COMMISSION DECISION

of 10.11.2005

imposing a periodic penalty payment

pursuant to Article 24(1) of Regulation No 1⁄2003

on Microsoft Corporation

(Case COMP/C-3/37.792 Microsoft)

(ONLY THE ENGLISH TEXT IS AUTHENTIC)

(Text with EEA relevance)

THE COMMISSION OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Community,

Having regard to Council Regulation No 1/2003 of 16 December 2002 on the implementation of the rules on competition laid down in Articles 81 and 82 of the Treaty[1], and in particular Article 24(1)(a) thereof,

Having regard to the Commission Decision of 24 March 2004 relating to a proceeding under Article 82 of the EC Treaty in Case COMP/C-3/37.792 Microsoft (C(2004)900), and in particular Article 5 thereof,

Whereas:

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[1]   OJ L 1, 4.1.2003, p. 1/1.

1 MICROSOFT'S OBLIGATIONS UNDER THE DECISION OF 24 MARCH 2004

(1)   On 24 March 2004, the Commission adopted a decision (C(2004)900) in a proceeding pursuant to Article 82 of the EC Treaty (Case COMP/C-3/37.792) addressed to Microsoft Corporation ("Microsoft"). In this decision ("the Decision"), the Commission found, *inter alia*, that Microsoft had infringed Article 82 of the EC Treaty ("Article 82") and Article 54 of the EEA Agreement by refusing, from October 1998 until the date of the Decision, to disclose certain specified "Interoperability Information" to vendors of work group server operating system products, so that they could develop and distribute such products.[2]

(2)   Article 5 of the operative part of the Decision reads:

> "As regards the abuse referred to in Article 2(a):
>
> (a) Microsoft Corporation shall, within 120 days of the date of notification of this 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;
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> (b) Microsoft Corporation shall ensure that the Interoperability Information made available is kept updated on an ongoing basis and in a Timely Manner;
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> (c) Microsoft Corporation shall, within 120 days of the date of notification of this 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 Corporation may impose reasonable and non-discriminatory conditions to ensure that access to the Interoperability Information is granted for evaluation purposes only;
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> (d) Microsoft Corporation shall, within 60 days of the date of notification of this Decision, communicate to the Commission all the measures that it intends to take under points (a), (b) and (c); that communication shall be sufficiently detailed to enable the Commission to make a preliminarily assessment as to whether the said measures will ensure effective compliance with the Decision; in particular, Microsoft Corporation shall outline in detail the terms under which it will allow the use of the Interoperability Information;
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> (e) Microsoft Corporation shall, within 120 days of the date of notification of this Decision, communicate to the Commission all the measures that it has taken under points (a), (b) and (c)."

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[2]   See Article 2(a) of the Decision.

(3)   The term "*Interoperability Information*" is defined in Article 1(1) of the Decision. It means "*the complete and accurate specifications for all the Protocols 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*".[3]

(4)   It is settled case-law that the operative part of a decision should be interpreted in light of its non-operative part.[4] In this regard, recitals 998 to 1010 of the Decision are particularly noteworthy when describing Microsoft's obligations under Article 5.

(5)   As set out in recital 1003 of the Decision, the objective of the Decision and in particular Article 5 thereof "*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*". To this end, recital 1005 of the Decision makes clear that "*Microsoft must not be allowed to render the order to supply ineffective by imposing unreasonable conditions with respect to the access to, or the use of, the information to be disclosed*".

(6)   It is incumbent upon the Commission to ensure the effectiveness of the Decision and to examine whether any compliance measures taken by Microsoft are in conformity with Article 5 of the Decision.

(7)   In this regard, the Commission has to assess whether any condition imposed by Microsoft with respect to the access to or the use of the Interoperability Information, is reasonable and non-discriminatory, as provided for in Article 5(a) or Article 5(c) of the Decision. In case Microsoft imposes conditions which have the potential effect of: (i) limiting the ability of, or providing disincentives to interested undertakings in providing competing work group server operating system products that interoperate with the Windows domain

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[3]   The term "*Windows Work Group Server Operating System*" is defined in Article 1(9) of the Decision as "*any of the software products marketed by Microsoft Corporation as Windows NT Server 4.0, Windows 2000 Server and Windows Server 2003 Standard Edition, and updates (including, without limitation, security patches), upgrades and successors to the latter, as well as updates and upgrades to such successors*". The term "*Windows Work Group Server*" is defined in Article 1(8) of the Decision as "*a computer connected to a network and on which a Windows Work Group Server Operating System is installed*". The term "*Windows Work Group Network*" is defined in Article 1(7) of the Decision as "*any group of Windows Client PCs and Windows Work Group Servers linked together via a computer network*". The term "*Windows Client PC*" is defined in Article 1(4) of the Decision as "*a PC connected to a network and on which a Windows Client PC Operating System is installed*" and the term "*Windows Client PC Operating System*" is defined in Article 1(5) of the Decision as "*any of the software products marketed by Microsoft Corporation as Windows 98, Windows 98 Second Edition, Windows Millennium Edition, Windows NT Workstation 4.0, Windows 2000 Professional, Windows XP Home and Windows XP Professional, and updates (including, without limitation, security patches), upgrades and successors to the latter, as well as updates and upgrades of such successors*".

[4]   See e.g. Judgment of the Court of First Instance of 22 October 1997, <u>SCK and FNK</u>, Joined Cases T-213/95 and T-18/96, [1997] ECR II-1739, at paragraph 104.

architecture; and/or (ii) preventing such products from becoming a viable competitive constraint to Microsoft's products, such conditions can only be considered as reasonable under the Decision if they constitute a proportionate measure aimed at protecting Microsoft's legitimate interests. In such a case, it is therefore incumbent upon Microsoft to identify the legitimate interests it intends to protect by means of a certain condition imposed on interested undertakings, and to explain how the imposed condition is both necessary and proportional having regard to such legitimate interests, and thus objectively justified. Therefore, when assessing the reasonableness of conditions imposed by Microsoft, a balance must be struck between any such legitimate interests and the public interest in ensuring the effectiveness of the Decision.

(8) Any interest claimed by Microsoft as requiring protection as well as any justification brought forward by Microsoft as to the necessity and proportionality of a condition in question must be considered in the light of Microsoft's special responsibility as a dominant undertaking.[5] This is a responsibility that weighs particularly on Microsoft, since that undertaking enjoys an overwhelmingly dominant position, as noted in recital 435 of the Decision.[6]

2 PROCEDURE

(9) The following paragraphs will set out, in chronological order, the written contacts that have so far taken place between Microsoft and the Commission as regards Microsoft's obligation pursuant to Article 5 of the Commission's Decision of 24 March 2004.[7] Meetings between the Commission services and Microsoft have also taken place in conjunction with these written contacts, but are not memorialised here.

(10) By letter of 27 May 2004,[8] Microsoft submitted a first description of the measures it intended to take to comply with Article 5(a) to (c) of the Decision.

