it is present today’: the only difference is that ‘now [that] elimination of competition is more imminent than it was in 1998’.

460 Next, the Commission disputes the conclusions that Microsoft draws from the Mercer reports. In the Commission’s view these reports demonstrate that customers choose Windows as a work group server operating system because of Microsoft’s ‘unfair interoperability advantage’, in spite of the fact that Windows is ‘lagging behind’ other products on a number of features that customers consider important.

461 The argument which Microsoft bases on the growth of Linux products is refuted as wholly unsupported; the Commission refers to recitals 506 and 632 to the contested decision, in which it is clearly shown that ‘the past growth of Linux has been *de minimis*’. The last two Mercer surveys demonstrate that Linux has only a very low market share, in the order of 5%, on the work group server operating systems market.

462 The Commission contends that the IDC projections are exaggerated and based on imperfect data (see paragraphs 365 and 366 above). In reality, the IDC data suggest that Microsoft rapidly acquired a dominant position on the relevant market, that it is continuing to increase its market share and that it is facing an increasingly fragmented fringe of niche players.

463 In the third place, the Commission rejects Microsoft's criticism of its definition of the second product market.

464 In reaching that definition, the Commission first of all identified a 'list of core work group services, which closely correspond to a specific customer need'. Those core services are the key services that customers take into account when purchasing a work group server operating system. The Commission based its analysis on a variety of evidence, including the information gathered in the 2003 market enquiry (recitals 349 to 352 to the contested decision), 'statistical correlation' between the use of a given operating system for one of the core work group services and its use for the other core services (recital 353 to the contested decision) and Microsoft's description and pricing of its products (recitals 359 to 382 to the contested decision).

465 The Commission contends that work group server operating systems are 'optimised' to provide work group services and that the way in which they provide those services plays a decisive role in the decision to purchase such systems. The fact that work group servers are sometimes used to run an application does not have the effect of 'temporarily' excluding them from the market or of 'temporarily' including in the market enterprise servers which are 'optimised' to run enterprise applications.

466 In response to Microsoft's argument that its Windows work group server operating systems may be used to provide proxy services or firewall services, the Commission refers to recital 58 to the contested decision and states that those tasks are implemented by specialised 'edge servers'. Those servers cannot therefore exercise a competitive constraint on Microsoft on the work group server operating systems market.

467 In the rejoinder, the Commission claims, first of all, that the terminology which it uses to designate the product market is irrelevant to whether it correctly defined that market. Furthermore, the expression 'work group server operating system' is indeed used in the industry to designate the 'type of products at stake in the [contested] decision'.

468 Next, the Commission rejects Microsoft's criticisms of the explanations set out in the defence (see paragraph 448 above).

469 First, contrary to Microsoft's contention, both it and its competitors 'do ... charge customers different prices for the same server operating system depending on how they will use it'. Prices vary according to the number of client PCs which have access to the server concerned. Furthermore, server operating systems vendors offer a number of different editions — at different prices — of systems forming part of the same 'family'. More generally, the Commission observes that 'Windows server operating systems are licensed by Microsoft to customers and [that] there is in principle no reason why Microsoft should not be able to discriminate depending on use'.

470 Second, the Commission submits that Microsoft's assertion that work group server operating systems 'spend far more time devoted to non-work group tasks than to work group [tasks]' is based on IDC data processed according to an inappropriate method.

471 Third, in response to Microsoft's assertion that 'the cost of modification in many cases would be zero', the Commission refers to recitals 334 to 341 and 388 to 400 to the contested decision, which show that there is no supply side substitutability for either client PC operating systems or work group server operating systems.

472 Still in the rejoinder, moreover, the Commission emphasises that Microsoft does not deny that interoperability with client PCs — and, more especially, with Windows client PCs — is particularly important for the performance of work group tasks by a server operating system. Microsoft's refusal to disclose interoperability information significantly harms its competitors' capacity to meet consumer expectations concerning the performance of those tasks and thus alters the conditions of competition for servers sold for those tasks by comparison with those sold for different tasks. In the Commission's submission, '[that] remains true even assuming ... that, for each of both Microsoft and its rivals, the various editions of its server operating systems currently on the market are all equally suited ... for the performance of both work group server tasks and certain other "low-end" tasks (non-mission critical applications such as e-mail, etc.)'.

473 The Commission further submits that, '[a]s for the supply side, it is obvious that, if one accepts for present purposes (i) the demand-side requirements of customers as regards work group services (undisputed by Microsoft) and (ii) Microsoft's own

hypothesis that the various editions of each vendor's respective server operating systems have identical capacities as regards work group tasks, then the very same distorted market forces which force the exit of Microsoft's competitors from the sale of server operating systems for work group tasks will prevent supply-side substitution through (re)entry on the basis of the "high-end" editions of the same operating system "families".

474 Last, the Commission refers to annex B.11 to the defence and annex D.12 to the rejoinder, in which it comments on the observations set out in annex A.23 to the application and annex C.12 to the reply.

475 In the fourth place, the Commission rejects Microsoft's criticisms of the method which it used to calculate market share. First of all, for the purpose of its assessment, there is no need for Microsoft to have already acquired a dominant position on the relevant secondary market by means of its abusive conduct: what matters is that there is a risk of elimination of competition on that market. Next, the Commission's method 'gives a sufficiently reliable picture of the imbalance of forces on the market for work group server operating systems'. The Commission did not consider only the time allocated to different tasks by a given server, but examined, in respect of the undertakings which participated in the 2003 market enquiry and responded to the second and third Mercer surveys, what proportion of the work group tasks was performed by servers from different suppliers. Neither that market enquiry nor those surveys indicate that Microsoft held a market share of less than 60% for any one of those work group tasks.

476 The Commission further contends that 'applying the "filters" identified by Microsoft makes it possible to use [the IDC] data as a rough proxy for the sale of the editions of various vendors identified as being work group server operating systems'. It

maintains that, 'to the extent that Microsoft's own exclusionary behaviour has the effect of partitioning sales of server operating systems purchased primarily for work group tasks from those primarily purchased for other tasks, a "workload" filter permits one to form an impression of Microsoft's relative strength in sales primarily for the former tasks'. In any event, even if only the '[USD] 25 000 filter' were applied, without any distinction based on workload, Windows' share would be 65% by volume and 61% by relevant turnover (recital 491 of the contested decision).

⁴⁷⁷ SIIA claims that, owing to the indispensability of the interoperability information, the refusal at issue is by nature such as to eliminate competition on the work group server operating systems market. In particular, Microsoft's market share on that market rose significantly and rapidly at the time when it placed its Windows 2000 Server operating system on the market. SIIA also contends that the arguments which Microsoft bases on the alleged growth in Linux products on the market are unfounded.

⁴⁷⁸ FSFE asserts that Linux products do not exert a competitive threat on the work group server operating systems market.

Findings of the Court

⁴⁷⁹ The Court will examine in the following order the four categories of arguments which Microsoft puts forward in support of its contention that the circumstance relating to the elimination of competition is not present in this case: first, the definition of the relevant product market; second, the method used to calculate

market shares; third, the applicable criterion; and, fourth, the assessment of the market data and the competitive situation.

— The definition of the relevant product market

⁴⁸⁰ Microsoft's arguments in respect of the definition of the relevant product market concern the second of the three markets identified by the Commission in the contested decision (see paragraphs 23 and 25 to 27 above), namely, the work group server operating systems market. The Commission describes those systems as being designed and marketed to deliver collectively file and print sharing services and group and user services to a relatively small number of client PCs linked together in a small or medium-sized network (recitals 53 and 345 to the contested decision).

⁴⁸¹ Microsoft contends, in effect, that the Commission defined that second market too restrictively by including only server operating systems used to supply the services mentioned in the preceding paragraph, namely what are known as 'work group' services. Microsoft's objective in challenging the Commission's definition of the market is essentially to establish that the evolution of the market is different from that described at recitals 590 to 636 to the contested decision and does not represent the elimination of all competition.

⁴⁸² The Court notes at the outset that in so far as the definition of the product market involves complex economic assessments on the part of the Commission, it is subject to only limited review by the Community judicature (see, to that effect, Case T-342/99 *Airtours v Commission* [2002] ECR II-2585, paragraph 26). However, this does not prevent the Community judicature from examining the Commission's

assessment of economic data. It is required to decide whether the Commission based its assessment on accurate, reliable and coherent evidence which contains all the relevant data that must be taken into consideration in appraising a complex situation and whether it is capable of substantiating the conclusions drawn from it (see, to that effect, *Commission v Tetra Laval*, cited in paragraph 89 above, paragraph 39).

483 The Court notes, moreover, that Microsoft on the one hand repeats arguments which it already submitted during the administrative procedure and which the Commission expressly rejected in the contested decision, but fails to indicate in what way the Commission's findings are incorrect, and, on the other, makes a general reference to two reports in annex A.23 to the application and annex C.12 to the reply. For the reasons set out at paragraphs 94 to 99 above, those reports will be taken into account by the Court only to the extent to which they support or complement pleas or arguments expressly set out by Microsoft in the body of its pleadings.

484 In arriving at the contested definition of the product market, the Commission took into account the demand-side substitutability and the supply-side substitutability of the products. It must be borne in mind that, as stated in the Commission Notice on the definition of the relevant market for the purposes of Community competition law (OJ 1997 C 372, p. 5), point 7, '[a] relevant product market comprises all those products and/or services which are regarded as interchangeable or substitutable by the consumer, by reason of the products' characteristics, their prices and their intended use'. As indicated at point 20 of that notice, moreover, supply-side substitutability may also be taken into account when defining markets in those situations in which its effects are equivalent to those of demand substitution in terms of effectiveness and immediacy. That means that suppliers are able to switch

production to the relevant products and market them in the short term without incurring significant additional costs or risks in response to small and permanent changes in relative prices.

485 The Court would point out straight away that the definition of the second market is not based on the idea that there is a separate category of server operating systems exclusively implementing file and print services and user and group administration services. Quite to the contrary, at a number of points in the contested decision the Commission expressly acknowledges that work group server operating systems may also be used to carry out other tasks, and, in particular, may run ‘non-mission critical’ applications (see, in particular, recitals 59, 355, 356 and 379 to the contested decision). At recital 59 to the contested decision, the Commission states that ‘non-mission critical’ applications are those whose failure ‘would impact the activity of some users [but] would not impact the overall activity of the organisation’. In that regard, the Commission refers, more specifically, to the running of internal email services. As will be explained in greater detail below, the Commission’s definition is based in fact on the finding that the capacity of work group server operating systems to supply collectively file and print services and also user and group administration services constitutes, without prejudice to the other tasks which they are capable of performing, an essential feature of those systems, and that those systems are primarily designed, marketed, purchased and used to provide those services.

486 As regards, in the first place, demand-side substitutability, the Commission concludes at recital 387 to the contested decision that ‘there are no products that ... exercise sufficient competitive pressure on work group server operating systems such that they should be included in the same relevant product market’.

487 In arriving at that conclusion, the Commission established, first, that it followed from the information gathered in the 2003 market enquiry that work group servers performed a distinct set of linked tasks which were demanded by consumers (recitals 348 to 358 to the contested decision).

488 The Court considers that that finding is confirmed by the evidence in the file and that Microsoft has raised no argument which disproves it.

489 In its request for information of 4 June 2003, the Commission asked the organisations concerned whether within those organisations a particular type of server was used to supply file and print services and group and user administrative services (first part of question 1). Of the 85 organisations which answered that question, 70 (approximately 82.3%) said that that was so.

490 The Commission also asked the organisations whether they considered that those services constituted a 'set of server tasks that "go together"' (second part of question 1). Of the 83 organisations which answered that question, 51 (61.4%) endorsed that proposition.

491 Those results are explained, in particular, by the fact that those services constitute the basic services which client PC users use in their daily activities. Entity I 06, for example, explains its positive answer to both parts of question 1 by describing servers that supply work group services as 'infrastructure servers' and those services as 'standard desktop services'. It states that '[e]ach user shall be identified/authenticated; he/she will create/modify files, print them, exchange/share them'.

Likewise, other organisations refer to the servers as being ‘infrastructure server providers’ (see response of entities I 13 and I 30).

⁴⁹² It is also significant that, as the Commission observes at recital 352 to the contested decision, several organisations explained their positive response to both parts of question 1 by the need to have a ‘single sign-on identification’ for users accessing the resources of the network or a single point of administration of the network (see, inter alia, the responses of entities I 30, I 46-16, I 46-37 and Inditex). Other organisations mention cost considerations, stating, in particular, that the use of the same operating system to supply work group services allows a reduction in administration costs (see, inter alia, the responses of entity I 49-19 and Inditex).

⁴⁹³ It is true that in the description of ‘work group tasks’ in its request for information of 4 June 2003 the Commission also included ‘support for internal email and collaboration services and other “non-mission critical” applications’ and that a number of the organisations questioned approved the inclusion of those services in that description. It is also true that, in answer to question 2 in the same request for information, 62 organisations out of 85 (approximately 72.9%) stated that they appreciated the flexibility offered by a work group server operating system which, in addition to file and print services and user and group administration services, was able to supply ‘non-mission critical’ services.

⁴⁹⁴ However, it cannot be inferred from those findings alone that the Commission defined the second product market too narrowly.

495 First, those findings must be qualified. Thus, in their response to question 1 of the request for information of 4 June 2003, a number of the organisations questioned stated that in their operations internal email or collaboration services were performed on specialist servers and they distinguished those services from the other work group services mentioned by the Commission (see, in particular, the responses of entities I 09-1, I 11, I 22, I 37, I 53, I 46-13, I 46-15, I 59 and I 72, and also those of Danish Crown, Spardat and Stork Food & Dairy Systems). For example, while entity I 37 considered that the work group tasks defined by the Commission constituted a set of linked server tasks, it stated that ‘file/print [services] [went] together’, whereas ‘internal email [services] [belonged to] a different set of servers’. Likewise, entity I 46-15 stated that it had ‘a server that provided file and print services and workstation management only’.

496 Second, as the Commission observes at recitals 353 and 354 to the contested decision, and as it reiterates in its answer to one of the written questions put by the Court, the 2003 market enquiry also shows that when organisations use a given operating system to supply file or print services, they generally use the same operating system to supply user and group administration services. The Court notes that Microsoft does not dispute the findings in footnotes 436 and 438 to the contested decision relating to the ‘correlation coefficients’ calculated by the Commission on the basis of the responses to question 5 of its request for information of 16 April 2003. The Commission explains in those footnotes that the ‘correlation coefficient’ between the workload share of a NetWare system (or a Windows system) for one of the work group services (namely file sharing, printing and user and group administration) and the workload share of the same system for another of the same services is particularly high. On the other hand, the ‘correlation coefficient’ is much lower between the workload share of a NetWare system (or a Windows system) for one of the work group services and the workload share of the same system for a different type of service, in particular internal email services or other applications which are ‘non-mission critical’. The Commission adds that the

same conclusions may be deduced from results of the second and third Mercer surveys. In other words, it is apparent from that evidence, which Microsoft does not dispute, that it is much more usual to combine, on the same server, the work group services identified by the Commission than one of those services and a service of another type.

⁴⁹⁷ Consequently, while it is true that users attach a certain importance to the possibility of using work group server operating systems to perform certain 'non-mission critical' tasks in addition to work group services, that does not at all affect the conclusion that there is a separate demand for server operating systems that supply work group services. Since it is settled that it is the three categories of services thus considered that determine the choice of demand, it is immaterial that the server operating systems belonging to the relevant market are capable of performing certain additional tasks.

⁴⁹⁸ Furthermore, as indicated at recitals 357, 358 and 628 to the contested decision, the customer statements produced by Microsoft during the administrative procedure confirm the correctness of the Commission's analysis.

⁴⁹⁹ Those statements show that while, admittedly, as Microsoft emphasises at a number of points in its pleadings, organisations often have 'heterogeneous' computer networks (that is to say, networks in which server and client PC operating systems from different suppliers are used), they nevertheless use different types of servers to perform different types of tasks. More particularly, it is clear from those statements that work group services as defined by the Commission are generally supplied by other types of servers than those performing 'mission critical' services. Thus, it appears from those organisations' descriptions of their computer environment that work group services are normally supplied by entry-level servers running a

Windows or NetWare system, while 'mission critical' applications run on more expensive and larger UNIX servers or on mainframes.

500 For example, a large chemical and pharmaceutical group states that the 'business-critical' applications which it uses to pay its staff salaries and for internal banking transactions run on mainframes, while other 'business-critical' applications used, inter alia, for the administrative and technical management of certain of its divisions are supplied by UNIX servers. On the other hand, within that group 'non-business-critical' tasks, in particular file and print services and user and group administration services, are performed by separate servers which mainly run Windows operating systems. Likewise, a large airline explains that the applications which it uses especially for flight planning and reservation services are supplied by UNIX servers, whereas 'non-mission critical' applications are supplied by Windows servers. A further relevant example is provided by a banking group, which states that it uses UNIX servers for essential financial applications, Solaris servers for other financial applications and applications which it develops in-house, and Windows NT servers to support 'infrastructure functionality such as domain services (especially login and permissioning) and file and print services'.

501 The Court notes that, as indicated particularly at recitals 58 and 346 to the contested decision, low-end servers are not all used to supply work group services. Some of those servers are installed at the 'edge' of networks and are intended to perform specialist tasks, such as Web serving, Web caching and firewall tasks.

502 Last, Microsoft's argument to the effect that the IDC data show that, with the single exception of Novell's NetWare system, the operating systems which the Commission describes as 'work group server operating systems' spend much less time performing work group tasks than performing other tasks cannot be upheld. That argument is based on IDC data which establish that only 24% of sales of servers, across all price ranges, running a Windows operating system correspond to 'file', 'print' and 'network administration' tasks (see footnote 93 to the reply). However, as may be seen from recitals 487 and 488 to the contested decision, and as the Court will explain in greater detail at paragraph 553 below, the method which IDC uses to calculate market shares has a number of flaws. In any event, even if the tasks mentioned above were to be considered to correspond to the work group services referred to in the contested decision, the percentage calculated on the basis of IDC's data would represent only Microsoft's share of sales of server operating systems, in all versions, which relate to the work group server operating systems market. Contrary to Microsoft's assertion, the percentage in question is not limited to work group server operating systems.

503 Second, the Commission found, relying in particular on Microsoft's own description of its products, that the server operating systems were 'optimised' for the tasks which they were to perform (recitals 359 to 368 to the contested decision).

504 The Court considers that the evidence in the file confirms the correctness of that finding.

505 Thus, information published by Microsoft on its Internet site shows that the server operating systems in the Windows 2000 range are marketed in three different versions, namely, Windows 2000 Server, Windows 2000 Advanced Server and

Windows 2000 Datacenter Server, and that each of those versions is intended to meet a specific task-based user demand.

506 Microsoft describes Windows 2000 Server as the ‘entry-level’ version of its Windows 2000 server operating systems and as ‘the right solution for work group file, print and communication servers’ (recital 361 to the contested decision). Windows 2000 Server ‘scales from 1 to 4 processors and up to 4 gigabytes’ (recital 364 to the contested decision).

507 Windows 2000 Advanced Server is presented by Microsoft as ‘the right operating system for essential business and e-commerce applications that handle heavier workloads and high-priority processes’ (recital 362 to the contested decision). Windows Advanced Server not only contains all the functionalities offered by Windows 2000 Server but also offers ‘additional scalability and reliability features, such as clustering, designed to keep ... business-critical applications up and running in the most demanding scenarios’ (recital 362 to the contested decision). Microsoft also states that Windows 2000 Advanced Server ‘scales from 1 to 8 processors and up to 64 gigabytes’ (recital 364 to the contested decision).

508 Last, Microsoft presents Windows 2000 Datacenter Server as offering ‘maximum reliability and availability’ and as constituting ‘the right operating system for running mission-critical databases [and] enterprise resource planning software’ (recital 363 to the contested decision). Windows 2000 Datacenter Server ‘is designed for enterprises that need very reliable high-end drivers and software’ and ‘scales from 1 to 32 processors and up to 64 gigabytes’ (recitals 363 and 364 to the contested decision).

509 Microsoft gives a similar presentation of the different versions of the range of server operating systems that replaced the Windows 2000 range, namely Windows Server 2003 Standard Edition, Windows Server 2003 Enterprise Edition, Windows Server 2003 Datacenter Edition and Windows Server 2003 Web Edition.

510 Thus, it describes Windows Server 2003 Standard Edition as ‘the ideal multipurpose network operating system for the everyday needs of organisations of all sizes, but especially small businesses and work groups’ and as permitting ‘intelligent file and printer sharing, secure Internet connectivity, centralised desktop policy management and Web solutions that connect employees, partners, and customers’ (recital 365 to the contested decision).

511 Windows Server 2003 Enterprise Edition, according to Microsoft’s description, offers, in addition to the functionalities present in Windows Server 2003 Standard Edition, ‘reliability features needed for business-critical applications’ (recital 366 to the contested decision).

512 Windows Server 2003 Datacenter Edition, according to Microsoft, ‘is built for mission critical applications that demand the highest levels of scalability, availability, and reliability’ (recital 366 to the contested decision).

513 Last, Windows Server 2003 Web Edition is described by Microsoft as being ‘designed for building and hosting Web applications, pages, and services’ and as being ‘designed specifically for dedicated Web serving needs’ (recital 367 to the contested decision). Microsoft emphasises that that system ‘can be used solely to

deploy Web pages, Web sites, Web applications, and Web services' (recital 367 to the contested decision).

514 That publicity material shows that Microsoft itself presents the different versions of its server operating systems as being designed to meet distinct task-based user demands. It is also apparent from that publicity material that the different versions are not designed to run on the same hardware.

515 The Court also notes that the products of other operating system suppliers are also 'optimised' for work group services. That is so particularly for the products of Red Hat, whose 'Red Hat Enterprise Linux ES' and 'Red Hat Enterprise Linux AS' operating systems are clearly designed to meet distinct user demands. Thus, as the Commission states at footnote 463 to the contested decision, on Red Hat's website its 'Red Hat Enterprise Linux ES' system is described as being 'ideally suited for network, file, print, mail, Web, and custom or packaged business applications'. On the other hand, its 'Red Hat Enterprise Linux AS' system is presented as being targeted at 'high-end and mission-critical systems' and as 'the ultimate solution for large departmental and datacenter servers'. That is consistent with the finding that operating systems running on high-end servers are designed to perform 'mission critical' tasks and must therefore be more reliable and have more functionalities than work group server operating systems (recitals 57 and 346 to the contested decision).

516 Third, the Commission relied on 'Microsoft's pricing strategy' and, in particular, on the fact that it charged different prices for different versions of its server operating systems (recitals 369 to 382 to the contested decision).

517 First of all, it is clear from the information set out at recitals 370 to 373 to the contested decision, and not disputed by Microsoft, that there are significant price differentials between the different versions of its server operating systems, both in the Windows 2000 Server range and in the Windows 2003 Server range.

518 Thus, based on 25 'Client Access Licences' ('CALs'), the selling price of Windows 2000 Advanced Server is 2.22 times the price of Windows 2000 Server, while Windows 2000 Datacenter Server costs 5.55 times the price of Windows 2000 Server (based on 25 CALs).

519 Likewise, based on 25 CALs, the selling price of Windows Server 2003 Enterprise Edition is 2.22 times the price of Windows Server 2003 Standard Edition. The selling price of Windows Server 2003 Datacenter Edition is 5.55 times the price of Windows Server 2003 Standard Edition (based on 25 CALs). Windows Server 2003 Web Edition, which can be used only to perform certain specific tasks (see paragraph 513 above), is sold at a much lower price than Windows Server 2003 Standard Edition.

520 Next, contrary to what Microsoft appears to suggest (see paragraph 446 above), the Commission does not infer from the sole fact that Microsoft charges different prices for the different versions of its server operating systems that those versions belong to separate product markets. From the aspect of demand-side substitutability, the Commission takes into account not only those price differentials but also, and primarily, the fact that each of the different versions is designed to meet a specific user demand.

521 Nor is Microsoft entitled to rely on the fact that the ‘more expensive’ versions of its Windows Server 2003 range, namely Windows Server 2003 Enterprise Edition and Windows Server 2003 Datacenter Edition, allow the same work group tasks to be performed as Windows Server 2003 Standard Edition. Even though that may be true, the fact remains that the first two systems are intended to meet demands which are different from the third system and that it is unlikely that a user interested only in work group services will purchase a much more costly system than Windows Server 2003 Standard Edition for that purpose.

522 As the Commission correctly observes at recital 376 to the contested decision, Microsoft itself shares that opinion when, in its own marketing material, it states, with reference to the systems in the Windows 2000 Server range:

‘[T]he three offerings in the family — Windows 2000 Server, [Windows 2000] Advanced Server, and [Windows 2000] Datacenter Server — allow you to tailor your investment to provide the level of system availability that’s appropriate for your various business operations, without overbuying for operations that don’t require maximum uptime.’

523 In the same context, Microsoft cannot rely on the fact that the Windows Server 2003 Standard Edition operating system also allows tasks other than work group tasks to be performed. That argument ignores the fact that Microsoft charges different prices for that operating system depending on whether it is intended to be used to supply work group services or other types of services. As explained at recitals 84 and 380 to the contested decision, the prices charged by Microsoft for the Windows Server 2003 Standard Edition operating system include a fee for each server on which it is installed and a fee (CAL) for each client PC to which that server supplies work group services. By contrast, the user does not need to purchase a CAL if he wishes to use that operating system to perform ‘unauthenticated’ tasks, such as

firewall, proxy or cache serving. Those findings show, moreover, that Microsoft's assertion that '[v]endors do not charge different people different prices for the same server operating system edition depending on how they will use it' is incorrect.

524 Fourth, and last, the Commission observed that server operating systems other than work group server operating systems did not need to interoperate as fully with the client PCs in an organisation as work group server operating systems (recitals 384 and 383 to 386 to the contested decision).

525 In that regard, it is sufficient to point out that it has already been found at paragraph 385 above that the Commission was correct to make such an appraisal. In any event, its appraisal is not disputed by Microsoft.

526 It follows from the foregoing considerations that Microsoft has not established that the Commission's finding that there are no products that, from the demand-side perspective, exercise sufficient competitive pressure on work group server operating systems to justify their inclusion in the same relevant product market (recital 387 to the contested decision) was manifestly incorrect.

527 In the second place, the question of supply-side substitutability is analysed by the Commission at recitals 388 to 400 to the contested decision.

528 The Commission considers that ‘other operating system vendors, including in particular vendors of server operating systems, would not be able to switch their production and distribution assets to work group server operating systems without incurring significant additional costs and risks and within a time framework sufficiently short so as to consider that supply-side considerations are relevant in this case’ (recital 399 to the contested decision). More specifically, the Commission rejects the argument developed by Microsoft in its response of 16 November 2001 to the second statement of objections, that there is a ‘virtually instantaneous supply-side substitution’, in that it is sufficient to ‘disable’ the ‘more complex functionalities’ in higher-end server operating systems in order to obtain a product comparable to a work group server operating system.

529 It is clear to the Court that, in the body of its pleadings, Microsoft puts forward no specific argument capable of calling in question the analysis carried out by the Commission in the recitals to the contested decision referred to above. In the reply, it merely makes the general assertion that ‘[t]he cost of modification in many cases would be zero’ and ‘in the other cases ... would be negligible’, without even indicating whether it thereby intends to contest the Commission’s finding that there was no supply-side substitutability.

530 In those circumstances, the Court finds that Microsoft has not established that the Commission manifestly erred when it concluded that there was no supply-side substitutability in this case.

531 The Court concludes from the foregoing that the Commission was correct to define the second product market as the work group server operating systems market.

532 That conclusion is not called in question by Microsoft's assertion that '[n]o one in the industry uses the term "work group server" in the way the Commission has used it to define [the relevant product market]'. First, as the Commission quite correctly states, the terminology which it uses to designate the market makes no difference whatsoever to whether it defined the market correctly. Second, Microsoft's assertion in any event has no basis in fact, since the file shows that the expressions 'work group server' and 'work group server operating system' are used in the industry to designate the type of products covered by the contested decision. Thus, in its complaint of 10 December 1998, Sun expressly states that the complaint relates to Microsoft's conduct 'in the work group server operating systems sector'. Likewise, it must be borne in mind that in its marketing material Microsoft itself presents its Windows 2000 Server as 'the right solution for work group file, print and communication servers' (see paragraph 506 above).

— The method used in calculating market shares

533 Microsoft takes issue with the Commission for having used an inappropriate method to calculate the market shares of the various operators on the second product market. It maintains, in particular, that that method provides no 'relevant information about dominance'.

534 The Court finds that, for the reasons given below, Microsoft has not demonstrated that the method used by the Commission is vitiated by any manifest error of assessment.

535 At recitals 473 to 490 to the contested decision, the Commission explains its method in detail.

536 The Commission states, first of all, that it uses two categories of ‘proxies’ to assess the position of the various operators on the market, namely, first, estimates of new sales by IDC based on price-band proxies and workload shares for various tasks and, second, estimates of market shares based on the results of the 2003 market enquiry and the second and third Mercer surveys (recital 473 to the contested decision).

537 It must be pointed out at the outset that the statement in the preceding paragraph shows that Microsoft’s assertion that the Commission, when calculating market shares, took into account only the time spent by the server operating systems in performing work group tasks and sales of server operating systems costing under USD 25 000 is clearly incorrect. Microsoft fails to mention that the Commission also took into consideration data from sources other than IDC. As will be shown at paragraph 556 below, the market shares established on the basis of the latter data correspond globally to those determined on the basis of the IDC data.

538 Next, the Commission states that market shares must be estimated on the number of units of the product shipped and the turnover generated by sales of software and hardware together (recitals 474 to 477 to the contested decision).

539 Last, the Commission contends that the IDC data must be adjusted by means of two ‘filters’ (recitals 478 to 489 to the contested decision). First, it takes account only of servers costing less than USD 25 000 (or EUR 25 000, since, as stated in footnote 6

to the contested decision, at the material time EUR 1 corresponded roughly to USD 1). Second, it took into consideration only certain of the categories of tasks defined by IDC.

540 Microsoft's complaint is directed against the use of those two filters.

541 As regards the first filter, in the body of the reply Microsoft merely contests, quite generally, its relevance. In annex C.12 to the reply, it expands somewhat on its argument, first, by claiming that the 2003 market enquiry — some of the results of which were used by the Commission to justify the application of that filter — concerns 'the behaviour of a particular group of customers' and, second, by criticising the fact that the Commission takes account of the selling price of servers and not the selling price of operating systems. On that last point, the applicant submits that the same work group server operating system can run on servers of very different prices, and in particular on servers costing more than USD 25 000.

542 Those arguments cannot be accepted.

543 First of all, the entities questioned by the Commission in connection with the 2003 market enquiry do not represent a 'particular group of customers'. As stated at recital 8 to the contested decision, those entities are companies selected at random by the Commission, established in different Member States, of different sizes and from different activity sectors.

544 Next, as the Commission stated in answer to one of the written questions put by the Court, the price limit of USD 25 000 (or EUR 25 000) applies to the 'total cost of the system (that is to say, hardware and software)'. The Court finds that the Commission was correct to take account of the selling price of hardware and software to evaluate the market shares of the operators on the work group server operating systems market. As stated at recitals 69 and 474 to the contested decision, some vendors (including Sun and most UNIX vendors) develop and sell server operating systems bundled with the hardware. The Court takes account, moreover, of the fact that during the administrative procedure Microsoft itself recommended the approach thus adopted by the Commission (see recital 476 to the contested decision).

545 Last, the Court finds that the Commission was quite correct to apply a maximum price of USD 25 000 (or EUR 25 000), which corresponds to the maximum selling price of servers in the first of the three categories of servers according to which IDC divides the market for the purposes of its analyses (recital 480 to the contested decision). In effect, the results of the 2003 market enquiry show that work group server operating systems generally run on relatively cheap servers, unlike 'mission critical' applications, which are run on high-level servers.

546 Thus, in connection with that enquiry, the Commission asked the organisations concerned to state what price they were prepared to pay for a work group server (question 3 of the request for information of 4 June 2003). Of the 85 organisations which answered that question, 83 (approximately 97.6%) stated that they would not pay more than EUR 25 000.

547 Likewise, in its request for information of 16 April 2003, the Commission asked the organisations a number of questions concerning their past and planned purchases of

servers intended to supply file and print services (questions 8 and 9). It appears from the answers to those questions that, of the 8 236 servers purchased for that purpose by those organisations, 8 001 (approximately 97.1%) cost less than EUR 25 000 and that, of the 2 695 planned purchases of such servers, 2 683 (approximately 99.6%) cost less than EUR 25 000 (recital 479 to the contested decision).

548 As regards the second filter, Microsoft merely observes in the body of its reply that the application of that filter leads to the absurd consequence that ‘a copy of an operating system is counted as [being] both inside and outside the market, depending on the tasks it is performing at any given time’. In annex C.12 to the reply the applicant adds that ‘a large part of the (artificially) excluded sales almost certainly represent sales of [server operating systems] editions that are within the Commission’s candidate market [namely, the work group server operating systems market]’.

549 Those arguments cannot be upheld either.

550 The Court finds not only that the Commission was quite correct to use that second filter, but also that Microsoft greatly exaggerates the consequences of its being used.

551 It is important to bear in mind why the Commission considered it necessary to use that filter. As stated at recital 482 to the contested decision, the Commission’s reason for doing so was that not all the operating systems running on servers costing under USD 25 000 (or EUR 25 000) supply work group services. In particular, some of those systems are devoted exclusively to specific tasks outside, or at the edge of, work group networks, such as Web services or firewall services. That is the case, for example, of Windows Server 2003 Web Edition, which according to its licence

conditions cannot be used to supply work group services and which normally runs on servers costing below USD 25 000 (or EUR 25 000).

552 The Commission therefore correctly concluded that it was necessary to qualify the IDC data on sales of computers costing below USD 25 000 (or EUR 25 000) by also taking into account the various types of tasks performed by those servers (recital 483 to the contested decision). To that end, the Commission used the IDC data in a database called 'IDC Server Workloads 2003 Model'. Those data were obtained from consumers whom IDC requested to specify the tasks (or 'workloads') carried out by the servers which they used in their organisation. As already stated at paragraph 431 above, IDC identified eight main categories of tasks and distinguished a number of sub-categories within those categories. The Commission used the sub-categories 'file/print sharing' and 'networking', which were the ones that most closely corresponded to the 'file and print' and 'group and user administration' services referred to in the contested decision (recital 486 to the contested decision).

553 Admittedly, the tasks in those two sub-categories do not correspond exactly with the services constituting the work group server operating systems market. The Commission was however fully aware of that as may be seen from the examples which it gives at recitals 487 and 488 to the contested decision and which show, in particular, that certain tasks performed on high-end servers may be placed in one or other of those sub-categories although they clearly do not represent work group tasks.

554 However, it was precisely the combination of the two filters of which Microsoft complains that allowed that problem of consistency between the tasks defined by IDC and those identified by the Commission to be reduced.

555 In any event, it is clear that the market shares obtained if only the first filter is applied are not significantly different from those obtained when both filters are used together. Thus, Microsoft's market share for 2002, when calculated on the basis of all servers sold for below USD 25 000, is 64.9% by units shipped and 61% by turnover (recital 491 to the contested decision). When, for the same servers, only the sub-categories 'file/print sharing' and 'networking' are taken into consideration, Microsoft's market shares are as follows: 66.4% by units shipped (65.7% by turnover) for the first sub-category and 66.7% by units shipped (65.2% by turnover) for the second (recital 493 to the contested decision).

556 More generally, as noted at recital 473 to the contested decision, the percentages obtained using the IDC data, when both filters are applied together, correspond globally with those obtained on the basis of the 2003 market enquiry and the second and third Mercer surveys (see, for example, recitals 495, 497 and 498 to the contested decision). It must be emphasised in that context that each time the Commission erred on the side of caution. Thus, in Microsoft's case, it took the lowest market share, 'at least 60%' (recital 499 to the contested decision).

557 The Court concludes that Microsoft has not demonstrated that the method which the Commission used when calculating market shares is vitiated by a manifest error of assessment or, consequently, that the estimates of market shares given at recitals 491 to 513 to the contested decision must be considered manifestly incorrect.

558 Nor did the Commission base its finding that Microsoft held a dominant position on the work group server operating systems market solely on its market shares on that market. It also took into account the fact that there were barriers to entry to that

market (recitals 515 to 525 to the contested decision), owing in particular to the presence of network effects and obstacles to interoperability, and also the close commercial and technological links between that market and the client PC operating systems market (recitals 526 to 540 to the contested decision).

559 Last, as regards the abusive refusal to supply, it must be borne in mind that in the contested decision the Commission takes issue with Microsoft for having used, by leveraging, its quasi-monopoly on the client PC operating systems market to influence the work group server operating systems market (recitals 533, 538, 539, 764 to 778, 1063, 1065 and 1069). In other words, Microsoft's abusive conduct has its origin in its dominant position on the first product market (recitals 567 and 787 to the contested decision). Even if the Commission were wrongly to have considered that Microsoft was in a dominant position on the second market (see, in particular, recitals 491 to 541, 781 and 788 to the contested decision) that could not therefore of itself suffice to support a finding that the Commission was wrong to conclude that there had been an abuse of a dominant position by Microsoft.

— The applicable criterion

560 In the contested decision, the Commission considered whether the refusal at issue gave rise to a 'risk' of the elimination of competition on the work group server operating systems market (recitals 585, 589, 610, 622, 626, 631, 636, 653, 691, 692, 712, 725, 781, 992 and 1070 to the contested decision). Microsoft contends that that criterion is not sufficiently strict, since according to the case-law on the exercise of an intellectual property right the Commission must demonstrate that the refusal to license an intellectual property right to a third party is 'likely to eliminate all competition', or, in other words, that there is a 'high probability' that the conduct in question will have such a result.

561 The Court finds that Microsoft's complaint is purely one of terminology and is wholly irrelevant. The expressions 'risk of elimination of competition' and 'likely to eliminate competition' are used without distinction by the Community judicature to reflect the same idea, namely that Article 82 EC does not apply only from the time when there is no more, or practically no more, competition on the market. If the Commission were required to wait until competitors were eliminated from the market, or until their elimination was sufficiently imminent, before being able to take action under Article 82 EC, that would clearly run counter to the objective of that provision, which is to maintain undistorted competition in the common market and, in particular, to safeguard the competition that still exists on the relevant market.

562 In this case, the Commission had all the more reason to apply Article 82 EC before the elimination of competition on the work group server operating systems market had become a reality because that market is characterised by significant network effects and because the elimination of competition would therefore be difficult to reverse (see recitals 515 to 522 and 533 to the contested decision).

563 Nor is it necessary to demonstrate that all competition on the market would be eliminated. What matters, for the purpose of establishing an infringement of Article 82 EC, is that the refusal at issue is liable to, or is likely to, eliminate all effective competition on the market. It must be made clear that the fact that the competitors of the dominant undertaking retain a marginal presence in certain niches on the market cannot suffice to substantiate the existence of such competition.

564 Last, it must be borne in mind that it is for the Commission to establish that the refusal to supply gives rise to a risk of the elimination of all effective competition. As already stated at paragraph 482 above, the Commission must base its assessment on accurate, reliable and coherent evidence which comprises all the relevant data that

must be taken into consideration in order to assess a complex situation and which are capable of substantiating the conclusions drawn from them.

— The assessment of the market data and the competitive situation

⁵⁶⁵ In the contested decision, the Commission analyses together the circumstance that interoperability is indispensable and the fact that the refusal is likely to eliminate competition (recitals 585 to 692 to the contested decision). Its analysis has four parts. In the first place, the Commission examines the evolution of the work group server operating systems market (recitals 590 to 636 to the contested decision). In the second place, it establishes that interoperability is a factor which plays a determining role in the use of Windows work group server operating systems (recitals 637 to 665 to the contested decision). In the third place, it states that there are no substitutes for disclosure by Microsoft of the interoperability information (recitals 666 to 687 to the contested decision). In the fourth place, it makes a number of observations about the CPLC (recitals 688 to 691 to the contested decision).

⁵⁶⁶ The arguments which Microsoft puts forward in support of the present complaint relate essentially to the first part of the Commission's analysis. Microsoft claims, in effect, that the market data contradict the Commission's argument that competition on the work group server operating systems market is at risk of being eliminated as a consequence of the refusal at issue.

⁵⁶⁷ In the first part of its analysis, the Commission began by examining the evolution of the market shares of Microsoft and its competitors on the second product market. It

established, essentially, that Microsoft's market share had experienced rapid and significant growth and that it continued to increase to the detriment of Novell in particular. The Commission then noted that the market share of UNIX vendors was weak. Last, it considered that Linux products had only a very small presence on the market, that they had made no headway on the market during the years immediately preceding the adoption of the contested decision and that certain forecasts concerning their future growth were not capable of calling in question its finding that effective competition would be eliminated on the market.

568 The Court considers that those different findings are confirmed by the evidence in the file and that they are not called in question by Microsoft's arguments.

569 First, the file shows that initially Microsoft supplied only client PC operating systems and that it was a relatively late entrant to the server operating systems market (see, in particular, paragraph 47 of the response of 17 November 2000 to the first statement of objections). It was only in the early 1990s that Microsoft began to develop a server operating system — it marketed its first system, 'Windows NT 3.5 Server', in July 1992 — and it was only with 'Windows NT 4.0', released in July 1996, that it first encountered real commercial success (see, in particular, paragraph 50 of the response of 17 November 2000 to the first statement of objections and paragraphs 50 and 56 of the application).

570 It is apparent from the IDC data, as reproduced at recital 591 to the contested decision, that Microsoft's market share, by units shipped, on the market for operating systems for servers costing under USD 25 000 grew from 25.4% (24.5% by turnover) in 1996 to 64.9% (61% by turnover) in 2002, a leap of almost 40% in just six years.