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[5] See Judgment of the Court of Justice of 14 February 1978, <u>United Brands v Commission,</u> Case 27/76 [1978] ECR 207, at paragraphs 189-190: "*The fact that an undertaking is in a dominant position cannot disentitle it from protecting its own commercial interests* […]*, and* […] *such an undertaking must be conceded the right to take such reasonable steps as it deems appropriate to protect its said interests* […]*. Even if the possibility of a counterattack is acceptable that attack must still be proportionate to the threat taking into account the economic strength of the undertakings confronting each other.*"

[6] See Opinion of Advocate General Fennelly in Joined Cases C-395/96 P & C-396/96 P, <u>Compagnie Maritime Belge and others v Commission</u> [2000] ECR I-1365, at paragraph 137, which describes a concept of "*superdominance*" and highlights the "*particularly onerous special obligation*" affecting an undertaking which enjoys a position of "*overwhelming dominance verging on monopoly*". See also Judgment of the Court of 14 November 1996, <u>Tetra Pak International SA v Commission,</u> Case C-333/94 P [1996] ECR I-05951, at paragraphs 28, 29 and 31, where Tetra Pak's "*quasi-monopolistic*" position, its "*almost complete domination of the aseptic markets*" and "*quasi-monopoly*" were referred to as relevant factors justifying that Tetra Pak's conduct on a non-dominated market and having effects on that non-dominated market could be found to be abusive.

[7] Other important events relating to Microsoft's compliance are also indicated, as appropriate.

[8] Letter of 27 May 2004 from David Heiner, Deputy General Counsel of Microsoft, to Jürgen Mensching, Director, Directorate C, DG Competition.

(11)   On 7 June 2004, Microsoft lodged an application for annulment of the Decision with the
         Court of First Instance ("CFI") (Case T-201/204). On 25 June 2004, Microsoft submitted
         an application for interim measures with the CFI, seeking to suspend the operation of the
         Decision pending the outcome of proceedings in Case T-201/04.[9]

(12)   On 25 June 2004, the Commission decided on its own initiative not to enforce Articles
         5(a), 5(b), 5(c), 5(e), 6(a) and 6(b) of the Decision, pending the outcome of the interim
         measures proceedings before the CFI. This non-enforcement decision did not amend nor
         affect in any way the time limits set out in the relevant provisions of the Microsoft
         Decision, to which Microsoft remained subject.

(13)   The Commission services responded to Microsoft's letter of 27 May 2004 on 30 July
         2004,[10] expressing doubts as to whether the information supplied by Microsoft was indeed
         detailed enough to be compliant with Article 5(d) of the Decision. In particular, the
         Commission services asked Microsoft to provide: (i) the technical documentation
         (specifications) that Microsoft had thus far prepared for the relevant protocols ("the
         Technical Documentation"); (ii) the terms that it would apply for the access to and use of
         the Technical Documentation; and (iii) the terms of the evaluation agreement that would
         govern access by interested third parties to the Technical Documentation for evaluation
         purposes only. In the absence of any response by Microsoft, the Commission services
         reiterated the above-mentioned request for more detailed information by letter of
         15 October 2004.[11]

(14)   Microsoft responded to these letters on 29 October 2004.[12] In its response, Microsoft
         argued that "*the Decision does not require Microsoft to provide the Commission with the
         intellectual property licenses and extensive technical documentation requested*".
         Microsoft also stated that in its view, the description of the measures supplied in its letter
         of 27 May 2004 satisfied Microsoft's obligation under Article 5(d).[13] Nevertheless,
         Microsoft submitted with its response two draft agreements that it intended to offer as part
         of a "Work Group Server Protocol Program" ("WSPP"), more specifically "*the draft form
         of license agreement that Microsoft plan*[ed] *to use in order to make available the
         intellectual property in its protocols*" ("the 2004 WSPP Development and Distribution
         Agreement"), and "*a draft form of evaluation agreement that Microsoft plan*[ed] *to use in
         order to enable prospective licensees to evaluate the protocols we would be making
         available before entering into a license for such protocols*" ("the 2004 WSPP Evaluation

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9   Case T-201/04 R.
10   Letter of 30 July 2004 from Jürgen Mensching to David Heiner.
11   Letter of 15 October 2004 from Jürgen Mensching to David Heiner.
12   Letter of 29 October 2004 from David Heiner to Jürgen Mensching.
13   Microsoft did not provide any reasoning substantiating this assertion. In particular, it did not explain how the
         information previously supplied alone was sufficient "*to enable the Commission to make a preliminarily assessment
         as to whether the said measures will ensure effective compliance with the Decision*" in the words of Article 5(d) of
         the Decision.

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Agreement").[14] Microsoft provided the Commission services access to the Technical Documentation later (see recitals (16) and (72) below).

(15)   The Commission services sent a letter to Microsoft on 8 December 2004 [15] asking Microsoft to supply further explanations and all the necessary supporting documents which would allow the Commission to assess the conformity of the 2004 WSPP Agreements with Microsoft's obligations under the Decision.

(16)   By e-mail of 11 December 2004,[16] Microsoft announced that it was providing the Commission with access to the Technical Documentation. The Commission received the Technical Documentation on 14 December 2004.

(17)   On 22 December 2004, the President of the CFI rejected Microsoft's application for suspension of the Decision in its entirety.[17]

(18)   By letter of 17 January 2005, Microsoft submitted to the Commission a report by PriceWaterhouseCoopers ("PwC").[18] It appears that this report ("the 2002 PwC Report") was drafted in 2002 in the context of the settlement signed by Microsoft and the US Department of Justice in November 2001.[19] Its focus was on determining "*the value of protocol licenses*" for the purpose of the US "*Communications Protocols Licensing Program*", which is described at recitals 273 to 279 of the Decision. On 18 January 2005, Microsoft provided the Commission with "*a memorandum describing the methodology applied to establish royalties for the WSPP licenses*" ("the January 2005 Pricing Memorandum").[20]

(19)   By e-mail of 26 January 2005,[21] Microsoft submitted the versions of the "WSPP Evaluation Agreement" and the "WSPP Development and Distribution Agreement" that it was offering pursuant to Article 5 of the Decision following the Order of the President of the CFI.   These agreements were slightly modified versions of the 2004 WSPP Development and Distribution Agreement and the 2004 WSPP Evaluation Agreement.

(20)   By letter of 27 January 2005,[22] the Commission sent a request for information to Microsoft under Article 18 of Regulation 1/2003, requesting further information in relation, in

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[14]   The 2004 WSPP Evaluation Agreement and the 2004 WSPP Development and Distribution Agreement are referred to together as "the 2004 WSPP Agreements".
[15]   Letter of 8 December 2004 from Jürgen Mensching to David Heiner.
[16]   E-mail of 11 December 2004 from Greg Sivinski to Jürgen Mensching, Cecilio Madero (Head of Unit C-3, DG Competition) and Nicholas Banasevic (Case Officer).
[17]   Order of the President of the Court of First Instance of 22 December 2004 in Case T-201/04 R, not yet reported.
[18]   Letter of 17 January 2005 from Jean-Yves Art, Director of Competition Law of Microsoft Europe Middle East Africa, to Cecilio Madero.
[19]   See recital 18 of the Decision.
[20]   E-mail of 18 January 2005 from Jean-Yves Art to Cecilio Madero.
[21]   E-mail of 26 January 2005 from Jean-Yves Art to Cecilio Madero.
[22]   Letter of 27 January 2005 from Cecilio Madero to Jean-Yves Art.

particular, to the "intrinsically valuable inventions" that Microsoft claimed to be present in the Interoperability Information. Microsoft responded to this request for information by e-mail of 15 February 2005.[23] Microsoft had in the meantime reiterated to the Commission that it believed that it had fulfilled its obligations pursuant to Article 5(d) of the Decision already prior to responding to the said request for information.[24]

(21)   By letter of 8 February 2005,[25] the Commission sent another request for information to Microsoft under Article 18 of Regulation 1/2003, asking it to provide a list of all its protocols licensed royalty-free and to explain the economic rationale behind this.

(22)   On 17 March 2005, the Commission services set out a number of concerns to Microsoft regarding its compliance with Article 5 of the Decision.[26] The Commission services raised in particular the following points:

(23)   As regards the WSPP Development and Distribution Agreement, the Commission services noted that Microsoft did not offer a licence for the relevant patents separately from the agreement governing the disclosure of the Interoperability Information. The Commission services also noted that the "choice" offered to third parties in the WSPP Development and Distribution Agreement as to which portions of the Technical Documentation they wanted to have access to was not granular enough ("all-in-one licence"). Furthermore, the Commission services observed that Microsoft had failed to identify the "intrinsically valuable inventions" that would justify the remuneration requested under the WSPP Development and Distribution Agreement. The Commission services also noted that Microsoft had not provided an objective justification for preventing open source vendors from taking advantage of the order to supply in Article 5 of the Decision (prohibition of protocol implementations in source code form). On the territorial restrictions limiting to the EEA the development and distribution of products covered by the WSSP Development and Distribution Agreement, the Commission services concluded that "*although the Commission services need to further investigate this issue, it is clear that territorial restrictions that would void the Decision of its useful effect could not be accepted*". Additionally, the Commission services raised concerns about other restrictive contractual clauses contained in the WSPP Development and Distribution Agreement.

(24)   As regards the WSPP Evaluation Agreement, the Commission services voiced concerns that the evaluation period of eight hours provided in the agreement was not sufficient to review the Technical Documentation and that the agreement provided that engineers who

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23   E-mail of 15 February 2005 from Jean-Yves Art to Cecilio Madero.
24   E-mail of 7 February 2005 from Jean-Yves Art to Case Officer Jean Huby.
25   Letter of 8 February 2005 from Cecilio Madero to Jean-Yves Art.
26   Letter of 17 March 2005 from Philip Lowe, Director General, DG Competition, to Bradford Smith, General Counsel, Microsoft.

had participated in the evaluation process would be banned from working on communications protocols for one year ("cooling off period").

(25)   Microsoft responded to the Commission services' 17 March 2005 letter on 31 March 2005[27]: it argued that it was "*in full compliance with its obligations under the Decision*" but was nevertheless prepared to make a number of changes to the WSPP Evaluation Agreement and to the WSPP Development and Distribution Agreement.[28] This included introducing a new scheme to determine the remuneration that third parties would have to pay in order to obtain access to and make use of the Interoperability Information under the WSPP Development and Distribution Agreement. This new remuneration scheme had been prepared in consultation with PwC, and Microsoft attached a new report by PwC on this point ("the March 2005 PwC report").[29]

(26)   On 18 April 2005, the Commission services sent to Microsoft draft agreements providing for possible ways to address the main concerns expressed in the letter of 17 March 2005.[30]

(27)   On 2 May 2005, Microsoft sent a letter to the Commission services proposing "*a framework for the protocol licensing program under the Decision*". This framework comprised eight "*framework principles*" according to which Microsoft expressed readiness to structure the WSPP.[31] On 9 May 2005, Microsoft sent a revised set of agreements to the Commission services, following up on the framework principles identified in the letter of 2 May 2005.[32]

(28)   On 20 May 2005, Microsoft[33] presented another set of revised agreements to the Commission services. In the accompanying cover letter, Microsoft made clear that as

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27   Letter of 31 March 2005 from David Heiner to Philip Lowe.
28   The changes were described in Annex A to the letter of 31 March 2005 from David Heiner to Philip Lowe.
29   Annex B to the letter of 31 March 2005 from David Heiner to Philip Lowe.
30   Letter of 18 April 2005 from Philip Lowe to Bradford Smith.
31   Letter of 2 May 2005 from Bradford Smith to Philip Lowe. The eight framework principles outlined in this letter are as follows. First, "*Licensees can choose to license the subsets they want among all the protocol technology covered by the Decision*". Second, "*Licensees can choose the level of documentation they wish to receive*". Third, "*Licensees can make a reasonable choice among the intellectual property rights they wish to license*". Fourth, "[r]*oyalties will be adjusted according to the licensee's choices among protocols, documentation and intellectual property rights, subject to review by the Trustee in accordance with the terms of the Decision*". Fifth, "*Licensees can implement Microsoft's protocol technology in order to develop software that interoperates with Windows servers as well as any other software product that is already compatible with Windows server operating systems*". Sixth, "*Implementations can be distributed for use with proprietary or open source software. Protocols implemented using Microsoft's trade secret documentation cannot, however, be published in source code form that thereby reveals the specifications to the world*". Seventh, "*Microsoft will discuss in good faith with prospective licensees how best to craft agreements in accordance with these principles and the terms of the Decision, subject to review by the Trustee*". Eighth, "[a]*ny dispute relating to the meaning of a license agreement will be subject to consultation with the Trustee, and failing agreement, judicial review by the courts. Any dispute relating to the meaning of the Decision will be subject to consultation with the Trustee, and failing agreement, the appropriate review and processes of the European Commission*".
32   Letter of 9 May 2005 from David Heiner to Cecilio Madero. This letter followed the letter from Mr. Lowe to Mr. Smith of 4 May 2005 asking for such text implementing the framework principles set forth in the letter of 2 May 2005 from Bradford Smith to Philip Lowe.
33   Letter of 20 May 2005 from Jean-Yves Art to Cecilio Madero.

regards "*the distribution of protocol implementations in source code form, the division of the individual pages of specifications into 'innovative' and 'mundane' intellectual property for purposes of allocation of both confidentiality protections and royalties, and the distribution of the protocol implementations on a worldwide basis*", Microsoft had not implemented any changes, and asserted that these would be neither reasonable nor required by the Decision.

(29)   On 23 May 2005, Mr. Steven Ballmer, Microsoft's CEO, wrote to Ms. Neelie Kroes, Member of the European Commission with responsibility for Competition. In this letter, further changes to the WSPP were proposed, including in particular the offer to distinguish between "*15 or so groupings of protocols*" for which documentation could be obtained separately, and to "*grant licensees development rights worldwide, provided we can work out the other open questions that bear upon geographic scope, such as whether intellectual property, including Microsoft's U.S. patents and trade secret rights, will be adequately safeguarded and priced*". Mr. Ballmer's letter proposed "*a range of factors*" according to which the Trustee envisaged in Article 7 of the Decision would assess whether the royalties required by Microsoft were reasonable and non discriminatory. Mr. Ballmer explained that these factors would be applied by Microsoft to "*put* [the] *protocols into distinct categories*", namely "*silver, gold, and platinum tiers*".