571 It also follows from the IDC data mentioned at recital 592 to the contested decision that Microsoft's market share increased continuously following the launch of the Windows 2000 generation of operating systems. As the Commission rightly observes at a number of places in the contested decision (see, for example, recitals 578 to 584, 588 and 613 to the contested decision), it was specifically with the Windows 2000 range of operating systems that the problems of interoperability arose in a particularly acute fashion for Microsoft's competitors.

572 Thus, for example, the 'NDS for NT' software, which had been developed by Novell by reverse engineering, made interoperability possible between Microsoft's competitors' work group server operating systems and the Windows domain architecture (in this instance Windows NT). NDS for NT could be installed on a Windows NT domain controller and enabled clients to use Novell's NDS (Novell Directory Service) (later called eDirectory) to administer the different aspects of Windows NT domains. Because Microsoft failed to communicate certain information to Novell, however, NDS for NT does not work with the Windows 2000 Server operating system (see recital 301 to the contested decision).

573 Another example is AS/U, which AT&T had been able to develop in the 1990s by using certain Windows source code which Microsoft had agreed to disclose to it under a licence. AS/U enabled a server running UNIX to work as main domain controller in a Windows NT domain (see recital 211 to the contested decision). Likewise, Sun, on the basis of the AS/U source code licensed to it by AT&T, had developed a product comparable to AS/U, 'PC NetLink', which, when installed on a Solaris server, enabled that server to 'provide transparent Windows NT file, print, directory, and security services to Windows 3.X/95/98/NT clients' (and to do so 'natively', that is to say, without users having to install additional software on their client PCs) and to act as a primary domain controller (or backup domain controller) in a Windows NT domain (see recital 213 to the contested decision). In 2001 Microsoft and AT&T decided not to extend their licence agreement to certain new server operating system technologies. Thus, Microsoft did not supply AT&T with the source code relating to the systems which replaced Windows NT 4.0.

Consequently, PC NetLink was no longer capable of working except with Windows NT client PCs — in particular, it did not work with Windows 2000 — and gradually lost its attraction.

574 In the same context, it is appropriate to mention the various changes which followed the migration from Windows NT technology to Windows 2000 technology and Active Directory (see paragraphs 167 to 171 above).

575 Second, it is apparent from the file that, alongside the evolution of Microsoft's position as described above, Novell experienced a continuous decline on the work group server operating systems market and in just a few years became a secondary player. At the time when Microsoft entered the server operating systems market, the leading product for the supply of work group services was Novell's NetWare (see paragraph 56 of the application), which had been present on that market since the mid-1980s.

576 Thus, the IDC data mentioned at recital 593 to the contested decision show that, when the 'file/print sharing' sub-category and servers costing under USD 25 000 are taken into account, NetWare's market share fell from 33.3% in 2000 to 23.6% in 2002 by units shipped and from 31.5% in 2000 to 22.4% in 2002 by turnover.

577 Novell's decline is confirmed both by the statements of market analysts and by Microsoft itself (see recital 596 to the contested decision).

578 Similarly, in the report containing the analysis of the results of its third survey, Mercer expressly states that numerous organisations have reduced their use of NetWare. Mercer observes, in particular, that 'when asked about their usage of each of the server operating systems for work group server functions over the last five years, organisations that have reduced their usage of NetWare outnumber those that have increased their usage of NetWare by a nearly 7:1 ratio' (page 25 and table 16 of the report).

579 Furthermore, as the Commission correctly observes at recitals 594 and 595 to the contested decision, certain results of the 2003 market enquiry and certain customer statements produced by Microsoft during the administrative procedure clearly show a tendency within organisations to replace NetWare by Windows 2000 Server. On the other hand, there are only very few examples of 'migration' from Windows to NetWare (see recitals 594 and 632 to the contested decision).

580 Third, the evidence in the file shows that Microsoft's other competitors were able to maintain only a very marginal position on the work group server operating systems market.

581 Thus, first of all, the IDC data mentioned at recital 508 to the contested decision show that the market share of UNIX vendors (including Sun) represented, when the 'file/print sharing' subcategory and servers costing under USD 25 000 were taken

into account, only 4.6% by units shipped and 7.4% by turnover. For the ‘network administration’ sub-category, the corresponding figures were 6.4% by units sold and 10.8% by turnover.

582 The results of the 2003 market enquiry and the customer statements produced by Microsoft show that UNIX systems are effectively used not to perform work group tasks but to run ‘mission-critical’ Web supply and firewall applications and also, to a lesser extent, to run internal email services (see recitals 509 to 511 to the contested decision).

583 Next, the IDC data, the results of the 2003 market enquiry and Microsoft’s customer statements show that, contrary to Microsoft’s assertions, Linux products also had only a marginal presence on the work group server operating systems market at the time of adoption of the contested decision.

584 Thus, the IDC data reproduced at recital 599 to the contested decision show that the combined market share of vendors of Linux products, by units shipped, fell, for the ‘file/print sharing’ subcategory and servers costing under USD 25 000, from 5.1% in 2000 to 4.8% in 2002. When measured by turnover, that combined market share remained at 3.9% over that period.

585 Admittedly, for the ‘network administration’ sub-category and servers costing under USD 25 000, the combined share of vendors of Linux products, by units shipped, rose, according to the IDC data mentioned in footnote 728 to the contested decision

(see also recital 505 to the contested decision), from 10.1% in 2000 to 13.4% in 2002 (and from 8% to 10.8% over the same period, by turnover). However, that increase has to be qualified in light of the fact that, as the Commission observes at recital 488 to the contested decision and in the above footnote to the contested decision, that sub-category includes services which are not work group services within the meaning of the contested decision. IDC describes that sub-category as 'includ[ing] the following networking applications: directory, security/authentication, network data/file transfer, communication, and system data/file transfer' (recital 488 to the contested decision). Such a description is likely to lead the users questioned by IDC to include in that sub-category certain tasks which do not belong there (and do not belong in the relevant product market) and which are generally performed by Linux or UNIX systems. For example, that description might be interpreted as covering 'network edge tasks', such as firewall (which might be considered to relate to 'security') and routing (which might be considered to relate to 'system data/file transfer'). As stated, in particular, at recitals 58, 346, 482, 600 and 601 to the contested decision, however, tasks of that type are generally performed by Linux on high-end servers. Accordingly, the IDC data relating to the 'network administration' sub-category overestimate Linux sales on the work group server operating systems market.

586 It is true that, at recital 487 to the contested decision, the Commission observes that the IDC data on the 'file/print sharing' sub-category are also less than perfect, notably in that, because high-end servers which perform 'mission critical' applications may be used to print certain documents (for example invoices), the users questioned may form the view that those servers perform tasks belonging to that sub-category when it is clear that they are not work group servers. However, the application of the EUR 25 000 (or USD 25 000) filter allows such inaccuracy to be reduced (see recital 489 to the contested decision, where the Commission observes that mainframes that print invoices will generally cost more than that amount). The IDC data are therefore more flawed with respect to the 'network administration' sub-category than with respect to the 'file/print sharing' sub-category.

587 The results of the 2003 market enquiry contain no flaws of the type referred to in the preceding paragraph. Those results confirm that Linux had only a marginal presence on the work group server operating systems market. Thus, in its request for information of 16 April 2003, the Commission requested the organisations concerned whether they used Linux servers in conjunction with Samba software to perform work group tasks (question 25). Of the 102 organisations which participated in that enquiry, only 19 used Linux servers for work group tasks, and in most cases did so to a very limited extent (recital 506 to the contested decision). Thus, out of a total of more than 1 200 000 client PCs covered by the 2003 market enquiry, fewer than 70 000 (less than 5.8%) were served by Linux/Samba servers for file and print tasks (recitals 506 and 599 to the contested decision).

588 Likewise, as the Commission submits in the defence (paragraph 140), the second Mercer survey reveals, for Linux products, a combined market share of 4.8% for file and print tasks and 5.2% for group and user administration tasks (the third Mercer survey reveals, for the same products, a market share of 5.4% for file and print services and 4.5% for group and user administration tasks).

589 In reality, the results of the 2003 market enquiry show that, like UNIX, Linux products are generally used to perform tasks other than work group tasks, namely, to provide Web and firewall services and to run 'mission-critical' applications (see recitals 600 and 601 to the contested decision, where the Commission comments on the responses to questions 5 and 6 of the request for information of 16 April 2003).

590 That finding is confirmed, moreover, by the customer statements submitted by Microsoft during the administrative procedure, as the Commission correctly observes at recital 602 to the contested decision.

591 Furthermore, the presence of vendors of Linux products on the work group operating systems market, apart from the fact it is by no means comparable to the market presence which Microsoft managed to acquire in just a few years, was achieved not at Microsoft's expense but at the expense of Novell and UNIX vendors. As the Commission stated in the rejoinder (paragraph 104), among the entities questioned by Mercer whose use of Linux for work group server tasks had increased over the previous five years, 67% had decreased their use of NetWare or UNIX, while only 14% had decreased their use of Windows. As the Commission correctly states at recital 632 to the contested decision, moreover, the 2003 market enquiry revealed only two instances of migration from Windows to Linux for work group server tasks.

592 Microsoft's assertions to the contrary in annex C.11 to the reply are scarcely credible, having regard particularly to the consistent increase in its market share on the relevant product market throughout the period covered by the abusive refusal in question.

593 The above factors confirm that Microsoft's refusal has the consequence that its competitors' products are confined to marginal positions or even made unprofitable. The fact that there may be marginal competition between operators on the market cannot therefore invalidate the Commission's argument that all effective competition was at risk of being eliminated on that market.

594 In light of the factors referred to at paragraphs 583 to 593 above, the Court considers that the Commission was correct to find, at recital 603 to the contested decision, that Linux vendors did not represent a significant threat to Microsoft on the work group server operating systems market.

595 Microsoft also claims that the presence of Linux products on the work group server operating systems market will continue to increase in the future. It expands on that argument in annex A.19 to the application and in annex C.11 to the reply. The Commission provides a detailed response to that argument in annex B.10 to the defence and in annex D.11 to the rejoinder.

596 In support of that argument, Microsoft refers, first of all, to certain results of the third Mercer survey.

597 In that survey, Mercer asked the IT executives whose organisations already used Linux operating systems for work group tasks whether they planned to increase that use within the next five years. Table 19 in the Mercer report, in which the results of that survey are analysed, shows that of the 70 IT executives concerned by that question, 53 responded in the affirmative.

598 The Court finds that the Commission was correct to conclude, at recital 605 to the contested decision, that that factor was not conclusive. On the one hand, those 53 IT executives represented only approximately 17.9% of the 296 IT executives who participated in the third Mercer survey (226 of those executives stated that their organisation did not use Linux systems to supply work group services). On the other

hand, the 53 IT executives in question did not quantify their intended increase in use of Linux systems to perform work group tasks, nor did they specify whether that increase would be at the expense of Windows.

599 Furthermore, table 18 in the same Mercer report shows that 58 IT executives considered that Linux would not even become 'viable' for the performance of work group tasks within the next five years.

600 It is true that the same table shows that 60% of the IT executives questioned stated that their organisation planned to adopt Linux systems within the next five years to supply work group services. However, as the Commission correctly observes at recital 606 to the contested decision, those executives were not invited to quantify their takeup of Linux nor to say whether it would be at the expense of Windows.

601 Next, Microsoft relies on certain projections by IDC which establish that Linux's market share will double between 2003 and 2008.

602 The Court observes that the IDC data contain a number of flaws, as its sub-categories include tasks which do not belong to the work group server operating systems market covered by the contested decision. IDC's growth projections must therefore be qualified.

603 Furthermore, as the Commission correctly observes at recital 609 to the contested decision, the limited growth that Linux is forecast to achieve on the market, according to those projections, would be at the expense, not of Windows, but of competing systems and, more particularly, of NetWare. The Court observes, in that context, that in April 2003 Novell announced that from 2005 its NetWare 7.0 operating system would be sold in two different versions, one based on the traditional NetWare platform and the other on the Linux operating system (see recital 95 to the contested decision).

604 Last, in annex A.19 to the application and annex C.11 to the reply, Microsoft refers to the opinion expressed by certain ‘industry observers’. It refers, more expressly, to certain passages in a report of 8 March 2004 by Merrill Lynch (annex 7 to annex C.11 to the reply) which contains the results of a survey carried out by Merrill Lynch among 50 IT executives. The applicant observes that half of those executives proposed to increase their use of Linux systems in their organisation and that, of that half, 34% envisaged doing so in order to replace Windows NT for file and print tasks.

605 That argument is not convincing. All that it means is that 17% of the IT executives questioned intended to replace Windows NT by Linux systems for the tasks referred to in the preceding paragraph, whereas it says nothing about the extent to which Windows would be thus replaced. In reality, in light of the fact that at the time of the Merrill Lynch survey Windows NT technology was already ‘outdated’ (see recital 583 to the contested decision), it is highly probable that the installed base of Windows NT servers was relatively small and, accordingly, that the ‘migration’ referred to above would be on only a small scale. It should also be borne in mind that non-Microsoft server operating systems could achieve a higher degree of interoperability with the Windows NT generation of systems than with subsequent generations of Windows produced by Microsoft. As the Commission emphasises in its assessment of the circumstance relating to the indispensability of the information at issue (see

paragraph 366 above), the ‘migration’ referred to in the Merrill Lynch report is likely to be a one-off phenomenon and cannot therefore affect the Commission’s findings in respect of the risk of the elimination of competition.

606 Continuing with the first part of its analysis (the part relating to the evolution of the work group server operating systems market), the Commission then established that Windows 2000, and in particular Active Directory, were ‘quickly gaining traction in the market’ (recitals 613 to 618 and 781 to the contested decision). The Commission further observed that, ‘[owing] to Microsoft’s disruption of interoperability-related disclosures, interoperability with ... Windows 2000 features is significantly more difficult for non-Microsoft work group servers than used to be the case with the analogous technologies in Windows NT’, before concluding that ‘the uptake [of the new features of the Windows domain specific to Windows 2000] contributes to the lock-in of the customers that embrace them in a homogeneous Windows solution for work group networks’ (recital 613 to the contested decision).

607 The Court finds that a number of documents in the file substantiate the correctness of those findings.

608 Thus, in a bulletin published in November 2001, IDC stated that ‘[f]or the vast majority of users, the question is not if, but when, they will implement directory services to support Windows 2000 Server and future Windows server operating systems’ and that ‘for Windows 2000 users, the directory of choice is overwhelmingly going to be Active Directory’ (recital 614 to the contested decision).

- 609 Likewise, as the Commission notes at recital 616 to the contested decision, an Evans Data Corporation survey conducted in 2002 shows that, when asked about the directory services for which their applications were designed, 50.3% of the in-house developers concerned mentioned Active Directory.
- 610 Certain results of the 2003 market enquiry also confirm the impressive interest caused by Active Directory. Thus, in its request for information of 16 April 2003, the Commission asked the entities concerned whether they had already implemented (or decided to implement) Active Directory in the majority of the Windows domains in their computer network (question 15). Of the 102 entities covered by the survey, 61 answered that question in the affirmative.
- 611 The interest in Active Directory is also apparent from certain results of the second Mercer survey, as the Commission notes at recital 618 to the contested decision.
- 612 It was stated at paragraphs 571 to 574 above, moreover, that the interoperability that work group server operating systems can achieve with products of the Windows 2000 generation is much lower than they were able to achieve with systems of the previous generation.
- 613 Last, the Commission concluded the first part of its analysis by rejecting three categories of arguments that Microsoft had put forward during the administrative procedure to dispute the risk of elimination of competition identified by the Commission. Microsoft had referred to certain statements made by its competitors,

relied on the fact that the computer networks within undertakings were heterogeneous and claimed that replacement solutions for Windows existed.

⁶¹⁴ In its pleadings, Microsoft referred to the customer statements which it had produced during the administrative procedure and reiterated its argument that networks within undertakings are heterogeneous.

⁶¹⁵ On that point, it is sufficient to observe that it has already been found at paragraphs 498 to 500 above that those statements confirmed that, so far as work group servers were concerned, those customers' computer networks consisted primarily of Windows systems.

⁶¹⁶ In its pleadings, Microsoft also relies on the fact that professional customers adopt their purchasing decisions in respect of server operating systems according to a set of criteria and that the question of interoperability with Windows client PC operating systems is not a determining factor in that regard. As already demonstrated at paragraph 426 above, that assertion is incorrect.

⁶¹⁷ Furthermore, Microsoft's argument that, six years after the alleged refusal to supply, there were still numerous competitors on the work group server operating systems market (see paragraph 442 above) must be rejected for the reasons set out at paragraph 429 above.

618 It follows from all of the foregoing that the Commission did not make a manifest error of assessment when it concluded that the evolution of the market revealed a risk that competition would be eliminated on the work group server operating systems market.

619 The Commission had even more reason to conclude that there was a risk that competition would be eliminated on that market because the market has certain features which are likely to discourage organisations which have already taken up Windows for their work group servers from migrating to competing operating systems in the future. Thus, as the Commission correctly states at recital 523 to the contested decision, it follows from certain results of the third Mercer survey that the fact of having an ‘established record as proven technology’ is seen as a significant factor by the large majority of IT executives questioned. At the time of the adoption of the contested decision, Microsoft, at a conservative estimate, held a market share of at least 60% on the work group server operating systems market (recital 499 to the contested decision). Likewise, certain results of that survey also establish that the factor ‘available skill-sets and cost/availability of support (in-house or external)’ is important for the majority of the IT executives questioned. As the Commission quite correctly states at recital 520 to the contested decision, ‘[that] means that the easier it is to find technicians skilled in using a given work group server operating system, the more customers are inclined to purchase that work group server operating system’ and, ‘[i]n turn, however, the more popular a work group server operating system is among customers, the easier it is for technicians (and the more willing are technicians) to acquire skills related to that product’. Microsoft’s very high market share on the work group server operating system market has the consequence that a very large number of technicians possess skills which are specific to Windows operating systems.

620 The Court therefore concludes that the circumstance that the refusal at issue entailed the risk of elimination of competition is present in this case.

(iv) The new product

Arguments of the parties

⁶²¹ Microsoft cites paragraphs 48 and 49 of *IMS Health*, cited in paragraph 107 above, and maintains that it has not been established that its refusal prevented the appearance of a new product for which there is unsatisfied consumer demand.

⁶²² The applicant already markets server operating systems which implement the communication protocols in question and its competitors market their own server operating systems, which use communication protocols which they have selected to provide work group services.

⁶²³ Microsoft refers to recital 669 to the contested decision and claims that the contested decision seeks to allow its competitors to make their products behave in exactly the same way as Windows server operating systems and that it is the Commission's intention that the applicant's communication protocols should be used by its competitors to create server operating systems that compete directly with the applicant's products by mimicking their functionality.

⁶²⁴ Microsoft also claims that the contested decision fails to identify any new product that its competitors would develop using the applicant's communication protocols and to demonstrate that there is any demand for such a product. The Commission

merely claims that Microsoft's competitors 'could use the disclosures to [develop] the advanced features of their own products' (recital 695 to the contested decision).

⁶²⁵ Microsoft observes that neither the letter of 15 September 1998 nor Sun's complaint of 10 December 1998 gives the slightest indication that Sun intended to use 'Microsoft's technology' to create anything other than a work group server operating system.

⁶²⁶ Microsoft disputes the Commission's assertion that in order to be described as new, it is sufficient for a product to contain substantial elements contributed by the licensee's own efforts. It maintains that the '[a]ddition of a feature taken from a competitor's products can hardly be viewed as the creation of a new product'.

⁶²⁷ Microsoft also challenges the Commission's claim that the applicant's refusal is a 'refusal to allow follow-on innovation' (see paragraph 632 below). It disputes the accuracy of the statements set out at recital 696 to the contested decision and submits that Novell never used AS/U and that sales of work group server operating systems supplied by Sun and 'several other vendors' who had been licensed to use AS/U were always modest. In reality, the compulsory licensing ordered in the contested decision is likely to reduce innovation, because the applicant will have less incentive to develop a specific technology if it is required to make that technology available to its competitors.

⁶²⁸ Last, Microsoft denies that the refusal at issue harms consumers. The Mercer report on which the Commission relies (see paragraph 635 below) relates to products currently on the market and is therefore irrelevant to the question whether the

refusal to supply prevented the emergence of new products for which there is unmet consumer demand. Much more significantly, none of the Mercer reports shows that Microsoft 'lags behind' its competitors. More specifically, the Commission fails to mention that Windows server operating systems scored higher than NetWare and Linux systems in 10 out of 13 categories and higher than UNIX systems in 9 out of 13 categories; and throughout the administrative procedure no customer claimed that it had been forced to use Windows server operating systems as a result of the applicant's alleged refusal to disclose interoperability information to its competitors.

629 CompTIA submits that the Commission has not shown in the contested decision that Microsoft's refusal had prevented the appearance of a new product.

630 The Commission rejects Microsoft's assertion that its refusal did not prevent the appearance of a new product for which there is unmet consumer demand.

631 The Commission submits that, in the first place, it follows from paragraph 49 of *IMS Health*, cited in paragraph 107 above, that a 'new product' is a product which does not limit itself essentially to duplicating the products already offered on the market by the owner of the copyright. It is sufficient, therefore, that the product concerned contains substantial elements that result from the licensee's own efforts. As Microsoft is required to disclose only the specifications and not the implementation of its interfaces, its competitors will not limit themselves to duplicating its products and, indeed, will not be able to do so. Competitors will use the interoperability information to constantly market improved products and 'offer ... added value over their own and Microsoft's previous offerings', instead of being eliminated from the market as a consequence of Microsoft's refusal to disclose that information (recital

695 to the contested decision). Nor will any feature of Microsoft's products, and in particular any portion of its software code, be integrated in other work group server operating systems.

632 In the second place, the Commission did not confine itself in the contested decision to a mere analysis of the 'new product' criterion as defined in *IMS Health*, cited in paragraph 107 above. It examined that criterion by reference to the prohibition laid down in Article 82(b) EC of abuses of a dominant position that limit technical development to the prejudice of consumers. The Commission thus took particular care to ascertain that Microsoft's refusal was a 'refusal to allow follow-on innovation', that is to say, the development of new products, and not a mere refusal to allow copying.

633 In support of those assertions, the Commission claims, first, that it examined the conduct which Microsoft's competitors had adopted in the past when Microsoft supplied interoperability information to them or inadvertently allowed them to employ 'workarounds' (recital 696 to the contested decision). In response to Microsoft's criticisms of that point, the Commission explains that, as Novell was not a 'UNIX vendor', it was not interested in 'UNIX-based implementations' such as AS/U. However, Sun and other UNIX vendors offered innovative products which could have met demand from those consumers if Microsoft had not refused to supply interoperability information.

634 Second, the Commission observes that, at recital 698 to the contested decision, it noted that numerous different implementations of the same specification were possible.

635 Third, the Commission cites recital 699 to the contested decision and asserts that it follows from the results of the third Mercer survey that, in spite of the fact that ‘Microsoft lags behind its competitors’ on several features considered important by server operating systems consumers, those consumers content themselves with Microsoft’s products ‘because of the interoperability barrier to adopting alternatives’. Microsoft scores higher than its competitors only because interoperability with Windows is a factor taken into account and because less important factors are given the same weight as important factors. In response to Microsoft’s argument that no customer has complained about having to adopt a Windows operating system because of its refusal to supply, the Commission refers to recitals 702 to 708 to the contested decision.

636 Fourth, the Commission observes that Microsoft’s competitors undertake research and development, but that they need access to Microsoft’s protocols to enable organisations using Windows work group servers and PCs to take advantage of their innovation without being penalised by the lack of interoperability. It states that ‘[a]s such, the refusal does not directly impair competitors’ ability to innovate, but rather the consumer’s ability to benefit from such innovation, as well as the competitors’ ability to earn a return on their innovation — and hence in the longer term their incentives to innovate’.

637 Last, the Commission asserts that Microsoft’s arguments concerning its own incentives to innovate are not relevant to the assessment of the consequences which the abusive practice has for its competitors’ incentives to innovate.

638 In the third place, the Commission claims that Microsoft’s argument that the ‘new product’ criterion is not satisfied in this case is based on a misinterpretation of the case-law.

639 First, that criterion does not require a concrete demonstration that the licensee's product will attract customers who do not buy the products offered by the existing dominant supplier. In *IMS Health*, cited in paragraph 107 above, the Court of Justice focused on product differentiation which could affect consumer choices or, in other words, whether there was 'potential demand' for the new product. The 'new product' criterion emphatically does not apply solely to restrictions on production. In the rejoinder, the Commission asserts that the proposed new products will clearly respond to potential demand and that they will build upon operating systems currently marketed by Microsoft's competitors, which have features that consumers value, often more highly than the corresponding features of Microsoft's work group server operating systems.

640 Second, Microsoft cannot rely on the fact that the contested decision focuses on its competitors' ability to adapt their own 'existing products'. The relevant question is whether those competitors will essentially confine themselves to reproducing the existing products developed by the holder of the intellectual property right. Microsoft's competitors' products will implement the same set of protocols as Windows work group server operating systems do but will differ widely in terms of performance, security and functionality.

641 Third, the Commission asserts that the case-law does not preclude the possibility that the licensee's future products will compete with the products of the owner of the intellectual property right, as may be seen from the facts of *Magill* and *IMS Health*, cited in paragraph 107 above.

642 SIIA claims that the refusal at issue prevents the emergence of 'new and innovative non-Microsoft work group server operating systems meeting the interoperability needs of customers'. If they have the interoperability information, Microsoft's

competitors will be able to offer not only 'enhanced functional capabilities' but also, and most importantly, interoperable products. SIIA also observes that there would be no competitive advantage for Microsoft's competitors in merely 'duplicating Microsoft's products' and that, moreover, they would be unable to do so if they had access to the information covered by the contested decision.

Findings of the Court

⁶⁴³ It must be emphasised that the fact that the applicant's conduct prevents the appearance of a new product on the market falls to be considered under Article 82(b) EC, which prohibits abusive practices which consist in 'limiting production, markets or technical developments to the ... prejudice of consumers'.

⁶⁴⁴ Thus, at paragraph 54 of *Magill*, cited in paragraph 107 above, the Court of Justice held that the refusal by the broadcasting companies concerned had to be characterised as abusive within the meaning of that provision because it prevented the appearance of a new product which the broadcasting companies did not offer and for which there was a potential consumer demand.

⁶⁴⁵ It is apparent from the decision at issue in that case that the Commission had, more specifically, considered that by their refusal, the broadcasting companies limited production or markets to the prejudice of consumers (see the first paragraph of recital 23 to Commission Decision 89/205/EEC of 21 December 1988 relating to a proceedings under Article [82 EC] (IV/31.851, *Magill TV Guide/ITP, BBC and RTE*) (OJ 1989 L 78, p. 43). The Commission had found that that refusal prevented publishers from producing and publishing a weekly television guide for consumers in Ireland and Northern Ireland, a type of guide not then available on that

geographic market. Although each of the broadcasting companies concerned published a weekly television guide, each guide was devoted to that particular broadcaster's own programmes. In finding an abuse of a dominant position by those broadcasting companies, the Commission had emphasised the harm which the absence of a general weekly television guide on the market in Ireland and in Northern Ireland caused to consumers, who, if they wished to know what programmes were being offered in the coming week, had no alternative to buying the weekly guides of each channel and themselves extracting the relevant information in order to make comparisons.

⁶⁴⁶ In *IMS Health*, cited in paragraph 107 above, the Court of Justice, when assessing the circumstance relating to the appearance of a new product, also placed that circumstance in the context of the damage to the interests of consumers. Thus, at paragraph 48 of that judgment, the Court emphasised, with reference to the Opinion of Advocate General Tizzano in that case ([2004] ECR I-5042), that that circumstance related to the consideration that, in the balancing of the interest in protection of the intellectual property right and the economic freedom of its owner against the interest in protection of free competition, the latter can prevail only where refusal to grant a licence prevents the development of the secondary market, to the detriment of consumers.

⁶⁴⁷ The circumstance relating to the appearance of a new product, as envisaged in *Magill* and *IMS Health*, cited in paragraph 107 above, cannot be the only parameter which determines whether a refusal to license an intellectual property right is capable of causing prejudice to consumers within the meaning of Article 82(b) EC. As that provision states, such prejudice may arise where there is a limitation not only of production or markets, but also of technical development.

648 It was on that last hypothesis that the Commission based its finding in the contested decision. Thus, the Commission considered that Microsoft's refusal to supply the relevant information limited technical development to the prejudice of consumers within the meaning of Article 82(b) EC (recitals 693 to 701 and 782 to the contested decision) and it rejected Microsoft's assertion that it had not been demonstrated that its refusal caused prejudice to consumers (recitals 702 to 708 to the contested decision).

649 The Court finds that the Commission's findings at the recitals referred to in the preceding paragraph are not manifestly incorrect.

650 Thus, in the first place, the Commission was correct to observe, at recital 694 to the contested decision, that '[owing] to the lack of interoperability that competing work group server operating system products can achieve with the Windows domain architecture, an increasing number of consumers are locked into a homogeneous Windows solution at the level of work group server operating systems'.

651 It must be borne in mind that it has already been stated at paragraphs 371 to 422 above that Microsoft's refusal prevented its competitors from developing work group server operating systems capable of attaining a sufficient degree of interoperability with the Windows domain architecture, with the consequence that consumers' purchasing decisions in respect of work group server operating systems were channelled towards Microsoft's products. The Court has also already observed, at paragraphs 606 to 611 above, that it was apparent from a number of documents in the file that the technologies of the Windows 2000 range, in particular Active Directory, were increasingly being taken up by organisations. As interoperability problems arise more acutely with work group server operating systems in that range

of products than with those of the preceding generation (see paragraphs 571 to 574 above and recitals 578 to 584, 588 and 613 to the contested decision), the increasing uptake of those systems merely reinforces the 'lock-in' effect referred to in the preceding paragraph.

652 The limitation thus placed on consumer choice is all the more damaging to consumers because, as already observed at paragraphs 407 to 412 above, they consider that non-Microsoft work group server operating systems are better than Windows work group server operating systems with respect to a series of features to which they attach great importance, such as 'reliability/availability of the ... system' and 'security included with the server operating system'.

653 In the second place, the Commission was correct to consider that the artificial advantage in terms of interoperability that Microsoft retained by its refusal discouraged its competitors from developing and marketing work group server operating systems with innovative features, to the prejudice, notably, of consumers (see, to that effect, recital 694 to the contested decision). That refusal has the consequence that those competitors are placed at a disadvantage by comparison with Microsoft so far as the merits of their products are concerned, particularly with regard to parameters such as security, reliability, ease of use or operating performance speed (recital 699 to the contested decision).

654 The Commission's finding that '[i]f Microsoft's competitors had access to the interoperability information that Microsoft refuses to supply, they could use the disclosures to make the advanced features of their own products available in the framework of the web of interoperability relationships that underpin the Windows domain architecture' (recital 695 to the contested decision) is corroborated by the conduct which those competitors had adopted in the past, when they had access to certain information concerning Microsoft's products. The two examples which the Commission gives at recital 696 to the contested decision, 'PC NetLink' and 'NDS for NT', speak volumes in that regard. PC NetLink is software developed by Sun on the basis of AS/U, which had been developed by AT&T using source code which

Microsoft had licensed to it in the 1990s (recitals 211 to 213 to the contested decision). A document submitted by Microsoft during the administrative procedure shows that the innovative features and added value that PC NetLink brought to Windows work group networks was used as a selling point for that product (footnote 840 to the contested decision). Likewise, in its marketing material, Novell highlighted the new features which NDS for NT — software which it had developed using reverse engineering — brought to the Windows domain architecture (in this instance Windows NT) (footnote 841 to the contested decision).

655 The Commission was careful to emphasise, in that context, that there was ‘ample scope for differentiation and innovation beyond the design of interface specifications’ (recital 698 to the contested decision). In other words, the same specification can be implemented in numerous different and innovative ways by software designers.

656 Thus, the contested decision rests on the concept that, once the obstacle represented for Microsoft’s competitors by the insufficient degree of interoperability with the Windows domain architecture has been removed, those competitors will be able to offer work group server operating systems which, far from merely reproducing the Windows systems already on the market, will be distinguished from those systems with respect to parameters which consumers consider important (see, to that effect, recital 699 to the contested decision).

657 It must be borne in mind, in that regard, that Microsoft’s competitors would not be able to clone or reproduce its products solely by having access to the interoperability

information covered by the contested decision. Apart from the fact that Microsoft itself acknowledges in its pleadings that the remedy prescribed by Article 5 of the contested decision would not allow such a result to be achieved (see paragraph 241 above), it is appropriate to repeat that the information at issue does not extend to implementation details or to other features of Microsoft's source code (see paragraphs 194 to 206 above). The Court also notes that the protocols whose specifications Microsoft is required to disclose in application of the contested decision represent only a minimum part of the entire set of protocols implemented in Windows work group server operating systems.

658 Nor would Microsoft's competitors have any interest in merely reproducing Windows work group server operating systems. Once they are able to use the information communicated to them to develop systems that are sufficiently interoperable with the Windows domain architecture, they will have no other choice, if they wish to take advantage of a competitive advantage over Microsoft and maintain a profitable presence on the market, than to differentiate their products from Microsoft's products with respect to certain parameters and certain features. It must be borne in mind that, as the Commission explains at recitals 719 to 721 to the contested decision, the implementation of specifications is a difficult task which requires significant investment in money and time.

659 Last, Microsoft's argument that it will have less incentive to develop a given technology if it is required to make that technology available to its competitors (see paragraph 627 above) is of no relevance to the examination of the circumstance relating to the new product, where the issue to be decided is the impact of the refusal to supply on the incentive for Microsoft's competitors to innovate and not on Microsoft's incentives to innovate. That is an issue which will be decided when the Court examines the circumstance relating to the absence of objective justification.

660 In the third place, the Commission is also correct to reject as unfounded Microsoft's assertion during the administrative procedure that it was not demonstrated that its refusal caused prejudice to consumers (recitals 702 to 708 to the contested decision).

661 First of all, as has already been observed at paragraphs 407 to 412 above, the results of the third Mercer survey show that, contrary to Microsoft's contention, consumers consider non-Microsoft work group server operating systems to be better than Windows work group server operating systems on a number of features to which they attach great importance.

662 Next, Microsoft cannot rely on the fact that consumers never claimed at any time during the administrative procedure that they had been forced to adopt a Windows work group server operating system as a consequence of its refusal to disclose interoperability information to its competitors. In that connection, it is sufficient to point out that Microsoft does not dispute the Commission's findings at recitals 705 and 706 to the contested decision. Thus, at recital 705 to the contested decision, the Commission observes that it is developers of complementary software required to interoperate with Microsoft's systems who 'depend on the interface information' and that '[c]ustomers will not always exactly know what is disclosed by Microsoft to other work group operating system vendors and what is not'. At recital 706 to the contested decision, the Commission states '[w]hen confronted with a "choice" between putting up with interoperability problems that render their business processes cumbersome, inefficient and costly, and embracing a homogeneous Windows solution for their work group network, customers will tend to opt for the latter proposition' and that '[o]nce they have standardised on Windows, they are unlikely to report interoperability problems between their client PCs and the work group servers'.

663 Furthermore, Microsoft's own statements concerning the disclosures made under the United States settlement show that those disclosures had the consequence of offering greater choice to consumers (see recital 703 to the contested decision).

664 Last, it must be borne in mind that it is settled case-law that Article 82 EC covers not only practices which may prejudice consumers directly but also those which indirectly prejudice them by impairing an effective competitive structure (Case 85/76 *Hoffmann-La Roche v Commission* [1979] ECR 461, paragraph 125, and *Irish Sugar v Commission*, cited in paragraph 229 above, paragraph 232). In this case, Microsoft impaired the effective competitive structure on the work group server operating systems market by acquiring a significant market share on that market.

665 The Court concludes from all of the foregoing considerations that the Commission's finding to the effect that Microsoft's refusal limits technical development to the prejudice of consumers within the meaning of Article 82(b) EC is not manifestly incorrect. The Court therefore finds that the circumstance relating to the appearance of a new product is present in this case.

(v) The absence of objective justification

Arguments of the parties

666 In the first place, Microsoft claims that the refusal to supply the information was objectively justified by the intellectual property rights which it holds over the

‘technology’ concerned. It has made significant investment in designing its communication protocols and the commercial success which its products have achieved represents the just reward. It is generally accepted, moreover, that an undertaking’s refusal to communicate a specific technology to its competitors may be justified by the fact that it does not wish them to use that technology to compete with it.

667 In the reply, Microsoft relies on the fact that the technology which it is required to disclose to its competitors is secret, that it is of great value for licensees and that it contains significant innovation.

668 In its answer to one of the written questions put by the Court, the applicant adds that it had an objective justification for not licensing the technology ‘given the prejudice to incentives to innovate that would have resulted if Sun (or others) had used that technology to build a “functional equivalent” that would compete against Microsoft’s products on the same market’.

669 In the second place, Microsoft claims that the Commission rejected its arguments on the basis of a new test, which is legally defective and marks a radical departure from the tests defined in the case-law. At recital 783 to the contested decision, the Commission considered that a refusal to communicate information protected by intellectual property rights constituted an infringement of Article 82 EC if, all things considered, the positive impact on the level of innovation in the whole industry outweighed the negative impact of the dominant undertaking’s incentives to innovate.

670 Microsoft contends that the application of such a ‘balancing test’ will have the consequence that dominant undertakings will have less incentive to invest in

research and development, because they will have to share the fruits of their efforts with their competitors. Intellectual property rights give the holder an incentive to continue to innovate and they also encourage competing undertakings to undertake their own innovative activities in order to avoid being 'left behind'. Nor does the Commission make any attempt to 'quantify' the negative impact that the compulsory licensing required by the contested decision will have on the applicant's competitors, who will wait to see what technology they can obtain under a licence rather than take the trouble to create their own technology.

671 Microsoft also criticises the vagueness and the unforeseeable consequences of that test; it observes, in particular, that the Commission provides no guidance which would enable undertakings in a dominant position to assess whether 'preserving [their] incentives to innovate can justify a decision to retain [their] intellectual property for [their] own use'. More generally, the contested decision gives no indication of the way in which that test was applied in the present case or of how it should be applied in the future.

672 In the third place, Microsoft disputes the relevance of the Commission's references to the United States settlement and the settlement with Sun (see paragraph 687 below).

673 Under the United States settlement, the applicant is required to license communication protocols implemented in Windows client PC operating systems for the sole purpose of being implemented in server software. Under the contested decision, on the other hand, it is required to license its 'server/server' communication protocols so that they can be implemented in directly competing server operating systems. The applicant's obligations under the United States settlement are limited to a five-year period, moreover, and an undertaking has a greater incentive to continue to develop technology when, after a fixed period, it will again have exclusive use of the improvements to that technology.

674 The settlement with Sun provides for a reciprocal commitment to share technology and intellectual property rights on negotiated terms, for a period of six years only. Under the contested decision, on the other hand, the applicant cannot choose its licensees and will be granted no licence in return; royalties and other licensing terms will be subjected to regulation by the Commission; and the applicant's licensing obligations 'extend indefinitely into the future'.

675 CompTIA emphasises, first of all, the importance of innovation for competition in the IT and communications industry and the need to have a 'robust system of [intellectual property rights] protection'. It submits, in particular, that those intellectual property rights encourage companies to improve existing products and to bring new products to the market.

676 Next, CompTIA, with reference to recital 783 to the contested decision, claims that the Commission applied a new balancing test in this case and submits that that test is inconsistent with the case-law.

677 The Commission, in the first place, asserts that it properly took into consideration the justification put forward by Microsoft.

678 First of all, Microsoft acknowledged in the application that it had relied on a single justification, namely the fact that it held intellectual property rights in the 'technology' concerned. Such justification cannot be accepted, particularly since in

Magill, cited in paragraph 107 above, where there was no doubt whatsoever that the effect of the contested decision for the companies concerned was the compulsory licensing of copyright, the Court of Justice held that the refusal was not objectively justified. The Commission is supported on that point by SIIA.

679 Next, the Commission explains that it took Microsoft's argument to mean that the facts of the case, and in particular 'the likely impact [which] an order to supply [would have] on [its] incentives to innovate', were so exceptional that the Commission could not apply the existing precedents.

680 It was for Microsoft to prove that its abusive conduct was objectively justified. More particularly, the applicant was at the very least required to show that the obligation imposed on it to disclose the interoperability information would have a negative impact on its incentives to innovate and also that there was a risk that that negative impact would outweigh 'the set of factors identified by the Commission which would otherwise make the behaviour abusive'. However, the only arguments which Microsoft put forward were purely theoretical and wholly unsubstantiated.

681 The Commission also contends that Microsoft cannot justify its refusal by the fact that the technology concerned is secret and valuable and that it contains significant innovations. Furthermore, that justification was not presented in the application.

682 In the second place, the Commission denies having applied a new evaluation test in this case.

683 First, the Commission rejects Microsoft's assertion that an undertaking is justified in refusing to supply a given technology to its competitors where it wishes to prevent them from using that technology to compete with it. That argument might be interpreted as meaning that even if the first three criteria established by the Court of Justice in *Magill* and *IMS Health*, cited in paragraph 107 above, are satisfied, a refusal to license is lawful if competitors intend to use the licence to compete with the dominant undertaking. That argument is manifestly incorrect. Again, that assertion might be interpreted as meaning that the principles laid down in *Magill*, cited in paragraph 107 above, do not apply where the intellectual property right concerned covers technology. Apart from the fact that Microsoft fails to explain what it means by 'technology' in this context, it would be extremely difficult to draw a distinction between 'technological' intellectual property rights and 'non-technological' intellectual property rights. Nor is it certain that the interoperability information at issue constitutes such technology, in particular if it represents what is a purely arbitrary convention without any innovative character.