(30)   On the same day, Microsoft sent by e-mail to the Commission services a "*proposed pricing test*".[34]

(31)   On 27 May 2005, Mr. Ballmer sent a further letter to Commissioner Kroes summarising his understanding of the state of the discussions on four points. First, on the concerns expressed by the Commission services that Microsoft had been offering an all-in-one licence, Mr. Ballmer noted that Microsoft had made a proposal dividing the relevant documentation into "*more than 40 distinct offerings*". Second, referring to the proposed "*pricing test*", Mr. Ballmer announced that Microsoft would submit further language that "*will guide any assessment of the reasonableness of* [Microsoft's] *protocol price*". Third, Mr. Ballmer described two alternative solutions to the issue of the open source exclusion which he believed were sufficient to address the concerns expressed by the Commission services. Fourth, as regards the geographic scope of the remedy, Mr. Ballmer reiterated that Microsoft was ready to "*grant worldwide development rights*", but noted that, as regards the question of distribution of products that Microsoft's competitors would develop in taking advantage of the Decision, he "*would like to talk about this issue*" with the Commissioner.

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[34]   E-mail of 23 May 2005 from Jean-Yves Art to Cecilio Madero.

(32)   On 27 May 2005, Microsoft also submitted revised versions of a "pricing test" that it
         would introduce in the WSPP Agreements.[35]   By letter of 28 May 2005, Microsoft
         provided further revised versions of the WSPP Agreements.[36]

(33)   In a letter of 30 May 2005,[37] Microsoft summarised its position on the issue of the open
         source exclusion and the basis for the calculation of the royalties.   In the same letter,
         Microsoft stated its belief that the Commission's approach of distinguishing between
         "*intrinsically valuable information*" and non-valuable information as regards these points
         was flawed. This letter discussed the appropriate pricing test for the WSPP. The letter also
         attached a report by PwC on the "*Comparability of Standard Setting to the Licensing of
         Interoperability Information and Intellectual Property Under the Decision*" ("the PwC
         Standards Report").

(34)   On the same day, Microsoft sent another letter which amplified on the two alternative
         solutions mentioned by Mr. Ballmer with regard to the open source issue.[38]

(35)   On 31 May 2005, Microsoft sent to the Commission services various letters on pending
         issues regarding the implementation of the Decision.[39]   One of these letters outlined
         Microsoft's position on the open source issue.[40]

(36)   On the same day, Microsoft sent a revised version of the WSPP Agreements which granted
         worldwide development and distribution rights.[41]

(37)   On 1 June 2005, the Commission services sent a letter to Microsoft outlining their view on
         the distribution of Windows protocol implementations in source code form ("the open
         source issue").[42]   On the same day, Microsoft responded to this letter stating that it
         contested the Commission services' position.[43] On 2 June 2005, Microsoft sent another
         letter concerning this issue in which it announced a draft contractual amendment. This
         draft amendment would allow for the distribution of protocol implementations in source
         code form. It would be made available for information purposes on Microsoft's web-site,

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[35]   Letter of 27 May from Jean-Yves Art to Philip Lowe.
[36]   Letter of 28 May 2005 from Jean-Yves Art to Cecilio Madero.
[37]   Letter of 30 May 2005 from Jean-Yves Art to Philip Lowe.
[38]   Letter of 30 May 2005 from Jean-Yves Art to Philip Lowe.
[39]   E-mail of 31 May 2005 from Jean-Yves Art to Philip Lowe comprising three letters from Jean-Yves Art to Philip
         Lowe.
[40]   Microsoft states in this letter that "*If the Court of First Instance upholds Article 5 of the Decision, Microsoft will
         move promptly to permit distribution in source code form of any such software that does not implement Microsoft
         protocol (i) trade secrets as protected under U.S. laws or (ii) legally protected know-how within the meaning of the
         European Commission's Technology Transfer Block Exemption.*"
[41]   E-mail of 31 May 2005 from Jean-Yves Art to Philip Lowe.
[42]   Letter of 1 June 2005 from Philip Lowe to Bradford Smith**.** This letter states: "*We believe that if the Court of First
         Instance does not annul Article 5, then Microsoft is under an obligation to permit distribution in source code form of
         such software to third parties, to the extent that the Windows protocols implemented in such software do not include
         any invention by Microsoft that involves an inventive step and is novel compared to the prior art.*"
[43]   Letter of 1 June 2005 from Bradford Smith to Philip Lowe.

but it would, according to Microsoft, only apply in case the Commission were to win an unfettered legal victory on this issue.[44] On 8 June 2005, Microsoft sent a letter to the Commission services in order to seek guidance on the contract amendment it had announced in relation to source code distribution of third party implementations.[45]

(38)   On 9 June 2005, Microsoft sent to the Commission services updated versions of the WSPP Agreements. These comprised five agreements:

- the "Microsoft Work Group Server Protocol Program Patent Only License Agreement for Development and Product Distribution" ("Patent Only Agreement");

- the "Microsoft Work Group Server Protocol Program License Agreement (All IP) for Development and Product Distribution" ("All IP Agreement");

- the "Microsoft Work Group Server Protocol Program License Agreement (No Patents) for Development and Product Distribution" ("No Patent Agreement");

- the "Microsoft Communications Protocol Program for Evaluation of Technical Documentation" ("3-day Evaluation Agreement");

- the "Microsoft Work Group Server Protocol Program Agreement for Evaluation of Technical Documentation (30-Day)" ("30-day Evaluation Agreement").

(39)   On 15 June 2005, the Commission services sent two reports by the Commission's external technical experts, OTR, to Microsoft for comments. The reports concerned the completeness and accuracy of the Technical Documentation supplied by Microsoft pursuant to the WSPP Agreements, as well as the lack of innovative features in the "Directory Replication Service Remote Protocol" ("DRS protocol").[46] Microsoft responded to this letter by letter of 8 July 2005.[47]

(40)   On 22 June 2005, the Commission services responded to Microsoft's letter of 8 June 2005 on source code distribution. Following a meeting with the Commission services, Microsoft sent another letter on 8 July 2005 proposing two options for possible contract amendments.[48]

(41)   In three letters dated 28 June 2005, 7 July 2005 and 13 July 2005 respectively, the Commission services set out to Microsoft a number of aspects of the 9 June 2005 WSPP Agreements that remained problematic, and seemed inconsistent with statements of intent previously made by Microsoft to the Commission services.[49]

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[44]   E-mail of 2 June 2005 from Bradford Smith to Philip Lowe.
[45]   Letter of 8 June 2005 from Jean-Yves Art to Cecilio Madero.
[46]   Letter of 15 June 2005 from Ángel Tradacete Cocera, Director, Directorate C, DG Competition, to Jean-Yves Art.
[47]   Letter of 8 July 2005 from Jean-Yves Art to Ángel Tradacete Cocera.
[48]   Letter of 8 July 2005 from Jean-Yves Art to Cecilio Madero.
[49]   Letter of 28 June 2005 from Ángel Tradacete Cocera to Jean-Yves Art, letter of 7 July 2005 from Cecilio Madero to Jean-Yves Art, letter of 13 July 2005 from Ángel Tradacete Cocera to Jean-Yves Art.

(42)   On 1 August 2005, the Commission services sent a request for information pursuant to Article 18 of Regulation 1/2003 ("August 2005 request for information") to Microsoft, enquiring about various clauses contained in the 9 June 2005 version of the WSPP Agreements.

(43)   Microsoft responded to the August 2005 request for information on 25 August 2005. In its response, Microsoft identified *"accommodations which could be made to the current licenses to address points that appear to be raised by particular questions"*.[50] On the same day, Microsoft also sent a letter which replied to the letters of the Commission services of 7 July 2005 and 13 July 2005. This letter also addressed one outstanding point from the Commission services' letter of 28 June 2005.[51] In this letter, Microsoft also proposed further changes to the WSPP Agreements.

(44)   On 26 August 2005, Microsoft provided revised WSPP Agreements.[52]

(45)   On 12 September 2005, the Commission services sent another letter to Microsoft requesting changes in the WSPP Agreements.[53] On 19 September 2005, Microsoft provided revised WSPP Agreements.[54] Following another letter of the Commission services of 20 September 2005,[55] Microsoft presented further revised WSPP Agreements.[56]

(46)   On 28 September 2005, the Commission's experts, OTR, submitted a second report on the completeness and accuracy of the Technical Documentation supplied by Microsoft.

(47)   On 3 October 2005, Microsoft sent a letter to the Commission services announcing further changes to the WSPP Agreements.[57] Revised WSPP Agreements were subsequently sent by Microsoft on 8 October 2005.[58]

(48)   On 3, 11 and 23 October 2005, following discussions with the Commission services, Microsoft sent letters outlining its position on the completeness of the Technical Documentation, as well as on the remuneration level in the WSPP Agreements.[59]

(49)   On 14 October 2005[60] and on 20 October 2005,[61] Microsoft submitted further revised WSPP Agreements.

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[50]   E-mail of 26 August 2005 from David Heiner to Cecilio Madero.
[51]   Letter of 25 August 2005 from Mary Snapp, Corporate Vice President, Deputy General Counsel of Microsoft, to Ángel Tradacete Cocera.
[52]   E-mail of 26 August 2005 from David Heiner to Cecilio Madero.
[53]   Letter of 12 September 2005 from Ángel Tradacete Cocera to David Heiner.
[54]   E-mail of 19 September 2005 from Jean-Yves Art to Ángel Tradacete Cocera.
[55]   Letter of 20 September 2005 from Ángel Tradacete Cocera to Jean-Yves Art.
[56]   Letter of 23 September 2005 from Jean-Yves Art to Ángel Tradacete Cocera.
[57]   Letter of 3 October 2005 from Bradford Smith to Philip Lowe.
[58]   E-mail of 8 October 2005 from Jean-Yves Art to Cecilio Madero.
[59]   Letter of 3 October 2005 from Bradford Smith to Philip Lowe, letter of 11 October 2005 from Steven Ballmer to Commissioner Kroes, which was followed by a letter of the same day from Bradford Smith to Philip Lowe, and letter of 23 October 2005 from Steven Ballmer to Commissioner Kroes.

(50)   On 21 October 2005, Microsoft submitted a report (dated 20 October 2005) "*on innovation and pricing of the Directory & Global Catalog Replication protocol group under the WSPP pricing principles*" ("Microsoft's report on the DRS protocol").[62] OTR provided an analysis of this report on 27 October 2005.

(51)   For the sake of convenience, in the following, the term "WSPP Protocols" will be used to designate the protocols for which specifications are made available pursuant to the WSPP.

(52)   For the purpose of analysing compliance with Article 5(a) and (c) of the Decision, the Commission assumes that Microsoft has now provided all necessary information pursuant to Article 5(d). For the sake of clarity, the revised WSPP Agreements as sent by Microsoft on 20 October 2005 constitute the basis of the Commission's assessment of Microsoft's compliance with Article 5(a) and (c) of the Decision. The Commission also infers that Microsoft has adduced all relevant evidence justifying the conditions that it imposes under the WSPP Agreements.

3   ASSESSMENT OF MICROSOFT'S COMPLIANCE WITH ARTICLE 5(A) AND (C) OF THE DECISION

3.1   Compliance with Article 5(a) and (c) of the Decision: the completeness and accuracy of the Technical Documentation provided under the WSPP Agreements

3.1.1   Microsoft's obligations under Article 5(a) and (c) of the Decision

(53)   In accordance with Article 5(a) of the Decision, Microsoft is obliged to make Interoperability Information available to any undertaking having an interest in developing and distributing work group server operating system products.

(54)   Article 5(c) of the Decision further requires Microsoft to make the Interoperability Information not only available for the purpose of developing and distributing work group server operating system products, but also for evaluation purposes in order to give interested undertakings a workable possibility of informing themselves about the scope and the terms of use of the Interoperability Information.

(55)   Article 1(1) of the Decision defines Interoperability Information as "*specifications for all the Protocols 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*

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[60]   Letter of 14 October 2005 from Mary Snapp to Cecilio Madero.
[61]   E-mail of 20 October 2005 from Jean-Yves Art to Cecilio Madero.
[62]   E-mail of 21 October 2005 from Bradford Smith to Philip Lowe.

Directory services and Group Policy services, to Windows Work Group Networks." It
states that these specifications must be complete and accurate.

(56)   Article 1(2) of the Decision defines a "*Protocol*" 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*".

(57)   As already pointed out in recital (5), recital 1003 of the Decision defines the objective of
the Decision with regard to the disclosure of the Interoperability Information as "*[...] 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. Microsoft should thus allow the use of the disclosed specifications for
implementation in work group server operating system products*."

(58)   Recital 182 of the Decision explains that "*the common ability to be part of that* [Windows
domain] *architecture is an element of compatibility of Windows client PCs and Windows
work group servers. This compatibility can be described in terms of 'interoperability with
the Windows domain architecture'*".   Recital 779 of the Decision confirms that
"*interoperability with the Windows domain architecture is necessary for a work group
server operating system vendor in order to viably stay on the market*."