684 Second, the Commission disputes Microsoft's assertion that because of the contested decision its competitors will no longer have any incentive to create their own technology. Microsoft fails to address the finding at recital 697 to the contested decision that, in view of Microsoft's quasi-monopoly on the client PC operating systems market, its competitors are not in a position to develop viable alternatives to its communication protocols.

685 Third, the Commission observes that Microsoft merely refers to its incentives to innovate in protocol design and ignores other aspects of its products. The Commission refers to recital 724 to the contested decision and submits that such an approach is incorrect.

686 Fourth, the Commission contends that Microsoft glosses over the fact that the information at issue is information necessary for interoperability within the meaning of Directive 91/250. It is clear from Article 6 of that directive that the Community legislature considers that the disclosure of interoperability information is beneficial for innovation.

687 In the third place, the Commission refers to certain statements made by Microsoft during the administrative procedure and after the adoption of the contested decision. Thus, at the administrative hearing, Microsoft stated, in response to a question from the Commission's services, that it had not noticed that the United States settlement had had any negative impact on its incentives to innovate. Likewise, at a joint press conference with Sun following the settlement concluded with that undertaking, Microsoft stated that both companies would continue to compete and innovate and that 'the impact of the settlement [would] not be less innovation, but more innovation'. The Commission contends that the argument which Microsoft bases on the fact that the United States settlement provides for reciprocal commitments is irrelevant and notes that when Sun concluded that settlement it already had a policy of disclosing the relevant protocols to the entire industry.

Findings of the Court

688 The Court notes, as a preliminary point, that although the burden of proof of the existence of the circumstances that constitute an infringement of Article 82 EC is borne by the Commission, it is for the dominant undertaking concerned, and not for the Commission, before the end of the administrative procedure, to raise any plea of objective justification and to support it with arguments and evidence. It then falls to the Commission, where it proposes to make a finding of an abuse of a dominant position, to show that the arguments and evidence relied on by the undertaking cannot prevail and, accordingly, that the justification put forward cannot be accepted.

689 In the present case, as the Commission found at recital 709 to the contested decision and as Microsoft expressly confirmed in the application, Microsoft relied as justification for its conduct solely on the fact that the technology concerned was covered by intellectual property rights. It made clear that if it were required to grant third parties access to that technology, that 'would ... eliminate future incentives to invest in the creation of more intellectual property' (recital 709 to the contested decision). In the reply, the applicant also relied on that fact that the technology was secret and valuable and that it contained important innovations.

690 The Court considers that, even on the assumption that it is correct, the fact that the communication protocols covered by the contested decision, or the specifications for those protocols, are covered by intellectual property rights cannot constitute objective justification within the meaning of *Magill* and *IMS Health*, cited in paragraph 107 above. Microsoft's argument is inconsistent with the *raison d'être* of the exception which that case-law thus recognises in favour of free competition, since if the mere fact of holding intellectual property rights could in itself constitute objective justification for the refusal to grant a licence, the exception established by the case-law could never apply. In other words, a refusal to license an intellectual property right could never be considered to constitute an infringement of Article 82 EC even though in *Magill* and *IMS Health*, cited in paragraph 107 above, the Court of Justice specifically stated the contrary.

691 It must be borne in mind that, as stated at paragraphs 321, 323, 327 and 330 above, the Community judicature considers that the fact that the holder of an intellectual property right can exploit that right solely for his own benefit constitutes the very substance of his exclusive right. Accordingly, a simple refusal, even on the part of an undertaking in a dominant position, to grant a licence to a third party cannot in itself constitute an abuse of a dominant position within the meaning of Article 82 EC. It is only when it is accompanied by exceptional circumstances such as those hitherto envisaged in the case-law that such a refusal can be characterised as abusive and that, accordingly, it is permissible, in the public interest in maintaining effective competition on the market, to encroach upon the exclusive right of the holder of the

intellectual property right by requiring him to grant licences to third parties seeking to enter or remain on that market. It must be borne in mind that it has been established above that such exceptional circumstances were present in this case.

692 The argument which Microsoft puts forward in the reply, namely that the technology concerned is secret and of great value to the licensees and contains important innovations, cannot succeed either.

693 First, the fact that the technology concerned is secret is the consequence of a unilateral business decision on Microsoft's part. Furthermore, Microsoft cannot rely on the argument that the interoperability information is secret as a ground for not being required to disclose it unless the exceptional circumstances identified by the Court of Justice in *Magill* and *IMS Health*, cited in paragraph 107 above, are present, and at the same time justify its refusal by what it alleges to be the secret nature of the information. Last, there is no reason why secret technology should enjoy a higher level of protection than, for example, technology which has necessarily been disclosed to the public by its inventor in a patent-application procedure.

694 Second, from the moment at which it is established that — as in this case — the interoperability information is indispensable, that information is necessarily of great value to the competitors who wish to have access to it.

695 Third, it is inherent in the fact that the undertaking concerned holds an intellectual property right that the subject-matter of that right is innovative or original. There can be no patent without an invention and no copyright without an original work.

696 The Court further observes that in the contested decision the Commission did not simply reject Microsoft's assertion that the fact that the technology concerned was covered by intellectual property rights justified its refusal to disclose the relevant information. The Commission also examined the applicant's argument that if it were required to give third parties access to that technology there would be a negative impact on its incentives to innovate (recitals 709 and 712 to the contested decision).

697 The Court finds that, as the Commission correctly submits, Microsoft, which bore the initial burden of proof (see paragraph 688 above), did not sufficiently establish that if it were required to disclose the interoperability information that would have a significant negative impact on its incentives to innovate.

698 Microsoft merely put forward vague, general and theoretical arguments on that point. Thus, as the Commission observes at recital 709 to the contested decision, in its response of 17 October 2003 to the third statement of objections Microsoft merely stated that '[d]isclosure would ... eliminate future incentives to invest in the creation of more intellectual property', without specifying the technologies or products to which it thus referred.

699 In certain passages in the response referred to in the preceding paragraph, Microsoft envisages a negative impact on its incentives to innovate by reference to its operating systems in general, namely both those for client PCs and those for servers.

700 In that regard, it is sufficient to note that, at recitals 713 to 729 to the contested decision, the Commission quite correctly refuted Microsoft's arguments relating to the fear that its products would be cloned. It must be borne in mind, in particular,

that the remedy prescribed in Article 5 of the contested decision does not, and is not designed to, allow Microsoft's competitors to copy its products (see paragraphs 198 to 206, 240 to 242 and 656 to 658 above).

701 It follows that it has not been demonstrated that the disclosure of the information to which that remedy relates will significantly reduce — still less eliminate — Microsoft's incentives to innovate.

702 In that context, the Court observes that, as the Commission correctly finds at recitals 730 to 734 to the contested decision, it is normal practice for operators in the industry to disclose to third parties the information which will facilitate interoperability with their products and Microsoft itself had followed that practice until it was sufficiently established on the work group server operating systems market. Such disclosure allows the operators concerned to make their own products more attractive and therefore more valuable. In fact, none of the parties has claimed in the present case that such disclosure had had any negative impact on those operators' incentives to innovate.

703 The Court further considers that if the disclosures made under the United States settlement and the MCPP as regards server-to-client protocols had no negative impact on Microsoft's incentives to innovate (recital 728 to the contested decision), there is no obvious reason to believe that the consequences should be any different in the case of disclosure relating to server/server protocols.

704 Last, the Court finds that Microsoft's assertion that in the contested decision the Commission applied a new evaluation test when rejecting the objective justification which Microsoft had submitted is based on a misreading of that decision.

705 That assertion is based on a single sentence in recital 783 to the contested decision, which is in a part of that decision containing the findings of the Commission's analysis, at recitals 560 to 778, of the refusal at issue.

706 That sentence reads as follows:

'[A] detailed examination of the scope of the disclosure at stake leads to the conclusion that, on balance, the possible negative impact of an order to supply on Microsoft's incentives to innovate is outweighed by its positive impact on the level of innovation of the whole industry (including Microsoft).'

707 However, that sentence must be read in conjunction with the one coming immediately afterwards in the same recital, which states that '... the need to protect Microsoft's incentives to innovate cannot constitute an objective justification that would offset the exceptional circumstances identified'.

708 It must also be compared with recital 712 to the contested decision, where the Commission sets out the following considerations:

'It has been established above ... that Microsoft's refusal to supply [creates a risk of elimination of] competition in the relevant market for work group server operating systems, that this is due to the fact that the refused input is indispensable to carry on business in that market and that Microsoft's refusal has a negative impact on technical development to the prejudice of consumers. In view of these exceptional

circumstances, Microsoft's refusal cannot be objectively justified merely by the fact that it constitutes a refusal to license intellectual property. It is therefore necessary to assess whether Microsoft's arguments regarding its incentives to innovate outweigh these exceptional circumstances.'

709 In other words, in accordance with the principles laid down in the case-law (see paragraphs 331 to 333 above), the Commission, after establishing that the exceptional circumstances identified by the Court of Justice in *Magill* and *IMS Health*, cited in paragraph 107 above, were present in this case, then proceeded to consider whether the justification put forward by Microsoft, on the basis of the alleged impact on its incentives to innovate, might prevail over those exceptional circumstances, including the circumstance that the refusal at issue limited technical development to the prejudice of consumers within the meaning of Article 82(b) EC.

710 The Commission came to a negative conclusion but not by balancing the negative impact which the imposition of a requirement to supply the information at issue might have on Microsoft's incentives to innovate against the positive impact of that obligation on innovation in the industry as a whole, but after refuting Microsoft's arguments relating to the fear that its products might be cloned (recitals 713 to 729 to the contested decision), establishing that the disclosure of interoperability was widespread in the industry concerned (recitals 730 to 735 to the contested decision) and showing that IBM's commitment to the Commission in 1984 was not substantially different from what Microsoft was ordered to do in the contested decision (recitals 736 to 742 to the contested decision) and that its approach was consistent with Directive 91/250 (recitals 743 to 763 to the contested decision).

711 It follows from all of the foregoing considerations that Microsoft has not demonstrated the existence of any objective justification for its refusal to disclose the interoperability at issue.

712 As the exceptional circumstances identified by the Court of Justice in *Magill* and *IMS Health*, cited in paragraph 107 above, were also present in this case, the first part of the plea must be rejected as wholly unfounded.

2. Second part: Sun did not request Microsoft to supply the technology which the Commission orders it to disclose

(a) Arguments of the parties

713 In the first place, Microsoft claims that Sun did not request access to interoperability information within the meaning of the contested decision.

714 The applicant refers to a passage in Sun's complaint and maintains that the request contained in the letter of 15 September 1998 did not relate to the 'full and complete specifications' for its communication protocols but to detailed information about the internal features of its Windows server operating systems.

715 Accordingly, even on the assumption that the letter of 6 October 1998 might be interpreted as containing a refusal, *quod non*, it cannot be claimed that Microsoft refused to supply Sun with the technology which, according to the contested decision, it did not disclose.

716 In addition, the ‘breadth of Sun’s request could not have put Microsoft on notice that Sun was seeking a licence [in respect of its] communication protocols’.

717 The applicant further observes that Sun’s complaint contains no reference to communication protocols.

718 Last, in the letter of 15 September 1998, Sun expressed the belief that ‘Microsoft should include a reference implementation and such other information as is necessary to insure, without reverse engineering, that COM objects and the complete set of Active Directory technologies will run in fully compatible fashion on Solaris’. Microsoft claims that access to such ‘technology’ would have enabled Sun to mimic virtually all the functionalities of Windows server operating systems; and, furthermore, Sun’s request related to ‘technology still under development’, as Windows 2000 Server and Active Directory were not marketed until December 1999.

719 In the second place, Microsoft contends that Sun’s request did not meet with a ‘flat refusal’ in the letter of 6 October 1998: the applicant invited Sun to discuss ‘ways in which the two firms might improve interoperability between their respective products for the benefit of mutual customers’. That letter also mentioned various ways in which Sun might ‘achieve interoperability’. The applicant cites recital 565 to the contested decision and asserts that the Commission cannot maintain that the technologies concerned were so complex that Sun could not be expected to know

what technology it needed: Sun is a highly specialised distributor of server operating systems and in any event it was Sun's responsibility to clarify its request.

720 Microsoft claims, moreover, that Sun did not take up its invitation and observes, in particular, that Sun failed to attend a meeting which had been arranged in order to discuss the interoperability of their products.

721 Last, Microsoft contends that there is no contradiction between its position that it is unclear whether it would have refused to disclose the specifications of its communication protocols if Sun or 'anyone else' had asked it to do so and the fact that it seeks annulment of the contested decision. There is a significant difference between a 'negotiated cross-licensing agreement with another leading operating system vendor' and a 'duty to supply the entire world with proprietary technology under mandate from the public authority'.

722 In the third place, Microsoft maintains that Sun did not request it to license its intellectual property rights so that Sun could develop work group server operating systems in the EEA. Microsoft was therefore under no obligation, when it replied to the letter of 15 September 1998, to have regard to its special responsibility under Article 82 EC not to hinder effective and undistorted competition.

723 In that context, Microsoft points out that Sun is a United States company and that the letter of 15 September 1998 was sent from Sun's headquarters in the United States to the United States headquarters of Microsoft, which is also a United States company. In the absence of any connection with the EEA, and as the letter did not

mention that the technology concerned was necessary for the development and distribution of work group server operating systems on the territory of the EEA, Microsoft had no reason to consider that Sun wished to obtain a licence for the EEA.

724 The Commission rejects Microsoft's arguments in their entirety.

725 In the first place, the Commission contends that Sun's request in the letter of 15 September 1998, 'although broader in certain respects than the scope of the [contested] decision', was sufficiently clear for Microsoft to understand (i) that Sun sought access to interoperability information and (ii) that some of that information pertained to certain features of Windows work group networks (the 'Active Directory domain') which were indispensable if Sun were to be able to exert viable competition on the work group server operating systems market.

726 The Commission contends that Microsoft misrepresents Sun's request when it claims that the request related to source code and not interface information. In its request, Sun sought a means of enabling its products to 'seamlessly communicate' with the Windows environment and in the letter of 6 October 1998 Mr Maritz clearly stated that he understood that request as relating to interoperability information. Furthermore, Sun made clear in its complaint that it wished to have access to 'interface information'.

727 The Commission refers to recitals 713 to 722 to the contested decision and further submits that access to interoperability information will not allow Microsoft's competitors to 'clone' or 'mimic' the functionalities of Windows work group server operating systems.

728 The fact that Sun did not use the expression 'communication protocol' is irrelevant, since a request for access to the information necessary to interconnect and interact with Windows and a request for access to protocol specifications are 'one and the same thing'.

729 The Commission also observes that in the letter of 6 October 1998 Microsoft did not mention the fact that Sun's request related to 'technology still under development'. In any event, such an argument cannot be accepted, because when Sun sent the letter of 15 September 1998 to Microsoft it was already one year since the first beta version of Windows 2000 Server had been released.

730 In the second place, the Commission contends that Microsoft cannot deny having refused Sun's request.

731 First, Microsoft's position is inconsistent with its claim that Article 5 of the contested decision should be annulled.

732 Second, the Commission refers to recitals 194 to 198 to the contested decision and claims that Microsoft explicitly confirmed to the Commission that it refused to give access to certain interoperability information. As stated at recitals 573 to 577 to the contested decision, that refusal forms part of a general pattern of conduct. Likewise, during the interlocutory proceedings, Microsoft stated that the refusal was part of its 'business model'.

733 Third, the Commission is not convinced that Microsoft would have supplied the requested information to Sun if Sun had responded more positively to Microsoft's alleged 'offer' to discuss interoperability. The Commission refers to certain statements by Microsoft managers set out at recitals 576 and 778 to the contested decision. The Commission finds it unlikely that Mr Goldberg, the Microsoft employee referred to in the letter of 6 October 1998, was authorised to take decisions concerning such matters. Mr Terranova, of Sun, met Mr Goldberg on 25 November 1998 and Microsoft does not explain how the fact that Mr Terranova had to cancel a further meeting due to take place on 8 March 1999 prevented discussions on interoperability. Last, the Commission observes that the agenda of that last meeting, as suggested by Mr Goldberg, did not contain the slightest reference to the relevant technologies, such as Active Directory.

734 In the third place, the Commission considers it irrelevant that Sun did not specifically refer to the EEA in the letter of 15 September 1998. First, as the relevant geographic market was worldwide, the EEA was necessarily covered by the request in that letter and, second, Sun lodged a complaint with the Commission on 10 December 1998.

(b) Findings of the Court

735 By its argument in support of the second part of its single plea, Microsoft seeks to establish that the Commission had no valid ground on which to find, in the contested decision, that Microsoft had abused its dominant position by refusing to disclose the interoperability information, since it cannot in fact be accused of any real refusal. In support of that argument, Microsoft relies, in substance, on the exchange of letters between it and Sun in the latter part of 1998. Its argument comes under three main heads. In the first place, Microsoft claims that Sun's request in the letter of 15 September 1998 did not relate to interoperability information as referred

to in the contested decision. In the second place, it denies in any event having refused that request in the letter of 6 October 1998. In the third place, Microsoft maintains that in the letter of 15 September 1998 Sun did not seek a licence covering intellectual property rights which Microsoft held in the EEA.

736 Each of those heads must be examined separately.

The scope of Sun's request

737 First of all, it is appropriate to recall the precise content of the letter of 15 September 1998 and the Commission's analysis of that letter in the contested decision.

738 In that letter, Sun identifies the information which it seeks from Microsoft, as follows:

- first, the complete information required to allow it to provide native support for COM objects on Solaris;

- second, the complete information required to allow Sun to provide native support for the complete set of Active Directory technologies on Solaris.

739 In the letter, Sun specified the extent of the information requested and also the objective of its request, indicating that:

- applications written to execute on Solaris should be able to seamlessly communicate via COM and/or Active Directory with the Windows operating systems and/or with Windows-based software;

- Microsoft should include a reference implementation and such other information as was necessary to ensure, without reverse engineering, that COM objects and the complete set of Active Directory technologies would run in fully compatible fashion on Solaris;

- the information should be provided for the full range of COM objects as well as for the full set of Active Directory technologies currently on the market;

- the information should be provided in a timely manner and on a continuing basis for COM objects and Active Directory technologies which would be released on the market in the future.

740 At recital 186 to the contested decision, the Commission interprets the second part of Sun's request in the letter of 15 September 1998 (see the second indent of paragraph 738 above) as meaning the 'ability for Solaris to act as fully compatible domain controller in Windows 2000 work group networks or as a member server (in particular as a file and print server) fully compatible with the Active Directory

domain infrastructure (security, directory service)'. Furthermore, the fact that Sun's request covers both client/server interoperability and server/server interoperability is consistent with the fact that the 'Windows domain architecture' closely connects both types of interoperability. In other words, 'Sun's request encompassed the specifications for the protocols used by Windows work group servers in order to provide file, print and group and user administration services to Windows work group networks', which include 'both direct interconnection and interaction between a Windows work group server and a Windows client PC, as well as interconnection and interaction between a Windows work group server and a Windows client PC that is indirect and passes through another Windows work group server' (recital 187 to the contested decision).

741 At recital 188 to the contested decision, the Commission examines the first part of Sun's request (see the first indent of paragraph 738 above). The Commission observes that COM/DCOM is a technology which 'is relevant to the delivery of file, print and group and user administration in Windows' and considers that there is an overlap between that part of Sun's request and the second part of its request, concerning Active Directory. At the following recital, the Commission states, however, that 'the only part of Sun's request for information concerning the COM technology that is relevant to the refusal to supply considered in [the contested decision] is what is encompassed in Sun's request for compatibility with Active Directory'. That observation must be compared with the Commission's statement at recital 566 to the contested decision that, first, 'the only refusal at stake in [the contested decision] is a refusal to provide a full specification of the protocols underlying the Windows domain architecture, which organises the way through which Windows work group servers deliver work group server services to Windows client PCs' and, second, '[t]he fact that Microsoft has also turned down Sun's request for information that would facilitate cross-platform portability of COM does not form part of the conduct treated in [the contested decision] as a refusal to supply'.

742 The Commission further observes, at recital 190 to the contested decision, that it is implicit in Sun's request that Sun is seeking access to specification in order to be able to implement them in its products.

743 At recitals 199 to 207 to the contested decision, the Commission sets out a series of considerations in order to demonstrate that the information to which Sun requests access in the letter of 15 September 1998 is connected with interoperability. First, it rejects Microsoft's assertion in its response of 17 October 2003 to the third statement of objections that Sun wished Microsoft to create a version of Active Directory that could be used on Solaris. Second, the Commission rejects Microsoft's argument, also put forward during the administrative procedure, that Sun's request concerned 'the internal make-up of Windows server operating systems' and therefore went beyond interoperability information. On that last point, the Commission observes that in the letter of 15 September 1998 Sun expressly states that it is its intention to achieve 'seamless communication' between the Solaris environment and the Windows environment (recital 207 to the contested decision). The Commission also observes that the letter of 6 October 1998 shows that Microsoft had fully understood that Sun wished to have access to information on interoperability with 'certain features of Windows' (recital 207 to the contested decision).

744 Next, in the light of those various factors, the Court finds, first, that while, as the Commission itself recognises in the defence, the scope of the request in the letter of 15 September 1998 was wider in certain regards than that of the contested decision, the fact remains that in that letter Sun qualified the scope of its request by stating that all that it wanted was that its products should be able to 'seamlessly communicate' with the Windows environment. Likewise, Sun also stated in its letter that the information requested should 'insure, without reverse engineering, that COM objects and the complete set of Active Directory technologies will run in fully compatible fashion on Solaris'. In other words, it is clear from the wording of the

letter of 15 September 1998 that Sun was seeking access to information and that the information should allow it to achieve interoperability between its products and the Windows environment.

745 It is also apparent from the wording of the letter of 15 September 1998 that Sun wished to be able to achieve a high level of interoperability between its products and the Windows domain architecture. In the letter of 6 October 1998, when Mr Maritz indicates that Microsoft has no plans to “port” the Active Directory to Solaris’ and that there are ‘varying levels of functionality [designed to allow other operating systems] to interoperate with the Active Directory’, he clearly draws a distinction between the high level of interoperability that can be achieved when the elements of one operating system are ‘ported’ to another operating system and the lower or ‘varying’ levels that can be achieved by using the other methods suggested in that letter.

746 Second, Microsoft cannot reasonably rely on the fact that Sun did not use the expression ‘communication protocols’ in its complaint. As stated at recital 49 to the contested decision, and as the Commission correctly observes in its pleadings, a ‘protocol’ represents a set of rules of interconnection and interaction between various pieces of software in a network (see also paragraphs 196 and 197 above). As stated at paragraph 740 above, it was precisely about such rules that Sun wished to obtain information. Microsoft’s argument is all the less acceptable because it is purely formalistic. In the letter of 6 October 1998, Mr Maritz makes a number of references to interoperability between Microsoft’s products and those of Sun or other software vendors. Microsoft had thus fully understood the scope of Sun’s request, in spite of the fact that there is no formal reference to ‘communication protocols’ in the letter of 15 September 1998.

747 Third, Microsoft's assertion that access to the technology would have enabled Sun to 'mimic' virtually all the functionalities of the Windows server operating systems cannot be upheld. It is clear from the preceding considerations that Sun sought access to the information necessary to be able to achieve interoperability between its products and the Windows domain architecture. As stated at recitals 34, 570 and 571 to the contested decision, and as already stated at paragraphs 199 to 206 above, such a result may be achieved by communicating only the specifications of certain protocols, that is to say, without disclosing implementation details. In so far as Microsoft's assertion is based on the fact that Sun indicates in the letter of 15 September 1998 that Microsoft should communicate a 'reference implementation', the Court finds that even if Sun had thereby intended to request communication of details of Microsoft's source code, Sun's qualification of the scope of its request (see paragraph 744 above) meant that Microsoft could not conclude that Sun's request did not also relate to the protocol specifications referred to by the contested decision, while the conduct penalised by that decision is limited, as stated at recital 569 to the contested decision, to Microsoft's refusal to communicate those specifications.

748 Fourth, Microsoft cannot effectively claim that the request in Sun's letter of 15 September 1998 concerned 'technology still under development'. That assertion is wholly irrelevant to the question whether that request concerned interoperability information as referred to in the contested decision. Nor does it take account of the fact that, as stated at recitals 398 and 790 to the contested decision, Microsoft had already released the first beta version of Windows 2000 server on 23 September 1997, almost one year before the date of Sun's letter.

749 The Court concludes from all of the foregoing considerations that, contrary to Microsoft's assertion, Sun's request in the letter of 15 September 1998 clearly concerned the interoperability information referred to in the contested decision and forming the subject-matter of the remedy prescribed in Article 5 of that decision.

The scope of the letter of 6 October 1998

750 The second head of Microsoft's argument in support of the second part of the plea, namely the head relating to the letter of 6 October 1998, cannot be accepted either.

751 When the wording of that letter, examined in the light of the context in which it was written, the identity of its author, the extent of his knowledge of the technologies concerned and the approach adopted by Microsoft up to the time of the adoption of the contested decision, is taken into account, it must be concluded that the Commission was correct, in the contested decision, to interpret that letter as containing a refusal to disclose to Sun the information which it had requested.

752 It must be borne in mind, first of all, that, as stated in the first part of the plea, Microsoft's arguments concerning the refusal to supply and authorise the use of the interoperability information rely largely on the degree of interoperability that must be achieved between its own and its competitors' products. Throughout the administrative procedure and in these proceedings, Microsoft contended that it was sufficient that the various operating systems should be capable of exchanging information or of reciprocally supplying services, or, in other words, that they could 'work properly' together. Microsoft maintains that the information and methods already available on the market allow such a result to be achieved, so that it cannot be required to disclose additional information, in particular the information relating to the communications that come within the 'blue bubble'. The applicant claims, in particular, that the Commission requires a degree of interoperability that goes far beyond what is envisaged by Directive 91/250 and which does not correspond to the way in which undertakings organise their computer networks in practice. It maintains that it is the Commission's intention that operating systems that compete with Microsoft's systems should function in all respects like a Windows server

operating system, which would require Microsoft to communicate to its competitors much more than information on the interfaces of its products and would interfere with its intellectual property rights and reduce its incentives to innovate.

753 As the Court has already found at paragraphs 207 to 245 above, the way in which Microsoft interprets the degree of interoperability required by the Commission and, accordingly, the scope of the information referred to by the contested decision is incorrect.

754 It is necessary to take those factors into account when assessing the way in which the Commission interpreted the letter of 6 October 1998 and the arguments which Microsoft has put forward on that point.

755 As demonstrated at paragraph 746 above, Microsoft had fully grasped the scope of Sun's request in the letter of 15 September 1998 and, in particular, had understood that Sun sought to obtain the information necessary for its products to be able to 'seamlessly communicate' with the Windows environment or, in other words, to establish a high level of interoperability between its products and that environment.

756 Furthermore, the purpose of the letter of 15 September 1998 was clearly to obtain access to information belonging to Microsoft that was not already in the public domain or available by means of the licences offered on the market.

757 The response in the letter of 6 October 1998 contains the following six points:

- first, Mr Maritz thanks Mr Green for the letter of 15 September 1998 and informs him that Microsoft has always been willing to help its competitors to ‘build the best possible products and interoperability for [its] platform’;
- second, he draws Mr Green’s attention to the fact that information about the services and interfaces of the ‘Windows platform’ is already available through the ‘MSDN’ product;
- third, he invites Sun to attend a conference organised by Microsoft to be held in Denver on 11-15 October 1998;
- fourth, he refers to a reference implementation of COM on Solaris that already exists and informs Mr Green that source code for COM can be licensed, notably from Software AG;
- fifth, he states that Microsoft has no plans to ‘port’ the Active Directory to Solaris, but mentions the existence of a number of methods, with varying levels of interoperability, of interoperating with Active Directory, including use of the standard LDAP protocol;
- sixth, he invites Sun, should it need ‘additional support’, to contact the ‘account managers’ of the ‘Developer Relations Group’, who are there to ‘help developers

who need additional support for Microsoft's platforms', naming Mr Goldberg as the person to contact for that purpose.

758 The Court notes, in the first place, that in the letter of 6 October 1998 Mr Maritz wholly fails to answer the specific requests made by Sun in the letter of 15 September 1998 and merely refers Sun to sources of information and methods which were already in the public domain or available under licence. As Mr Maritz was clearly aware of the significance of the specific requests stated by Mr Green, such a reference cannot be interpreted as anything other than a refusal to communicate the information requested.

759 The fact that Mr Maritz states in the letter of 6 October 1998 that Microsoft has no plans to 'port' Active Directory to Solaris confirms the correctness of that interpretation, since it shows that Mr Maritz was fully aware that Microsoft's competitors, including Sun, aspired to achieve a higher level of interoperability than they could achieve by using the methods mentioned in that letter (see paragraph 745 above).

760 That point is established all the more clearly because, in the case, first of all, of MSDN, Microsoft does not dispute in the present part of the plea the Commission's analysis in the contested decision that that mechanism does not allow Microsoft's competitors to achieve a sufficient degree of interoperability with Windows client PC operating systems (recital 563 to the contested decision, which refers to Section 4.1.3 and, in particular, to recitals 209 and 210 to the contested decision).

761 As regards, next, the possibility that Sun could use a freely-available COM reference implementation, which Microsoft also mentions in the letter of 6 October 1998, Microsoft has also not maintained in the present part of the plea that the

Commission had erred in considering, in the contested decision, that that product did not constitute a sufficient solution (recital 563 to the contested decision, which refers to Section 4.1.3 and, in particular, to recitals 218 to 230 to the contested decision; see also recitals 288 to 291 to the contested decision).

⁷⁶² As regards, last, the possibility for Sun to use the LDAP protocol, which is also expressly mentioned in the letter of 6 October 1998, Microsoft has not maintained in the present part of the plea, and did not demonstrate in the preceding part of the plea, that the Commission had erred in concluding, particularly at recitals 194 and 195 and 243 to 250 to the contested decision, that that protocol was not sufficient to achieve a suitable level of interoperability with Active Directory.

⁷⁶³ In the second place, Microsoft cannot rely on Mr Maritz's offer of additional support from Mr Goldberg to substantiate its claim that that letter does not contain a refusal. The additional support mentioned in the final paragraph of that letter relates only to the information and methods mentioned in the second and third paragraphs of the letter. In essence, Microsoft thereby proposes to assist Sun only in the same way as the 'account managers' of the 'Developer Relations Group' assist any developer requiring support in connection with 'Microsoft's platforms'.

⁷⁶⁴ Nor can Microsoft usefully rely on the minute it prepared summarising the exchanges between itself and Sun in order to maintain that Sun had no intention of acting on Mr Goldberg's proposals. At no point in that minute, as the Commission correctly observed at recital 193 to the contested decision, is there any mention of a formal proposal by Microsoft to supply the information which Sun requested, that is to say, information going beyond that which was publicly available.

- 765 It should be added, in the third place, that in the contested decision the Commission had all the more reason to interpret the letter of 6 October 1998 as containing a refusal to give access to the interoperability information requested by Sun because, during the administrative procedure, Microsoft expressly recognised that it had not disclosed some of the information requested and that it continued to refuse to do so (see recitals 194 to 198 to the contested decision). Although at the hearing Microsoft questioned the exhaustive nature of one of the citations set out at recital 195 to the contested decision, it did not deny having stated during the administrative procedure that the replication among different copies of Active Directory was 'proprietary'.
- 766 Microsoft's argument that the letter of 6 October 1998 does not constitute a refusal must therefore be rejected as unfounded.
- 767 It is appropriate, moreover, to analyse the letter of 6 October 1998 in the more general context described in the contested decision. In the decision, the Commission did not rely on that letter alone, but, as may be seen from recitals 194 to 198 and 573 to 577 to the contested decision in particular, it considered that the conduct which it evidenced formed part of a general pattern of conduct on Microsoft's part.
- 768 At recital 573 to the contested decision, which refers specifically to recital 194 to the contested decision, the Commission stated, in particular, that a number of Microsoft's competitors had confirmed that they did not obtain sufficient interoperability information and that some of them had also claimed that Microsoft had refused to provide information that they had requested, or had failed to answer their requests.

769 At recital 576 to the contested decision, moreover, the Commission reproduced excerpts from testimony given to the United States courts by a manager of the Windows Source Licensing Program, which, according to the Commission, indicates that Microsoft places restrictions on licence agreements concerning technologies necessary for interoperability with the Windows domain architecture.

770 Microsoft did not specifically deny those matters before the Court.

771 Furthermore, the Court observes that, at recital 778 to the contested decision, the Commission, in refuting Microsoft's denials of the existence of a refusal, given Microsoft's claim that it never had any reason to exclude competitors by leveraging, cited an extract from a speech given by Mr Gates, President of Microsoft, in February 1997 to members of Microsoft's sales force. That extract confirms the existence of a pattern of general conduct designed to restrict the communication of interoperability information, containing as it does, the following declaration:

'What we are trying to do is use our server control to do new protocols and lock out Sun and Oracle specifically ... Now, I don't know if we'll get to that or not, but that's what we are trying to do.'

The geographic scope of the request contained in the letter of 15 September 1998

772 The third head of the argument which Microsoft develops in support of the second part of its single plea is based on the fact that in the letter of 15 September 1998 Sun did not expressly request a licence over Microsoft's intellectual property rights in the

EEA in order to develop work group server operating systems in the EEA. Microsoft concludes that when it responded to Sun it was under no obligation to have regard to its particular responsibility not to hinder effective and undistorted competition.

773 Those arguments are purely formal and must be rejected.

774 In the letter of 15 September 1998, Sun did not, admittedly, expressly request Microsoft to grant it a licence over intellectual property rights held in the EEA. However, there was no need for Sun to assess in its request whether the information to which it sought access was protected by intellectual property rights and whether the use of that information needed to be licensed by Microsoft. It is clear, moreover, that Sun wished Microsoft to supply the information at issue so that it would be able to implement that information in its own work group server operating systems. Furthermore, as the relevant geographic market for those systems is worldwide (see recital 427 to the contested decision), the territory of the EEA was necessarily covered by Sun's request, which was drafted in general terms. Last, as the Commission observes in its pleadings, as Sun had lodged a complaint pursuant to Article 3 of Regulation No 17 a few weeks later, Microsoft could in any event no longer fail to be aware that the EEA was also concerned.

775 It follows that the Commission was correct to find at recital 787 to the contested decision that when Microsoft had responded to the letter of 15 September 1998 it had not taken sufficiently into account its special responsibility not to hinder effective and undistorted competition in the common market. The Commission was also correct to state, at the same recital, that that particular responsibility derived from Microsoft's 'quasi-monopoly' on the client PC operating systems market. As is apparent from the considerations set out at paragraph 740 above, the refusal at issue

concerned ‘interface specifications that organise a network of Windows work group servers and client PCs and that, as such, are not attributable to one of the two [types of product] at stake (client PCs or work group servers), but rather represent a rule of compatibility between those two products’ (recital 787 to the contested decision).

⁷⁷⁶ It follows from all of the foregoing considerations that the second part of the single plea put forward by Microsoft in connection with the refusal to supply and authorise the use of the interoperability information must be rejected as unfounded.

3. Third part: the Commission did not take proper account of the obligations imposed on the Communities by the TRIPS Agreement

(a) Arguments of the parties

⁷⁷⁷ Microsoft claims that, by requiring it to license to its competitors the communication protocol specifications which it owns, the contested decision infringes Article 13 of the TRIPS Agreement. It submits that the cumulative conditions laid down in that agreement are not met in the present case.

⁷⁷⁸ In the first place, the requirement in question goes further than is necessary to achieve interoperability and, consequently, violates the condition that ‘limitations’

or 'exceptions' can be applied to intellectual property rights only in 'special cases'. By imposing that requirement, the Commission seeks to enable other server operating systems suppliers to create products that 'mimic' the functionality of Windows server operating systems. Microsoft also criticises the requirement that it make its communication protocols available to its competitors, irrespective of whether or not they are affected by its allegedly anti-competitive conduct.

779 In the second place, Microsoft claims that the licensing requirement conflicts directly with the 'normal exploitation' of its intellectual property rights. Rather than license their innovative technologies to third parties, commercial software writers like the applicant normally exploit their intellectual property rights by developing and marketing products that implement those technologies. The requirement will also have negative effects on its sales, since its competitors will be able to use its communication protocols to create server operating systems that are interchangeable with its own products.

780 In the third place, Microsoft claims that the requirement 'unreasonably prejudice[s] [its] legitimate interests', because it is disproportionate to the Commission's stated objective of eliminating the effects of anti-competitive conduct. The Commission's new balancing test appears to legitimise compulsory licensing whenever a dominant undertaking's competitors would benefit from access to the applicant's intellectual property, regardless of whether such a measure is necessary to remedy anti-competitive conduct.

781 Last, Microsoft acknowledges that the TRIPS Agreement may not be directly applicable in Community law, but observes that the Court of Justice has established the principle that Community law, including Article 82 EC, must be interpreted in the light of the international agreements concluded by the Community, such as the TRIPS Agreement (Case C-61/94 *Commission v Germany* [1996] ECR I-3989, paragraph 52).

782 ACT maintains that the principle of interpretation referred to in the preceding paragraph must apply not only to secondary Community legislation but also to norms of primary Community law.

783 Next, ACT claims that the Commission's interpretation of Article 82 EC in the contested decision is inconsistent with the Community's international obligations under the TRIPS Agreement, in three respects.

784 In the first place, the remedy prescribed in Article 5 of the contested decision is incompatible with Article 13 of that agreement.

785 In the second place, in so far as the remedy entails the compulsory licensing of Microsoft's patents, it violates Article 31 of the TRIPS Agreement.

786 More particularly, ACT observes that that article provides, in particular, the following:

‘Where the law of a Member allows for other use of the subject-matter of a patent with the authorisation of the right holder, including use by the Government or third parties authorised by the Government, the following provisions shall be respected:

(a) authorisation of such use shall be considered on its individual merits’.

787 ACT maintains that that provision means that licences must be granted only on a case-by-case basis. However, Article 5 of the contested decision provides for compulsory licensing that ‘sweeps within it patents that have been granted, those that are the subject of current applications, and all of those that may be applied for and granted in future’. That decision means the compulsory licensing of ‘categories of inventions’.

788 In the third place, by reference to Article 39 of the TRIPS Agreement (the only article in Section 7 of that agreement), in so far as Article 5 of the contested decision requires Microsoft to disclose business secrets to its competitors, it not only means the loss of the right to control the use of those business secrets, but also results in the ‘complete destruction’ of those secrets.

789 The Commission observes, first of all, that it is settled case-law that, ‘having regard to their nature and structure, the WTO agreements are not in principle among the rules in the light of which the Court is to review the legality of measures adopted by the Community institutions’ (Case C-149/96 *Portugal v Council* [1999] ECR I-8395,

paragraph 47). In Joined Cases C-300/98 and C-392/98 *Dior and Others* [2000] ECR I-11307, paragraph 44, moreover, the Court of Justice held that 'the provisions of [the TRIPS Agreement], an annex to the WTO Agreement, are not such as to create rights upon which individuals may rely directly before the Courts by virtue of Community law'. *Commission v Germany*, cited in paragraph 781 above, is not relevant to the present case, since it refers to the interpretation not of a provision of the EC Treaty but of a measure of secondary Community law. In any event, Microsoft's essential argument is that the contested decision is unlawful because it violates the TRIPS Agreement.

790 Next, the Commission contends that Microsoft's argument is based on the mistaken premiss that the contested decision requires it to license to its competitors the copyright specifications for its proprietary communication protocols. The question of copyright is, at most, 'purely incidental' in the present case, and as the 'right of disclosure' on which Microsoft relies is a 'moral right', it cannot be covered by the TRIPS Agreement.

791 Last, the Commission submits that Microsoft's assertion that the conditions laid down by Article 13 of the TRIPS Agreement are not met in the present case is based on 'erroneous assumptions'. What is claimed to be the compulsory licensing imposed by the decision does not go beyond what is necessary to attain interoperability and the Commission did not apply any new balancing test in this case.

792 The Commission contends that ACT's arguments must be rejected as inadmissible in so far as they are based on Articles 31 and 39 of the TRIPS Agreement, since they were not submitted by Microsoft. In any event, its arguments are wholly unfounded.

793 SIIA supports the Commission's arguments.

(b) Findings of the Court

794 In the third part of this single plea, Microsoft criticises the Commission for having interpreted Article 82 EC in a way that is inconsistent with Article 13 of the TRIPS Agreement. The applicant contends that if the Commission had properly taken that provision into account, it would not have been able to conclude, in Article 2(a) of the contested decision, that the refusal at issue constituted an abuse of a dominant position, or have been able to impose the remedy provided for in Articles 4, 5 and 6 of that decision, in so far as that measure concerned interoperability information.

795 Microsoft bases its argument on paragraph 52 of *Commission v Germany*, cited in paragraph 781 above, in which the Court stated that Community law, including Article 82 EC, must be interpreted in the light of binding international agreements, such as the TRIPS Agreement. At the hearing, Microsoft emphasised that it did not claim that the provisions of the TRIPS Agreement had direct effect.

796 The Court considers that Microsoft cannot properly rely on *Commission v Germany*, cited in paragraph 781 above.

797 Paragraph 52 of that judgment states, in particular:

‘[T]he primacy of international agreements concluded by the Community over provisions of secondary Community legislation means that such provisions must, so far as is possible, be interpreted in a manner that is consistent with those agreements.’

798 The Court holds that the principle of consistent interpretation thus invoked by the Court of Justice applies only where the international agreement at issue prevails over the provision of Community law concerned. Since an international agreement, such as the TRIPS Agreement, does not prevail over primary Community law, that principle does not apply where, as here, the provision which falls to be interpreted is Article 82 EC.

799 In the present case, moreover, unlike the situation referred to by paragraph 52 of *Commission v Germany*, cited in paragraph 781 above, the Commission was not, strictly speaking, required to make a choice between several possible constructions of a text of Community law. The present case concerns a situation in which the Commission was required to apply Article 82 EC to the factual and legal circumstances of the particular case and in which it must be presumed, in the absence of proof to the contrary, that the conclusions which it reached in that regard are the only ones that it could validly adopt.