(59)   The above-mentioned objectives of the order to disclose Interoperability Information have
to be seen in the light of the actual interoperability problems that were at the origin of the
Decision.   It is therefore appropriate to briefly recall the background for the order to
disclose Interoperability Information, and more specifically, Sun's request for
interoperability information which triggered the Commission's investigation of Microsoft's
refusal to supply this information.[63]

(60)   Sun's request is described in detail in Section 4.1.2 of the Decision.   Recital 186 of the
Decision outlines that Sun's request to "*provide native support for the complete set of
Active Directory technologies on Solaris*" involved the ability for Sun's server software to
act as a 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).[64]

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[63]   Recital 3 of the Decision.
[64]   There are other instances in the Decision outlining what the information requested by Sun and that Microsoft refused
to provide is supposed to achieve: "[t]*he objective of the requested disclosure of information is thus seamless
communication between the Solaris environment and the Windows environment*" (recital 207 of the Decision). This
is further illustrated by Sun's statements with regard to the overall objective of its request: "*to provide native
Windows NT services*" (recital 212 of the Decision); "*to provide transparent Windows NT file, print, directory, and
security services to Windows 3.X/95/98/NT clients*" (recital 212 of the Decision); to enable a Solaris server "*to act*

(61)   Recital 187 of the Decision refers to Sun's request as encompassing "*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. This 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.*"

(62)   The description of Sun's request in the Decision and the above-mentioned recitals on the objectives of the Decision illustrate the nature of the interoperability required by the Decision.

(63)   Therefore, by virtue of the Decision, the specifications for the protocols at stake must provide a description of all rules of interconnection and interaction between Windows work group server operating systems and Windows client PC operating systems necessary to enable Microsoft's competitors to develop work group server operating system products that interoperate with the Windows domain architecture on an equal basis with Microsoft's server operating system products.[65]

3.1.2   Protocol specifications are not software implementations

(64)   By way of preliminary remark, and before assessing Microsoft's compliance with the order to disclose the Interoperability Information, it is appropriate to recall some basic concepts that are relevant for the issues at stake. A distinction between "implementations" and "specifications" is made in software development. The implementation is the actual code that constitutes the software product and which will run on the computer, whereas the specification is the description of what the software product, that is to say the implementation, must achieve. The distinction between specifications and implementations is important in this context. A specification describes <u>what</u> an implementation must achieve, not <u>how</u> it achieves it.[66]

(65)   The specification is descriptive in nature while an implementation has to be algorithmic - it has to provide a process or set of rules to be followed in calculations or problem-solving

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         as a primary domain controller (or backup domain controller) in a Windows NT domain" (recital 213 of the Decision).

[65]   See also recital 282 of the Decision which refers to: "[…] *real interoperability solutions that would enable non-Microsoft servers to be integrated in a Windows domain on an equal basis with Windows servers*" (as opposed to migration tools towards Windows).

[66]   See recitals 24 and 570 of the Decision. See also, for example, C. Ghezzi, M. Jazayeri, and D. Mandrioli, *Fundamentals of Software Engineering,* Prentice Hall, 2003.

operations that will run on a computer. In contrast to the implementation, the description provided by the specification cannot be run on a computer.[67]

(66)   This distinction between the protocol specifications to be disclosed under the Decision and Microsoft's implementations thereof is further highlighted in the Decision in recital 999: "*the use of the term 'specifications' makes clear that Microsoft should not be required to disclose its own implementation of these specifications, that is to say, its own source code. The term 'protocol' relates to the rules of interconnection and interaction between instances of the Windows client PC operating system and the Windows work group server operating system*".

(67)   With regard to the distinction between specifications and implementations, the Decision also refers to statements by Professor Wirsing, a computer science professor.[68] He states that "*since it does not have to be executable* [i.e. to run on a computer]*, a specification does not have to be concerned with details that are relevant to the implementation (e.g., memory allocation or details of most algorithms used in an actual realisation of the specification)*".[69]

(68)   As recital 571 of the Decision stresses, it is common industry practice to provide interface specifications without giving access to all implementation details.

(69)   There is academic literature and texts by standard-setting organisations on best practices in software specification.[70] Professor Wirsing explains that "*a specification describes the whole range of external behaviours of the system that has to be achieved by each implementation.* […] *This includes the services and operations offered by the implementation and also assumptions and dependencies which are required for the functioning of the implementation. Thus a specification consists of all interfaces, protocols, behaviours, internal and external effects, and dependencies which are necessary for full interoperation*".[71]

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67   Recital 24 of the Decision.
68   Recital 570 of the Decision.
69   See Martin Wirsing *et al.*, *Specification and Implementation of Interoperable Systems*, on page 1, in [COMPANY D]'s submission of 31 October 2003.
70   See, for example, Martin Wirsing et al., *Specification and Implementation of Interoperable Systems,* 2003; David L. Parnas, *Software Fundamentals*: *Collected Papers*, 2001. See also IEEE Recommended Practice for Software Requirements Specifications (reference 830-1998, www.ieee.org); the Single UNIX Specification, Version 3, 2004 Edition (http://www.opengroup.org). See also, more generally, on interface specifications, Paul Clements, Felix Bachman, Len Bass, David Garlan, James Ivers, Reed Little, Robert Nord and Judith Stafford, *Documenting Software Architecture*, 2005.
71   See Martin Wirsing *et al.*, *Specification and Implementation of Interoperable Systems*, on page 1, in [COMPANY D]'s submission of 31 October 2003. On "behaviours" see also Paul Clements, Felix Bachman, Len Bass, David Garlan, James Ivers, Reed Little, Robert Nord and Judith Stafford, *Documenting Software Architectures*, 2005, which includes as essential features of best-practice interface documentation the "resource semantics" (ibid on page 229). [For a definition of "resource", see Microsoft Computer Dictionary, Fifth Edition, on page 451: "[A]*ny non executable data that is logically deployed with an application. A resource might be displayed in an application as error messages or as part of the user interface. Resources can contain data in a number of forms, including strings,*

(70)   As documented by the references above, there is a common understanding as to the nature of the information that is essential for protocol specifications. A standard requirement is that behaviours and dependencies are fully documented.

(71)   It will be shown in the following recitals that Microsoft has to date provided protocol specifications that fall far short of a substantial number of essential characteristics of adequate protocol documentation. Furthermore, the evidence below shows that in preparing the Technical Documentation, Microsoft has not followed industry practice.[72]

3.1.3   Review of the Technical Documentation

(72)   The Commission's technical experts, OTR, reviewed the Technical Documentation for a three-day period, and on 11 June 2005, provided a report on their findings as regards the completeness and fitness for purpose of the Technical Documentation ("first OTR report").[73] Microsoft was invited to make comments on the first OTR report and did so by letter of 8 July 2005.[74] In response to concerns raised in the first OTR report about the usability and accessibility of certain information in the Technical Documentation, on 8 August 2005, Microsoft provided a version of the Technical Documentation in PDF format to the Commission services.[75] This version of the Technical Documentation was also reviewed by OTR. OTR then provided on 28 September 2005 an updated report on the completeness and accuracy of the Technical Documentation based on this version of the Technical Documentation ("second OTR report").

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images, and persisted objects"]. "Resource semantics" describe the response to the question: "*What is the result of invoking this resource?*" (ibid on page 229). Resource semantics should include "*assignments of values to data; changes in the element's state brought about by using the resource, especially side effects; events that will be signaled or messages that will be sent as a result of using the interface; how other resources will <u>behave</u> differently in the future as a result of using this resource; humanly observable results*" (ibid on page 229, emphasis added). As regards in particular resource semantics, the book states that these can sometimes be insufficient: "*In some cases, semantics need to be reasoned about in terms of how a broad number of individual interactions interrelate. Essentially a* protocol *of interaction is involved that is documented by considering multiple <u>interactions</u> simultaneously. These protocols could represent the complete behaviour of the interaction or patterns of usage that the element designer expects to be used repeatedly. In general, if interacting with the elements via its interface is complex, the interface documentation might include a static behavioural model, such as a state machine or examples of carrying out specific interactions in the form of trace-oriented scenarios.*" (ibid on page 232-233, emphasis on "interactions" added). More generally on behaviour, see chapter 8 (ibid).