800 Furthermore, the Court considers that, under the guise of the principle of consistent interpretation, Microsoft is in reality simply challenging the legality of the contested decision on the ground that it is contrary to Article 13 of the TRIPS Agreement.

801 It is settled case-law that, given their nature and structure, WTO agreements are not in principle among the rules in the light of which the Community judicature is to review the legality of measures adopted by the Community institutions (*Portugal v Council*, cited in paragraph 789 above, paragraph 47; Joined Cases C-27/00 and C-122/00 *Omega Air and Others* [2002] ECR I-2569, paragraph 93; Case C-76/00 P *Petrotub and Republica v Council* [2003] ECR I-79, paragraph 53; and Case C-93/02 P *Biret International v Council* [2003] ECR I-10497, paragraph 52).

802 It is only where the Community has intended to implement a particular obligation assumed under the WTO or where the Community measure refers expressly to specific provisions of the WTO agreements that the Community judicature must review the legality of the Community measure in question in the light of the WTO rules (*Portugal v Council*, cited in paragraph 789 above, paragraph 49, and *Biret International v Council*, cited in paragraph 801 above, paragraph 53).

803 As the circumstances of the present case clearly do not correspond with either of the two situations described in the preceding paragraph, Microsoft cannot rely on Article 13 of the TRIPS Agreement in support of its claim for annulment of Articles 2, 4, 5 and 6 of the contested decision. Accordingly, there is no need to examine the arguments which Microsoft, supported by ACT, puts forward to substantiate its assertion that the conditions envisaged by Article 13 of the TRIPS Agreement are not satisfied in this case.

804 ACT's argument that Article 5 of the contested decision is incompatible with Articles 31 and 39 of the TRIPS Agreement (see paragraphs 785 to 788 above) must be rejected, for the same reasons as those set out at paragraphs 796 to 803 above.

805 Furthermore, ACT's argument that Article 5 of the contested decision fails to have regard to Article 31(a) of the TRIPS Agreement rests on the wholly erroneous idea

that the remedy provides for the compulsory licensing of 'categories of inventions' and does not allow for any individual assessment. Even assuming that, in order to comply with Article 5 of the contested decision, Microsoft were obliged to grant licences authorising certain of its competitors to exploit one or more of its patents, there is nothing in the contested decision to prevent it from negotiating the terms of that licence on a case-by-case basis.

806 It follows from the contested decision that the remedy referred to in Article 5 must be implemented according to a three-stage procedure and which complies with the conditions set out at recitals 1005 to 1009 to the contested decision.

807 Thus, Microsoft is first of all required to draw up the interoperability information within the meaning of Article 1(1) of the contested decision and to implement the evaluation mechanism referred to in Article 5(c) of that decision.

808 At the second stage, Microsoft is required to give access to the interoperability information to the undertakings wishing to develop and distribute work group server operating systems in order to allow them to evaluate the business value to them of implementing that information in their products (recital 1008(i) to the contested decision). The conditions on which Microsoft authorises that evaluation must be reasonable and non-discriminatory.

809 At the third stage, Microsoft is required to give access to the information concerned to any undertaking interested in all or part of the interoperability and to authorise that undertaking to implement that information in work group server operating systems (recital 1003 to the contested decision). In that context too, the conditions which it intends to impose must be reasonable and non-discriminatory (recitals 1005 to 1008 to the contested decision).

810 It is clear from those various provisions of the contested decision that there is nothing to prevent Microsoft, where the interoperability information sought by a given undertaking relates to a technology covered by a patent (or by another form of intellectual property right), from giving access to and authorising the use of that information by granting a licence, subject to the application of reasonable and non-discriminatory conditions.

811 The mere fact that the contested decision requires that the conditions to which any licences are subject be reasonable and non-discriminatory does not mean that Microsoft must impose the same conditions on every undertaking seeking such licences. It is not precluded that the conditions may be adapted to the specific situation of each of those undertakings and vary, for example, according to the extent of the information to which they seek access or the type of products in which they intend to implement the information.

812 It follows from all of the foregoing considerations that the third part of the single plea must be rejected as unfounded.

813 It follows that the single plea put forward in connection with the first issue must be rejected as unfounded in its entirety.

C — The bundling of Windows Media Player with the Windows client PC operating system

814 In this second issue, Microsoft relies on two pleas: first, infringement of Article 82 EC and, second, breach of the principle of proportionality. The first plea concerns

the Commission's finding that Microsoft's conduct in making the availability of the Windows client PC operating system conditional on the simultaneous acquisition of Windows Media Player constitutes an abusive tied sale (Article 2(b) of the contested decision). The second plea relates to the remedy prescribed in Article 6 of the contested decision.

815 Before examining those pleas, the Court will summarise a number of factual and technical findings in the contested decision forming the background to the conduct in question which the Court notes are not in effect disputed by Microsoft.

1. Factual and technical findings

816 At recitals 60 to 66 to the contested decision, the Commission describes digital media.

817 First of all, the Commission defines media players as software products that are able to 'play back' audio and video content, that is to say, to decode the corresponding data and translate them into instructions for the hardware, such as loudspeakers or a display (recital 60 to the contested decision).

818 Next, at recital 61 to the contested decision, the Commission explains that the audio and video content is arranged in digital media files according to certain specific formats and that compression and decompression algorithms have been developed in order to reduce the storage space required by that content without any loss of

audio or video quality. Those algorithms are implemented in media players and in encoding software which make it possible to generate compressed files. The piece of code in a media player that implements a compression/decompression algorithm is called a 'codec' and, in order to be able to act correctly with a compressed media content in a specific format using a specific compression/decompression algorithm, a media player needs to understand that format and that compression/decompression algorithm, that is to say, it needs to implement the corresponding codec.

819 At recital 62 to the contested decision, the Commission explains that the end user is able to access audio and video content via the Internet by downloading the relevant file to his client PC, that is to say, by copying the file and transferring it to his client PC. Once it has been downloaded, the file may be 'played back' by a media player compatible with the file's format.

820 At recital 63 to the contested decision, the Commission states that the end user may also receive audio and video content streamed over the Internet. Where that method is used, there is no longer any need to wait for an entire file to be downloaded, as the file is sent to the client PC in the form of a sequence of small pieces, that is to say, as a 'stream' of data which the media player plays as it goes along. Streaming requires the presence of a streaming media player on the client PC.

821 The Commission points out that the streaming of audio and video content to an end user often entails specific streaming protocols which govern communications between the media player and the software server which distributes the content over the Internet. In order to access sound and video content streamed using a given

protocol, the user must have a media player that ‘understands’ that protocol (recital 64 to the contested decision).

822 Last, at recital 66 to the contested decision, the Commission explains that by using encoding software streaming servers and media players which are compatible in terms of codec, format and streaming protocol support, it is possible to build a software infrastructure for delivery and consumption of streamed digital audio or video content over IT networks. Such an infrastructure will also be able to provide a platform for the development of other applications, which will use the services provided by it. In particular, media players may exhibit APIs which other applications will call in order, for example, to trigger the playback of a file by the player.

823 At recitals 107 to 120 to the contested decision, the Commission briefly describes the economic factors that characterise supply, competition and consumption patterns in the digital media industry.

824 In the first place, at the beginning of the digital media content chain are the content owners, who generally have copyright in the content and can therefore control its reproduction and distribution (recital 108 to the contested decision).

825 In the second place, the content is then aggregated by content providers, who distribute the content to consumers, in particular by storing it on servers connected to the Internet which consumers are able to access from their client PCs (recitals 109 to 111 to the contested decision).

826 In the third place, the software infrastructure that enables the creation, transmission and playback of digital content is provided by software developers, including Microsoft, RealNetworks and Apple (recital 112 to the contested decision). Those three companies have the specific feature that, as well as supporting certain industry standard formats, they offer a comprehensive solution, from encoding software to player, based essentially on their own digital media technologies and on their own proprietary file formats (recital 113 to the contested decision). Thus, Microsoft owns the following formats: 'Windows Media Audio' (WMA), 'Windows Media Video' (WMV) and 'Advanced Streaming Format' (ASF). RealNetworks' formats are called 'RealAudio' and 'RealVideo', while Apple's 'QuickTime' formats have the file extensions '.qt', '.mov' and '.moov'. Other software developers do not offer an end-to-end solution for delivery of media content, but generally license the technology from one of the three companies mentioned above or use open industry standards (recital 117 to the contested decision).

827 In the fourth place, there are various channels through which media players may be distributed to end users (recitals 119 and 120 to the contested decision).

828 First, media players may be installed on client PCs by OEMs under agreements between the OEMs and the software developers. End users thus find a media player and possibly other software pre-installed on their client PCs in addition to an operating system. According to recital 68 to the contested decision, OEMs are companies which assemble computers using a variety of components supplied by different manufacturers. That assembly generally includes the installation of an operating system supplied by a software developer or developed by the OEM itself, together with the bundling of several applications required by the end users. The devices thus assembled are then purchased by 'resellers', who resell them with additional software.

829 Second, end users may download media players on to their client PCs over the Internet.

830 Third, media players may be sold in retail outlets or distributed with other software products.

831 At recitals 121 to 143 to the contested decision, the Commission describes Microsoft's products and those of its competitors.

832 Microsoft's media player is called Windows Media Player and at the time of the contested decision the most recent version of that player was called 'Windows Media Player 9 Series' (WMP 9). WMP 9, which allows the playback of downloaded or streamed audio and video content, has been available since 7 January 2003 and since November 2003 has also worked with the Mac OS and UNIX operating systems. WMP 9 does not support the Real and QuickTime formats.

833 As regards Microsoft's competitors, the Commission describes, in particular, the products of RealNetworks (recitals 125 to 134 to the contested decision) and Apple (recitals 135 to 140 to the contested decision).

834 In 1995, RealNetworks — which was then called Progressive Networks Inc. — was the first large company to market products allowing the streaming of digital audio

content, including 'RealAudioPlayer'. In February 1997 RealNetworks released 'RealPlayer 4.0', which played live and on-demand audio and video.

⁸³⁵ Apple developed, in the early 1990s, a media player called 'QuickTime Player', which initially ran only on Macintosh computers. In November 1994 Apple released 'QuickTime 2.0 for Windows' and, in April 1999, 'QuickTime 4.0', which supported media streaming.

⁸³⁶ The Commission also mentions MusicMatch's 'MusicMatch Jukebox' and Nullsoft's 'Winamp Media Player', which rely not on their own codecs or file formats but on technologies owned by Microsoft, Apple or RealNetworks or on open formats (recitals 141 to 143 to the contested decision).

⁸³⁷ Recitals 302 to 314 to the contested decision contain a chronology of Microsoft's activities in the media software industry, which may be summarised as follows:

- in August 1991, Microsoft released a version of its 'Windows 3.0' operating system, which contained 'Multimedia Extensions' that allowed users to view still photographs and to listen to sounds, but did not enable media streaming;

- in 1993, Microsoft released 'Video for Windows', which included 'Media Player 2.0' and allowed users to play downloaded video files on their client PCs;

- in August 1995, Microsoft released the 'Windows 95' operating system, in which it subsequently integrated its 'Internet Explorer' browser, which included RealNetworks' 'RealAudio Player';

- in September 1996, Microsoft released 'NetShow 1.0', which was developed to work with Windows 95 and which allowed audio and video distributed over intranets to be played;

- on 21 July 1997, Microsoft and RealNetworks announced an agreement to collaborate on streaming media, under which Microsoft licensed from RealNetworks, first, RealAudio and RealVideo 4.0 codecs for inclusion in its NetShow software and, second, RealPlayer 4.0 for inclusion in Internet Explorer;

- in October 1997, Microsoft announced that RealPlayer 4.0 was included in Internet Explorer 4.0;

- on 4 May 1998, Microsoft released the beta version of 'Microsoft Media Player', which was capable of streaming media across the Internet and of supporting, in particular, MPEG, QuickTime, RealAudio and RealVideo formats, and also the beta version of its 'Netshow 3.0 Server' software;

- on 25 June 1998, Microsoft released its 'Windows 98' operating system, the installation CD of which included the 'NetShow 2.0' player, which played streamed content but did not feature in the default configurations which Windows 98 offered to users;

- on 7 July 1998, Microsoft released 'Windows Media Player 6' (WMP 6), which played content streamed over the Internet and worked with Windows 95, Windows 98 and Windows NT 4.0 and which supported RealAudio 4.0, RealVideo 4.0, ASF, AVI, WAV, MPEG and QuickTime;

- on 5 May 1999, Microsoft released 'Windows 98 Second Edition' for client PCs, which included the media player WMP 6; that media player could not be removed by OEMs or by users and was also included in subsequent versions of Windows, namely 'Windows Me', 'Windows 2000 Professional' and 'Windows XP';

- in August 1999, Microsoft released the 'Windows Media Technologies 4' architecture, which included Windows Media Player, 'Windows Media Services', 'Windows Media Tools' and Microsoft's own digital rights management technology;

- that software no longer provided native support for RealNetworks' or QuickTime's formats;

- in September 2002, Microsoft announced the release of the beta version of its 'Windows Media 9 Series' technology, which included, inter alia, the WMP 9 player.

838 It should be noted that Microsoft complied with its obligation under the United States settlement to allow OEMs and consumers to enable or remove access to its middleware software, by releasing Windows 2000 Professional Service Pack 3 on 1 August 2002 and Windows XP Service Pack 1 on 9 September 2002 (recital 315 to the contested decision).

2. First plea, alleging infringement of Article 82 EC

839 The first plea raised by Microsoft in relation to the Windows Media Player issue may be broken down into four parts. In the first part, Microsoft claims that the Commission applied a new, speculative, argument with no basis in law, in order to establish the existence of a foreclosure effect. In the second part, it claims that the Commission failed to take sufficient account of the advantages flowing from the 'architectural concept' of its operating system. In the third part, it submits that the Commission failed to establish the existence of an infringement of Article 82 EC, and in particular of Article 82(d) EC. Last, in the fourth part, Microsoft maintains that the Commission failed to take account of the obligations imposed by the TRIPS Agreement.

840 Furthermore, by way of introduction to the arguments which it develops in connection with the Windows Media Player issue, Microsoft makes a number of assertions concerning the conditions necessary to establish the existence of abusive bundling.

841 The Court will first examine the assertions referred to in the preceding paragraph. Next, in the light of the conclusions which it reaches (see paragraph 869 below), it will analyse the arguments which Microsoft puts forward in the first three parts of the first plea. It will consider finally the fourth part of the plea.

(a) The necessary conditions for a finding of abusive tying

Arguments of the parties

⁸⁴² Microsoft refers to recital 794 to the contested decision and asserts that the Commission based its finding that there was abusive tying in the present case on the following factors:

- first, the tying and tied products are two separate products;

- second, the undertaking concerned is dominant in the market for the tying product;

- third, the undertaking concerned does not give customers a choice to obtain the tying product without the tied product; and

- fourth, the practice in question forecloses competition.

⁸⁴³ The applicant refers to recital 961 to the contested decision and observes that the Commission also took into account the fact that the tying was not objectively justified.

844 Microsoft asserts that those various factors depart from the conditions laid down in Article 82(d) EC, in two respects.

845 First, the applicant claims that the Commission replaced the condition that ‘the conclusion of contracts [must be made] subject to acceptance by the other parties of supplementary obligations which, by their nature or according to commercial usage, have no connection with the subject of such contracts’ by the condition that the dominant undertaking ‘does not give customers a choice to obtain the tying product without the tied product’.

846 Second, the Commission is alleged to have added a foreclosure requirement, not expressly provided for in Article 82(d) EC and which is not normally taken into account when assessing the existence of abusive tying. More specifically, the Commission, after acknowledging at recital 841 to the contested decision that the present case was not a ‘classical tying case’, based its conclusion that there was a foreclosure effect on a new and ‘highly speculative’ theory that the widespread distribution of media functionality in Windows would compel content providers to encode their content in Windows Media format, which would have the effect of excluding all competing media players from the market and would then, indirectly, compel consumers to use only that media functionality.

847 Microsoft further submits that the contested decision is contradictory in that the Commission asserts at recital 792 to the contested decision that the conditions of Article 82(d) EC are satisfied in the present case, while at the same time taking into account conditions which derogate from that provision.

848 ACT claims that the Commission took three different categories of conditions into account in order to find that there had been abusive tying in the present case,

namely, first, those laid down in Article 82(d) EC, second, those laid down in Article 82 EC in general and, third, the four conditions set out at recital 794 to the contested decision. ACT contends that, whatever category of conditions is applied, the Commission's appraisal is flawed.

⁸⁴⁹ The Commission, referring to recital 831 to the contested decision, claims that the tying at issue infringes 'Article 82 EC generally and Article 82(d) in particular'. It explains that it referred to those two provisions jointly in view of Microsoft's arguments during the administrative procedure and 'for the avoidance of doubt' and also 'to avoid semantic debate on the interpretation [of Article 82(d) EC]'. The conditions which the Commission applied in the present case in finding that there was abusive tying are consistent with those recognised in the case-law.

Findings of the Court

⁸⁵⁰ The Court finds that Microsoft's arguments are purely semantic and cannot be accepted.

⁸⁵¹ It is appropriate to recall the way in which the Commission structures its argument relating to bundling in the contested decision.

⁸⁵² At recital 794 to the contested decision, the Commission states that tying prohibited under Article 82 EC requires the presence of the four factors set out at paragraph 842 above.

- 853 Next, it examines Microsoft's conduct in the light of those four factors (recitals 799 to 954 to the contested decision).
- 854 So, the Commission first observes that Microsoft has a dominant position on the client PC operating systems market (recital 799 to the contested decision). The Court notes that Microsoft does not dispute that fact.
- 855 Second, the Commission says that streaming media players and client PC operating systems are two separate products (recitals 800 to 825 to the contested decision).
- 856 Third, the Commission states that Microsoft does not give customers the choice of obtaining Windows without Windows Media Player (recitals 826 to 834 to the contested decision).
- 857 Fourth, the Commission claims that the tying of Windows Media Player forecloses competition in the media players market (recitals 835 to 954 to the contested decision). It observes, in particular, that in classical tying cases both it and the Community Courts 'considered the foreclosure effect for competing vendors to be demonstrated by the bundling of a separate product with the dominant product' (recital 841 to the contested decision). The Commission states, however, that in the present case there are good reasons not to assume without further analysis that tying Windows Media Player constitutes conduct which by its very nature is liable to foreclose competition (ibid.). The Commission considers, in essence, that 'tying [Windows Media Player] with the dominant Windows makes [Windows Media Player] the platform of choice for complementary content and applications which in turn [creates a risk of] foreclosing competition in the market for media players' (recital 842 to the contested decision). Furthermore, '[t]his has spillover effects on

competition in related products such as media encoding and management software (often server-side), but also in client PC operating systems for which media players compatible with quality content are an important application' (ibid.).

858 Last, the Commission examines the basis on which Microsoft relies in its attempt to demonstrate that the abusive conduct imputed to it is objectively justified (recitals 955 to 970 to the contested decision).

859 The Court considers that the Commission's analysis of the constituent elements of bundling is correct and that it is consistent both with Article 82 EC and with the case-law. The Commission was correct to rely on the factors set out at recital 794 to the contested decision and on the fact that the tying was without objective justification in deciding whether Microsoft's conduct constituted abusive tying. Those factors can be deduced both from the very concept of bundling and from the case-law (see, in particular, Case T-30/89 *Hilti v Commission* [1991] ECR II-1439, upheld in Case C-53/92 P *Hilti v Commission* [1994] ECR I-667 (both cases being referred to below as '*Hilti*') and judgments of the Court of First Instance and the Court of Justice in *Tetra Pak II*, cited in paragraph 293 above).

860 It must be borne in mind that the list of abusive practices set out in the second paragraph of Article 82 EC is not exhaustive and that the practices mentioned there are merely examples of abuse of a dominant position (see, to that effect, Case C-333/94 P *Tetra Pak II*, cited in paragraph 293 above, paragraph 37). It is settled case-law that the list of practices contained in that provision is not an exhaustive enumeration of the abuses of a dominant position prohibited by the EC Treaty (Case 6/72 *Europemballage and Continental Can v Commission* [1973] ECR 215, paragraph 26, and *Compagnie maritime belge transports and Others v Commission*, cited in paragraph 229 above, paragraph 112).

- 861 It follows that bundling by an undertaking in a dominant position may also infringe Article 82 EC where it does not correspond to the example given in Article 82(d) EC. Accordingly, in order to establish the existence of abusive bundling, the Commission was correct to rely in the contested decision on Article 82 EC in its entirety and not exclusively on Article 82(d) EC.
- 862 In any event, the Court holds that the constituent elements of abusive tying identified by the Commission at recital 794 to the contested decision coincide effectively with the conditions laid down in Article 82(d) EC.
- 863 The Court thus rejects Microsoft's argument that in the present case the Commission applied conditions which differ, from two perspectives, from those laid down in Article 82(d) EC.
- 864 In the first place, when the Commission states that it is necessary to examine whether the dominant undertaking 'does not give customers a choice to obtain the tying product without the tied product', it is merely expressing in different words the concept that bundling assumes that consumers are compelled, directly or indirectly, to accept 'supplementary obligations', such as those referred to in Article 82(d) EC.
- 865 In the present case, as the Court will explain in greater detail at paragraphs 962 and 965 below, that coercion is mainly applied first of all to OEMs, who then pass it on to the end user. The end user is directly exposed to that coercion in the less frequent situation in which, rather than deal through an OEM, he acquires a Windows client PC operating system directly from a retailer.

866 In the second place, it cannot be claimed that the Commission introduced a new condition relating to the foreclosure of competitors from the market in order to establish the existence of abusive bundling within the meaning of Article 82(d) EC.

867 In that regard, the Court observes that, while it is true that neither that provision nor, more generally, Article 82 EC as a whole contains any reference to the anti-competitive effect of bundling, the fact remains that, in principle, conduct will be regarded as abusive only if it is capable of restricting competition (see, to that effect, Case T-203/01 *Michelin v Commission* [2003] ECR II-4071 (*Michelin II*), paragraph 237).

868 Furthermore, as will be made explicit at paragraphs 1031 to 1058 below, the applicant cannot claim that the Commission relied on a new and highly speculative theory to reach the conclusion that a foreclosure effect exists in the present case. As indicated at recital 841 to the contested decision, the Commission considered that, in light of the specific circumstances of the present case, it could not merely assume, as it normally does in cases of abusive tying, that the tying of a specific product and a dominant product has by its nature a foreclosure effect. The Commission therefore examined more closely the actual effects which the bundling had already had on the streaming media player market and also the way in which that market was likely to evolve.

869 In light of the foregoing, the Court considers that the question of the bundling must be assessed by reference to the four conditions set out at recital 794 to the contested decision (see paragraph 842 above) and to the condition relating to the absence of objective justification.

870 The second condition set out at recital 794 to the contested decision must be considered to be met, because it is common ground that Microsoft has a dominant position on the market for what is alleged to be the tying product, namely client PC operating systems. The arguments which Microsoft puts forward in relation to the first three parts of the first plea (see paragraph 839 above) will be examined in conjunction with the four other conditions which must be satisfied to substantiate the finding of abusive tying. In carrying out that examination, the Court will proceed as follows. First, it will examine the condition relating to the existence of two separate products in the light of the arguments advanced by Microsoft on the second and third parts of the plea. Second, it will examine the condition to the effect that the conclusion of contracts is made subject to supplementary obligations, in the light of the arguments which Microsoft puts forward in support of the third part of the plea. Third, the Court will analyse the condition relating to the restriction of competition on the market in the light of the submissions made by Microsoft in connection with the first part of the plea. Fourth, it will examine the objective justifications on which the applicant relies, taking into account the arguments which it puts forward in connection with the second part of the plea.

871 The fourth part, relating to the alleged failure to take into account the obligations imposed on the Communities by the TRIPS Agreement, will then be examined.

(b) The existence of two separate products

Contested decision

872 The Commission deals with this first condition at recitals 800 to 825 to the contested decision. Its analysis comes under three heads. In the first place, it takes particular care to demonstrate that streaming media players and client PC operating systems are separate products (recitals 800 to 813 to the contested decision). In the

second place, it rejects Microsoft's argument that it began to bundle its media player technology with its Windows operating system before 1999 (recitals 814 to 820 to the contested decision). In the third place, it rejects Microsoft's argument that bundling a streaming media player with an operating system is normal commercial practice (recitals 821 to 824 to the contested decision).

⁸⁷³ Under the first head of its analysis, the Commission explains, first, that, according to the case-law, the fact that there are independent manufacturers who specialise in the manufacture of the tied product indicates the existence of separate consumer demand and therefore of a distinct market for the tied product (recital 802 to the contested decision). The Commission therefore considers that the distinctness of products for the purposes of an analysis under Article 82 EC must be assessed in the light of consumer demand, in the sense that if there is no separate demand for what is alleged to be a tied product the products at issue are not distinct (recital 803 to the contested decision).

⁸⁷⁴ Second, the Commission observes that 'the market provides media players separately' and that there are vendors who develop and supply media players on a standalone basis, separately from operating systems (recital 804 to the contested decision).

⁸⁷⁵ Third, the Commission refers to Microsoft's practice of developing and distributing versions of Windows Media Player for Apple's Mac and Sun's Solaris operating systems (recital 805 to the contested decision). It also notes that Microsoft releases upgrades of its media player, distinct from Windows operating system releases or upgrades (recital 804 to the contested decision).

- 876 Fourth, the Commission states that a not insignificant number of consumers choose to obtain media players separately from their operating system, including RealPlayer from RealNetworks, which does not develop or sell operating systems (ibid.).
- 877 Fifth, the Commission points out that some operating system users will not need or want a media player (recital 807 to the contested decision).
- 878 Sixth, the Commission rejects Microsoft's argument that there is no material demand for operating systems without media player technologies (recital 809 to the contested decision).
- 879 Seventh, the Commission observes that Microsoft engages in specific promotions of Windows Media Player, independent of the operating system (recital 810 to the contested decision).
- 880 Eighth, the Commission explains that client PC operating systems and streaming media players are also different in terms of their functionalities (recital 811 to the contested decision).
- 881 Ninth, the Commission states that the two products 'involve' different industry structures, as may be seen from the fact that Microsoft still has some competitors on the media players market, whereas its competitors on the client PC operating systems market are insignificant (recital 812 to the contested decision). The price points of the two products are also different (ibid.).

882 Tenth, the Commission explains that Microsoft applies software developer's kit licences ('SDK licences') which differ according to whether the software developer's kit ('SDK') relates to the Windows operating systems or the Windows Media technologies (recital 813 to the contested decision).

883 Under the second head of its analysis, the Commission asserts that Microsoft's argument that its media player technology has been bundled with Windows since 1992 cannot affect the Commission's conclusion that there are two separate products. It states, in particular, that it 'takes issue with Microsoft's conduct at a juncture where tying became more harmful than it had previously been', and observes, in that regard, that in 1999 Microsoft 'tied a product (WMP 6) which matched other vendors' products in the essential functionality that many customers came to expect from a media player (media streaming over the Internet) and with which Microsoft had entered the market for streaming media players in 1998' (recital 816 to the contested decision). The Commission also observes that the first streaming media player which Microsoft distributed together with Windows, in 1995, was RealNetworks' RealAudio Player, as at the time Microsoft did not yet have a 'viable' streaming media player (recital 817 to the contested decision). The Commission states that the RealAudio Player software code could be fully uninstalled (*ibid.*).

884 Under the third head of its analysis, the Commission refutes Microsoft's argument that bundling a streaming media player with a client PC operating system is normal commercial practice. First, that argument does not take account of the fact that there are independent suppliers of the tied product; second, Sun and the Linux vendors do not bundle their own media players but third-party media players; and, third, none of those operating system vendors links the media player with the operating system in such a way that it cannot be uninstalled (recitals 821 to 823 to the contested decision).

Arguments of the parties

885 In the first place, Microsoft, supported by CompTIA, DMDsecure and Others, ACT, TeamSystem, Mamut and Exor, claims that the contested decision does not establish that Windows and its media functionality belong to two separate product markets.

886 The media functionality in question is a 'long-standing feature of the Windows operating system'. In Windows, the software code that permits users to play audio and video content is no different from the code that permits them to access other types of information, such as text or graphics. Furthermore, other parts of Windows and of third-party applications running on top of the Windows operating system call on the same software code.

887 Microsoft takes issue with the fact that in the contested decision the Commission considers only the question whether what it alleges to be the tied product, namely media functionality, is available separately from what it alleges to be the tying product, namely the client PC operating system. In reality, the appropriate question is whether the tying product is regularly offered without the tied product. In fact, there is no real consumer demand for a client PC operating system without media functionality and no operator therefore markets such a system.

888 Microsoft submits that the Commission punishes dominant undertakings which improve their products by integrating new features in them, when it requires that such features be made removable whenever a third party markets a standalone product that provides the same or similar functionalities.

889 Furthermore, the position adopted by the Commission is even less acceptable, because the alleged abuse is not the result of the integration of media functionality in Windows — which goes back to 1992 and has been the subject of continuous improvement — but of the improvement which Microsoft made to that functionality in 1999, when it added its own streaming capability. In other words, the Commission challenges the presence of media functionality in Windows only in so far as it permits audio and video content found on the Internet to be played before it is completely downloaded.

890 Microsoft also claims that all the other major client PC operating systems, namely Mac OS, Linux, OS/2 and Solaris, contain media functionality capable of playing content streamed over the Internet. Its competitors all consider that the integration of such functionality in client PC operating systems is normal commercial practice that responds to consumer demand. That shows that streaming capability is a ‘natural feature’ in client PC operating systems and not a separate product. In that regard, Microsoft emphasises that ‘a product should be defined primarily in terms of customer expectations and demands’. As stated at recital 824 to the contested decision, however, the Commission appears to accept that customers do in fact want operating systems to have media functionality.

891 Microsoft further submits that the Commission expressly recognises, at recital 1013 to the contested decision, that it would not have committed an abuse if it had in 1999 offered two versions of Windows at the same price, namely one with Windows Media Player and the other without it. However, there is no evidence that there would have been any demand for a version of Windows that, at the same price, contained fewer features. That lack of demand also shows that ‘Windows with media functionality’ is a single product.

892 Furthermore, Microsoft, supported on this point by DMDsecure and Others and ACT, asserts that the Commission cannot rely on *Tetra Pak II*, cited in paragraph 293 above, and *Hilti*, cited in paragraph 859 above, to substantiate its argument that Windows and its media functionality belong to two separate product markets. First of all, those cases concerned consumable products which were used with durable equipment over the lifetime of that durable equipment and which were 'physically separate'. In those two cases, unlike in the present case, there was evidence of demand for the tying product without the tied product. In the present case, moreover, the Commission has never identified a customer wishing to obtain what is alleged to be the tying product without what is alleged to be the tied product.

893 Last, Microsoft takes issue with certain arguments put forward by the Commission in the defence to demonstrate that Windows is a separate product from Windows Media Player. First, it submits that the United States courts never found that Windows Media Player belonged to a separate market from the market to which the Windows operating system belonged. Second, it contends that the fact that it releases versions of Windows Media Player separately from Windows does not demonstrate the existence of demand for Windows without Windows Media Player. In addition, those versions of Windows Media Player are in fact merely updates of the media functionality present in Windows. Third, the Commission's assertion that the files that constitute Windows Media Player are readily identifiable is irrelevant. In any event, that assertion is incorrect.

894 Microsoft also asserts that the Commission has not demonstrated that the media functionality is not linked, by its nature or according to commercial usage, to the client PC operating systems.

895 The applicant claims that the integration of media functionality is a 'natural step' in the evolution of those operating systems, as may be seen from the fact that all

vendors of operating systems include such functionality in their products. Microsoft is constantly seeking to improve Windows in response to technological advances and to changes in consumer demand, and Windows and other client PC operating systems have evolved over time to support an increasingly wider range of file types. For software developers and consumers, there is no fundamental difference between files that contain text or graphics and files that contain audio or video. In reality, a modern operating system is expected to support both types of files.

⁸⁹⁶ Operating systems and media functionalities have also become ‘strongly connected’ by commercial usage. The applicant integrated media functionality in Windows in 1992 and has steadily improved that functionality since then. The streaming capability which it added in 1999 was ‘just one of the many capabilities [which it] added to keep pace with rapid changes in technology’.

⁸⁹⁷ Last, Microsoft contends that the Commission cannot rely on the Court of Justice’s statement, at paragraph 37 its judgment in *Tetra Pak II*, cited in paragraph 293 above, that even where tied sales of two products are in accordance with commercial usage, such sales may still constitute abuse within the meaning of Article 82 EC unless they are objectively justified. Unlike the situation in *Tetra Pak II*, suppliers of third-party media players are not excluded from the market by the presence of media functionality in Windows.

⁸⁹⁸ In the reply, Microsoft further contends that the Commission’s argument that an undertaking in a dominant position may be deprived of the right to adopt a course of conduct which would be unobjectionable if it were adopted by a non-dominant undertaking, and that it is not permissible to refer to industry practice in certain

circumstances, is irrelevant to the issue whether the Commission has demonstrated that the conditions laid down in Article 82(d) EC were satisfied.

899 The Commission, supported by SIIA, disputes Microsoft's assertion that the contested decision does not establish that Windows and its 'media functionality' belong to two separate markets.

900 The Commission makes the preliminary observation that Microsoft's argument rests on a 'diffuse notion of "media functionality"'. What Microsoft calls 'media functionality' is not one general, indivisible block of code. In practice, Microsoft itself draws a distinction between the underlying media infrastructure of the operating system, which acts as a platform for media applications and provides basic system services to the rest of the operating system, and the media player application which runs on top of the operating system and which decodes, decompresses and plays digital audio and video files downloaded or streamed over the Internet: the Commission gives the example of Microsoft's product 'Windows XP Embedded'. The Commission emphasises that the contested decision is concerned with Microsoft's tying of the streaming media application Windows Media Player and not with the underlying media infrastructure.

901 The Commission refers to recital 802 to the contested decision and submits that the Community Courts have held that the existence of independent manufacturers which specialise in the manufacture of the tied product indicated a separate consumer demand and therefore a distinct market for the tied product. The distinction that Microsoft draws between the present case and *Tetra Pak II* and *Hilti*, on the basis that the latter cases concerned consumables that were physically separate from the equipment with which they were used, lacks conviction. The judgments delivered in those cases, paragraphs 293 and 859 above, cannot be interpreted as meaning that the application of Article 82 EC must be limited to the tying of consumables.

902 The Commission disputes Microsoft's assertion that it ought, rather, to have considered whether there was a demand for the tying product without the tied product, which in the Commission's submission amounts to an incorrect claim that complementary products cannot constitute two separate products for the purposes of Article 82 EC. The United States courts have rejected similar arguments which Microsoft had raised before them and have consistently held that there was a separate market for Intel-compatible client PC operating systems and excluded 'middleware' products (which include Windows Media Player) from that market.

903 The Commission also maintains that Microsoft's commercial practice of developing and distributing versions of Windows Media Player for Apple's Mac and Sun's Solaris operating systems, and even for non-PC platforms — notably television decoders — provides further indication that client PC operating systems and media players are not just parts of the same product (recital 805 to the contested decision). Likewise, Microsoft releases upgrades of Windows Media Player distinct from Windows operating systems releases or upgrades, engages in promotion specifically dedicated to Windows Media Player and applies different SDK licence agreements depending on whether the SDK concerns Windows or Windows Media technologies (recitals 805 and 813 to the contested decision).

904 Furthermore, particular importance should be attached to the role of OEMs, which, in their relationships with software vendors, act as intermediaries on behalf of end users and provide them with an 'out-of-the-box' product, by combining hardware, client PC operating system and applications for which there is demand (recitals 68 and 119 to the contested decision). The great majority (75%) of Microsoft's sales of client PC operating systems are made through OEMs and the fact that consumers want to find a media player pre-installed on their computers is no reason for Microsoft to tie its own media player with its PC operating system. OEMs could meet such consumer demand by adding a media player to the client PCs which they sell, just as they offer the possibility of other software applications being included.

Microsoft's argument that there is no demand for a Windows operating system without a media player ignores the role thus played by OEMs.

905 The evidence in the Commission's possession shows that users of operating systems do not necessarily want those systems to have a streaming media player (recital 807 to the contested decision) and that, 'to the extent that they do, their demand for streaming media players is distinct from the demand [for] operating systems'.

906 The Commission refers to recitals 814 to 820 to the contested decision and submits that Microsoft's assertion that the alleged abuse is the result of the improvement which it made to its media functionality in 1999 is misleading.

907 In response to Microsoft's arguments that other operating system vendors are doing exactly the same as it does, the Commission observes that tying practices have a different impact depending on whether or not they are engaged in by a dominant undertaking. Furthermore, some operating system vendors, such as Sun and Linux distributors, do not bundle their own media player with their operating system but bundle a different media player offered by independent suppliers, and they do not link the media player concerned with their operating system in such a way that it is impossible to remove it (recitals 822 and 823 to the contested decision).

- 908 The Commission denies having acknowledged, at recital 1013 to the contested decision or anywhere else in that decision, that Microsoft would not have committed an abuse if in 1999 it had offered, at the same price, two versions of Windows, one with and the other without Windows Media Player. Should Microsoft now decide to sell the unbundled version of Windows at the same price as the bundled version, the Commission would examine that price by reference to the present market situation and in the light of Microsoft's obligation to refrain from any measure having an equivalent effect to tying and, if necessary, adopt a new decision pursuant to Article 82 EC.
- 909 Last, the Commission disputes Microsoft's assertion that it has not been shown that media functionality is not linked, by its nature or according to commercial usage, to client PC operating systems.
- 910 The Commission refers to recital 961 to the contested decision and observes that a dominant undertaking may be deprived of the right to adopt a course of conduct which would be unobjectionable if it were adopted by a non-dominant undertaking. The Court of Justice held in *Tetra Pak II*, cited in paragraph 293 above, that even if tied sales of two products are in accordance with commercial usage, they may none the less constitute abuse within the meaning of Article 82 EC unless they are objectively justified. In the Commission's submission, it is 'tautological' to refer to commercial usage or practice in an industry that is 95% controlled by Microsoft; and it is established case-law that reference to industry practice in a market where competition is already restricted by the very presence of a dominant undertaking is not admissible.
- 911 Last, the Commission disputes Microsoft's argument that the integration of media functionality in Windows client PC operating systems forms part of a natural evolution. Microsoft was unable to develop a streaming media player using its own technology and it was only after it acquired VxTreme in 1997 that it was able to create a media player capable of competing with RealNetworks' player. The Commission also refers to an email sent to Mr Gates in January 1997 by Mr Bay, a

Microsoft executive, in which the latter proposed to 'reposition [the] streaming media battle from NetShow vs. Real to Windows vs. Real' and to 'follow the [Internet Explorer] strategy wherever appropriate'.

Findings of the Court

- ⁹¹² Microsoft contends, in substance, that media functionality is not a separate product from the Windows client PC operating system but forms an integral part of that system. As a result, what is at issue is a single product, namely the Windows client PC operating system, which is constantly evolving. In Microsoft's submission, customers expect that any client PC operating system will have the functionalities which they perceive as essential, including audio and video functionalities, and that those functionalities will be constantly updated.
- ⁹¹³ The Court notes, by way of preliminary observation, that the IT and communications industry is an industry in constant and rapid evolution, so that what initially appear to be separate products may subsequently be regarded as forming a single product, both from the technological aspect and from the aspect of the competition rules.
- ⁹¹⁴ It is by reference to the factual and technical situation that existed at the time when, according to the Commission, the impugned conduct became harmful, and therefore the period after May 1999, that the Court must assess whether the Commission was correct to find that streaming media players and client PC operating systems constituted two separate products.

915 The Court must thus ascertain whether the Commission was correct to conclude in the contested decision that when, from May 1999, Microsoft released the version of Windows incorporating Windows Media Player, that conduct involved the bundling of two separate products for the purposes of Article 82 EC.

916 The Court notes, by way of further preliminary observation, that, as the Commission correctly explains, the argument which Microsoft puts forward in connection with the bundling of Windows and Windows Media Player relies to a large extent on the vague concept of media functionality. In that regard, it must be emphasised that it is clear from the contested decision that, so far as that issue is concerned, the impugned conduct concerns only the application software that is Windows Media Player, to the exclusion of any other media technology included in the Windows client PC operating system (see, in particular, recitals 1019 and 1020 to the contested decision). As the Commission and the parties intervening in its support observed in their pleadings and at the hearing, Microsoft itself differentiates, in its technical documentation, the files which constitute Windows Media Player from the other media files, in particular those relating to the basic media infrastructure of the operating system. It is also appropriate to mention the example of the Microsoft product called Windows XP Embedded, referred to at recitals 1028 to 1031 to the contested decision and discussed at the hearing. From the technical aspect, that product is a genuine client PC operating system, but Microsoft's licensing conditions limit its use to certain specialised machines, such as bank automatic teller machines and decoders. The particular feature of that product is that it enables IT engineers to select the components of the operating system. In order to do so, they use a tool called 'Target Designer' to access a menu of the components which they can include in, or exclude from, their operating systems. Those components specifically include Windows Media Player. Furthermore, the menu contains separate entries for the media infrastructure and for the media applications, and Windows Media Player is expressly included among the latter applications.

- 917 First of all, it must be observed that, as the Commission correctly states at recital 803 to the contested decision, the distinctness of products for the purpose of an analysis under Article 82 EC has to be assessed by reference to customer demand. Furthermore, Microsoft clearly shares that opinion (see paragraph 890 above).
- 918 The Commission was also correct to state, at the same recital, that in the absence of independent demand for the allegedly tied product, there can be no question of separate products and no abusive tying.
- 919 Microsoft's argument that the Commission thus applied the wrong test and that it ought in reality to have ascertained whether what was alleged to be the tying product was regularly offered without the tied product or whether customers 'want[ed] Windows without media functionality' cannot be accepted.
- 920 In the first place, the Commission's argument finds support in the case-law (see, to that effect, Case C-333/94 P *Tetra Pak II*, cited in paragraph 293 above, paragraph 36; Case T-30/89 *Hilti*, cited in paragraph 859 above, paragraph 67; and Case T-83/91 *Tetra Pak II*, cited in paragraph 293 above, paragraph 82).
- 921 In the second place, as the Commission correctly observes in its pleadings, Microsoft's argument, based on the concept that there is no demand for a Windows client PC operating system without a streaming media player, amounts to contending that complementary products cannot constitute separate products for the purposes of Article 82 EC, which is contrary to the Community case-law on bundling. To take *Hilti*, for example, it may be assumed that there was no demand

for a nail gun magazine without nails, since a magazine without nails is useless. However, that did not prevent the Community Courts from concluding that those two products belonged to separate markets.

922 In the case of complementary products, such as client PC operating systems and application software, it is quite possible that customers will wish to obtain the products together, but from different sources. For example, the fact that most client PC users want their client PC operating system to come with word-processing software does not transform those separate products into a single product for the purposes of Article 82 EC.

923 Microsoft's argument ignores the particular intermediary role played by OEMs, who combine hardware and software from different sources in order to offer a ready-to-use PC to the end user. As the Commission very correctly observes at recital 809 to the contested decision, if OEMs and consumers were able to obtain Windows without Windows Media Player, that would not mean that they would choose to obtain Windows without a streaming media player. OEMs follow consumer demand for a pre-installed media player on the operating system and offer a software package including a streaming media player that works with Windows, the difference being that that player would not necessarily be Windows Media Player.

924 In the third place, and in any event, Microsoft's argument cannot succeed because, as the Commission observes at recital 807 to the contested decision, there exists a demand for client PC operating systems without streaming media players, for example by companies afraid that their staff might use them for non-work-related purposes. That fact is not disputed by Microsoft.

925 Next, the Court finds that a series of factors based on the nature and technical features of the products concerned, the facts observed on the market, the history of the development of the products concerned and also Microsoft's commercial practice demonstrate the existence of separate consumer demand for streaming media players.

926 In the first place, it must be borne in mind that the Windows client PC operating system is system software while Windows Media Player is application software. As the Commission explains at recital 37 to the contested decision, "[s]ystem software" controls the hardware of the computer, to which it sends instructions on behalf of "applications" fulfilling a specific user need, such as word processing', and '[o]perating systems are system software products that control the basic functions of a computer and enable the user to make use of such a computer and run application software on it'. More generally, it is clear from the description of those products at recitals 324 to 342 and 402 to 425 to the contested decision that client PC operating systems and streaming media players clearly differ in terms of functionalities.

927 In the second place, there are distributors who develop and supply streaming media players on an autonomous basis, independently of client PC operating systems. Thus, Apple supplies its QuickTime player separately from its client PC operating systems. A further particularly convincing example is that of RealNetworks, Microsoft's main competitor on the streaming media players market, which neither develops nor sells client PC operating systems. It must be pointed out, in that regard, that according to the case-law the fact that there are on the market independent companies specialising in the manufacture and sale of the tied product constitutes serious evidence of the existence of a separate market for that product

(see, to that effect, Case C-333/94 P *Tetra Pak II*, cited in paragraph 293 above, paragraph 36; Case T-30/89 *Hilti*, cited in paragraph 859 above, paragraph 67; and Case T-83/91 *Tetra Pak II*, cited in paragraph 293 above, paragraph 82).

928 Likewise, in the third place, Microsoft, as it confirmed in answer to a written question put by the Court, develops and markets versions of Windows Media Player which are designed to work with its competitors' client PC operating systems, namely Apple's Mac OS X and Sun's Solaris. Similarly, RealNetworks' RealPlayer works with, inter alia, the Windows, Mac OS X, Solaris and some UNIX operating systems.

929 In the fourth place, Windows Media Player can be downloaded, independently of the Windows client PC operating system, from Microsoft's Internet site. Likewise, Microsoft releases upgrades of Windows Media Player, independently of releases or upgrades of its Windows client PC operating system.

930 In the fifth place, Microsoft engages in promotions specifically dedicated to Windows Media Player (see recital 810 to the contested decision).

931 In the sixth place, as the Commission pertinently observes at recital 813 to the contested decision, Microsoft offers SDK licences which differ according to whether they relate to the Windows client PC operating system or to Windows Media technologies. There is thus a specific SDK licence for Windows Media Player.

932 Last, and in the seventh place, in spite of the bundling applied by Microsoft, a not insignificant number of customers continue to acquire media players from Microsoft's competitors, separately from their client PC operating system, which shows that they regard the two products as separate.

933 The foregoing facts demonstrate to the requisite legal standard that the Commission was correct to conclude that client PC operating systems and streaming media players constituted two separate products for the purposes of Article 82 EC.

934 That conclusion is not undermined by Microsoft's other arguments.

935 In the first place, as regards Microsoft's argument that the integration of Windows Media Player in the Windows operating system from May 1999 constitutes a normal and necessary step in the evolution of that system and is in keeping with the constant improvement of its media functionality, it is sufficient to observe that the fact that tying takes the form of the technical integration of one product in another does not have the consequence that, for the purpose of assessing its impact on the market, that integration cannot be qualified as the bundling of two separate products.

936 As Microsoft itself acknowledged in answer to a question put to it by the Court at the hearing, its decision to supply WMP 6 as a functionality integrated in the Windows operating system from May 1999 was not the consequence of a technical constraint. At that time there was nothing to prevent Microsoft from distributing WMP 6 in the same way as it had distributed its previous player, NetShow, which

since June 1998 had been included on the Windows 98 installation CD: and none of the four Windows 98 default installations provided for the installation of NetShow, which had to be installed by users if they wished to use it.

937 Furthermore, Microsoft's argument that the integration of Windows Media Player in the Windows operating system was dictated by technical reasons is scarcely credible in the light of the content of certain of its own internal communications. Thus, it follows from Mr Bay's email of 3 January 1999 to Mr Gates (see paragraph 911 above) that the integration of Windows Media Player in Windows was primarily designed to make Windows Media Player more competitive with RealPlayer by presenting it as a constituent part of Windows and not as application software that might be compared with RealPlayer.

938 In the second place, Microsoft cannot claim that the Commission fails to show that media functionality is not linked, by nature or according to commercial usage, to client PC operating systems.

939 First, it follows from the considerations set out at paragraphs 925 to 932 above that client PC operating systems and streaming media players do not, by their nature, constitute indissociable products. While it is true that there is a link between a client PC operating system such as Windows and application software such as Windows Media Player, in the sense that both products are on the same computer from the user's perspective and that a media player will only work when an operating system is present, that does not mean that the two products are not dissociable in economic and commercial terms for the purpose of competition rules.

940 Second, as the Commission rightly observes, it is difficult to speak of commercial usage in an industry that is 95% controlled by Microsoft.

941 Third, Microsoft cannot rely on the fact that vendors of competing client PC operating systems also bundle those systems with a streaming media player. On the one hand, Microsoft has not adduced any evidence that such bundling was already carried out by its competitors at the time when the abusive bundling commenced. On the other hand, moreover, it is clear that the commercial conduct of those competitors, far from invalidating the Commission's argument, corroborates it. As may be seen from recitals 822 and 823 to the contested decision and as the Commission observes in its pleadings, some vendors of non-Microsoft operating systems who supply their operating systems with a media player make the installation of the media player optional, or allow it to be uninstalled, or offer a selection of different media players.

942 Fourth, and in any event, it is settled case-law that even when the tying of two products is consistent with commercial usage or when there is a natural link between the two products in question, it may none the less constitute abuse within the meaning of Article 82 EC, unless it is objectively justified (Case C-333/94 P *Tetra Pak II*, cited in paragraph 293 above, paragraph 37).

943 Finally, in the third place, the argument which Microsoft put forward at the hearing, that the unbundled version of Windows which it placed on the market pursuant to the remedy had met with no success, must also be rejected. As already stated at paragraph 260 above, the lawfulness of a Community measure must be assessed on the basis of the matters of fact and of law existing at the time when the measure was adopted. Furthermore, any doubts as to the effectiveness of the remedy ordered by the Commission do not in themselves prove that its finding as to the existence of two separate products is wrong.

944 The Court concludes from all of the foregoing considerations that the Commission was correct to find that client PC operating systems and streaming media players constituted separate products.

(c) Consumers are unable to choose to obtain the tying product without the tied product

Contested decision

945 At recitals 826 to 834 to the contested decision, the Commission seeks to demonstrate that the third condition necessary for a finding of abusing bundling, namely the condition relating to coercion, is satisfied in the present case, in that Microsoft does not give consumers the option of obtaining the Windows client PC operating system without Windows Media Player.

946 In the first place, the Commission states that the OEMs who license the Windows operating system from Microsoft for pre-installation on a client PC are ‘direct “addressees”’ of that coercion and pass it on to end-users (recital 827 to the contested decision). It explains that under Microsoft’s licensing system, OEMs must license the Windows operating system with Windows Media Player pre-installed. In effect, Microsoft does not license Windows without Windows Media Player. OEMs who wish to install a different media player on Windows can do so only by adding it to Windows Media Player. At recital 829 to the contested decision, the Commission adds that there are no technical means of uninstalling Windows Media Player.

947 In the second place, the Commission asserts that the United States settlement does not alter that situation, since '[r]emoval of end-user access does not restore the choice of Microsoft's customers as to whether to acquire Windows without [Windows Media Player]' (recital 828 to the contested decision).

948 In the third place, the Commission considers that Microsoft cannot rely on the fact that consumers are not required to pay extra for Window Media Player, since Article 82(d) EC makes no mention of 'paying' where it refers to 'supplementa[ry] obligations' (recital 831 to the contested decision). Furthermore, the price of Windows Media Player is probably 'hidden' in the overall price for the bundle of Windows and Windows Media Player (footnote 971 to the contested decision).

949 In the fourth place, the Commission observes that there is no suggestion in the language of Article 82 EC that consumers must be compelled to use the 'tied' product. It submits that, in so far as the tied sale gives rise to a risk that competition will be restricted, it is immaterial whether consumers are forced to buy or use Windows Media Player (recitals 832 and 833 to the contested decision).

Arguments of the parties

950 Microsoft, supported by CompTIA, DMDsecure and Others, ACT, TeamSystem, Mamut and Exor, claims that the question of 'supplementary obligations' within the meaning of Article 82(d) EC does not arise in the present case.

- 951 In support of that assertion, Microsoft submits, first of all, that consumers are not required to pay anything extra for the media functionality of Windows. Media functionality is a feature of Windows and is included in the overall price of the operating system. Unlike the situation in *Hoffmann-La Roche v Commission*, cited in paragraph 664 above, and *Hilti*, Microsoft does not impose any financial disadvantage that might discourage consumers from using its competitors' products.
- 952 Nor are consumers required to use the media functionality in Windows. They can even use the 'Set Program Access & Defaults' function in Windows, which Microsoft created pursuant to the United States settlement, confirmed by decision of the District Court of 1 November 2002, to remove all end-user access to that functionality and set a competing media player as the default handler of various media file types.
- 953 Last, Microsoft contends that, unlike in *Tetra Pak II* and *Hilti*, consumers are not prevented from installing and using third-party media players instead of, or in addition to, the media functionality in Windows. At recital 860 to the contested decision, moreover, the Commission notes that consumers use on average 1.7 media players each month and states that that figure is increasing.
- 954 In the reply, Microsoft further submits that the Commission's argument has the consequence of depriving Article 82 EC of its useful effect. If the Commission's argument were to be accepted, it would have the consequence of eliminating the requirement of 'coercion' as an element of abusive tying, which would be contrary to sound economic principles.

955 The Commission submits that the arguments which Microsoft puts forward in support of its proposition that the question of 'supplementary payments' within the meaning of Article 82(d) EC does not arise in the present case have already been rejected at recitals 826 to 834, 960 and 961 to the contested decision. Those arguments find no support in the case-law and would deprive Article 82 EC of its useful effect. Coercion exists when a dominant undertaking deprives its customers of the realistic choice of buying the tying product without the tied product.

956 Article 82(d) EC makes no mention of 'payment'. By its arguments, Microsoft suggests that there can be no question of harm to competition where a dominant undertaking charges a uniform price, rather than two separate prices, for two products or imposes a product on consumers without charging a supplement. Microsoft is thus confusing the question of coercion and the question of harm to competition.

957 Nor, in the Commission's submission, does it follow from the wording of Article 82 EC that customers must be forced to use the tied product or prevented from using competitors' substitutes for the tied product. The question whether or not consumers or suppliers of complementary software and content are likely to use the bundled product at the expense of competing non-bundled products is clearly relevant to the examination of the condition relating to foreclosure of competition.

958 In response to Microsoft's assertion that an average of 1.7 media players are used each month by consumers, the Commission contends that consumers cannot replace Windows Media Player by another media player on their PCs, but can only add a second media player. That average figure of 1.7 must not obscure the fact that Windows Media Player is always pre-installed on Windows PCs.

959 Last, in answer to a written question put by the Court, the Commission stated that the United States settlement did not require Microsoft to suppress end-user access to Windows Media Player but only to hide that access, so that Windows Media Player remained pre-installed and fully active on the PC. OEMs and end users are therefore still compelled to acquire Windows Media Player and Windows simultaneously. Referring to recital 852 to the contested decision, the Commission also maintained, in its answer, that Microsoft had conceived the 'hiding' mechanism in such a way that Windows Media Player could override the default parameters and reappear when the user accessed media files streamed over the Internet via Internet Explorer.

Findings of the Court

960 Microsoft contends, in essence, that the fact that it integrated Windows Media Player in the Windows client PC operating system does not entail any coercion or supplementary obligation within the meaning of Article 82(d) EC. In support of its argument, it emphasises, in the first place, that customers pay nothing extra for the media functionality of Windows; in the second place, that they are not obliged to use that functionality; and, in the third place, that they are not prevented from installing and using competitors' media players.

961 The Court observes that it cannot be disputed that, in consequence of the impugned conduct, consumers are unable to acquire the Windows client PC operating system without simultaneously acquiring Windows Media Player, which means (see paragraph 864 above) that the condition that the conclusion of contracts is made subject to acceptance of supplementary obligations must be considered to be satisfied.

962 As the Commission correctly states at recital 827 to the contested decision, in most cases that coercion is applied primarily to OEMs, and is then passed on to consumers. OEMs, who assemble client PCs, install on those PCs a client PC operating system provided by a software producer or developed by themselves. OEMs who wish to install a Windows operating system on the client PCs which they assemble must obtain a licence from Microsoft in order to do so. Under Microsoft's licensing system, it is not possible to obtain a licence on the Windows operating system without Windows Media Player. The Court notes, in that regard, that it is common ground that the vast majority of sales of Windows client PC operating systems are made through OEMs, that is to say, by means of licences purchased when a client PC is purchased, while only 10% of sales of those systems are generated by the sale of individual Windows licences.

963 The coercion thus applied to OEMs is not just contractual in nature, but also technical. In effect, it is common ground that it was not technically possible to uninstall Windows Media Player.

964 As OEMs act in their relationships with software producers as intermediaries on behalf of end users, and as they supply end users with an 'out-of-the-box' PC, the impossibility of acquiring the Windows client PC operating system without simultaneously acquiring Windows Media Player applies ultimately to those users.

965 In the less common case where the end user acquires a Windows client PC operating system directly from a retailer, the abovementioned contractual and technical coercion is applied directly to that end user.

966 The Court considers that the arguments which Microsoft puts forward must be rejected.

967 Thus, in the first place, Microsoft cannot rely on the fact that customers are not required to pay anything extra for Windows Media Player.

968 First, while it is true that Microsoft does not charge a separate price for Windows Media Player, it cannot be inferred that the media player is provided free of charge. As is evident from paragraph 232 of Microsoft's application, the price of Windows Media Player is included in the total price of the Windows client PC operating system.

969 Second, and in any event, it does not follow from either Article 82(d) EC or the case-law on bundling that consumers must necessarily pay a certain price for the tied product in order for it to be concluded that they are subject to supplementary obligations within the meaning of that provision.

970 Nor, in the second place, is it relevant for the purposes of the examination of the present condition that, as Microsoft claims, consumers are not obliged to use the Windows Media Player which they find pre-installed on their client PC and that they can install and use other undertakings' media players on their PCs. Again, neither Article 82(d) EC nor the case-law on bundling requires that consumers must be forced to use the tied product or prevented from using the same product supplied by a competitor of the dominant undertaking in order for the condition that the conclusion of contracts is made subject to acceptance of supplementary obligations

to be capable of being regarded as satisfied. For example, as the Commission correctly observes at recital 832 to the contested decision, in *Hilti* users were not forced to use the Hilti branded nails which they obtained with the Hilti branded nail gun.

971 The Court observes that, as will be explained in greater detail when it examines the condition relating to the restriction of competition on the market due to the bundling in question, first, OEMs are deterred from pre-installing a second streaming media player on client PCs and, second, consumers have an incentive to use Windows Media Player at the expense of competing media players, notwithstanding that the latter players are of better quality.

972 The argument which Microsoft bases on certain measures which it adopted pursuant to the United States settlement (see paragraph 952 above) must also be rejected.

973 First, it was only in November 2001 that that settlement was concluded and only in August and September 2002 that Microsoft adopted the measures required by that settlement concerning middleware (including Windows Media Player); however, the abusive bundling began in May 1999. Furthermore, the United States settlement was concluded for a limited period, until 2007.

974 Second, as the Commission correctly observes at recital 828 to the contested decision, the measures which Microsoft adopted under the United States settlement did not have the consequence of allowing consumers to acquire the Windows client PC operating system without having to acquire Windows Media Player at the same time. Under that settlement, Microsoft was only required to remove the Windows

Media Player icon which appeared on the screen and the similar points of access and also to disable the automatic implementation of that player. As Windows Media Player thus remained pre-installed and fully active, OEMs and customers continued to be compelled to acquire both products together. Furthermore, as stated at recital 852 to the contested decision, Microsoft devised the mechanism in such a way that Windows Media Player could override the default setting and reappear when the user used Internet Explorer to access media files streamed over the Internet.

⁹⁷⁵ It follows from all of the foregoing considerations that the Commission was correct to find that the condition relating to the imposition of supplementary obligations was satisfied in the present case.

(d) The foreclosure of competition

Contested decision

⁹⁷⁶ At recitals 835 to 954 to the contested decision, the Commission analyses the fourth condition necessary for a finding of abusive bundling, namely the condition relating to the foreclosure of competition.

⁹⁷⁷ The Commission's analysis takes as its starting point recital 841 to the contested decision, which is worded as follows:

'There are ... circumstances relating to the tying of [Windows Media Player] which warrant a closer examination of the effects that tying has on competition in this case.

While in classical tying cases, the Commission and the Courts considered the foreclosure effect for competing vendors to be demonstrated by the bundling of a separate product with the dominant product, in the case at issue, users can and do to a certain extent obtain third party media players through the Internet, sometimes [free of charge]. There are therefore indeed good reasons not to assume without further analysis that tying [Windows Media Player] constitutes conduct which by its very nature is liable to foreclose competition.'

978 Next, the Commission's reasoning in the contested decision follows three stages.

979 In the first stage, it establishes that the tied sale ensures that Windows Media Player is ubiquitous on client PCs worldwide (recitals 843 to 878 to the contested decision).

980 In that context, first, the Commission observes that the Windows client PC operating system is pre-installed on more than 90% of client PCs shipped worldwide, so that, by bundling Windows Media Player with Windows, Microsoft ensures that its media player is as ubiquitous as Windows on client PCs. Users who find Windows Media Player pre-installed on their client PCs are generally less inclined to use another media player (recitals 843 to 848 to the contested decision).

981 Second, the Commission considers that the option of entering into distribution agreements with OEMs constitutes a less efficient means of obtaining media player distribution than Microsoft's bundling (recitals 849 to 857 to the contested decision).

982 Third, the Commission asserts that neither the downloading of media players from the Internet nor other distribution channels, including the tied sale of a media player with other software or Internet access services and retail sale of media players, can offset Windows Media Player's ubiquity (recitals 858 to 876 to the contested decision).

983 In the second stage, the Commission examines the effects of that bundling on content providers and software developers, and on certain adjacent markets (recitals 879 to 899 to the contested decision). The Commission considers, in substance, that in view of the indirect network effects that obtain in the media player market, 'the ubiquitous presence of the [Windows Media Player] code provides [that media player] with a significant competitive advantage, which is liable to have a harmful effect on the structure of competition in that market' (recital 878 to the contested decision).

984 In that context, the Commission emphasises, first of all, that it is on the basis of the percentages of installation and use of media players that content providers and software developers choose the technology for which they will develop their complementary software. Those operators tend to develop their solutions on the basis of Windows Media Player, since that enables them to reach all users of Windows, that is, more than 90% of client PC users. Furthermore, once complementary software is encoded in the proprietary Windows media formats, it will work with competitors' media players only if Microsoft licenses the relevant technology.

985 At recitals 883 to 891 to the contested decision, the Commission examines, more particularly, the situation of content providers. More particularly, since supporting many different technologies generates additional development, infrastructure and administration costs, content providers tend to give priority to a single set of technologies. Furthermore, the fact that a given media player incorporating a

number of media technologies is widely installed is an important factor likely to convince content providers to create media content for the technologies used by that player. By supporting the most widely-disseminated media player, content providers maximise the potential reach of their own products. The Commission concludes that the ubiquity of Windows Media Player on Windows client PCs therefore gives Microsoft a competitive advantage unrelated to the intrinsic qualities of its product.

⁹⁸⁶ At recitals 892 to 896 to the contested decision, the Commission examines the situation of software developers. In substance, software developers have an incentive to create applications designed to run on Windows Media Player alone, rather than on several different platforms, as they can thereby reach virtually all potential users of their products, recover their costs and make the most efficient use of their limited development resources. The Commission emphasises that some results of the 2003 market enquiry show that designing applications which support several media technologies gives rise to additional costs.

⁹⁸⁷ At recitals 897 to 899 to the contested decision, the Commission states that the ubiquity of Windows Media Player on client PCs has effects on certain adjacent markets, such as the markets for media players on wireless information devices, set-top boxes, DRM (Digital Rights Management) solutions and on-line music delivery.

⁹⁸⁸ Last, in the third stage, the Commission examines market development in the light of market surveys carried out by Media Metrix, Synovate and Nielsen/NetRatings (recitals 900 to 944 to the contested decision). In substance, the data obtained in those surveys 'consistently point to a trend in favour of usage of [Windows Media Player] and Windows Media formats to the detriment of the main competing media players (and media player technologies)' (recital 944 to the contested decision).

Arguments of the parties

989 First of all, Microsoft claims that the Commission added a further condition, namely foreclosure, which is not normally taken into account for the purpose of assessing the existence of abusive tying. At recital 841 to the contested decision, the Commission acknowledged that the present case was not a 'classical tying case' and that there were 'good reasons not to assume without further analysis that tying [Windows Media Player] constitute[d] conduct which by its very nature [was] liable to foreclose competition'. The Commission then concluded that there was a foreclosure effect, and in reaching that conclusion it relied on a new and highly speculative theory (see paragraph 846 above).

990 Microsoft refers to recital 842 to the contested decision and submits that the Commission's new theory is based on the existence of indirect network effects and on the notion that competition may be foreclosed at some unidentified point in the future if, as a result of the widespread distribution of media functionality in Windows, software developers and content providers have an incentive to design their products solely for Windows Media Player. That theory thus bases a presumption that anti-competitive effects exist on a single prediction about the future conduct of third parties over which Microsoft has no control.

991 Next, Microsoft claims that it took all necessary measures to ensure that the integration of media functionality in Windows did not have the effect of excluding competing media players from the market. Furthermore, a number of those measures were 'codified' in the decision of the District Court of 1 November 2002.

992 In support of that argument, Microsoft relies, in the first place, on a series of considerations about the way in which it designs Windows.

993 First, it ensures that the inclusion of media functionality does not interfere with the functioning of third-party media players. It is thus technically possible — and indeed common practice — for a Windows-based client PC to run one or more third-party media players in addition to the media functionality in Windows. Second, third-party media players are easily accessible from the Windows user interface. Third, Microsoft designs Windows in such a way that third-party media players can automatically supply certain aspects of the media functionality that Windows itself is capable of supplying. Fourth, OEMs and consumers can use a dedicated tool created by Microsoft to remove end-user access to Windows Media Player. Fifth, Microsoft facilitates the development of applications that compete with the media functionality in Windows by exposing that functionality through published APIs.

994 In the second place, Microsoft claims that in its agreements with Windows distributors — that is, essentially, OEMs — it ensures that vendors of competing media players retain the possibility of distributing their own products. Thus, it expressly provides that OEMs are free to install whatever software products they please on client PCs running Windows, including media players that compete with Windows Media Player. It also authorises them to offer Internet access by placing icons on the 'Start' menu and on the Windows desktop, by showing those offers on screen when Windows is started for the first time. In fact, Internet access providers frequently distribute and promote third-party media players.

- 995 In the third place, Microsoft states that in its contracts with software developers, content providers or anyone else, it never requires them to distribute or otherwise promote Windows Media Player either exclusively or as a fixed percentage of their total distribution of media software.
- 996 In the fourth place, Microsoft contends that the integration of media functionality into Windows does not prevent the use of third-party media players on Windows or their 'widespread distribution'. Media players can be distributed by various methods, including pre-installation by OEMs on new client PCs, downloading from the Internet or corporate intranets, inclusion in other developers' software and distribution to users of products and services by content providers or Internet service providers.
- 997 In the same context, Microsoft states, with reference to an analysis in annex A.24.1 to the application, that a recent survey shows that most OEMs, both in the United States and in Western Europe, install media players that compete with Windows Media Player, such as RealPlayer and QuickTime, on their client PCs. The Commission's assertion that OEMs will not install third-party media players on a client PC unless they can remove Windows Media Player is therefore untrue. Furthermore, even the market data set out in the contested decision show that the use of third-party media players continues to increase, sometimes as much as or more than growth in the use of the media functionality in Windows.
- 998 Last, Microsoft, supported on this point by ACT, claims that the Commission's foreclosure theory fails to take account of certain relevant factors and that it is based on predictions which are contradicted by the facts. The applicant emphasises that the burden of proof borne by the Commission is particularly heavy when it carries out such a prospective analysis.

999 In the first place, Microsoft submits that the Commission ‘ignored the factors that lead content providers to write to formats other than Windows Media format’. There is no basis for the belief that it is the extent of distribution of media software associated with a particular format that determines a content provider’s choice of the format in which it will encode its products. Microsoft criticises the Commission for not having asked content providers, in the 2003 market enquiry, whether other factors influenced their encoding decisions.

1000 Microsoft criticises the Commission’s assertion that content providers bear additional costs when they make their products available in more than one format. The Commission ought to have proved that the costs involved in providing content in an additional format outweigh the benefits of doing so. In reality, the Commission collected, but ignored, evidence that the costs of making content available in a given media format represented an insignificant portion of overall costs. Microsoft refers to recital 894 to the contested decision and further submits that ‘encoding in a second media technology costs only 50% as much as to support the first’. Supported on this point by CompTIA and ACT, the applicant concludes that offering several media formats brings economies of scale and that a second format will be offered even if it is much less popular with users.

1001 Microsoft also submits that even some content providers who rely on only one format did not choose Windows Media, even after the alleged abuse began. Thus, Apple does not use Windows media technology either for its iPod or for its iTunes music store. Furthermore, software developers informed the Commission that they used on average ‘two or three major sets of APIs (Windows, Real or QuickTime)’.

1002 In the reply, Microsoft, supported on this point by DMDsecure and Others, claims, with reference to a report drawn up by one of its experts (annex C.16 to the reply), that media players would be susceptible to ‘tipping’ only if (i) users or content providers faced significant costs if they used multiple media players and (ii) media players were perceived as homogeneous with respect to their intrinsic characteristics and the content accessible by such media players. Neither of those two conditions is met in the present case.

1003 In the second place, Microsoft claims that the prediction made at recital 984 to the contested decision that ‘tipping’ in favour of Windows Media format will occur in the ‘foreseeable future’ is contradicted by the facts and by the evidence in the file, which show that content providers continue to make content available in different formats; that, far from having disappeared from the market, third-party media players are flourishing; and that consumers are not forced to use Windows Media Player.

1004 In that regard, Microsoft observes, first, that the 2003 market enquiry shows that 10 of the 12 content providers who encoded their content in Windows Media format also encoded it in other formats. Thus, numerous content providers continue to use formats developed by Apple, RealNetworks or other producers. A survey of the 1 000 Web sites most visited in the United States between 2001 and 2004 shows that the number of sites ‘with any media content’ rose by 47%, whereas the number of sites using RealNetworks’ formats rose by 59% and the number of sites using QuickTime formats rose by 79%.

1005 Second, Microsoft asserts that OEMs continue to offer several media players on the PCs which they sell. Thus, in May 2004, the average number of third-party media players installed on home or small office computers sold by the main OEMs was 4.3 on United States models and 2.4 on European models.

1006 Third, Microsoft claims that the average number of media players per person used each month rose from 1.5 at the end of 1999 to 2.1 in 2004. The Commission's contention that the number of users of Windows Media Player is increasing is irrelevant; what matters is whether the number of users of other formats is sufficient for content providers to find it worthwhile to encode their products in those formats. Microsoft also disputes the relevance of the analogy which the Commission draws with Netscape Navigator.

1007 Microsoft further submits that the Commission's foreclosure theory clearly lacks objectivity. It is apparent from the contested decision that that theory applies only where the media functionality bundled with Windows is developed by Microsoft. In particular, the Commission did not apply that theory between 1995 and 1998, when RealNetworks' streaming media player was integrated into Windows.

1008 DMDsecure and Others, ACT, TeamSystem, Mamut and Exor put forward essentially the same arguments as Microsoft.

1009 The Commission first of all recalls the findings made at recital 841 to the contested decision and claims that it follows from 'earlier well-known cases' that the mere fact that an undertaking in a dominant position bundles a separate product with a dominant product in itself permits the conclusion that there is a foreclosure effect on the market. In the present case, however, the particular features of the market led the Commission to consider that 'there [were] therefore ... good reasons not to assume without further analysis that tying [Windows Media Player] [constituted] conduct which by its very nature [was] liable to foreclose competition'. The Commission did not conclude that the impugned conduct was not abusive in itself but considered that it must be analysed 'in its specific market context'. The Commission finds it surprising that Microsoft should criticise it for having taken the

trouble to examine the real foreclosure effect created by the tying at issue and contends that the fact that it demonstrated such a foreclosure effect in a case where it is normally presumed does not mean that it applied a new legal theory.

1010 The Commission claims that it found, at the close of its analysis, that ‘Microsoft thus [interfered] with the normal competitive process’ (recital 980 to the contested decision) and that ‘there [was] therefore a reasonable likelihood that tying [Windows Media Player] with Windows [would] lead to a lessening of competition so that the maintenance of an effective competition structure [would] not be ensured in the foreseeable future’ (recital 984 to the contested decision). Contrary to Microsoft’s contention, the Commission did not assert at recital 984 to the contested decision, or at any other point in that decision, that the abusive conduct at issue would lead to the elimination of all third-party media players in the foreseeable future. It demonstrated that Microsoft ‘distort[ed] the choices and incentives of market participants through its tying’ and maintains that such a distortion of the competitive process amounts to a restriction of competition within the meaning of the case-law, ‘as it is liable to foreclose competition’. The Commission also analysed the actual foreclosure effects of Microsoft’s abusive conduct on the basis of data on the development of the market and submits, with reference to recital 944 to the contested decision, that those data point to a consistent trend in favour of Windows Media Player and the Windows Media formats and confirm that there was already a degree of foreclosure on the market.

1011 Next, the Commission disputes Microsoft’s assertion that it took all necessary steps to ensure that the tying at issue did not foreclose third-party media players from the market. That abusive conduct began in May 1999 and was still continuing on the date on which the defence was lodged. The United States settlement was not concluded until November 2001 and the measures adopted pursuant to that agreement were not taken until August and September 2002. Furthermore, those measures are clearly insufficient to remedy the tying abuse found in the contested decision. As for the various methods of distributing third-party media players described by Microsoft, the Commission states, with reference to recitals 849 to 877

to the contested decision, that they do not allow those players to achieve the ubiquity that Microsoft can ensure for Windows Media Player by bundling it with Windows.

¹⁰¹² The Commission also reviews the findings of foreclosure of competition which it made in the contested decision, in particular at recitals 844 to 846 and 879 to 882 to the contested decision.

¹⁰¹³ Supported on this point by SIIA, the Commission contends that its finding that the tying at issue created a risk of foreclosure of competition on the market is not speculative but is based on a factual assessment of the specific characteristics of the market and also of the incentives of content providers and software developers. It follows from Case T-65/98 *Van den Bergh Foods v Commission* [2003] ECR II-4653 that it is acceptable to take into account the likely reactions of third parties, and in particular competitors or customers, to the unilateral action of a dominant undertaking when assessing whether that action is likely to lead to foreclosure. In the present case, it is beyond dispute that Microsoft does not give customers the choice to acquire Windows without Windows Media Player. Furthermore, the tying at issue has a direct influence on third parties and therefore interferes with their free choice (recitals 845, 851, 870, 883, 884 and 895 to the contested decision).

¹⁰¹⁴ The Commission refers to recitals 879 to 896 to the contested decision and observes, in that context, that it undertook a detailed analysis of the impact of the impugned conduct, including by sending extensive questionnaires to a large number of content providers, software developers and content owners.

1015 On the basis of the responses to those questionnaires, the Commission made the following findings:

- all the content providers that responded to the questionnaires stated that the creation of specific content for more than one technology generated additional costs (recital 884 to the contested decision);

- those content providers considered that the number of users of a given technology and the presence of media software on PCs were significant factors in deciding which technology to support (recital 886 to the contested decision);

- some of those providers even stated that the number of users of a given technology was ‘the single most important factor’ (recital 889 to the contested decision);

- so long as third-party media players’ usage is still significant, the trade-off of supporting additional formats may be positive for content providers (recital 890 to the contested decision);

- software developers responded along the same lines as content providers (recitals 893 to 896 to the contested decision);

- thus, 12 software developers out of 13 answered in the affirmative the question whether the additional costs of ‘multiple format support’ were in the future likely to influence their decisions on whether to develop applications for technologies other than Windows Media (recital 890 to the contested decision);

- by tying Windows Media Player to Windows, Microsoft assures content providers and software developers that end users will be able to play back their content, in other words that they will reach a wide audience; the ubiquity of Windows Media Player on Windows client PCs therefore secures Microsoft a competitive advantage unrelated to the merits of that product (recital 891 to the contested decision).

¹⁰¹⁶ Last, the Commission rejects Microsoft’s assertion that the theory applied in the present case does not take account of certain relevant factors and is based on predictions that are contradicted by the facts.

¹⁰¹⁷ In the first place, the Commission denies having ‘ignor[ed] factors that lead content providers to write to non-Windows Media formats’. In the requests for information which it sent to those content providers, it did not refer solely to the question of the ‘reach’ of a media reader; and in the contested decision it did not state that reach was the only relevant factor, but merely highlighted the importance of that factor. In any event, Microsoft recognises that content providers take that factor into consideration when choosing the encoding format of their products and therefore implicitly accepts that the ‘unmatched ubiquity achieved through [its] tie distorts that [choice]’.

1018 It follows from the questions put to content providers and software developers, moreover, that those third parties do balance and give more weight to the costs of multi-technology support than to its benefits. The Commission observes that Microsoft itself has stated that ‘to encode streaming content for delivery to multiple formats [was] expensive and time-consuming for content providers’ (recital 883 to the contested decision) and refers to certain evidence gathered in the 2003 market enquiry (recital 884 to the contested decision). Even if the cost of supporting several technologies is not the only factor that determines content providers’ choice of whether or not to encode in several formats, it is clearly one significant factor that they do take into consideration. The Commission also denies having gathered, in the 2003 market enquiry, evidence showing that the cost of making content available in a specific media format represented only a trivial portion of overall costs. On the contrary, the feedback which the Commission received on the estimation of content preparation costs rather indicates that those costs are significant.

1019 The Commission also disputes the merits of the findings in the report in annex C.16 to the reply (see paragraph 1002 above). First of all, the contested decision demonstrates that downloading cannot offset the ubiquity that Windows Media Player acquires through the tying at issue and that its ubiquity distorts the incentives of content providers. Next, the Commission’s conclusion that there is an abuse of a dominant position does not rely on a finding of complete elimination of competition or ‘tipping’ of the market. Last, the author of that report (i) does not substantiate his claim, (ii) ignores various material aspects of the present case, such as ‘the distortions caused to network effects by monopoly leveraging’ and (iii) does not demonstrate that the conditions which he claims are necessary for tipping have not been fulfilled.

1020 In the second place, the Commission, supported on this point by SIIA, disputes Microsoft’s assertion that the analysis of foreclosure in the contested decision is contradicted by the facts.

1021 The Commission reiterates, first of all, that Microsoft has misrepresented recital 984 to the contested decision, which does not refer to the ‘tipping’ of the market but states only that Microsoft’s tying is likely to affect the structure of competition on the media player market.

1022 Next, the Commission submits that the industry data which it used in the contested decision invariably reveal a tendency in favour of the use of Windows Media Player and Windows Media formats to the detriment of the main competing media players (recitals 906 to 942 to the contested decision). Those data show that until the second quarter of 1999 RealPlayer was the market leader, with almost twice as many users as Windows Media Player and QuickTime (recital 906 to the contested decision). From the second quarter of 1999 to the second quarter of 2002, on the other hand, the total number of users of Windows Media Player increased by approximately 39 million, which was roughly equal to the combined increase in users of RealNetworks’ and Apple’s media players (recital 907 to the contested decision). More recent data from Nielsen/NetRatings show that Windows Media Player attained a distinct lead over RealPlayer (more than 50% more unique users) and QuickTime (three times as many users) and that its lead increased further between October 2002 and January 2004 (recital 922 to the contested decision). That trend is similar to the situation on the web browser market, which was the subject of the proceedings for violation of United States antitrust law.

1023 The Commission maintains that Microsoft does not contest those various data, but presents new data, some of which postdate the adoption of the contested decision and for that reason clearly could not be taken into consideration.

1024 Last, the Commission claims that in any event the foreclosure effect established in the contested decision is confirmed by more recent data.

1025 Thus, first, the Commission states that the data relating to content providers presented by Microsoft (see paragraph 1004 above) are not substantiated and that Microsoft's presentation of them is misleading. The Commission maintains that it is clear that during the period 2001-04 the number of Internet sites with 'any' media content increased, so that it is not surprising that there are more Internet sites which offer non-Windows Media formats. Microsoft also fails to mention that during the same period the number of Internet sites supporting Windows Media formats rose by 141%, or to give any real indication of the actual quantity of content in non-Windows Media format offered by the Internet sites in question or of the actual usage of the content in those media formats.

1026 Second, the Commission asserts that the data relating to the average number of media players pre-installed on client PCs by OEMs are not conclusive (see paragraph 1005 above). In any event, Microsoft's evidence shows that more than 70% of PCs shipped in Europe and more than 80% of those shipped worldwide typically have just one media player and that, because of the tie, that player is always Windows Media Player. Furthermore, in so far as OEMs pre-install competing media players on PCs, that pre-installation is 'overshadowed' by the fact that Windows Media Player is automatically present on 95% of PCs shipped worldwide. Last, Microsoft's data are not reliable, since they relate in particular to competing media players which were pre-installed following 'legacy deals' which were not renewed and to software which does not satisfy the 'streaming media player' criteria.

1027 Third, the Commission claims that there is a clear trend in favour of Windows Media Player and Windows Media format usage. The Nielsen/NetRatings data on United States media player usage show that in March 2005 Windows Media Player's usage share had risen to over 80%, RealPlayer's usage share had fallen to below 40% and QuickTime's usage share had fallen to just over 10%. Recent Nielsen/NetRatings

data also show that Windows Media Player's share of exclusive users has steadily increased, with 53 to 55% of users currently using Windows Media Player exclusively, against 10 to 13% for RealPlayer and 3 or 4% for QuickTime Player.

1028 In response to Microsoft's assertion that the foreclosure theory lacks objectivity, in that it did not apply when RealNetworks' media player was integrated in Windows (see paragraph 1007 above), the Commission refers to recital 818 to the contested decision and observes that it cannot be precluded from pursuing a given infringement of Community competition law on the ground that it did not pursue another possible infringement.

1029 SIIA makes essentially the same arguments as the Commission.

1030 Audiobanner claims that the bundling in question has a negative impact on third-party investment in non-Microsoft technologies, on innovation in the digital streaming media industry and on consumers. On that last point, Audiobanner emphasises that bundling precludes competition on the merits.

Findings of the Court

1031 Microsoft claims, in substance, that the Commission has failed to prove that the integration of Windows Media Player in the Windows client PC operating system

involved foreclosure of competition, so that the fourth constituent element of abusive tying, as set out at recital 794 to the contested decision, is not fulfilled in this case.

1032 In particular, Microsoft contends that the Commission, recognising that it was not dealing with a classical tying case, had to apply a new and highly speculative theory, relying on a prospective analysis of the possible reactions of third parties, in order to reach the conclusion that the tying at issue was likely to foreclose competition.

1033 The Court considers that Microsoft's arguments are unfounded and that they are based on a selective and inaccurate reading of the contested decision. Those arguments essentially focus on the second of the three stages of the Commission's reasoning set out at recitals 835 to 954 to the contested decision.

1034 In fact, it is clear that in the contested decision, the Commission clearly demonstrated, *inter alia*, that the fact that from May 1999 Microsoft offered OEMs, for pre-installation on client PCs, only the version of Windows bundled with Windows Media Player had the inevitable consequence of affecting relations on the market between Microsoft, OEMs and suppliers of third-party media players by appreciably altering the balance of competition in favour of Microsoft and to the detriment of the other operators.