[72]   It should also be pointed out that footnote 1 on page 1 of the second OTR report highlights that Microsoft has not followed its own documentation practice, since its documentation of its CIFS protocol is of a higher standard than that for the WSPP protocols. See specification for the Common Internet File System (CIFS) File Access Protocol at http://www.microsoft.com/downloads/details.aspx?FamilyId=C4ADB584-7FF0-4ACF-BD91-5F7708ADB23C&displaylang=en, printed on 13 October 2005.

[73]   This report was originally submitted to the CFI as annex D.01 to the Commission's rejoinder in Case T-201/04. It was subsequently transmitted to Microsoft for comment by letter of 15 June 2005 from Ángel Tradacete Cocera to Jean-Yves Art.

[74]   Letter of 8 July 2005 from Jean-Yves Art to Ángel Tradacete Cocera.

[75]   Letter of 8 August 2005 from Jean-Yves Art to Cecilio Madero. Microsoft indicated in this letter that the version provided was only a beta test version.

(73)   In order to fulfil its obligation under Article 5(c) of the Decision, Microsoft makes two
         Evaluation Agreements available to interested undertakings. Companies interested in
         evaluating the Technical Documentation provided by Microsoft may either opt for a three-
         day evaluation agreement which permits access to the Technical Documentation in a
         Microsoft facility and implies no "cooling off period" for those engineers who have had
         access to the documentation, or for a thirty-day evaluation agreement which provides for
         electronic access to the Technical Documentation and a "cooling off" period.[76]

(74)   Four companies have to date entered into three-day evaluation agreements with
         Microsoft.[77] The Commission services have requested these companies to submit both a
         detailed description of how the evaluation took place on-site, and an assessment on
         whether the Technical Documentation examined in the course of the evaluation provides
         complete and accurate specifications for the protocols covered by the Decision, as well as
         their views on the value of the technology disclosed with the Technical Documentation.[78]

(75)   Section 3.1.4 will set out OTR's technical findings as regards the completeness and
         accuracy of the Technical Documentation provided to the Commission by Microsoft. In
         addition to OTR's findings, the observations of the four companies which reviewed the
         Technical Documentation provided to them in the course of the three-day evaluation
         process will also be discussed. These observations substantially confirm OTR's findings.

3.1.4   Completeness and accuracy of the Technical Documentation provided by Microsoft

3.1.4.1 Information on behaviours and dependencies is missing

(76)   As pointed out in recital (63), in accordance with the Decision, complete and accurate
         protocol specifications have to include all sets of rules of *interconnection* and *interaction*

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[76]   The "cooling off" period is defined in Section 5(b) of the 30-day Evaluation Agreement, as follows:
        "*Commencing at the end of the Evaluation Period and for the duration of the time period designated for a Selected
        Protocol as specified in Exhibit A (a "Restricted Period"), the Evaluating Individuals will not participate in any way
        in the design, development, enhancement or support of any communications protocol, or software that implements a
        communications protocol, that is similar (in function or design) to any of the Selected Protocols.*"
[77]   [COMPANY D], [COMPANY C], [COMPANY B], [COMPANY A].
[78]   Requests for information pursuant to Article 18 of Regulation 1/2003 were sent to [COMPANY D] on 5 September
        2005, to [COMPANY C] on 22 September 2005, and to [COMPANY A] and [COMPANY B] on 4 October 2005.
        The full text of the questions reads as follows: "*1. Please describe in detail how the evaluation took place on-site,
        and in particular what kind of facilities Microsoft provided and what kind of security measures Microsoft put in
        place. 2. Do you consider that the Technical Documentation examined by [your company] provides complete and
        accurate specifications (see Article 1(1) of the Decision) for the protocols covered by the Decision? Please
        substantiate your answer. 3. After scrutiny of the Technical Documentation do you consider that the royalty levels
        proposed by Microsoft and set out in the Royalty Table annexed to the WSPP Agreements are in conformity with
        WSPP Pricing Principles, which are also annexed to the WSPP Agreements, in as far as they: i. enable
        implementation of the protocols by a licensee in a commercially practicable manner; and ii. reflect value conferred
        upon a licensee to the exclusion of the strategic value stemming from Microsoft's market power in the client PC
        operating system market or in the work group server operating system market?*". Responses were received from
        [COMPANY D] on 20 September 2005, from [COMPANY C] on 12 October 2005, [COMPANY B] on 13 October
        2005 and [COMPANY A] on 21 October 2005.

between various instances of Windows Work Group Server operating systems and Windows Client PC operating systems necessary to enable Microsoft's competitors to develop work group server operating system products that interoperate with the Windows domain architecture on an equal basis with Microsoft's work group server operating system products.

(77)   In order to meet these requirements, the Interoperability Information that has to be disclosed under the Decision has to include: (i) the description of the types of messages that are exchanged; but also (ii) explanations about behaviours, effects (internal and external), and dependencies, which the IEEE defines as "*the definition of the responses of the software to all realizable classes of input data in all realizable classes of situations.[…] [I]t is important to specify the responses to both valid and invalid input values*".[79]

(78)   In both its reports on the Technical Documentation, OTR has indicated that it could neither find nor infer such information on behaviours and dependencies from the reading of the Technical Documentation. In its first report, OTR detects "*a lack of diagrams showing the relationship of a protocol to the state of servers that may use it and the lack of complete message and attribute inventories*".[80] [81] In its second report, OTR notes that "*implementation is prevented by the absence of any information concerning dependencies, in particular essential descriptions like where, why and with what impact upon other elements of the system information goes out 'over the wire'*".[82]

(79)   In the same vein, [COMPANY C] points out that "*information in significant amounts is missing from the Microsoft-provided specifications. Microsoft's documentation fails to identify when certain messages are sent, what the possible outcomes are, and how recovery in the event of failure is to be achieved to restore the communicating partners to known states*."[83] [84]

(80)   Similarly, [COMPANY B] stresses that "*the engineers carrying out the implementation need to know all of the possible changes to the state of the system that may result from each request that a protocol may make (at least to the extent that those changes would be*

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[79]   IEEE Recommended Practice for Software Requirements Specifications. The Institute of Electrical and Electronics Engineers, Inc., 1998 (reference 830-1998).

[80]   First OTR report, on page 2.

[81]   See also [COMPANY C]'s response of 11 October 2005 to a request for information, on page 7 where Mr. […], [COMPANY C]'s expert, points out that: "*state transition documents or other similar artefacts are essential to the proper understanding of the protocol. They are essential elements of the protocol. While the state does not necessarily flow over the wire, nevertheless it is an integral part of the protocol and must be disclosed fully with the protocol specifications.*"

[82]   Second OTR report, on page 6.