1035 As already observed at paragraph 868 above, the fact that the Commission examined the actual effects which the bundling had already had on the market and the way in which that market was likely to evolve, rather than merely considering — as it

normally does in cases of abusive tying — that the tying has by its nature a foreclosure effect, does not mean that it adopted a new legal theory.

¹⁰³⁶ The Commission's analysis of the foreclosure condition begins at recital 841 to the contested decision, where the Commission states that in the present case there are good reasons not to assume without further analysis that the bundling of Windows and Windows Media Player constitutes conduct which by its very nature is liable to foreclose competition (see paragraph 977 above). In substance, the conclusion which the Commission reached is based on the finding that the bundling of Windows Media Player with the Windows client PC operating system — the operating system pre-installed on the great majority of client PCs sold throughout the world — without the possibility of removing that media player from the operating system, allows Windows Media Player to benefit from the ubiquity of that operating system on client PCs, which cannot be counterbalanced by the other methods of distributing media players.

¹⁰³⁷ The Court considers that that finding, which is the subject-matter of the first stage of the Commission's reasoning (see recitals 843 to 878 to the contested decision, as summarised at paragraphs 979 to 982 above), is entirely well founded.

¹⁰³⁸ Thus, in the first place, it is clear that owing to the bundling, Windows Media Player enjoyed an unparalleled presence on client PCs throughout the world, because it thereby automatically achieved a level of market penetration corresponding to that of the Windows client PC operating system and did so without having to compete on the merits with competing products. It must be borne in mind that it is common ground that Microsoft's market share on the client PC operating systems market is more than 90% and that the great majority of sales of Windows client PC operating systems (approximately 75%) are made through OEMs, who pre-install Windows on the client PCs which they assemble and distribute. Thus, the figures cited at recital 843 to the contested decision show that in 2002 Microsoft had a market share of

93.8% by units shipped on the client PC operating systems market (see also recital 431 to the contested decision) and that Windows — and, as a result, Windows Media Player — was pre-installed on 196 million of the 207 million client PCs shipped in the world between October 2001 and March 2003.

¹⁰³⁹ As will be explained in greater detail below, no third-party media player could achieve such a level of market penetration without having the advantage in terms of distribution that Windows Media Player enjoys as a result of Microsoft's use of its Windows client PC operating system.

¹⁰⁴⁰ It should be added that Microsoft's combined offer of the Windows operating system and the NetShow 2.0 player from June 1998 did not guarantee NetShow 2.0 the same degree of presence on client PCs. As already explained at paragraphs 837 and 936 above, NetShow 2.0 was included on the Windows 98 installation CD but was not installed by any of the four default installations of that system. In other words, users had to make the effort to install NetShow 2.0 separately and could therefore decide not to install it. Similarly, that combined offer did not prevent developers of third-party media players from competing with Microsoft on the intrinsic merits of their products or prevent OEMs from taking advantage of that competition.

¹⁰⁴¹ In the second place, it is clear that, as the Commission correctly states at recital 845 to the contested decision, '[u]sers who find [Windows Media Player] pre-installed on their client PCs are indeed in general less likely to use alternative media players as they already have an application which delivers media streaming and playback functionality'. The Court therefore considers that, in the absence of the bundling,

consumers wishing to have a streaming media player would be induced to choose one from among those available on the market.

¹⁰⁴² In that regard, it is necessary to bear in mind the circumstance to which the Commission refers at recitals 119, 848, 869 and 956 to the contested decision, namely the importance that users attach to being able to buy 'out-of-the-box' client PCs or systems, that is to say, those that can be installed and used with a minimum of effort. Thus, the supplier whose software is initially pre-installed on the client PC and is launched automatically as soon as the PC is started clearly has a competitive advantage over any other supplier of similar products.

¹⁰⁴³ In the third place, the Court considers that the Commission was correct to state, at recital 857 to the contested decision, that the impugned conduct created disincentives for OEMs to ship third-party media players on their client PCs.

¹⁰⁴⁴ On the one hand, as stated at recital 851 to the contested decision, OEMs are reluctant to add a second media player to the package which they offer consumers, as a second media player uses hard-disk capacity on the client PC while offering functionality similar, in essence, to that of Windows Media Player and when it is unlikely that consumers will be prepared to pay a higher price for such a bundle.

¹⁰⁴⁵ On the other hand, the presence of several media players on the same client PC creates a risk of confusion on the part of users and an increase in customer support and testing costs (see recital 852 to the contested decision). The Court points out in

that regard that during the administrative procedure Microsoft itself emphasised that OEMs generally operate on thin profit margins and that they would therefore prefer to avoid having to bear such costs (see footnote 1006 to the contested decision).

¹⁰⁴⁶ Thus, the release of the bundled version of Windows and Windows Media Player as the only version of the Windows operating system capable of being pre-installed by OEMs on new client PCs had the direct and immediate consequence of depriving OEMs of the possibility previously open to them of assembling the products which they deemed most attractive for consumers and, more particularly, of preventing them from choosing one of Windows Media Player's competitors as the only media player. On this last point, it must be borne in mind that at the time RealPlayer had a significant commercial advantage as market leader. As Microsoft itself acknowledges, it was only in 1999 that it succeeded in developing a streaming media player that performed well enough, given that its previous player, NetShow, 'was unpopular with customers because it did not work very well' (recital 819 to the contested decision). It must also be borne in mind that between August 1995 and July 1998 it was RealNetworks' products — first RealAudio Player, then RealPlayer — that were distributed with Windows. There is therefore good reason to conclude that if Microsoft had not adopted the impugned conduct competition between RealPlayer and Windows Media Player would have been decided on the basis of the intrinsic merits of the two products.

¹⁰⁴⁷ Furthermore, even if developers of media players competing with Microsoft succeeded in reaching an agreement with OEMs for the pre-installation of their product, they would still be in a disadvantageous competitive position by comparison with Microsoft. First, as Windows Media Player cannot be removed by OEMs or by users from the package consisting of Windows and Windows Media Player, the third-party media player could never be the only media player on the client PC. In particular, the bundling prevents developers of third-party media players from competing with Microsoft for that purpose on the intrinsic merits of the products. Second, as the number of media players that OEMs are prepared to pre-install on client PCs is limited, developers of third-party media players compete with each other in order to have their products pre-installed, while, owing to the

bundling, Microsoft evades that competition and the significant additional costs which it entails. On this last point, it is pertinent to refer to recital 856 to the contested decision, where the Commission mentions the distribution agreement for RealPlayer concluded in 2001 between RealNetworks and Compaq and also the fact that Microsoft acknowledged during the administrative procedure that RealNetworks paid OEMs to pre-install its products.

1048 It follows from those findings that the Commission was correct to conclude that ‘the option of entering into agreements with OEMs [was] a less efficient and effective means of obtaining media player distribution in the face of Microsoft’s tying’ (recital 849 to the contested decision).

1049 In the fourth place, the Court finds that the Commission was also correct to find that methods of distributing media players other than pre-installation by OEMs could not offset Windows Media Player’s ubiquity (recitals 858 to 876 to the contested decision).

1050 First, while it is true that downloading via the Internet enables suppliers to reach a large number of users, it is less effective than pre-installation by OEMs. First, downloading does not guarantee competing media players distribution equivalent to Windows Media Player’s (recital 861 to the contested decision). Second, downloading, unlike using a pre-installed product, is seen as complicated by a significant number of users. Third, as the Commission observes at recital 866 to the contested decision, a significant number of download attempts — more than 50%, according to tests carried out by RealNetworks in 2003 — are not successfully concluded. While it is true that broadband makes downloading faster and less complex, it must be

borne in mind that in 2002 only one in six households in Europe with Internet access had a broadband connection (recital 867 and footnote 1037 to the contested decision). Fourth, users will probably tend to consider that a media player integrated in the client PC which they have bought will work better than a product which they install themselves (recital 869 to the contested decision). Fifth and last, in most undertakings employees cannot download software from the Internet as that complicates the work of the network administrators (ibid.).

¹⁰⁵¹ Some data provided by Microsoft itself during the administrative procedure, and mentioned at recitals 909 to 911 to the contested decision, confirm that downloading via the Internet is less effective as a method of distribution than pre-installation by OEMs. Microsoft stated that 8.8 million copies of WMP 6 were downloaded during the 12 months following its release and also that it sold 7.9 million Windows 98 SE operating systems between July and September 1999. In other words, in three months WMP 6 obtained almost the same distribution by being bundled with the Windows operating system as it achieved in a year by downloading.

¹⁰⁵² As the Commission asserts at recital 870 to the contested decision, while downloading is in itself a technically inexpensive way of distributing media players, vendors must deploy major resources to ‘overcome end-users’ inertia and persuade them to ignore the pre-installation of [Windows Media Player]’.

1053 Second, Microsoft has put forward no argument capable of calling in question the Commission's finding that the other methods of distributing streaming media players mentioned in the contested decision, namely bundling the media player with other software or Internet access services, and retail sale, are only a 'second-best solution and [do] not rival the efficiency and effectiveness of distributing software pre-installed on [Windows] PCs' (recitals 872 to 876 to the contested decision).

1054 It follows from the foregoing that in the analysis set out at recitals 843 to 878 to the contested decision, which is the first stage of its reasoning, the Commission demonstrated to the requisite legal standard that the bundling of Windows and Windows Media Player from May 1999 inevitably had significant consequences for the structure of competition. That practice allowed Microsoft to obtain an unparalleled advantage with respect to the distribution of its product and to ensure the ubiquity of Windows Media Player on client PCs throughout the world, thus providing a disincentive for users to make use of third-party media players and for OEMs to pre-install such players on client PCs.

1055 Admittedly, as Microsoft contends, a number of OEMs continue to add third-party media players to the packages which they offer to their customers. It is also common ground that the number of media players and the extent of the use of multiple players are continually increasing. However, those factors do not invalidate the Commission's conclusion that the impugned conduct was likely to weaken competition within the meaning of the case-law. Since May 1999 vendors of third-party media players have no longer been able to compete through OEMs to have their own products placed instead of Windows Media Player as the only media player on the client PCs assembled and sold by OEMs.

1056 It should further be noted that the merits of the findings made above are borne out by data examined by the Commission in the third stage of its reasoning. More particularly, as will be explained at paragraphs 1080 to 1084 below, the data mentioned at recitals 905 to 926 to the contested decision show a clear tendency in favour of using Windows Media Player to the detriment of competing media players.

1057 It follows from information communicated by Microsoft itself during the administrative procedure and referred to at recitals 948 to 951 to the contested decision that the significant growth in the use of Windows Media Player has not come about because that player is of better quality than competing players or because those media players, and particularly RealPlayer, have certain defects.

1058 In the light of all the foregoing considerations, the Court concludes that the Commission's findings in the first stage of its reasoning are in themselves sufficient to establish that the fourth constituent element of abusive bundling is present in this case. Those findings are not based on any new or speculative theory, but on the nature of the impugned conduct, on the conditions of the market and on the essential features of the relevant products. They are based on accurate, reliable and consistent evidence which Microsoft, by merely contending that it is pure conjecture, has not succeeded in showing to be incorrect.

1059 It follows from the foregoing that it is not necessary to examine the arguments which Microsoft puts forward against the findings made by the Commission in the other two stages of its reasoning. None the less, the Court considers that it should examine them briefly.

1060 In the second stage of its reasoning, the Commission seeks to establish that the ubiquity of Windows Media Player as a result of its bundling with Windows is capable of having an appreciable impact on content providers and software designers.

1061 The Commission's theory is based on the fact that the market for streaming media players is characterised by significant indirect network effects or, to use the expression employed by Mr Gates, on the existence of a 'positive feedback loop' (recital 882 to the contested decision). That expression describes the phenomenon where, the greater the number of users of a given software platform, the more there will be invested in developing products compatible with that platform, which, in turn reinforces the popularity of that platform with users.

1062 The Court considers that the Commission was correct to find that such a phenomenon existed in the present case and to find that it was on the basis of the percentages of installation and use of media players that content providers and software developers chose the technology for which they would develop their own products (recital 879 to the contested decision). The Commission correctly stated, first, that those operators tended primarily to use Windows Media Player as that allowed them to reach the very large majority of client PC users in the world and, second, that the transmission of content and applications compatible with a given media player was in itself a significant competitive factor, since it increased the popularity of that media player, and, in turn, favoured the use of the underlying media technology, including codecs, formats (including DRM) and server software (recitals 880 and 881 to the contested decision).

1063 First, as to the effects of the bundling on content providers, the Court considers that the Commission's assessment of that issue at recitals 883 to 891 to the contested decision is well founded.

1064 More particularly, the Commission was quite correct to find that the provision of several different technologies gave rise to additional development, infrastructure and administrative costs for content providers, who were therefore inclined to use only one technology for their products if that allowed them to reach a wide audience.

1065 Thus, it follows from the evidence gathered by the Commission, and especially from the replies to the requests for information which it sent to content providers in connection with the 2003 market enquiry, that encoding streamed content in several formats is expensive and time-consuming. In its request for information of 16 April 2003, the Commission asked those content providers, inter alia, whether it cost more for them to make available the same content based on more than one technology (question 19). All the entities who responded did so in the affirmative, mentioning mainly additional person/hours for content preparation, additional hardware/infrastructure costs and additional licensing costs. When asked to estimate those costs, the entities concerned put them within a range of 20 to 100% by reference to the initial costs of providing content in only one format, or on average additional costs of approximately 50% (question 20). As the Commission observes at recital 884 to the contested decision, one of the entities questioned even stated that ‘the relatively high costs of content preparation [might] reduce the economic incentive for record companies and/or online portals to support multiple formats with different reaches’ and that ‘[i]ndividual record companies [would] balance these additional costs against the benefits of extended reach and supporting multiple [t]echnologies’.

1066 The Court notes that, contrary to Microsoft’s contention, the Commission examined whether the advantages resulting from encoding in several formats could outweigh the additional costs created by such encoding. The Commission had questioned content providers about that point in the 2003 market enquiry and the content providers expressed their views on the subject (see recitals 884, 887, 889 and 890 to the contested decision).

1067 It is also apparent from the evidence gathered by the Commission that the more widely distributed a media player is, the more content providers are inclined to create content for the technology implemented in that media player. As the Commission rightly states at recital 885 to the contested decision, by supporting the widely disseminated media player, developers maximise the potential reach of their own products.

1068 Thus, as stated at recital 886 to the contested decision, in its request for information of 16 April 2003 the Commission had asked content providers whether a particular technology's reach and the presence of media client software on client PCs were significant factors in deciding which technology to support (questions 33 and 34). All the companies which answered those questions did so in the affirmative.

1069 In view of the foregoing, and of the fact that Windows is present on almost all client PCs in the world, it must be held that the Commission was correct to conclude, at recital 891 to the contested decision, that '[b]y tying [Windows Media Player], Microsoft [could] assure content providers that end-users [would] be able to play back their content, that is to say, that they [would] reach a wide audience', that '[u]biquity of [Windows Media Player] on Windows PCs therefore [secured] Microsoft a competitive advantage unrelated to the merits of its product' and that, '[once] content based on a given format [was] widespread, the competitive standing of compatible media players [was] reinforced [and] entry for new contenders [was] difficult'.

1070 It must be borne in mind, in that context, that Article 82 EC is intended to prohibit a dominant undertaking from strengthening its position by recourse to means other

than those based on competition on the merits (Case T-229/94 *Deutsche Bahn v Commission* [1997] ECR II-1689, paragraph 78, and *Van den Bergh Foods v Commission*, cited in paragraph 1013 above, paragraph 157).

1071 In the second place, the Court considers that the Commission, at recitals 892 to 896 to the contested decision, correctly assessed the effects of the bundling on software developers.

1072 More particularly, the Commission was correct to observe, at recital 892 to the contested decision, that software developers were inclined to create applications for a single platform if that enabled them to reach virtually all potential users of their products, whereas porting, marketing and supporting other platforms gave rise to additional costs.

1073 Thus, it is apparent from the answers to a number of questions which the Commission asked software developers in connection with the 2003 market enquiry (see, in particular, questions 8 and 48 of the request for information of 16 April 2003) that the development of software for several media technologies entails additional costs in terms of person/hours, licensing and customer support. The software developers concerned placed those additional costs on a scale of 1 to 100% by reference to the costs of developing applications for a single technology, or an average additional cost of approximately 58% (see recital 894 to the contested decision).

1074 It is also apparent from the answers to the request for information of 16 April 2003 that the fact that the development of applications for additional technologies, other than Microsoft's, entails additional costs for software developers is likely to influence their decision on whether to develop applications for additional technologies (see

recital 894 to the contested decision; see also the statement of Entity T30 at recital 893 to the contested decision).

¹⁰⁷⁵ In view of those factors, and of the fact that, owing to the bundling, Windows Media Player is present on the great majority of client PCs in the world, it must be held that the Commission was correct to find, at recital 895 to the contested decision, that software developers who wrote applications that relied on a media player had incentives to write foremost to Windows Media Player. It should be noted, in that regard, that in the 2003 market enquiry the Commission had requested the software developers questioned to state the factors which determined their choice of the technology for which they wrote their applications (question 7 of the request for information of 16 April 2003). Of the 14 entities who answered that question, 10 identified the degree of presence of a media player on PCs as being the most important or the second most important factor (recital 896 to the contested decision). The Commission had also asked the software developers whether it was important to them that the interfaces of Windows Media Player were on almost all Windows PCs (question 14 of the request for information of 16 April 2003). Of the 13 entities who answered that question, 10 did so in the affirmative (recital 896 to the contested decision).

¹⁰⁷⁶ In the third place, the Court recalls that, at recitals 897 to 899 to the contested decision, the Commission states that the ubiquity which Windows Media Player enjoys by virtue of the bundling also has effects on adjacent markets, such as media players on wireless information devices, set-top boxes, DRM solutions and on-line music delivery. On that point, it is sufficient to state that Microsoft has put forward no argument capable of vitiating that assessment.

¹⁰⁷⁷ In light of the foregoing considerations, the Court concludes that the second stage of the Commission's reasoning is well founded.

1078 In the third stage of its reasoning, the Commission examines the evolution of the market in light of market surveys carried out by Media Metrix, Synovate and Nielsen/NetRatings and concludes that the data in those surveys ‘consistently point to a trend in favour of usage of [Windows Media Player] and Windows Media formats to the detriment of the main competing media players (and media player technologies)’ (recital 944 to the contested decision).

1079 The Court finds that the conclusion referred to in the preceding paragraph is correct.

1080 Thus, in first place, as regards media players usage, it is apparent from the data gathered by Media Metrix that until the second quarter of 1999, when the bundling began, Windows Media Player was a considerable way behind the market leader, RealPlayer, which had almost twice as many users (recitals 905 and 906 to the contested decision). Between the second quarter of 1999 and the second quarter of 2002, on the other hand, the total number of users of Windows Media Player increased by more than 39 million, which was comparable with the combined increase in the number of users of RealPlayer and QuickTime Player (tables 8 and 9 of recital 907 to the contested decision).

1081 The data gathered by Synovate on behalf of Microsoft and mentioned at recitals 918 to 920 to the contested decision also clearly show a tendency towards Windows Media Player and away from RealPlayer and QuickTime Player.

1082 In particular, it is apparent from the Synovate data set out at recital 920 to the contested decision that while a number of users did make use of more than one media player, in August 2003 45% of the ‘multiple users’ questioned stated that the

media player which they used most often was Windows Media Player, against 19% for RealPlayer and 11% for QuickTime Player. By comparison, in October 1999 the media player most used by multiple users was RealPlayer (50%), followed first by Windows Media Player (22%) and then QuickTime Player (15%).

1083 In that context, it is appropriate to add that Microsoft's assertion that consumers used an average of 1.7 media players in June 2002 — a figure which had increased to 2.1 in 2004 — must be put in context. As the Commission correctly observes at recital 860 to the contested decision, downloading over the Internet — even though it is less effective as a means of distribution than pre-installation by OEMs — at the most enables users to add a second media player to their client PC and not to replace Windows Media Player. Windows Media Player is always present on the client PC, while the additional player is RealPlayer in some cases and QuickTime Player in others, or a different third-party media player.

1084 Last, the data gathered by Nielsen/NetRatings (see recitals 921 and 922 to the contested decision) also show that between October 2002 and January 2004 Windows Media Player significantly increased its lead over both RealPlayer and QuickTime Player.

1085 In second place, as regards the use of formats, the Nielsen/NetRatings data mentioned at recitals 930 to 932 to the contested decision clearly show a tendency towards the Windows Media formats and away from the RealNetworks formats and Apple's QuickTime formats.

1086 In third place, the Court considers that the Commission was correct to find, at recitals 934 to 942 to the contested decision, that the data on the media formats

used on Internet sites gathered by Netcraft, a company providing Internet services, which Microsoft had submitted during the administrative procedure were not conclusive. In particular, the Commission demonstrated to the requisite legal standard that the faulty methodology affecting Netcraft's surveys, as identified at recitals 940 to 942 to the contested decision, undermined Microsoft's assertion that 'in November 2002, RealNetworks' formats continued to be much more common on the [Internet]' (recital 937 to the contested decision).

1087 Last and in fourth place, the Court considers that the Commission was correct to reject, at recital 943 to the contested decision, the argument which Microsoft based on the fact that in 2001 RealPlayer was present on 92% of home PCs in the United States and therefore had an installed base comparable with Windows Media Player's for client PCs. In fact, as stated at the same recital, by 2003 RealPlayer was present on only 60 to 70% of home PCs in the United States. Furthermore, it must be borne in mind that the rate of installation of Windows Media Player is 100% on Windows client PCs and more than 90% on client PCs, whether for home or work use, worldwide.

1088 It follows from the foregoing considerations that the final conclusion which the Commission sets out at recitals 978 to 984 to the contested decision concerning the anti-competitive effects of the bundling is well founded. The Commission is correct to make the following findings:

- Microsoft uses Windows as a distribution channel to ensure for itself a significant competitive advantage on the media players market (recital 979 to the contested decision);

- because of the bundling, Microsoft's competitors are a priori at a disadvantage even if their products are inherently better than Windows Media Player (*ibid.*);

- Microsoft interferes with the normal competitive process which would benefit users by ensuring quicker cycles of innovation as a consequence of unfettered competition on the merits (recital 980 to the contested decision);

- the bundling increases the content and applications barriers to entry, which protect Windows, and facilitates the erection of such barriers for Windows Media Player (*ibid.*);

- Microsoft shields itself from effective competition from vendors of potentially more efficient media players who could challenge its position, and thus reduces the talent and capital invested in innovation of media players (recital 981 to the contested decision);

- by means of the bundling, Microsoft may expand its position in adjacent media-related software markets and weaken effective competition, to the detriment of consumers (recital 982 to the contested decision);

- by means of the bundling, Microsoft sends signals which deter innovation in any technologies in which it might conceivably take an interest and which it might tie with Windows in the future (recital 983 to the contested decision).

1089 The Commission therefore had ground to state, at recital 984 to the contested decision, that there was a reasonable likelihood that tying Windows and Windows Media Player would lead to a lessening of competition so that the maintenance of an effective competition structure would not be ensured in the foreseeable future. It must be made clear that the Commission did not state that the tying would lead to the elimination of all competition on the market for streaming media players. Microsoft's argument that, several years after the beginning of the abuse at issue, a number of third-party media players are still present on the market therefore does not invalidate the Commission's argument.

1090 It follows from all of the foregoing considerations that Microsoft has put forward no argument capable of vitiating the merits of the findings made by the Commission in the contested decision concerning the condition relating to the foreclosure of competition. The Court must therefore conclude that the Commission has demonstrated to the requisite legal standard that the condition was satisfied in the present case.

(e) The absence of objective justification

Contested decision

1091 At recitals 955 to 970 to the contested decision the Commission examines the argument whereby Microsoft seeks to show that the bundling produces efficiency gains that would outweigh the anti-competitive effects identified.

1092 In the first place, the Commission rejects Microsoft's argument that the bundling produces efficiencies related to distribution (recitals 955 to 961 to the contested decision).

1093 First of all, the Commission considers that Microsoft cannot claim that the fact that a set of options are defined by default on an 'out-of-the-box' computer has advantages for consumers by saving time and reducing the risk of confusion. Microsoft is thus confusing 'the benefit to consumers of having a media player pre-installed along with the client PC operating system and Microsoft selecting the media player for consumers' (recital 956 to the contested decision).

1094 Next, the Commission emphasises the role played by OEMs and, in particular, the fact that they customise client PCs with respect to both hardware and software in order to differentiate them from competing products and to meet specific consumer demand. It explains that '[t]he market would therefore respond to the efficiencies associated with the purchase of a full package [consisting of] hardware, operating system and software applications such as media players and, in addition, the market would be free to offer the variety that consumers demand' (recital 957 to the contested decision). Consumers could choose, from among the bundles of client PC operating systems and media players offered by OEMs, the one that suited them the best.

1095 The Commission further considers that Microsoft is also unable to rely on the fact that the economies made by the tied sale of two products can mean a saving in financial resources which would otherwise be spent on maintaining a distribution system for the second product and that those economies would be passed on to consumers, 'who could save costs related to a second purchasing act, including selection and installation of the product' (recital 958 to the contested decision). It contrasts, in particular, the low distribution costs associated with software licensing with the importance of consumer choice and innovation regarding software such as media players.

1096 Last, the Commission rejects Microsoft's assertion that by prohibiting the bundling it placed Microsoft at a competitive disadvantage by comparison with most of its

competitors, who provide multimedia capabilities with their operating systems. First, the contested decision does not prevent Microsoft from entering into agreements with OEMs to pre-install the Windows operating system and a media player — possibly Windows Media Player — in order to meet consumer demand. It emphasises that '[w]hat is abusive is that Microsoft invariably imposes its own media player through tying' (recital 959 to the contested decision). In addition, Microsoft fails to take account of the fact that tying has different effects on the market, depending on whether it is done by an undertaking in a dominant position or by an undertaking not having such a position. Furthermore, an undertaking in a dominant position may be deprived of the right to adopt a course of conduct which would not be objectionable if it were adopted by non-dominant undertakings.

1097 In the second place, the Commission rejects Microsoft's argument that the tying at issue produces efficiencies related to Windows Media Player as a platform for content and applications (recitals 962 to 969 to the contested decision).

1098 The Commission asserts, in substance, that Microsoft has not adduced evidence that the integration of Windows Media Player in Windows enhances the technical performance of the product or, more generally, that the tying at issue is indispensable in order for the pro-competitive effects on which it relies to be achieved. In particular, Microsoft neither claims nor demonstrates that software developers would not have been able to develop applications if Windows Media Player had been distributed independently of the Windows client PC operating system (recital 965 to the contested decision).

1099 The Commission also states that the fact that media players of different makes are able to work with Windows has contributed significantly to the dissemination of

multimedia streaming technology and to the consequent development of a host of multimedia-enabled applications (recital 966 to the contested decision).

1100 In the third place, the Commission concludes, at recital 970 to the contested decision, that Microsoft has not established to the requisite legal standard that the tying at issue was objectively justified by pro-competitive effects which would outweigh the barrier to competition caused by that practice. The benefits which Microsoft presents as being the result of the tying could be achieved without it. Furthermore, the other benefits on which Microsoft relies consist essentially in increased profitability for Microsoft and are disproportionate to the anti-competitive effects of the tying.

1101 At recitals 1026 to 1042 to the contested decision, the Commission examines the arguments which Microsoft bases on the alleged interdependencies between Windows and Windows Media Player and also on those between Windows and third-party applications.

Arguments of the parties

1102 By way of introduction to the arguments which it develops in connection with the bundling of Windows and Windows Media Player, Microsoft makes a series of factual observations.

1103 Thus, first, it claims that the integration of new functionalities generally into successive releases of its Windows client PC operating system brings benefits for software developers, OEMs and consumers.

1104 Microsoft states, first of all, that for software developers the Windows client PC operating system provides a stable and well-defined platform for software development. The integration of new functionality into Windows makes it easier and faster to develop software that works with Windows. The fact that software developers are able to use the functionality offered by Windows enables them to reduce the number of functionalities which they need to design, develop and test in their own products and also the overall size of those products. Last, Microsoft observes that the less software code an application contains, the less likely it is that the application will malfunction and require technical support.

1105 OEMs, according to Microsoft, 'depend on the addition of functionality to Windows to create PCs that will appeal to customers and that will support the creation of interesting new applications'.

1106 Consumers expect that Windows will be continually improved. In addition, new users of PCs, particularly those with limited technical knowledge, want PCs to be easy to set up and use.

1107 Second, Microsoft describes the benefits that result from the integration, more particularly, of multimedia functionality in Windows. First, third-party applications can call upon that functionality, which makes it easier for software developers to include audio and video content in their products. The uniform presence of media functionality in Windows, which is exposed to software developers through published APIs, encouraged the creation of numerous applications that make use of such content. Next, media functionality in Windows offers a series of functions, such as the ability to play audio CDs and video DVDs and to download music over the Internet, which are popular with consumers and help to increase sales of client

PCs. Last, the presence of media functionality in Windows makes PCs more attractive and easier to use for consumers.

1108 Microsoft submits that the main justification for its conduct is that the integration of new functionality into operating systems in response to technological advances and changes in consumer demand is a core element of competition in the operating system business and has served the industry well for more than 20 years. The integration of streaming capacity into Windows is one of the aspects of its 'successful business model' and has contributed to the increasing use of digital media. Supported on this point by DMDsecure and Others and Exor, Microsoft claims that the Commission made a manifest error of assessment by not sufficiently considering the real benefits flowing from the integration of new functionality into the Windows operating system.

1109 In support of the arguments set out in the preceding paragraph, Microsoft formulates three series of considerations.

1110 In the first place, Microsoft, supported by DMDsecure and Others, TeamSystem, Mamut and Exor, contends that the integration of media functionality in Windows is essential to allow software developers and Internet site creators to make efficient use of the 'stable and well-defined' Windows platform. By calling on that functionality, those software developers and Internet site creators can easily include audio and video content in their products and thus do not need to develop the complex software code required to play such content and are able to concentrate on improving the features of their products.

- 1111 Microsoft refutes the Commission's assertion at recital 1031 to the contested decision that it does not matter whether the media functionality bundled with Windows is provided by Microsoft or by a third party, because it is possible to redistribute the software code that supplies that functionality or to rely on functionality supplied by third-party media players. It claims that if software developers did not have a common platform that provides a reliable set of system services they would need to determine in each individual case what functionality is present on the version of Windows installed on a particular customer's PC and then to supplement that functionality as necessary. That would render applications larger and more complex and thus more expensive to develop, test and support.
- 1112 Microsoft, supported on this point by Exor, submits that adding components to Windows on a piecemeal basis is likely to create conflicts between the different versions of those components, which would cause Windows or the application being installed to malfunction.
- 1113 Microsoft also claims that, as regards applications 'that are already in broad use', there is no ready mechanism to distribute the components of Windows on which they rely in order to obtain media functionality. Those applications will no longer work correctly with a version of Windows without Windows Media Player. Furthermore, the media functionality in Windows is not 'fungible', so that an application designed to call on that functionality cannot call on similar functionality provided by a competing media player without being substantially revised.
- 1114 Microsoft further disputes the Commission's assertion that competing media players are capable of replacing Windows Media Player for much of its functionality. It claims, in particular, that the Commission does not demonstrate that any third party

will decide to offer 'substitute functionality for all the media functionality integrated into Windows'.

- 1115 In Microsoft's submission, the absence of media functionality in some copies of Windows will also be damaging for Internet site creators, who rely on it to distribute audio and video content. If they can no longer count on the uniform presence of media functionality in Windows, they will have to incorporate in their products mechanisms for detecting the presence of the requisite media functionality and, if it is missing, for downloading the necessary software code to the user's PC.
- 1116 Last, in the reply, Microsoft disputes the Commission's assertion that the benefits flowing from the integration of media functionality in Windows cannot constitute valid justification under Community law. When the Commission applies Article 82 EC it cannot ignore the benefits that flow from the conduct regarded as abusive; and, furthermore, it is not correct to claim that the standardisation that would come about in the present case would not be the result of a competitive process.
- 1117 In the second place, Microsoft contends that the integration of media functionality in Windows is indispensable to achieving 'other benefits'.
- 1118 The applicant explains that Windows is composed of a large number of specialised blocks of software that perform specific functions. In order to avoid duplicating the same functionality in each of those blocks, particular blocks of software code — the 'components' — call upon one another to perform specific tasks. A single component may thus be used to perform several functions. For example, a component which plays audio content may be used both for the 'Help' system in

Windows and for the text-to-voice narration feature that makes Windows more accessible to the visually impaired. That method of software design, known as ‘componentisation’, relies on the interdependency of the components, so that if one of them were removed many others will malfunction. Thus, numerous features of Windows XP, including the Help system, will no longer work if media functionality is removed from the operating system. Furthermore, because of the interdependency of the components, Microsoft will be unable to develop other parts of Windows that are designed to rely on the media function if it cannot be sure that that functionality will be present in all Windows client PCs. Computer manufacturers must not therefore be free to remove the components of Windows, especially those that supply media functionality.

1119 In the reply, Microsoft denies that it has never argued that the integration of Windows Media Player in Windows produced efficiencies. It explained in detail the reasons why it was ‘technically efficient to include media functionality in Windows that is available to be called upon by other parts of the operating system as well as by applications running on top of the operating system’. In addition, the fact that many software developers freely choose to rely on the media functionality in Windows is itself evidence that ‘uniform integration’ of such functionality generates technical efficiencies. Last, Microsoft claims to have shown during the administrative procedure that Windows operated ‘faster’ when media functionality was integrated.

1120 In the third place, Microsoft claims that enforcement of the remedy prescribed in Article 6(a) of the contested decision will have harmful consequences.

1121 First, it submits that removing components from the integrated whole made up of Windows and Windows Media Player would degrade the operating system, especially when those components are used to provide basic services, such as the ability to play audio and video content.

1122 Second, Microsoft asserts that if the contested decision were to apply as precedent against future integration in its Windows operating system, it would quickly become impossible to design, develop and test that operating system. For each block of software code that had to be made removable, Microsoft would face an exponential increase in the amount of work required. Thus, for example, if the Commission decided to apply to a second block of software codes the same principles as those established in the contested decision, it would have to offer four different versions of Windows. Such 'fragmentation' would have the effect that it would be impossible to know whether any given copy of the operating systems contained functionality on which software developers, manufacturers of peripherals or users wished to rely. There would therefore be one version, or indeed several versions, of Windows per computer manufacturer, each offering a different set of functionalities. In the long term, the ability to remove Windows functionalities would reduce consumer choice, since consumers would be tied to particular brands of client PCs running idiosyncratic versions of Windows, with no assurance that applications, such as graphics, would work on other versions of Windows. It would also become much more difficult to mix and match different brands of client PCs within the same computer network. In Microsoft's submission, the only way to avoid such fragmentation would be to 'freeze' Windows in its current version.

1123 The Commission first of all rejects the factual observations formulated by Microsoft. It claims, in particular, that the applicant's general assertions concerning the benefits of the integration of new functionalities unrelated to Windows Media Player into client PC operating systems are irrelevant.

1124 Next, the Commission, supported by SIIA, submits that Microsoft has failed to show that the impugned conduct is objectively justified.

1125 In the first place, at recitals 955 to 970 to the contested decision, the Commission rejected Microsoft's argument that the tying at issue produced efficiencies capable of outweighing the anti-competitive effects identified. As regards, more particularly, the alleged distribution efficiencies, the Commission observes that Microsoft's arguments are based on confusion between 'the benefits to consumers of having a media player pre-installed along with the client PC operating system, and Microsoft selecting the media player for consumers'. Referring to recital 962 to the contested decision, the Commission further submits that Microsoft has not put forward any technical efficiency for which integration of Windows Media Player into Windows would be a precondition. Microsoft's assertion, first submitted in the reply, that Windows operates faster when media functionality is integrated, is not supported by any evidence. Last, by the tying at issue, Microsoft shields itself from effective competition from vendors of potentially more efficient media player vendors which could challenge its position. Microsoft thus reduces the talent and capital invested in innovation in respect of media players and reduces its own incentive to innovate in that sphere.

1126 In the second place, the Commission examines the three series of considerations formulated by Microsoft.

1127 First, the Commission observes that media players exhibit both application and platform software characteristics. In other words, although they build on the client PC operating system, other applications may build on them. Media players offer their platform services irrespective of whether or not they are tied to a PC operating system.

- 1128 The Commission claims that the benefit that the bundling offers to software developers and content providers is that it allows them to avoid the 'efforts of competition', which cannot constitute valid justification under Community competition law. Because of the bundling of Windows Media Player with the 'ubiquity of the Windows monopoly', software developers and content providers who base their products on Windows Media Player do not need to convince users to install that player. By contrast, those who base their products on a third-party media player platform typically provide an incentive for users to install the necessary media player on their own computer, for example by including links for downloading the player through the Internet.
- 1129 The Commission further submits that the bundling has the effect of increasing the costs which vendors of competing media players and third-party software developers who rely on those media players necessarily incur in convincing users to install those media players, because 'competitors need to overcome the disincentives generated by the automatic presence of Windows Media Player to install a different media player product, but with essentially similar characteristics (learning, support, and storage costs are examples of such disincentives)'.
- 1130 The Commission also maintains that Microsoft's arguments relating to the 'uniform platform' amount to asserting that it should be allowed to extend the Windows monopoly by tying other software products to Windows, for the simple reason that such other software products also offer platform capabilities to third-party developers. Microsoft essentially claims that the integration of Windows Media Player in Windows leads to de facto standardisation and that this provides benefits to third parties, since they know that Windows Media Player will always be present in Windows. However, standardisation cannot be imposed unilaterally by a dominant undertaking through tying (recital 969 to the contested decision).

1131 Furthermore, even if software code is not completely fungible (see paragraph 1113 above), the fact remains that competing media players can replace Windows Media Player for a large part of its functionality. As regards other functionality, third-party media player vendors may choose not to implement it at present because they know that it is available in Windows Media Player. However, that does not exclude the possibility that they will develop that functionality immediately after implementation of the remedy in order to take advantage of the unbundled version of Windows and to meet the demand of software developers.

1132 In the rejoinder, the Commission insists that it never asserted that third-party media players were ‘complete substitutes’ for the media functionality in Windows. It merely explained in the contested decision that third-party media players running on top of an unbundled version of Windows could to a large extent ‘replace features’ of Windows Media Player. Streaming media players compete on the basis of a number of parameters, such as the quality of streaming, the method of organising content and the format in which the file is provided.

1133 Last, the Commission refutes Microsoft’s assertion that some applications will no longer work properly when they are used with the version of Windows imposed by Article 6(a) of the contested decision. Referring to the example given at recital 1038 to the contested decision, moreover, the Commission observes that professional Internet sites normally incorporate mechanisms that automatically detect the absence of components needed to run an Internet page and allow them to be downloaded. In the rejoinder, it further submits that in any event developers who base their products on Windows Media Player have a variety of ways of dealing with the possibility that a PC user has not already installed Windows Media Player.

1134 Second, the Commission rejects the arguments which Microsoft bases on componentisation.

1135 It claims, first of all, that those arguments are wholly abstract, as Microsoft refers to media functionality in general. It reiterates that the remedy prescribed in Article 6(a) to the contested decision does not affect the basic media functionality of Windows.

1136 Next, the Commission submits that the files constituting Windows Media Player which must be removed pursuant to the contested decision have been clearly identified by Microsoft. It refers to a letter of 13 September 2004 from Mr Heiner, a Microsoft employee, and contends that Microsoft cannot claim that it is not 'technically feasible' to design an unbundled version of Windows.

1137 The Commission further observes that the contested decision requires Microsoft to develop and offer an unbundled version of Windows without Windows Media Player and to ensure that that version is full-functioning and of good quality, but does not prevent Microsoft from continuing to offer a version of Windows bundled with Windows Media Player 'in line with its current software design methodology'.

1138 Last, the Commission observes that Microsoft gives only a single example of 'component cross-dependency', namely the Windows XP 'Help' system. In so far as that Help system relies on audio and video, it relies on media infrastructure that will remain in the unbundled version of Windows without Windows Media Player. It will therefore work well irrespective of the presence of Windows Media Player, as has been demonstrated by a test report submitted by RealNetworks in the interim

measures proceedings. Furthermore, Microsoft's assertion that numerous other features of Windows XP will no longer work if media functionality is removed from the system consisting of Windows and Windows Media Player is wholly unfounded.

1139 The Commission further submits that it examined in detail, at recitals 1026 to 1042 to the contested decision, the question of the alleged interdependencies between Windows and Windows Media Player. It noted that it was obvious that if Windows Media Player were removed from Windows certain functionalities which it normally delivered would not be available (recital 1033 to the contested decision). That does not mean, however, that the operating system will not work properly or that the product will be 'degraded'. In addition, the example of Windows XP Embedded shows that it is technically possible for Windows to cope with the absence of multimedia capabilities caused by code removal without entailing the breakdown of operating system functionality (recitals 1028 to 1030 to the contested decision).

1140 Third, the Commission contends that the arguments which Microsoft puts forward concerning the future negative effects of the remedy prescribed in Article 6(a) of the contested decision are hypothetical, conjectural and wholly irrelevant.

1141 First of all, pursuant to the contested decision, Microsoft is to retain the right to offer the bundled version of Windows.

1142 Next, the Commission, supported on this point by SIIA, observes that Microsoft already markets a number of different versions of its client PC operating system which are not all interchangeable, such as Windows 98, Windows 2000, Windows Millennium Edition, Windows NT and Windows XP. Those different versions of Windows do not support the same applications.

1143 Last, the Commission rejects Microsoft's assertion that it would have to 'freeze' Windows in its current version. The remedy prescribed in Article 6(a) of the contested decision fully preserves Microsoft's incentives to innovate both in the media player market and in the client PC operating systems market and it allows consumers to exercise their choice on the basis of the merits of the products. Supported on this point by Audiobanner.com, the Commission claims that, in reality, it is the bundling that deters innovation, in particular on the media player market (recital 981 to the contested decision). Furthermore, that practice discourages investment in all the technologies in which Microsoft could conceivably take an interest in the future (recital 983 to the contested decision).

Findings of the Court

1144 It must be borne in mind, as a preliminary point, that although the burden of proof of the existence of the circumstances that constitute an infringement of Article 82 EC is borne by the Commission, it is for the dominant undertaking concerned, and not for the Commission, before the end of the administrative procedure, to raise any plea of objective justification and to support it with arguments and evidence. It then falls to the Commission, where it proposes to make a finding of an abuse of a dominant position, to show that the arguments and evidence relied on by the undertaking cannot prevail and, accordingly, that the justification put forward cannot be accepted.

1145 In its pleadings, Microsoft submits in substance two series of arguments to justify its conduct, which to a large extent cover those which it submitted to the same end during the administrative procedure and which were examined and correctly rejected by the Commission at recitals 955 to 970 and 1026 to 1042 to the contested decision, as appears from the following paragraphs.

1146 First, Microsoft takes issue with the Commission for having ignored the benefits flowing from its business model, which entails the ongoing integration of new functionality into Windows. In that context, it claims, more particularly, that the integration of media functionality in Windows is indispensable in order for software developers and Internet site creators to be able to continue to benefit from the significant advantages offered by the 'stable and well-defined' Windows platform.

1147 Second, Microsoft claims that the removal of media functionality from the system consisting of Windows and Windows Media Player would create a series of problems to the detriment of consumers, software developers and Internet site creators. It refers, in particular, to the fact that its Windows operating system relies on the method known as 'componentisation' (see paragraph 1118 above) and that the withdrawal of media functionality would result in the degrading and 'fragmentation' of that system.

1148 As regards the first series of arguments invoked by Microsoft, it is appropriate, first of all, to recall the precise scope of the abuse found in Article 2(b) of the contested decision and of the remedy prescribed in Article 6(a) of that decision.

1149 The circumstance to which the Commission takes exception in the contested decision is not that Microsoft integrates Windows Media Player in Windows, but that it offers on the market only a version of Windows in which Windows Media Player is integrated, that is to say, that it does not allow OEMs or consumers to obtain Windows without Windows Media Player or, at least, to remove Windows Media Player from the system consisting of Windows and Windows Media Player. Thus, while Article 6(a) of the contested decision requires Microsoft to offer a 'full-functioning version of the Windows Client PC Operating System which does not incorporate Windows Media Player', it expressly states that 'Microsoft ... retains the

right to offer a bundle of the Windows Client PC Operating System and Windows Media Player' (see, to the same effect, recitals 1011 and 1023 to the contested decision).

1150 Thus, the Commission does not interfere with Microsoft's business model in so far as that model includes the integration of a streaming media player in its client PC operating system or the possibility for that operating system to allow software developers and Internet site creators to take advantage of the benefits offered by the 'stable and well-defined' Windows platform. The Commission takes issue with the fact that Microsoft does not market the version of Windows that corresponds to its business model and at the same time a version of that system without Windows Media Player, thus permitting OEMs or end users wishing to do so to install the product of their choice on their client PC as the first streaming media player.

1151 Next, the Court considers that Microsoft is not entitled to rely on the fact that the bundling ensures the uniform presence of media functionality in Windows, which enables software developers and Internet site creators to avoid the need to include in their products mechanisms which make it possible to ascertain what media player is present on a particular client PC and where necessary to install the necessary functionality (see paragraphs 1107, 1111 and 1115 above). The fact that that tying enables software developers and Internet site creators to be sure that Windows Media Player is present on virtually all client PCs in the world is precisely one of the main reasons why the Commission correctly took the view that the bundling led to the foreclosure of competing media players from the market. Although the uniform presence to which Microsoft refers may have advantages for those operators, that cannot suffice to offset the anti-competitive effects of the tying at issue.

1152 As the Commission correctly observes (see paragraph 1130 above), by such an argument Microsoft is in fact claiming that the integration of Windows Media Player in Windows and the marketing of Windows in that form alone lead to the de facto standardisation of the Windows Media Player platform, which has beneficial effects on the market. Although, generally, standardisation may effectively present certain advantages, it cannot be allowed to be imposed unilaterally by an undertaking in a dominant position by means of tying.

1153 The Court further notes that it cannot be ruled out that third parties will not want the de facto standardisation advocated by Microsoft but will prefer it if different platforms continue to compete, on the ground that that will stimulate innovation between the various platforms.

1154 Furthermore, as the Commission and SIIA rightly submit, the other benefits on which Microsoft relies could just as easily be obtained in the absence of the impugned conduct.

1155 Thus, consumer demand for an ‘out-of-the-box’ client PC incorporating a streaming media player can be fully satisfied by OEMs, who are in the business of assembling such PCs and combining, inter alia, a client PC operating system with the applications desired by consumers (recitals 68 and 119 to the contested decision). Nor does the contested decision prevent Microsoft from continuing to offer the bundled version of Windows and Windows Media Player to consumers who prefer that solution.

1156 Similarly, Microsoft cannot rely on the fact that OEMs ‘depend on the addition of functionality to Windows to create PCs that will appeal to customers and that will

support the creation of interesting new applications'. OEMs are capable of offering client PCs with such features by pre-installing on them applications obtained from software developers. In the same way, the functionalities offered by Windows Media Player may be supplied by Microsoft on an independent basis, that is to say, without that media player being tied to the Windows operating system.

1157 Nor can Microsoft claim that the integration of media functionality in Windows is essential in order to enable software developers and Internet site creators to use the Windows platform effectively and that it enables those operators to avoid having to develop the requisite software code themselves.

1158 For the reasons set out at recitals 962 to 967 to the contested decision, that argument must be rejected as unfounded. It must be borne in mind, in that regard, that although streaming media players — and this applies both to Windows Media Player and to competing media players — constitute application software, they none the less expose APIs and may therefore also serve as platforms for third-party applications. It is wholly unnecessary for a streaming media player to be integrated in a client PC operating system in order to be able to provide such platform services. In particular, contrary to the impression that Microsoft would give, the absence of such integration does not have the consequence that software developers must write the requisite software code. Thus, as stated at recital 966 to the contested decision, a large number of software developers and Internet content providers develop their products using APIs exposed by RealPlayer even though that is not integrated in any client PC operating system. Similarly, the Court notes that software developers can — and do — write applications designed to work with WMP 9, although that player was not pre-installed on Windows (recital 965 to the contested decision).

1159 Last, the Court notes that, as the Commission observes both in the contested decision and in its pleadings, Microsoft does not show that the integration of Windows Media Player in Windows creates technical efficiencies or, in other words, that it 'lead[s] to superior technical product performance' (recital 962 to the contested decision).

1160 In the reply, Microsoft asserts, for the first time, that 'Windows ... operate[s] faster when media functionality is integrated'. In that regard, it is sufficient to state that that assertion is unsupported.

1161 Also in the reply, Microsoft asserts that the fact that numerous software developers freely choose to call on the media functionality in Windows shows that the 'uniform integration' of such functionality creates technical efficiencies. That assertion must be rejected: the contested decision refers to Windows Media Player and not to media functionality in general, and the mere fact that software developers rely on Windows Media Player does not prove that the tying produces technical efficiencies.

1162 The second series of arguments on which Microsoft relies must also be rejected.

1163 First of all, as regards Microsoft's claim that applications 'that are already in broad use' will no longer work correctly when they are implemented on the version of Windows without Windows Media Player, it is sufficient to state that this has not been demonstrated to the requisite legal standard.

1164 Next, the Court finds that Microsoft's assertion that the removal of media functionality from the system consisting of Windows and Windows Media Player will affect the functioning of parts of the Windows operating system itself is unfounded. The only examples that Microsoft provides on that point, namely the examples of the 'Help' system and the text-to-voice system contained in Windows, are unconvincing. Those systems rely on the basic media infrastructure of the Windows operating system and not on Windows Media Player. As already stated at paragraph 916 above in connection with the bundling issue, the impugned conduct concerns only the application software that constitutes Windows Media Player, to the exclusion of any other multimedia technology in the Windows client PC operating system, and the basic multimedia infrastructure of that system remains in the version of Windows imposed by Article 6(a) of the contested decision. It was also stated at paragraph 916 above that Microsoft itself differentiates in its technical literature the files which constitute Windows Media Player from the other multimedia files, notably those relating to the basic multimedia infrastructure.

1165 The Court further considers that Microsoft cannot contend that the removal of Windows Media Player from the system consisting of Windows Media Player and Windows will entail a degrading of the operating system. Thus, Windows XP Embedded can be configured in such a way as not to include Windows Media Player without having any effect on the integrity of the other functionality of the operating system. Furthermore, throughout the period between June 1998 and May 1999, when Microsoft first integrated WMP 6 in its Windows client PC operating system without allowing OEMs or users to remove it from that system, Microsoft offered its streaming media player as separate application software, without any effect on the functioning of the Windows operating system. The Court further notes that, pursuant to the remedy prescribed in Article 6(a) of the contested decision, Microsoft placed on the market a version of Windows without Windows Media Player and that that version is fully functional.

1166 Last, the Court also rejects Microsoft's argument based on the risk of 'fragmentation' of its Windows operating system (see paragraph 1122 above). As the Commission states in the defence, that argument is hypothetical and speculative. Furthermore, it is inconsistent with Microsoft's own business practice. Thus, over recent years, Microsoft has successively marketed a number of different versions of its Windows operating system which are not all interchangeable, namely Windows 98, Windows 2000, Windows Me, Windows NT and Windows XP. In addition, as regards, for example, Windows XP, that operating system can be broken down into seven distinct versions.

1167 It follows from all of the foregoing considerations that Microsoft has not demonstrated the existence of any objective justification for the abusive bundling of Windows Media Player with the Windows client PC operating system.

(f) Failure to comply with the obligations imposed on the Communities by the TRIPS Agreement

Contested decision

1168 At recitals 1049 to 1053 to the contested decision, the Commission examines Microsoft's argument that the remedy for the abusive refusal to supply fails to comply with the obligations imposed on the Community by the TRIPS Agreement and also the argument that the remedy for the abusive tying fails to comply with the Agreement on Technical Barriers to Trade (TBT) of 15 April 1994 (Annex 1A to the Agreement establishing the WTO ('the WTO Agreement')).

1169 The Commission maintains, in effect, that the contested decision is fully consistent with its obligations under the TRIPS Agreement and the WTO Agreement (recital 1052 to the contested decision).

1170 The Commission further asserts that, for the reasons set out at paragraphs 801 and 802 above, Microsoft cannot invoke those agreements in order to challenge the legality of the contested decision (recital 1053 to the contested decision).

Arguments of the parties

1171 Microsoft claims that the contested decision forces it to develop a version of its Windows operating system from which 'nearly all' the media functionality has been removed and to offer that 'degraded product', under the Microsoft and Windows trade marks, to consumers in Europe. The contested decision thereby infringes its trade mark rights and its copyright, two categories of rights which the Communities are legally bound to protect under the TRIPS Agreement.

1172 In the first place, Microsoft claims that the contested decision infringes its trade mark rights, contrary to Articles 17 to 20 of the TRIPS Agreement. Under Article 17 of the TRIPS Agreement, any exceptions to trade mark rights must be limited and must take account of the legitimate interests of the owner of the trade mark and of third parties, while Article 20 of the TRIPS Agreement provides that the use of a trade mark cannot be unjustifiably encumbered by special requirements, such as 'use in a special form or use in a manner detrimental to its capability to distinguish the goods or services of one undertaking from those of other undertakings'.

1173 Microsoft maintains that by requiring it to offer to license a version of Windows without media functionality, the Commission requires it to place its 'most valuable' trade mark on a product which it did not design and which it knows will not work in the desired way. In addition, there is a likelihood of confusion between the version of Windows without media functionality and the version with media functionality. The contested decision also infringes Microsoft's right to control the quality of the products to which the trade mark is affixed and, in that regard, the applicant reiterates that the version of Windows imposed by Article 6(a) of the contested decision will affect the functioning of a series of elements of the Windows operating system itself and also applications and Internet sites which call on that media functionality. The 'encumbrances' thus created by the contested decision do not form part of the type of 'limited' exceptions envisaged by Article 17 of the TRIPS Agreement and the requirement that it place its Windows and Microsoft trade marks on inferior products over which it is unable to exercise design control runs directly counter to its own interests and also to those of consumers and third-party software developers.

1174 There is a breach of Article 20 of the TRIPS Agreement in so far as, in spite of the existence of equally effective alternatives, the Commission forces Microsoft to encumber the Windows trade mark in a manner that reduces its function as an indicator of source and quality, which causes confusion in the minds of consumers and harms the goodwill of the trade mark.

1175 In the second place, as regards its copyright, Microsoft claims that the contested decision infringes its exclusive rights — protected by the TRIPS Agreement — to authorise adaptations, arrangements and other alterations of its works, to authorise the reproduction of its works, in any manner or form, and to distribute copies of Windows to the public. The contested decision forces it to create an adaptation of Windows which is not of the applicant's own design and which represents a substantial alteration of its copyrighted work, and also to license the use of copies of

that ‘compelled adaptation of its copyrighted work’. The compulsory licensing of a copyrighted work is authorised by the TRIPS Agreement only on the conditions laid down in Article 13 of that agreement, which are not fulfilled in this case.

1176 The Commission claims, primarily, that the legality of the contested decision cannot be reviewed by reference to the TRIPS Agreement (see paragraph 789 above).

1177 In the alternative, the Commission contends that Microsoft’s arguments are in any event wholly unfounded.

1178 In the first place, the Commission rejects Microsoft’s arguments relating to its trade marks.

1179 First of all, it submits that those arguments are difficult to understand and that Microsoft fails to make clear whether the alleged breach of the TRIPS Agreement refers to the finding of the tying abuse made in the contested decision or to the remedy for that abuse.

1180 Next, the Commission submits that, under Article 16(1) of the TRIPS Agreement, the owner of a registered trade mark is to have the exclusive right to prevent third parties acting without its consent from using identical or similar signs. Microsoft fails to explain how that right would be affected by the contested decision or to what extent the use of its trade marks might, on account of the contested decision, be unjustifiably encumbered by special requirements within the meaning of Article 20 of the TRIPS Agreement. In the Commission’s submission, the exclusive right referred to above is therefore preserved in the present case, as is the function of the trade mark as a guarantee of origin of the products.

1181 The Commission further submits that the remedy prescribed by Article 6(a) of the contested decision does not infringe Microsoft's right to control the quality of the products to which the trade mark is affixed, since Microsoft would retain 'total control of the quality of its own products'. Furthermore, the argument that the version of Windows without Windows Media Player was a degraded product has already been refuted, and the risk of confusion on which Microsoft relies can be avoided with adequate information and labelling.

1182 Last, the Commission asserts that, even on the assumption that the contested decision does infringe Microsoft's trade marks, the derogation provided for in Article 17 of the TRIPS Agreement, read together with Article 8(2) and Article 40(2) of that agreement, would allow the infringement of competition law identified in the contested decision to be brought to an end.

1183 In the second place, the Commission rejects the arguments which Microsoft bases on its copyright.

1184 First of all, the contested decision does not authorise any third party to adapt or reproduce Microsoft's copyright works and Microsoft cannot rely on an 'integrity right', which is a moral right and is therefore not covered by the TRIPS Agreement.

1185 Next, the Commission submits that the arguments which Microsoft bases on Article 13 of the TRIPS Agreement cannot be upheld. In particular, the contested decision deals with a 'special case' within the meaning of that article, since it applies to 'instances of tying which would constitute an abuse of a dominant position'.

1186 Last, the Commission contends that, even on the assumption that the contested decision does infringe Microsoft's copyright, the exception provided for in Article 13 of the TRIPS Agreement, read together with Article 8(2) and Article 40(2) of that agreement, would allow the infringement of competition law identified in the contested decision to be brought to an end.

1187 SIIA essentially supports the Commission's arguments.

Findings of the Court

1188 The Court notes that Microsoft is challenging the legality of the contested decision on the ground that it is contrary to various provisions of the TRIPS Agreement, and in particular to Articles 13, 17 and 20 of that agreement.

1189 However, as the Court has already stated at paragraph 801 above, it is settled case-law that, given their nature and structure, WTO Agreements are not in principle among the rules by reference to which the Community judicature will review the legality of measures adopted by the Community institutions.

1190 As the Court has also already observed at paragraph 802 above, it is only where the Community has intended to implement a particular obligation assumed under the WTO or where the Community measure refers expressly to specific provisions of the WTO Agreements that the Community judicature must review the legality of the Community measure in question in the light of the WTO rules. As the circumstances of the present case clearly do not correspond to either of those two

situations, Microsoft cannot rely on the TRIPS Agreement, in particular its Articles 13, 17 and 20, in support of its application for annulment of the contested decision in so far as it concerns the bundling of Windows and Windows Media Player.

1191 It follows that this part of the first plea must be rejected without there being any need to examine the arguments which Microsoft has raised in support of it.

1192 In any event, there is nothing in the provisions of the TRIPS Agreement to prevent the competition authorities of the members of the WTO from imposing remedies which limit or regulate the exploitation of intellectual property rights held by an undertaking in a dominant position where that undertaking exercises those rights in an anti-competitive manner. Thus, as the Commission correctly observes, it follows expressly from Article 40(2) of the TRIPS Agreement that the members of the WTO are entitled to regulate the abusive use of such rights in order to avoid effects which harm competition. Article 40(2) provides as follows:

‘Nothing in this Agreement shall prevent Members from specifying in their legislation licensing practices or conditions that may in particular cases constitute an abuse of intellectual property rights having an adverse effect on competition in the relevant market. As provided above, a Member may adopt, consistently with the other provisions of this Agreement, appropriate measures to prevent or control such practices, which may include for example exclusive grantback conditions, conditions preventing challenges to validity and coercive package licensing, in the light of the relevant laws and regulations of that Member.’

1193 It follows from all of the foregoing that the first plea must be rejected as unfounded in its entirety.

3. Second plea, alleging breach of the principle of proportionality

(a) Contested decision

1194 By way of remedy for the abusive tying referred to in Article 2(b) of the contested decision, Article 6 of that decision orders Microsoft to offer, within 90 days of the date of notification of that decision, a full-functioning version of its Windows client PC operating system which does not incorporate Windows Media Player, although Microsoft is to retain the right to offer a bundle of its Windows client PC operating system and Windows Media Player. Article 6 also provides that Microsoft is to communicate to the Commission, within the same period, all the measures which it has taken to comply with that obligation.

1195 At recitals 1011 to 1042 to the contested decision, the Commission provides details of that remedy.

1196 In the first place, the Commission describes the scope of the remedy (recitals 1011 to 1014 to the contested decision).

1197 In particular, the obligation imposed on Microsoft to offer a version of Windows without Windows Media Player applies both where Windows is licensed directly to

end users and where it is licensed to OEMs. Likewise, the option which Microsoft retains to offer a bundle of Windows and Windows Media Player applies with respect both to end users and to OEMs.

1198 The Commission also prohibits Microsoft from adopting any technological, commercial, contractual or other measure which would have an effect equivalent to tying Windows and Windows Media Player, and states in particular that the version of Windows without Windows Media Player must perform as well as the version of Windows with Windows Media Player. Recital 1013 to the contested decision contains a non-exhaustive list of practices which are prohibited on that ground.

1199 In the second place, the Commission fixes at 90 days the period within which Microsoft must implement the remedy in question (recitals 1015 to 1017 to the contested decision).

1200 In the third place, the Commission rejects Microsoft's assertion that the remedy prescribed in Article 6(a) of the contested decision is not sufficiently precise, since Microsoft knows exactly what software code it must remove from its product (recitals 1018 to 1021 to the contested decision). The Commission gives, *inter alia*, the example of Windows XP Embedded and makes clear that the contested decision does not require Microsoft to remove all media files from Windows, but only those which constitute Windows Media Player.

1201 In the fourth place, the Commission puts forward a series of considerations in order to demonstrate that the remedy in question is proportionate (recitals 1022 to 1042 to the contested decision).

- 1202 First, it maintains that the remedy is necessary to remove the restriction of competition resulting from Microsoft's conduct (recital 1022 to the contested decision).
- 1203 Second, the remedy prescribed in Article 6(a) of the contested decision does not prevent Microsoft from marketing its media player and places no restrictions on Microsoft apart from prohibiting the tying practice at issue or the adoption of any measures having an equivalent effect to that practice (recital 1023 to the contested decision). The Commission reiterates that Microsoft can continue to market a bundle of Windows and Windows Media Player (*ibid.*).
- 1204 Third, the Commission rejects Microsoft's argument that there is no significant consumer demand for client PC operating systems without multimedia functionality (recitals 1024 and 1025 to the contested decision). The Commission states, in substance, that OEMs can respond to consumer expectations by pre-installing the media player chosen by the consumer on the client PCs which they sell to them.
- 1205 Fourth, at recitals 1026 to 1034 to the contested decision, the Commission examines Microsoft's arguments concerning the interdependencies between Windows and Windows Media Player. Referring again to the example of Windows XP Embedded, the Commission rejects the assertion that the elimination of the Windows Media Player code would harm the integrity of the operating system. It also contends that Microsoft has not shown that the integration of Windows Media Player in Windows was a precondition for efficiency gains, and asserts, in particular, that '[i]f developers devise their own solutions or integrate a third party's redistributable code in their application, they do not depend on the presence of the media player on the user's client PC' (recital 1032 to the contested decision).

1206 Last, and fifth, at recitals 1035 to 1042 to the contested decision the Commission examines Microsoft's arguments relating to the alleged interdependencies between Windows and third-party applications. More specifically, it rejects the assertion that the elimination of the Windows Media Player code would have harmful consequences for content providers and software developers. The Commission submits that it is not uncommon for content providers to implement solutions which determine what media player is installed on a given client PC and that they foresee the measures to be taken where the presentation of their content requires a particular media player or a particular version of a given media player (recital 1037 to the contested decision), and it rejects Microsoft's argument that there is an advantage in preserving Windows as a 'consistent platform' (recital 1041 to the contested decision). The Commission considers, in substance, that Microsoft cannot rely on the fact that its practice allows software developers whose products rely on media players to have a 'focal point' for that purpose, since that practice distorts competition on the merits (recital 1042 to the contested decision).

(b) Arguments of the parties

1207 Microsoft claims that the remedy prescribed in Article 6(a) of the contested decision infringes the principle of proportionality from three perspectives.

1208 In the first place, the remedy ignores the legitimate interest of software developers and Internet site creators in 'preserving Windows as a stable and consistent platform'.

1209 In the second place, the remedy infringes Microsoft's moral rights by requiring it to degrade its Windows operating system and to license that degraded version of its

product to third parties. In particular, the remedy ignores Microsoft's right to object to changes in its work or to the deformation, mutilation or other impairment of it.

1210 In the third place, Microsoft maintains that the remedy prescribed in Article 6(a) of the contested decision is 'internally inconsistent' and impossible for Microsoft to comply with, because it is required to remove important functionality from Windows and at the same time ensure that the degraded version of Windows is not less performing than the version with Windows Media Player.

1211 The Commission contends that the remedy is proportionate, especially since Microsoft retains the right to offer a bundled version of Windows with Windows Media Player. Nor does the remedy prevent Microsoft from marketing its media player or from continuing to offer it separately for downloading.

1212 The Commission disputes Microsoft's assertion that it is impossible to identify the software code of Windows Media Player or to comply with the remedy prescribed in Article 6(a) of the contested decision, and points out that Microsoft itself acknowledges that it has already developed an unbundled version of Windows which is ready to be placed on the market. It refers, moreover, to recitals 1018 to 1021 to the contested decision.

1213 The Commission further contends that Microsoft has adduced no evidence capable of showing that third parties would suffer harm or that the operating system would be degraded as a result of the remedy.

1214 As regards the alleged infringement of Microsoft's moral rights, the Commission asserts that Microsoft is not 'normally considered [to be] the rightholder of moral rights in Europe'. Nor does the remedy prevent the authors of the work from claiming 'paternity' or involve any disclosure of the code.

1215 Last, the Commission, supported on this point by SIIA, contends that the measures provided for by the judgment of the District Court of 1 November 2002 are not sufficient to remedy the tying abuse identified in the contested decision. That judgment does not require Microsoft to remove the Windows Media Player code from the client PC operating system, but only to provide a means for OEMs and end users to hide the on-screen icon and menu entries used to access the Windows Media Player software. Furthermore, Microsoft designed the 'hiding' mechanism in such a way that Windows Media Player can be reactivated and can override the default settings chosen by users. The remedies referred to in that judgment therefore do not affect the ubiquity of the Windows Media Player code on client PCs or, consequently, the incentives for software developers and content providers to 'focus on Windows Media Player as the platform technology for their complementary offerings'.

(c) Findings of the Court

1216 First of all, the Court notes that, in support of the present plea, Microsoft reiterates in essence the same arguments it submitted in the first plea on the condition relating to the absence of objective justification (see paragraphs 1102 to 1122 above).

1217 The grounds on which the Court held that those arguments were unfounded must apply also in the examination of the present plea.

1218 Thus, in the first place, as regards the argument that the Commission failed to take account of the interest of software developers and Internet site creators in having a stable and well-defined platform, it is sufficient to refer to paragraphs 1148 to 1153 above.

1219 In the second place, Microsoft's argument that the remedy prescribed in Article 6(a) of the contested decision requires it to degrade its Windows operating system and to license such a degraded version of its product to third parties has already been refuted at paragraph 1165 above.

1220 In that regard, it must be borne in mind that the contested decision does not require Microsoft to offer a version of Windows from which all multimedia files, including those relating to the basic multimedia infrastructure of the operating system, have been removed. The only files affected are the files constituting Windows Media Player, which Microsoft itself distinguishes from the other files in its technical documentation (see paragraphs 916 to 1164 above). It must also be borne in mind that the example of Windows XP Embedded shows that the absence of Windows Media Player from the operating system does not harm the integrity of the other functionalities of that system (see paragraph 1165 above).

1221 Furthermore, between June 1998 and May 1999 Microsoft offered its streaming media player as separate application software, without any effect on the Windows operating system. As already stated at paragraph 936 above, Microsoft acknowledged at the hearing that there was no technical reason in May 1999 to prevent it

from continuing to supply its media player in that form, that is to say, without integrating it in the Windows 98 Second Edition operating system.

1222 In the third place, it follows from the considerations set out at paragraphs 1219 to 1221 above that Microsoft's assertion that the remedy prescribed in Article 6(a) of the contested decision is internally inconsistent and impossible to comply with is unfounded. That assertion rests on the incorrect premiss that the version of Windows imposed by Article 6(a) is a degraded version of Microsoft's operating system. As the Commission correctly submits in its pleadings, while it is clear that when Windows Media Player is removed from Windows the functionalities offered by that player are no longer available on such a version of the operating system, it cannot be inferred that that version is degraded or that it performs less well in other respects than a version of the operating system bundled with Windows Media Player. The requirement that Microsoft offer a 'full-functioning' version of its Windows client PC operating system without Windows Media Player (Article 6(a) of the contested decision) must be seen in the light of, in particular, the requirement at recital 1012 to the contested decision that '[t]he unbundled version of Windows must in particular not be less performing than the version of Windows which comes bundled with [Windows Media Player], regard being had to [Windows Media Player]'s functionality which, by definition, will not be part of the unbundled version of Windows'.

1223 Next, the Court considers that, far from being disproportionate, the remedy prescribed in Article 6(a) of the contested decision is an appropriate means of putting an end to the abuse in question and of resolving the competition issues identified, while causing the least possible inconvenience to Microsoft and its business model.

1224 Thus, the implementation of that measure does not entail any change in Microsoft's current technical practice other than the development of the version of Windows imposed by Article 6(a) of the contested decision.

1225 In particular, Microsoft retains the right to continue to offer the bundle of Windows and Windows Media Player. It must be borne in mind that the Commission's sole intention is to make it possible for consumers to obtain Windows without Windows Media Player.

1226 Furthermore, as the Commission correctly observes, the remedy does not affect Microsoft's ability to market its media player and, in particular, to offer it for downloading over the Internet.

1227 Last, the Court finds that, for the reasons set out at paragraph 974 above, the Commission was correct to consider that the measures taken by Microsoft pursuant to the United States settlement were not sufficient to put an end to the abuse and to resolve the competition issues identified.

1228 It follows from all of the foregoing considerations that the second plea must be rejected as unfounded.

1229 It follows that the claims relating to the annulment of the contested decision must be rejected in so far as they concern the bundling of Windows and Windows Media Player.

D — *The independent monitoring trustee*

1. Contested decision

1230 The first paragraph of Article 4 of the contested decision provides that Microsoft is to bring to an end the abusive conduct established in Article 2, in accordance with the procedures laid down in Articles 5 and 6 of that decision. Microsoft is also required to refrain from repeating any act or conduct having the same or equivalent object or effect as that abusive conduct (second paragraph of Article 4).

1231 By way of remedy for the abusive refusal to supply the interoperability information, Article 5 of the contested decision orders Microsoft to disclose, within 120 days of notification of that decision, that information to any undertaking having an interest in developing and distributing work group server operating systems and to allow, on reasonable and non-discriminatory terms, those undertakings to use the information in question to develop and distribute work group server operating systems. Microsoft is also required to ensure that the interoperability information disclosed is kept updated on an ongoing basis and in a timely manner. Last, Article 5 of the contested decision orders Microsoft, within 120 days of the date of notification of that decision, to set up an evaluation mechanism that will give interested undertakings a workable possibility of informing themselves about the scope and terms of use of the interoperability information.

1232 By way of remedy for the abusive bundling of the Windows client PC operating system and Windows Media Player, Article 6 of the contested decision orders Microsoft, inter alia, to offer, within 90 days of notification of the decision, a full-functioning version of its Windows client PC operating system which does not

incorporate Windows Media Player, although Microsoft is to retain the right to offer a bundle of the Windows client PC operating system and Windows Media Player.

1233 Article 7 of the contested decision, moreover, provides for the establishment of a suitable mechanism to assist the Commission in monitoring Microsoft's compliance with the contested decision and including, in particular, the appointment of an independent monitoring trustee. Article 7 provides that that mechanism is to form the subject-matter of a proposal by Microsoft within 30 days of notification of the decision, while in the event that the Commission considers that the proposed mechanism is not suitable, it is to 'retain the right to impose such a mechanism by way of a decision'.

1234 At recitals 1043 to 1048 to the contested decision, the Commission describes in greater detail the monitoring mechanism referred to in the preceding paragraph and, in particular, sets out the '[g]uiding principles for Microsoft [when it draws up its proposal for the appointment of an independent monitoring trustee]' (recital 1044 to the contested decision).

1235 Thus, at recital 1045 to the contested decision, the Commission states that the monitoring trustee's 'primary responsibility' is to issue opinions, and to do so upon application by a third party or by the Commission, or on his own initiative, on 'whether Microsoft has, in a specific instance, failed to comply with [the contested decision], or on any issue that may be of interest with respect to the effective enforcement of [that decision]'.

1236 At recitals 1046 and 1047 to the contested decision, the Commission describes the task of the monitoring trustee with respect to each of the two abuses at issue (see paragraph 1261 below).

1237 At recital 1048 to the contested decision, the Commission establishes the principles which Microsoft must take into account in its proposal concerning the monitoring trustee. In the first place, the monitoring trustee is to be appointed by the Commission from a list of persons submitted by Microsoft and Microsoft is to devise a procedure which allows the Commission to appoint a monitoring trustee of its choosing if it does not deem any of the persons proposed by Microsoft adequate for the task. In the second place, the monitoring trustee must be independent of Microsoft and 'provisions [must] be established to ensure that [he] is not and will not become exposed to a conflict of interest'. The monitoring trustee must possess the necessary qualifications to carry out his mandate and it should be possible for him to hire experts to carry out certain precisely-defined tasks on his behalf. In the third place, provisions must be established in order to guarantee that the monitoring trustee has 'access to Microsoft's assistance, information, documents, premises and employees to the extent that he may reasonably require such access in carrying out his mandate'. In the fourth place, the monitoring trustee must have full access to the source code of the relevant Microsoft products. Last, in the fifth place, 'all costs of establishment of the monitoring trustee, including a fair remuneration for the monitoring trustee's activities, should be borne by Microsoft'.

2. Arguments of the parties

1238 Microsoft contends that the obligation imposed on it by Article 7 of the contested decision to appoint an independent monitoring trustee is unlawful, since the Commission lacks authority, first, to delegate to a private individual the enforcement powers conferred on it by Regulation No 17 and, second, to require Microsoft to bear the costs of monitoring its compliance with the contested decision, including remuneration of the monitoring trustee.

1239 As a preliminary point, Microsoft denies that its application for annulment of Article 7 of the contested decision is premature. In particular, the Commission

cannot rely on the fact that it could have imposed a monitoring mechanism by adopting a separate decision if it had not been satisfied with Microsoft's proposal and that Microsoft could then have sought annulment of that decision.

1240 Next, in the first place, Microsoft asserts that it is clear from recitals 1043 to 1048 to the contested decision that the powers delegated to the monitoring trustee in the present case are powers of investigation and enforcement that normally belong to the Commission. Although the monitoring trustee's primary task is to issue opinions on compliance with the contested decision, he also has the power to investigate the measures taken by Microsoft to comply with that decision. Microsoft points out that footnote 1317 to the contested decision states that '[t]he monitoring trustee should not only be reactive, but should play a proactive role in the monitoring of Microsoft's compliance'. The contested decision is thus intended to establish an independent source of measures of investigation and enforcement.

1241 Under Articles 11 and 14 of Regulation No 17 and Articles 18 to 21 of Council Regulation (EC) No 1/2003 on the implementation of the competition rules laid down in Articles 81 [EC] and 82 [EC] (OJ 2003 L 1, p. 1), however, the powers of investigation and enforcement in connection with those rules belong exclusively to the Commission and the national competition authorities. Neither of those regulations authorises the Commission to delegate those powers to third parties or, *a fortiori*, to private individuals.

1242 Furthermore, by thus delegating its powers, the Commission deprives Microsoft of guarantees recognised to undertakings by the case-law to safeguard their rights of defence.

1243 In the reply, Microsoft makes clear that it has no objection to an independent monitoring trustee advising the Commission on technical questions. However, the Commission ought to have appointed its own expert for that purpose.

1244 In the second place, Microsoft observes that Article 7 of the contested decision, read with recital 1048(v) thereto, requires it to bear ‘all costs of establishment of the monitoring trustee, including a fair remuneration for the monitoring trustee’s activities’. In applying the competition rules, the Commission cannot impose on the undertaking concerned any pecuniary charges other than fines and periodic penalty payments.

1245 Microsoft submits that the Commission cannot invoke its power to order an undertaking to bring an infringement to an end as a ground for making that undertaking responsible for the costs associated with the monitoring trustee. The imposition of such a pecuniary charge has no legal basis in Regulation No 17, Regulation No 1/2003 or any other provision.

1246 The Commission contends, primarily, that Microsoft’s arguments concerning the question of the monitoring trustee are inadmissible in that they are premature, conjectural and insufficient to warrant annulment of Article 7 of the contested decision. That article requires Microsoft to submit a proposal for the establishment of a monitoring mechanism, while reserving to the Commission the right to impose such a mechanism by adopting a decision should it consider that Microsoft’s proposed mechanism is not suitable. Recitals 1044 to 1048 to the contested decision set out the guiding principles that Microsoft should take into account in drawing up that proposal, but most of those principles are not imposed on Microsoft by Article 7 of the contested decision. In particular, that article does not specify either the independent monitoring trustee’s precise functions or the ‘source’ of his remuneration. Microsoft is thus free to suggest a narrower scope of action than that envisaged in the contested decision and different arrangements for remuneration. The Commission would then be able to reject those proposals and impose a differently-worded mandate by decision. Such a decision would not merely be confirmatory of the contested decision and would be open to challenge.

1247 In the alternative, the Commission contends that Microsoft's arguments are unfounded.

1248 In the first place, the Commission submits that it does not follow from recitals 1044 to 1048 to the contested decision that it delegated to a private individual the powers of investigation and enforcement conferred on it by Articles 81 EC and 82 EC. From the perspective of 'information-gathering', the contested decision provides only for a 'consensual mechanism' which permits the swift resolution of many of the technical issues that are likely to arise concerning the implementation of the remedies. Admittedly, recital 1048 and footnote 1317 to the contested decision provide that the independent monitoring trustee can put questions to Microsoft and have access to documents and to the source code of the relevant products, but there is nothing to prevent Microsoft from specifying in its proposal for the mandate that it could refuse to answer such questions or to grant access to the requested information. In the event of such a refusal, the Commission would consider whether it would be appropriate to take action pursuant to Chapter V of Regulation No 1/2003 and would thus retain full discretion as concerns the use of its powers of investigation.

1249 In answer to a written question put by the Court, the Commission stated that Article 7 of the contested decision was based on Article 3 of Regulation No 17 and that it constituted an 'expression' of the power conferred on it by that article to adopt decisions ordering undertakings to bring an infringement to an end.

1250 In the second place, the Commission claims that the obligation imposed on Microsoft to bear the costs associated with the remuneration of the monitoring trustee clearly does not form part of the sanctions provided for in Regulation No 17 and Regulation No 1/2003. If Article 7 of the contested decision must be understood as imposing an obligation as regards the remuneration of the monitoring trustee, that obligation must have its legal basis in Article 3 of Regulation No 17. A decision adopted on the basis of that article may include an order to do certain acts or provide certain advantages which have been wrongfully withheld as well as

prohibiting the continuation of certain action, practices or situations which are contrary to the Treaty and will entail some costs for the addressee. The Commission refers to recital 1044 to the contested decision and observes that the implementation of the remedies requires effective monitoring of compliance with the obligations imposed on Microsoft by the contested decision.

3. Findings of the Court

¹²⁵¹ Microsoft seeks annulment of Article 7 of the contested decision on the ground that, by unlawfully delegating its powers of investigation and enforcement to a third party, the Commission exceeded its powers under Article 82 EC and Regulation No 17. Microsoft maintains that the imposition on an undertaking of a monitoring mechanism such as that referred to in Article 7 of the contested decision, and the charging to that undertaking of the remuneration of a third party appointed by the Commission to assist its task of monitoring compliance with the remedies ordered in an infringement decision, have no legal basis in Community law.

¹²⁵² The Commission contends that that application for annulment is premature and therefore inadmissible, in that Article 7 of the contested decision imposes no obligation on Microsoft but merely invites it to submit a proposal for the establishment of a monitoring mechanism; and in any event, that article entails no delegation of the Commission's powers. The Commission claims that that monitoring mechanism and the charging to Microsoft of the remuneration of the independent monitoring trustee have their basis in Article 3 of Regulation No 17, which allows it to order the undertakings concerned to bring to an end an infringement which the Commission has found.

¹²⁵³ It must be borne in mind that the legality of Article 7 of the contested decision falls to be assessed by reference to the facts and the law as they existed at the time of adoption of the contested decision. At that time Regulation No 17 was still in force, whereas Regulation No 1/2003, which replaced it, became applicable on 1 May 2004.

1254 It must also be borne in mind that the powers of investigation and enforcement which the Commission enjoyed at the time of adoption of the contested decision, in so far as they are relevant to the application for annulment of Article 7 of that decision, were its power under Article 3(1) of Regulation No 17 to require the undertakings concerned to bring to an end an infringement, its powers under Article 11 of that regulation to request information, its powers of investigation under Article 14 of that regulation and the power under Article 16 of that regulation to impose periodic penalty payments on undertakings in order to compel them to put an end to the infringement found.

1255 First of all, the Court rejects the Commission's argument that the application for annulment of Article 7 is premature in that the article merely invites Microsoft to submit a proposal prior to the adoption by the Commission of a final decision on the establishment of a monitoring mechanism. The fact that Article 7 of the contested decision contains an invitation to submit a proposal cannot alter the binding nature of that article in so far as it constitutes the exercise by the Commission of its power to order that an infringement be brought to an end.

1256 When the Commission finds in a decision that an undertaking has infringed Article 82 EC, that undertaking is required to take, without delay, all the measures necessary to comply with that provision, even in the absence of specific measures prescribed by the Commission in that decision. Where remedies are provided for in the decision, the undertaking concerned is required to implement them — and to assume all the costs associated with their implementation —, failing which it exposes itself to liability for periodic penalty payments imposed pursuant to Article 16 of Regulation No 17 (see paragraph 1259 below).

1257 It follows from the wording of Article 7 of the contested decision, and in particular from the period of 30 days imposed on Microsoft, that it was precisely such a binding measure that was provided for by that provision. Although the first reaction envisaged in the event that Microsoft should fail to submit a suitable proposal is that

referred to in the second paragraph of Article 7, namely the imposition of a monitoring mechanism by way of a decision, the fact remains that if Microsoft fails to comply with the obligation to submit a proposal it also incurs the risk of periodic penalty payments. The binding nature of the measure thus ordered cannot be affected by the mere fact that the Commission retains the right to impose such a mechanism itself in the event that it considers that Microsoft's proposal is not suitable. Failure to comply with such a specific measure ordered in a decision designed to put an end to an infringement of Article 82 EC constitutes a separate infringement of Community law, in this particular case Article 3 of Regulation No 17.

1258 That assessment is not invalidated by the Commission's argument that Microsoft could have submitted a different proposal better tailored to its own perception of what the Commission was entitled to require it to do. It is settled case-law that the operative part of an act is indissociably linked to the statement of reasons for it and when it has to be interpreted account must be taken of the reasons that led to its adoption (Case C-355/95 P *TWD v Commission* [1997] ECR I-2549, paragraph 21; Case C-91/01 *Italy v Commission* [2004] ECR I-4355, paragraph 49; and Case T-137/02 *Pollmeier Malchow v Commission* [2004] ECR II-3541, paragraph 60).

1259 The Court considers that in the light of the role which the Commission envisages for the monitoring trustee, as summarised at paragraph 1261 below, and of the powers conferred on the Commission by Articles 3 and 16 of Regulation No 17, Article 7 of the contested decision has the effect that if Microsoft failed, within the prescribed period of 30 days, to submit a proposal consistent with the principles set out, in particular, at recitals 1045 to 1048 to the decision, it would infringe the contested decision and incur the risk of being ordered to pay periodic penalty payments pursuant to Article 16 of Regulation No 17. It follows that Microsoft's legal situation was directly affected by Article 7 of the contested decision and that the application for annulment of that provision cannot be characterised as premature or as speculative, as the Commission contends.

1260 Next, the Court considers it appropriate to examine whether Article 7 of the contested decision has a legal basis in Regulation No 17 or whether, as Microsoft maintains, the Commission exceeded its powers of investigation and enforcement in so far as it ordered Microsoft to accept the establishment of an independent monitoring trustee endowed with the role and powers in question.

1261 It follows from recitals 1043 to 1048 to the contested decision that the monitoring trustee's task includes, in particular, the following functions:

- his 'primary responsibility' is to issue opinions on whether Microsoft has, in a specific instance, failed to comply with the contested decision (including compliance with the obligation to implement the remedies correctly);

- those opinions will be given either upon application by a third party or by the Commission, or by the monitoring trustee acting on his own initiative;

- on that point, the monitoring trustee must not only be reactive but must play a proactive role in the monitoring of Microsoft's compliance (footnote 1317 to the contested decision);

- as regards the abusive refusal to disclose the interoperability information, the monitoring trustee is required to assess whether the information made available by Microsoft is complete and accurate, whether the terms under which Microsoft makes the specifications available and authorises their use are reasonable and non-discriminatory and whether the ongoing disclosures are made in a timely manner;

- as regards the abusive tying, the monitoring trustee is required to advise the Commission whether substantiated complaints by third parties about Microsoft's compliance with the contested decision are well founded from a technical point of view and, in particular, whether the version of Windows without Windows Media Player is less performing than any bundled version of Windows that Microsoft would continue to market. The monitoring trustee is also required to advise whether Microsoft hinders the performance of rival media players through selective, inadequate or untimely disclosures of Windows APIs.

¹²⁶² At recital 1048 to the contested decision, the Commission sets out the principles which Microsoft must take into account in its proposal concerning the independent monitoring trustee pursuant to the decision. Those principles are, in particular, as follows:

- (i) the monitoring trustee should be appointed by the Commission from a list of persons submitted by Microsoft;
- (ii) the monitoring trustee is to be independent of Microsoft and provisions should be established to ensure that the monitoring trustee is not and will not become exposed to a conflict of interests; he should possess the necessary qualifications to carry out his mandate, and be entitled to hire experts to carry out certain precisely-defined tasks on his behalf;
- (iii) provisions are to be established in order to guarantee that the monitoring trustee has access to Microsoft's assistance, information, documents, premises and employees to the extent that he may reasonably require such access in carrying out his mandate;

- (iv) the monitoring trustee should have full access to the source code of the relevant Microsoft products (any controversy as to the accuracy and completeness of the specifications that will be disclosed can only be resolved if the technical information is checked against the actual source code of Microsoft's products);

- (v) all costs of establishment of the monitoring trustee, including a fair remuneration for the monitoring trustee's activities, are to be borne by Microsoft.

¹²⁶³ It is clear from that description that the Commission sees the monitoring trustee's role as being to evaluate and monitor the implementation of the remedies, by having access where necessary to the resources referred to in the preceding paragraph, at (iii) and (iv), while acting independently and, indeed, on his own initiative.

¹²⁶⁴ The Commission expressly acknowledges in its pleadings that it is not entitled to delegate to a third party the powers of investigation and enforcement conferred on it by Regulation No 17. It does not accept, however, that the monitoring mechanism provided for in the contested decision entails such a delegation of powers.

¹²⁶⁵ On the other hand, as Microsoft acknowledges, the Commission is entitled to monitor the implementation by the undertaking concerned of the remedies ordered in an infringement decision and to ensure that the other measures necessary to put an end to the anti-competitive effects of the infringement are fully implemented without delay. For those purposes, it is entitled to use the powers of investigation provided for in Article 14 of Regulation No 17 and, where necessary, to use an external expert in order, inter alia, to resolve technical issues.

1266 Nor can it be disputed that where the Commission decides to obtain the assistance of an external expert it may communicate to that expert any information and documents which it may have obtained in the exercise of its powers of investigation under Article 14 of Regulation No 17.

1267 Under Article 11(4) and Article 14(3) of Regulation No 17, undertakings are required to provide the information requested by the Commission and to submit to the investigations which it orders. However, such requests and investigations are subject where necessary to the control of the Community Courts.

1268 The Court considers that by establishing a monitoring mechanism involving the appointment of an independent monitoring trustee as referred to in Article 7 of the contested decision, and charged with the functions set out, in particular, at recital 1048(iii) and (iv) to that decision, the Commission went far beyond the situation in which it retains its own external expert to provide advice when it investigates the implementation of the remedies prescribed in Articles 4, 5 and 6 of the contested decision.

1269 In effect, by Article 7 of the contested decision, the Commission requires the appointment of a trustee who, in the performance of his tasks, is independent not only of Microsoft but also of the Commission itself, in so far as he is required to act on his own initiative and upon application by third parties in the exercise of his powers. As the Commission observes at recital 1043 to the contested decision, that requirement goes beyond a mere obligation to report to the Commission on Microsoft's actions.

1270 Furthermore, the role envisaged for the monitoring trustee is not limited to putting questions to Microsoft and reporting the answers to the Commission, or to advice concerning the implementation of the remedies. As regards the obligation imposed

on Microsoft to allow the monitoring trustee, independently of the Commission, access to information, documents, premises and employees and also to the source code of its relevant products, the Court notes that no limit in time is envisaged for the continuing intervention of the monitoring trustee in monitoring Microsoft's activities related to the remedies. Furthermore, it is clear from recital 1002 to the contested decision that the Commission considers that the obligation to disclose interoperability information must apply 'in a prospective manner' to future generations of Microsoft's products.

¹²⁷¹ It follows that the Commission has no authority, in the exercise of its powers under Article 3 of Regulation No 17, to compel Microsoft to grant to an independent monitoring trustee powers which the Commission is not itself authorised to confer on a third party. The second subparagraph of Article 7 of the contested decision is therefore without legal basis, particularly in so far as it entails the delegation to the monitoring trustee of powers of investigation which the Commission alone can exercise pursuant to Regulation No 17.

¹²⁷² If, moreover, as the Commission maintains, its intention was to establish a purely consensual mechanism, there was no need to order such a mechanism in Article 7 of the contested decision.

¹²⁷³ Last, the Commission exceeds its powers in so far as Article 7 of the contested decision, read with recital 1048(v) to that decision, makes Microsoft responsible for all the costs associated with the appointment of the monitoring trustee, including his remuneration and the expenditure incurred in carrying out his functions.

¹²⁷⁴ There is no provision of Regulation No 17 that authorises the Commission to require an undertaking to bear the costs which the Commission incurs as a result of monitoring the implementation of remedies.

- 1275 It is for the Commission, in its capacity as authority responsible for applying the Community competition rules, to pursue the implementation of infringement decisions in an independent, objective and impartial manner. It would be incompatible with its responsibility in that regard for the effective implementation of Community law to depend on or be influenced by the willingness or the capacity of the addressee of the decision to bear such costs.
- 1276 The case-law shows, moreover, that the Commission does not have unlimited discretion when formulating remedies to be imposed on undertakings for the purpose of putting an end to an infringement. In the context of the application of Article 3 of Regulation No 17, the principle of proportionality requires that the burdens imposed on undertakings in order to bring an infringement to an end do not exceed what is appropriate and necessary to attain the objective sought, namely re-establishment of compliance with the rules infringed (*Magill*, cited in paragraph 107 above, paragraph 93).
- 1277 If the Commission is not competent to adopt a decision pursuant to Article 3 of Regulation No 17 imposing remedies on an undertaking which has infringed Article 82 EC, including the costs associated therewith, which exceed what is appropriate and necessary, then it is even less competent to make that undertaking responsible for the costs which are to be borne by the Commission in fulfilling its own investigation and enforcement responsibilities.
- 1278 It follows from all of the foregoing considerations that Article 7 of the contested decision has no legal basis in Regulation No 17 and therefore exceeds the Commission's powers of investigation and enforcement under Regulation No 17 in so far as it orders Microsoft to submit a proposal for the establishment of a mechanism which must include the appointment of an independent monitoring trustee empowered to access, independently of the Commission, Microsoft's assistance, information, documents, premises and employees and also the source

code of its relevant products and also provides that Microsoft is to bear all the costs of the appointment of the monitoring trustee, including his remuneration. The Commission cannot therefore retain the right to impose such a mechanism by adopting a decision in the event that it considers that the mechanism proposed by Microsoft is not suitable.

1279 It follows that Article 7 of the contested decision must be annulled to the extent described in the preceding paragraph.

II — *The claims that the fine should be annulled or that its amount should be reduced*

A — *Contested decision*

1280 For the two types of abuse identified in the contested decision, a single fine of EUR 497 196 304 is imposed (Article 3 of the contested decision).

1281 The question of the fine is examined by the Commission at recitals 1054 to 1080 to the contested decision.

1282 In the first place, the Commission states that it took into account the provisions of Article 15(2) of Regulation No 17 (recital 1054 to the contested decision) and observes that, in fixing the amount of the fine, it must have regard to the gravity and duration of the infringement and also to any aggravating or attenuating circumstances (recital 1055 to the contested decision).

1283 In the second place, the Commission rejects the arguments which Microsoft had put forward during the administrative procedure in support of its argument that no fine ought to be imposed on it in the present case (recitals 1056 to 1058 to the contested decision).

1284 First, the Commission states that the contested decision establishes to the requisite legal standard that Microsoft intentionally, or at least negligently, infringed Article 82 EC and Article 54 of the EEA Agreement (recital 1057 to the contested decision). Second, it denies having introduced a 'new rule of law' and concludes that Microsoft ought to have been aware that it was infringing those provisions (*ibid.*). Third, it rejects Microsoft's argument that the abusive tying cannot have begun in 1999, since certain media functionality has been integrated in Windows since 1992 (*ibid.*).

1285 In the third place, the Commission explains the way in which it calculated the fine (recitals 1059 to 1079 to the contested decision).

1286 First, the Commission determined the basic amount of the fine according to the gravity and duration of the infringement (recitals 1059 to 1078 to the contested decision).

1287 The Commission observes that, in order to assess the gravity of the infringement, it must take into consideration the nature of the infringement, its impact on the market and the size of the relevant geographic market (recital 1060 to the contested decision).

1288 As regards the nature of the infringement, the Commission draws attention, at recitals 1061 to 1068 to the contested decision, to the following factors:

- the Court of Justice has on several occasions declared that refusals to supply by undertakings in a dominant position and tied sales by such undertakings are unlawful;
- Microsoft has a dominant position on the client PC operating systems market, with a market share of over 90%;
- that market, and the other two markets identified in the contested decision, are characterised by the existence of significant direct and indirect network effects;
- in those circumstances, Microsoft adopted a leveraging strategy which constitutes two separate abuses;
- as regards the abusive refusal to supply, Microsoft adopted a general pattern of conduct aimed at the creation and exploitation to its advantage of a range of privileged connections between its client PC operating system and its work group server operating system and which entails a disruption of previous higher levels of supply;
- that abusive practice enables Microsoft to extend its dominant position to the market for work group server operating systems, which is of 'significant value';

- Microsoft's capture of that market is likely to have other harmful effects on competition;

- as regards the abusive tying, it ensures that the ubiquity of Microsoft's client PC operating system is shared by Windows Media Player, which creates disincentives for OEMs to pre-install third-party media readers on client PCs and harms competition on the streaming media player market;

- that abusive practice also has significant effects on competition for the delivery of content over the Internet and in the multimedia software industry;

- last, domination of the streaming media player market may constitute a strategic gateway to a range of related markets, some of which are very profitable.

¹²⁸⁹ In the light of the factors mentioned in the preceding paragraph, the Commission concludes that the infringement must, by its nature, be characterised as 'very serious' (recital 1068 to the contested decision).

¹²⁹⁰ As regards the effects of the infringement on the market, the Commission finds that '[t]he 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' (recital 1069 to the contested decision).

1291 The Commission bases that finding on the following factors:

- the abusive refusal to supply interoperability information already allowed Microsoft to acquire a dominant position on the work group server operating systems market and created a risk that competition would be eliminated on that market (recital 1070 to the contested decision);

- the abusive tying already enabled Microsoft to achieve a leading position on the streaming media players market and the evidence examined in the contested decision shows that ‘the market may already be tipping in favour of [Windows Media Player]’ (recital 1071 to the contested decision).

1292 As regards the size of the relevant geographic market, the Commission states that the three markets identified in the contested decision cover the whole of the EEA (recital 1073 to the contested decision).

1293 At recital 1074 to the contested decision, the Commission concludes from the foregoing analysis that Microsoft committed a very serious infringement of Article 82 EC and Article 54 of the EEA Agreement, for which the likely fine is above EUR 20 million. At the following recital, it fixes an initial amount for gravity at EUR 165 732 101, the starting point of the basic amount of the fine (‘the starting amount’).

1294 At recital 1076 to the contested decision, the Commission states that, in order to ensure a sufficient deterrent effect on Microsoft, and in the light of that undertaking’s significant economic capacity, the starting amount should be doubled, which brings the amount of the fine at that stage to EUR 331 464 203.

1295 Furthermore, as regards duration, the Commission states that the abusive refusal to supply began in October 1998 and had not yet finished, while the abuse tying began in May 1999 and has not yet finished (recital 1077 to the contested decision). The Commission concludes that the total duration of the infringement committed by Microsoft is therefore five years and five months, which corresponds to an infringement of long duration (*ibid.*). The Commission therefore increases the amount stated in the preceding paragraph by 50% and thus fixes the basic amount of the fine at EUR 497 196 304 (recital 1078 to the contested decision).

1296 Second, the Commission considers that there is no aggravating or attenuating circumstance to be taken into account in the present case (recital 1079 to the contested decision). The final amount of the fine is therefore set at EUR 497 196 304 (recital 1080 to the contested decision).

B — *Arguments of the parties*

1297 Microsoft submits, primarily, that the fine imposed by Article 3 of the contested decision is wholly unfounded in the absence of an infringement of Article 82 EC.

1298 In the alternative, Microsoft claims that the fine is excessive and disproportionate and that it should therefore be annulled or substantially reduced.

1299 In the first place, Microsoft contends that there is no justification for imposing a fine when the infringements result from 'novel theories of law'. In support of that assertion, Microsoft refers to extracts from press releases issued by the Commission

concerning competition cases (Press Releases IP/01/584 of 20 April 2001 and IP/04/705 of 2 June 2004) and to the Commission's practice of not imposing fines in cases which raise novel or complex issues. In some cases, moreover, the Commission has imposed only a symbolic fine on the undertakings concerned because they could not easily have concluded from its previous practice in taking decisions that their conduct infringed the competition rules.

1300 Microsoft contends that the principles applied by the Commission in the present case represent a significant departure from established case-law and are the product of 'substantial modification of the Commission's theories as the case progressed over the last five years'.

1301 Thus, as regards the abusive conduct consisting in its refusal to supply its competitors with interoperability information and to authorise its use, Microsoft asserts that the Commission has never precisely identified the information concerned. Microsoft reiterates that Sun did not ask it to license its intellectual property rights for use in the development of work group server operating systems in the EEA. Last, the Commission's position is unprecedented in that it imposes an obligation to license valuable intellectual property rights to facilitate the development of products that compete directly against Windows server operating systems. For those various reasons Microsoft had good reason to believe that the present case did not present the exceptional circumstances required by the Court of Justice.

1302 Furthermore, as regards the abusive conduct consisting in the fact that Microsoft made the supply of its Windows client PC operating system conditional upon the simultaneous acquisition of Windows Media Player, Microsoft observes, first of all, that the Commission's tying theory was not even mentioned in the first statement of objections. Next, this is the first time that the Commission has considered that

improving a product through the integration of 'improved' functionality, in this instance media functionality incorporating streaming capacity, without simultaneously offering a version of that product at the same price without that functionality, could constitute an infringement of Article 82 EC.

1303 In the second place, Microsoft claims that the amount of the fine is excessive. In support of that assertion, it puts forward three series of arguments.

1304 First, it submits that the starting amount of the fine is not justified. First of all, the way in which that amount is set at EUR 165 732 101 is arbitrary and lacks proper reasoning. Next, the applicant disputes the Commission's assertion that the infringement was 'very serious'. It took the Commission more than five years to arrive at the conclusion that the conduct in question was objectionable, and even longer to determine what remedies were appropriate. Last, Microsoft was unable to predict that its conduct might be regarded as constituting an infringement of the competition rules, still less a 'very serious' infringement.

1305 In the reply, Microsoft challenges the Commission's assertion that the abuses have a significant impact on the relevant markets.

1306 Also in the reply, Microsoft claims that the Commission did not merely take into account the 'products ... concerned by the infringements' when setting the starting amount, but took as its basis Microsoft's turnover on the market for server operating systems in general. In fact, less than one quarter of the applicant's revenues from those systems can be attributed to the work group server operating systems market as defined by the Commission.

1307 Second, Microsoft contends that the Commission was not correct to double the starting amount on account of its 'significant economic capacity' and the need to ensure a sufficient deterrent effect. The Commission does not claim that Microsoft was unwilling to comply with the law and, on the contrary, Mr Monti, the then Member of the Commission responsible for competition, commended Microsoft's efforts to arrive at an amicable settlement of the case and also the professionalism of the members of its team. Nor can the Commission invoke the need to deter other undertakings from committing similar infringements. Last, the starting amount is based on Microsoft's worldwide turnover and profits and the same figures are used to justify the multiplier for deterrence (footnote 1342 to the contested decision), which amounts to 'double counting'. The other factors mentioned in footnote 1342 to the contested decision do not justify the doubling of the starting amount.

1308 Third, Microsoft claims that the increase of the fine by 50% of double the starting amount, to reflect the duration of the infringement, is excessive. First of all, the Commission has not taken account of the measures Microsoft took to address the issues raised by the Commission during their discussions and in the statements of objections or of the commitments which Microsoft made under the United States settlement. Next, the Commission failed to take account of the duration of the administrative procedure and Microsoft cannot be criticised for having attempted to reach a settlement with the Commission. And Microsoft could not have brought the alleged abuses to an end earlier, since 'the Commission's theories changed so much over six years'.

1309 The Commission contends that Microsoft's main argument must be rejected, since it has not established that the Commission erred in finding that it had infringed Article 82 EC.

1310 The Commission also disputes Microsoft's alternative argument.

1311 In the first place, the Commission maintains that the fine is justified.

1312 First, it did not apply any new rule of law in the present case.

1313 Thus, as regards the abusive refusal, the Commission took account of the possibility that '[intellectual property rights] are involved'. Consequently, in reliance on judgments such as *Magill*, cited in paragraph 107 above, it devoted a large part of the contested decision to showing that in exceptional circumstances a refusal to license intellectual property rights could be an abuse of a dominant position. Furthermore, as the recitals to Directive 91/250 specifically indicate that withholding interoperability information may constitute an abuse of a dominant position, Microsoft cannot seriously maintain that it was not aware that it was infringing Article 82 EC.

1314 Furthermore, the Commission has already rebutted Microsoft's arguments relating to the scope of Sun's request and has already stated that the possibility that the products of the copyright owner and the future products of the licensee would compete was not precluded by the case-law. In the rejoinder, the Commission further submits that it had identified at the time of the first statement of objections 'a certain amount of information that was wrongfully withheld by Microsoft' and reiterates that Microsoft had been fully aware that it was refusing to give its competitors access to the interoperability information referred to in the contested decision.

1315 As regards the tying abuse, the Commission acknowledges that the present case may differ from previous tying cases in that in the contested decision it conducted an assessment of the actual effects of that conduct. However, it cannot be inferred that

the Commission developed a new theory and its findings are based on well-known legal and economic principles.

¹³¹⁶ Second, the Commission submits that Microsoft's significant financial and legal resources were such that it was capable of predicting that its conduct in using its dominant position on one market to conquer another market would be characterised as abusive. Furthermore, the Community Courts have consistently rejected the argument that no fine should be imposed when the undertaking concerned could not be aware that it was infringing the competition rules. Last, Microsoft cannot rely on the fact that the Commission did not impose a fine on an undertaking in a different case.

¹³¹⁷ In the second place, the Commission contends that the fine is not excessive and points out that it represents only 1.62% of Microsoft's worldwide turnover in the business year ending 30 June 2003.

¹³¹⁸ First, the Commission has a margin of discretion when setting the amount of a fine and is not required to apply specific mathematical formulae. Its obligation to state reasons does not require it to set out in its decision the statements of figures relating to the calculation of the fines. In accordance with the Guidelines on the method of setting fines imposed pursuant to Article 15(2) of Regulation No 17 and Article 65(5) [CS] (OJ 1998 C 9, p. 3; 'the Guidelines'), moreover, it assessed the gravity of the infringement in the light of its nature, its impact on the market and the size of the relevant geographic market.

1319 The Commission set the starting amount of the fine not on the basis of Microsoft's worldwide turnover but on the basis of its turnover in the EEA on the market for client PC and work group server operating systems. In footnote 217 to the defence, the Commission states that the starting point represents 7.5% of that turnover. The Commission concludes that Microsoft's assertion that there is double counting is unfounded. In response to Microsoft's assertion that it took into account its turnover on the market for operating systems for servers in general, the Commission states that it relied on the figures provided by Microsoft in response to a request for information concerning work group server operating systems. The Commission refers, on that point, to a letter which Microsoft sent to it on 9 March 2004 (annex D.16 to the rejoinder).

1320 Second, the Commission claims that it was entitled to apply a weighting of 2 to the starting amount of the fine. That starting amount represented less than 1% of Microsoft's turnover during the last business year, which would not have made the fine sufficiently deterrent. When fixing that multiplier, it took account of the fact that large undertakings generally have resources which make them better able to be aware of the requirements and consequences of competition law than smaller undertakings are.

1321 The Commission also submits that it is clear from the case-law that the objective of deterrence which it is entitled to pursue when setting the amount of fines is intended to ensure that undertakings comply with the competition rules laid down in the Treaty when conducting their business within the Community or the EEA (Case T-224/00 *Archer Daniels Midland and Archer Daniels Midland Ingredients v Commission* [2003] ECR II-2597, paragraphs 110 and 111). It follows that the deterrent nature of a fine imposed for infringement of the Community competition rules cannot be assessed by reference solely to the particular situation of the undertaking sanctioned. It is necessary not only to deter that undertaking from

repeating the same infringement or from committing infringements of the competition rules but also to deter other undertakings 'of similar size and resources' from committing similar infringements.

- 1322 The Commission also emphasises that it did not claim that Microsoft had obstructed its investigation and that it did not find any aggravating circumstance on Microsoft's part.
- 1323 Third, the Commission denies that the increase of 50% which it applied to the amount determined for gravity, in order to reflect the duration of the infringement, is excessive. It followed the normal practice of applying, for long duration, an increase of 10% for each year of participation in the infringement.
- 1324 The Commission submits that Microsoft cannot rely on the measures which it took to remedy the issues raised by the Commission or under the United States settlement, which have no relevance to the calculation of the duration of the infringement. The Commission refers to recitals 241, 242 and 270 to 279 to the contested decision and submits that those measures did not bring the infringement to an end.
- 1325 Last, the Commission disputes Microsoft's argument relating to the duration of the administrative procedure and observes, in particular, that that duration was objectively justified by the complexity of the case and the need to ensure Microsoft's rights of defence.

C — Findings of the Court

1326 The present submissions call upon the Court to examine the legality of Article 3 of the contested decision and, if appropriate, to exercise its unlimited jurisdiction and annul or reduce the fine imposed on Microsoft by that article.

1327 The Commission imposed a single fine on Microsoft for the two abuses found in Article 2 of the contested decision. It is apparent from recitals 1061 to 1068 to that decision that the Commission, while recognising the existence of two separate abuses, none the less considered that Microsoft committed a single infringement, namely the application of a strategy consisting in leveraging its dominant position on the client PC operating systems market (see, in particular, recital 1063 to the contested decision).

1328 It follows from recitals 1054 to 1080 to the contested decision that, even though the decision does not expressly say so, the Commission calculated the amount of the fines according to the method set out in the Guidelines.

1329 Microsoft claims, primarily, that Article 3 of the contested decision should be annulled in that, as there has been no infringement of Article 82 EC, the fine has no legal basis.

1330 That argument must be rejected. It follows from the assessment of the refusal to supply and authorise the use of the interoperability information, and also of the bundling of the Windows client PC operating system and Windows Media Player,

that the Commission was correct to find that Microsoft had infringed Article 82 EC by adopting those two courses of conduct.

1331 In the alternative, Microsoft maintains that the fine is excessive and disproportionate and should therefore be annulled or substantially reduced. In particular, the two types of conduct referred to in Article 2 of the contested decision are wholly new forms of abuse of a dominant position and Microsoft could not have predicted that its conduct, consisting in exercising its intellectual property rights with respect to a valuable technology which it developed and in introducing new technology to an existing product, would be interpreted by the Commission as constituting an infringement of Article 82 EC.

1332 The Court finds that the arguments put forward by Microsoft in the alternative are unfounded and, in particular, that Microsoft has not shown that the Commission erred in assessing the gravity and duration of the infringement or in setting the amount of the fine.

1333 It must be borne in mind that in the examination of the issues arising in the first abuse, the Court confirmed the validity of the Commission's finding that Microsoft's refusal — and the Commission proceeded on the premiss that the refusal might represent a refusal to license Microsoft's intellectual property rights to a third party — was abusive since, first, it took place in exceptional circumstances such as those envisaged in the case-law, which, in the public interest in maintaining effective competition on the market, permitted an interference with the exclusive right of the owner of the intellectual property right and, second, it was not objectively justified.

- 1334 It must also be borne in mind that, in the examination of the issues of the second abuse, the Court found that the Commission had established to the requisite legal standard that the fact that Microsoft made the supply of the Windows client PC operating system conditional on the simultaneous acquisition of the Windows Media Player software satisfied the conditions for a finding of abusive tying within the meaning of Article 82 EC and was not objectively justified.
- 1335 In the first place, as regards Microsoft's argument that the two abuses found in Article 2 of the contested decision result from a 'new interpretation of the law' (see paragraphs 1299 to 1302 above), it is sufficient to state that it has already been established by the Court, in its examination of the two sets of claims of annulment of the contested decision, that Microsoft's argument was unfounded. That examination shows that the Commission did not apply any new rule of law in the present case.
- 1336 Thus, as regards, first, the abuse found in Article 2(a) of the contested decision, it has already been explained that, at the time when the facts took place, the Court of Justice had already held, in *Magill*, paragraph 107 above, that while a refusal by the owner of an intellectual property right to grant a licence, even where it is the act of an undertaking in a dominant position, cannot in itself constitute an abuse of a dominant position, the exercise of the exclusive right by the owner might however, in exceptional circumstances, give rise to abusive conduct.
- 1337 Microsoft's assertion that it could not easily be aware that its conduct infringed the competition rules is also difficult to reconcile with the position which it adopted throughout the administrative procedure. In effect, Microsoft claimed that if the Commission were to find that the refusal at issue constituted abuse, that could upset the 'careful balance between copyright and competition policies' struck by Directive 91/250 (recital 743 to the contested decision). It should be added that the 26th recital to that directive states that the provisions of the directive 'are without prejudice to the application of the competition rules under Articles [81 EC and 82 EC] if a

dominant supplier refuses to make information available which is necessary to interoperability as defined in [that] directive’.

1338 It follows that the Commission was correct to conclude that Microsoft ought to have been aware that its refusal might infringe the competition rules.

1339 The same applies as regards, second, the abuse found in Article 2(b) of the contested decision, as the arguments alleging the application of a new theory have already been rejected during the examination of the bundling issue (see, in particular, paragraphs 859 and 863 to 868 above). The Court therefore finds that the Commission was correct to state, at recital 1057 to the contested decision, that its examination of the tying at issue and its conclusion that Microsoft’s conduct was abusive were based on a practice that was well established, notably in *Hilti* and *Tetra Pak II*.

1340 The fact that the abusive tying was not mentioned in the first statement of objections is of no relevance to the question whether the Commission applied a new legal theory.

1341 Nor can the assertion that the contested decision is the first decision in which the Commission has characterised as abusive the improvement of a product consisting in the integration of an ‘improved’ functionality in that product be upheld. As stated at paragraphs 936, 937 and 1221 above, the integration of that product was not dictated by technical grounds. Furthermore, for the reasons stated at paragraph 935 above, that assertion does not invalidate the Commission’s finding that there were two separate products, which constitutes one of the criteria on which it is possible to identify abusive tying, according to the case-law cited at paragraph 859 above.

1342 It follows from the foregoing considerations that Microsoft cannot validly claim that the Commission ought not to have imposed a fine on it or that it ought to have imposed a symbolic fine.

1343 In the second place, Microsoft's argument that the amount of the fine is excessive must also be rejected. The Court finds that the Commission made a correct assessment of the gravity and duration of the infringement.

1344 First, as regards the gravity of the infringement, it must be borne in mind at the outset that the two abuses at issue form part of a leveraging infringement, consisting in Microsoft's use of its dominant position on the client PC operating systems market to extend that dominant position to two adjacent markets, namely the market for work group server operating systems and the market for streaming media players.

1345 First of all, as regards the abuse found in Article 2(a) of the contested decision, the Commission evaluated the gravity of that abuse by taking into consideration its nature (recitals 1064 and 1065 to the contested decision), its actual impact on the market (recitals 1069 and 1070 to the contested decision) and the size of the relevant geographic market (recital 1073 to the contested decision). The Commission characterised the infringement of which that abuse formed part as 'very serious' and therefore likely to incur a fine of over EUR 20 million.

1346 The Court finds that the matters taken into consideration by the Commission in the recitals mentioned in the preceding paragraph justify the description of the infringement as 'very serious'. That assessment is not called in question by Microsoft's arguments.

1347 The Court would observe that a number of internal Microsoft documents in the file confirm that Microsoft made use, by leveraging, of its dominant position on the client PC operating systems market to strengthen its position on the work group server operating systems market. Thus, at recital 774 to the contested decision, the Commission cites an extract from an email from Mr Bayer, a senior director of Microsoft, to Mr Madigan, another senior director of Microsoft, in which he states that '[Microsoft] has a huge advantage in the enterprise computing market by leveraging the dominance of the Windows desktop'.

1348 At the following recital to the contested decision, the Commission refers to a passage from another email between those two senior directors which shows that conquering the work group server operating systems market was regarded as a means of implementing the same leveraging strategy against the Internet. That passage reads as follows:

'Dominance on the server infrastructure on the Internet is a tougher nut to crack [but] we just might be able to do it from the enterprise out if we could own the enterprise (which I think we can).'

1349 Furthermore, as the Commission correctly observes at recital 778 to the contested decision, it is clear from an extract from a speech given by Mr Gates in February 1997 that the most senior directors of Microsoft regarded interoperability as a tool in that leveraging strategy. That extract reads as follows:

'What we are trying to do is use our server control to do new protocols and lock out Sun and Oracle specifically ... Now, I don't know if we'll get to that or not, but that's what we are trying to do.'

1350 The Court notes that Mr Gates' speech was given in February 1997, well before the date on which Microsoft rejected the request contained in the letter of 15 September 1998. The Commission was therefore correct to consider that Microsoft's refusal formed part of an overall strategy consisting in Microsoft's use of its dominant position on the client PC operating systems market to strengthen its dominant position on the adjacent market for work group server operating systems.

1351 Next, as regards the tying of Windows Media Player and Windows referred to in Article 2(b) of the contested decision, the Court finds that the Commission also made a correct assessment of the gravity of the infringement by characterising it as 'very serious'.

1352 It should be noted first that it follows from the email sent to Mr Gates by Mr Bay in January 1999 (see paragraph 911 above) that the second abuse also formed part of a leveraging strategy.

1353 Second, the Commission was correct to find, at recital 1068 to the contested decision, that the abuse constituted by its nature a very serious infringement of Article 82 EC and Article 54 of the EEA Agreement.

1354 Tying practices had already clearly been declared unlawful by the Community Courts, notably in *Hilti* and *Tetra Pak II*, and the impugned conduct satisfied the conditions laid down in that case-law. It must be borne in mind, in particular, that, as stated at paragraphs 859 and 863 to 868 above, the Commission did not apply a

new legal theory in this case, especially when it examined whether the foreclosure condition was satisfied.

¹³⁵⁵ The Commission was quite correct, moreover, to observe, at recital 1066 to the contested decision, that the tying ensured the worldwide ubiquity of Windows Media Player, which created disincentives for OEMs to pre-install competing media players on their client PCs and harmed competition on the market for streaming media players (see paragraphs 1031 to 1058 above).

¹³⁵⁶ Last, as the Commission properly emphasises at recital 1067 to the contested decision, the abusive tying has significant effects on competition for the delivery of content over the Internet and also on the multimedia software industry. As stated at paragraphs 1060 to 1075 above, the ubiquity that tying confers on Windows Media Player gives content providers an incentive to distribute their content in Windows Media formats and gives software developers an incentive to develop their products so that they rely on certain functionalities of Windows Media Player, in spite of the fact that competing media players are of similar or even better quality than Windows Media Player. It has also been shown at paragraphs 1076 above that the Commission was quite correct to find, at recitals 897 to 899 to the contested decision, that the abusive tying had also had effects on some adjacent markets.

¹³⁵⁷ Third, the Commission was correct to observe, at recitals 1069 and 1071 to the contested decision, that the abusive tying has a significant effect on the market for streaming media players. The tying enabled Microsoft to become market leader with Windows Media Player.

1358 Fourth, it is common ground that the market for streaming media players covers the whole of the EEA (recital 1073 to the contested decision).

1359 It follows from the considerations set out at paragraphs 1344 to 1358 above that the Commission was correct to take as a starting point for the fine imposed for the infringement a minimum amount of EUR 20 million.

1360 In the present case, after taking into consideration the nature of the infringement, its effects on the relevant product markets and the geographical size of those markets, the Commission took a single starting point, which it set at EUR 165 732 101 (recital 1075 to the contested decision). The Commission does not explain in the contested decision what that amount represented or how it was apportioned between the two types of abuse. It is apparent, however, upon reading footnote 217 to the defence together with the content of Microsoft's letter of 9 March 2004 (see paragraph 1319 above), that that amount represents 7.5% of Microsoft's overall EEA turnover on the markets for client PC operating systems and work group server operating systems in the business year ending 30 June 2003. Contrary to Microsoft's contention, the starting amount cannot therefore be considered to have been fixed arbitrarily.

1361 As regards Microsoft's assertion that the Commission failed to state the reasons for fixing the starting amount of the fine at EUR 165 732 101, it is sufficient to observe that it is settled case-law that the obligation to state reasons does not require the Commission to indicate in its decision the figures relating to the method of calculating the fines (Case C-291/98 P *Sarrió v Commission* [2000] ECR I-9991,

paragraphs 76 and 80, and *Limburgse Vinyl Maatschappij and Others v Commission*, cited in paragraph 95 above, paragraph 464).

1362 Nor can Microsoft's assertion that the Commission took account of its turnover on the market for server operating systems in general, that is to say, a wider market than the second market identified in the contested decision, be upheld. The Commission relied on the figures which had been given to it by Microsoft in its letter of 9 March 2004 (see paragraph 1319 above) in response to a request for information of 2 March 2004 (annex D.16 to the rejoinder) expressly referring to the Windows work group server operating systems which Microsoft was still supplying at the time.

1363 Furthermore, the Court finds that the Commission was correct to apply a weighting of 2 to that amount to ensure that the fine was sufficiently deterrent and to reflect Microsoft's significant economic capacity. Since Microsoft is very likely to maintain its dominant position on the client PC operating systems market, at least over the coming years, it cannot be precluded that it will have other opportunities to use leveraging vis-à-vis other adjacent markets. Furthermore, Microsoft had already faced proceedings in the United States for a practice similar to the abusive tying at issue, namely the tying of its Internet Explorer browser and its Windows client PC operating system, and the possibility cannot be precluded that it might commit the same type of infringement in future with other application software.

1364 Second, as regards the duration of the infringement, Microsoft's argument that the increase of 50% of the basic amount of the fine is excessive must be rejected. As the Court has already held when examining the second part of the refusal to supply interoperability information, the Commission was correct to consider that the letter of 6 October 1998 contained a refusal to communicate to Sun the information which

it had requested. It follows that the Commission was correct to find that, from that date, Microsoft was guilty of an infringement of Article 82 EC. It has been established that that infringement continued until the date of adoption of the contested decision and that, from May 1999, a second type of abusive conduct was added to that infringement.

1365 Third, the Court finds that the Commission was correct to take the view that no aggravating or attenuating circumstances were to be taken into account in the present case.

1366 It follows from all of the foregoing considerations that Microsoft's argument that the fine is excessive and disproportionate must be rejected.

1367 The application must therefore be rejected as unfounded in so far as it seeks annulment or a reduction in the amount of the fine.

Costs

1368 Under Article 87(2) of the Rules of Procedure, the unsuccessful party is to be ordered to pay the costs if they have been applied for in the successful party's pleadings. Article 87(3) provides that where each party succeeds on some and fails on other heads, or where the circumstances are exceptional, the Court may order that the costs be shared or that each party bear its own costs.

1369 In the present case, Microsoft has been unsuccessful in its claim that the contested decision should be annulled in its entirety and in its claim that the fine should be annulled or reduced, and the Commission has been unsuccessful in its claim that the entirety of the application should be dismissed.

1370 In the main action, it is appropriate, in those circumstances, to order that the costs be shared. Microsoft shall bear 80% of its own costs and pay 80% of the Commission's costs, with the exception of the costs which the Commission has incurred in connection with the intervention of CompTIA, ACT, TeamSystem, Mamut, DMDsecure and Others and Exor. The Commission shall bear 20% of its own costs and pay 20% of Microsoft's costs, with the exception of the costs which Microsoft has incurred in connection with the intervention of SIIA, FSFE, Audiobanner.com and ECIS.

1371 In the interim measures proceedings, Microsoft shall bear its own costs and pay the costs incurred by the Commission, with the exception of the costs which the Commission incurred in connection with the intervention of CompTIA, ACT, TeamSystem, Mamut, DMDsecure and Others and Exor.

1372 CompTIA, ACT, TeamSystem, Mamut, DMDsecure and Others and Exor shall bear their own costs, including those relating to the interim measures proceedings. As the Commission did not request that those interveners be ordered to pay the costs which it incurred in connection with their intervention, they shall bear only their own costs.

1373 The costs incurred by SIIA, FSFE, Audiobanner.com and ECIS, including those relating to the interim measures proceedings, shall be paid by Microsoft.

On those grounds,

THE COURT OF FIRST INSTANCE (Grand Chamber)

hereby:

- 1. Annuls Article 7 of Commission Decision 2007/53/EC of 24 March 2004 relating to a proceeding pursuant to Article 82 [EC] and Article 54 of the EEA Agreement against Microsoft Corp. (Case COMP/C-3/37.792 — Microsoft), in so far as:**
 - it orders Microsoft to submit a proposal for the establishment of a mechanism which is to include a monitoring trustee with the power to have access, independently of the Commission, to Microsoft's assistance, information, documents, premises and employees and to the source code of the relevant Microsoft products;**
 - it requires that the proposal for the establishment of that mechanism provide that all the costs associated with the appointment of the monitoring trustee, including his remuneration, be borne by Microsoft; and**
 - it reserves to the Commission the right to impose by way of decision a mechanism such as that referred to in the first and second indents above;**

- 2. Dismisses the remainder of the application;**

- 3. Orders Microsoft to bear 80% of its own costs and to pay 80% of the Commission's costs, with the exception of the costs incurred by the Commission in connection with the intervention of The Computing Technology Industry Association, Inc., Association for Competitive Technology, Inc., TeamSystem SpA, Mamut ASA, DMDsecure.com BV, MPS Broadband AB, Pace Micro Technology plc, Quantel Ltd, Tandberg Television Ltd and Exor AB;**

- 4. Orders Microsoft to bear its own costs and to pay the Commission's costs relating to the interim measures proceedings in Case T-201/04 R, with the exception of the costs incurred by the Commission in connection with the intervention of The Computing Technology Industry Association, Association for Competitive Technology, TeamSystem, Mamut, DMDsecure.com, MPS Broadband, Pace Micro Technology, Quantel, Tandberg Television and Exor;**

- 5. Orders Microsoft to pay the costs of Software & Information Industry Association, Free Software Foundation Europe, Audiobanner.com and European Committee for Interoperable Systems (ECIS), including those relating to the interim measures proceedings;**

- 6. Orders the Commission to bear 20% of its own costs and to pay 20% of Microsoft's costs, with the exception of the costs incurred by Microsoft in connection with the intervention of Software & Information Industry Association, Free Software Foundation Europe, Audiobanner.com and ECIS;**

7. **Orders The Computing Technology Industry Association, Association for Competitive Technology, TeamSystem, Mamut, DMDsecure.com, MPS Broadband, Pace Micro Technology, Quantel, Tandberg Television and Exor to bear their own costs, including those relating to the interim measures proceedings.**

Vesterdorf

Jaeger

Pirrung

García-Valdecasas

Tiili

Azizi

Cooke

Meij

Forwood

Martins Ribeiro

Wiszniewska-Białecka

Vadapalas

Labucka

Delivered in open court in Luxembourg on 17 September 2007.

E. Coulon

B. Vesterdorf

Registrar

President

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