[83]   [COMPANY C]'s response of 11 October 2005 to a request for information, on page 2.

[84]   "State" or "status" is "*the condition at a particular time of any of numerous elements of computing - a device, a communications channel and network station, a programme, a bit, or other elements - used to report on or to control computer operations*". Microsoft's *Computer Dictionary*, fifth edition, 2002, on page 246.

externally visible in the sense that they would be exposed to subsequent request by another or the same protocol).[85] [COMPANY D] also states that "[s]*uch behaviours and dependencies must be disclosed in order for interoperability to be achieved. Implementation is effectively prevented by these omissions*".[86] [87]

(81)   In view of the foregoing, it appears that the Technical Documentation could only be used in conjunction with reverse-engineering. OTR notes that "[i]*n order to develop an interoperable product, a competitor would have to perform a considerable number of experiments using functioning combinations of Windows work group servers and PCs*"[88]. As noted in recital 687 of the Decision, one reason to order Microsoft to supply Interoperability Information was that reverse engineering - as opposed to disclosures from Microsoft - does not constitute a viable solution for companies wishing to compete with Microsoft on the work group server operating system market.

(82)   The conclusion to be drawn from OTR's reports, which is supported by the observations of the companies which have carried out an evaluation of the Technical Documentation,[89] is that due to the lack of the essential information on behaviours and dependencies in the Technical Documentation, it is virtually impossible to develop work group server operating systems which interoperate with Windows Work Group Server/Client PCs Operating Systems in the way contemplated by the Decision on the basis of the Technical Documentation in its current form.

3.1.4.2   Information on sequencing is missing

(83)   Both OTR reports stress that the documentation on the types of messages exchanged and the timing for the sending of messages is also inadequate and insufficient.

(84)   Messages have to be sent to the operating system in a special order to trigger specific reactions. OTR notes that most of the sequences had to be guessed from the names of the Interface Definition Language[90] [91] ("IDL") used. In most cases, Microsoft did not provide sequencing information.[92] [93]

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[85]   [COMPANY B]'s response of 13 October 2005 to a request for information, at paragraph 19.
[86]   [COMPANY D]'s response to a request for information of 20 September 2005, on page 6.
[87]   [COMPANY A] characterises the Technical Documentation provided by Microsoft as a "*bag of nails and loose parts without disclosure of the blueprint to build anything*" ([COMPANY A]'s response of 21 October 2005 to a request of information, at paragraph 6). [COMPANY B] states that: "*[...] the licensee is not told what the words mean, why these words must be put together in the stated order, or what the full consequences are.*" ([COMPANY B]'s response of 13 October 2005 to a request for information, at paragraph 18).
[88]   Second OTR report, on page 7.
[89]   [COMPANY C] states that "*Microsoft's disclosure of its protocol specifications is inadequate to permit their use by third parties in the development of interoperable products in a commercially practicable manner.*" See [COMPANY C]'s response of 11 October 2005 to a request for information, on page 2.
[90]   [COMPANY A] indicates that "*the information disclosed will not permit [COMPANY A] to develop sufficiently interoperable substitute server products [...]*", see [COMPANY A]'s response of 21 October 2005 to a request for information, at paragraph 3.

(85)	On pages 6-7 of its second report, OTR also stresses that the few descriptions of sequencing provided by Microsoft in the Technical Documentation were not consistent with the kind of description commonly used in the industry. According to OTR, any such descriptions by Microsoft do "*not correspond to the kind of sequence incurred in IDLs for server to server operation, but only to a lower level type of communication. A number of such sequences are needed and have consequently to be examined together in order to set up a server to server communication*". OTR concludes that Microsoft's descriptions have "*nothing to do with the kind of description commonly used. As an example; the Open Group's documentation of the same general topic is much more helpful.*"[94]

3.1.4.3	Other deficiencies of the Technical Documentation

3.1.4.3.1	Introductory and explanatory materials are lacking

(86)	In its first report, OTR also highlights the fact that introductory and explanatory material is lacking for the protocols in the Technical Documentation. This makes it difficult for developers to understand a protocol specification without such material.[95] Such deficiencies make some of the topics of the Technical Documentation virtually unusable.[96] As such, the Technical Documentation essentially comprises only a large collection of protocol disclosures, which are individually incomplete and without sufficient overall description and explanation of the interrelationships between the protocols.[97] This point is also made by the companies which have reviewed the Technical Documentation. For example, [COMPANY C] states that: "*Text, context, narrative and example are virtually non-existent. These are not specifications in the sense that it is understood in our industry. Rather they are a series of excerpts, snippets of information untethered to anything. This*

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[91]	An "Interface Definition Language" is "*a language that lets a program or object written in one language communicate with another program written in an unknown language. An IDL is used to define interfaces between client and server programs*". Microsoft's *Computer Dictionary*, fifth edition, 2002, on page 264.

[92]	For example, as outlined in the first OTR report, on page 3: "*One could evidently guess that IDL elements containing 'REQUEST' in their name preceded those containing 'REPLY'. Apart from such obvious examples, the Technical Documentation appeared to be unhelpful and incomplete in this respect*".

[93]	Letter of 8 July 2005 from Jean-Yves Art to Ángel Tradacete Cocera, Annex B.

[94]	OTR refers to http://www.opengroup.org/onlinepubs/9629399/docix.htm, printed on 14 October 2005. See in particular http://www.opengroup.org/onlinepubs/9629399/chap11.htm#tagcjh_16_04_01, printed on 14 October 2005.

[95]	OTR notes, in particular, that "[t]*he Technical Documentation lacked all but the tersest introductory material. It appeared unlikely that, in all circumstances, a developer of an interoperable product would be able to find his or her way about or be able to understand sufficiently what was going on*". First OTR report, on page 1.

[96]	To illustrate the lack of introductory and explanatory material, and in reply to Microsoft's comments to the first OTR report, OTR notes: "*The example provided in figure 3 of Microsoft's response further illustrates the deficiencies in explanatory material: the Documentation does explain that the BackupKey interface is used by the Data Protection API (DRAPI) to communicate master key backup information between the client machine and the domain controller. There is absolutely no description of how the backup key information is used by either server involved implementing the DRAPI (only a digression into the stateful characteristics of remote procedure calls in general is provided).*" See second OTR report, on page 5.

[97]	Second OTR report, on pages 5 and 6.

terseness and unnecessary brevity reduces the value of the specifications significantly and in some cases to worthless."[98] [99]

3.1.4.3.2 The information is not usable without prior knowledge of the Microsoft environment

(87)   Moreover, and as expressed by OTR in both its reports, the Technical Documentation presupposes and requires knowledge of or access to Microsoft's programming environment. It is virtually unusable without looking into other Microsoft documentation. OTR mentions as an example that "*calls were made* [in the documentation] *to programming methods without there being any explanation of what they did.*"[100] OTR also points out the lack of description of protocols in the public domain but further extended by Microsoft.[101]

(88)   This point was also made by [COMPANY D], which concluded that "[i]t *was common for the protocol documentation to assume knowledge and information located in other Microsoft disclosures made outside the WSPP* […] *As a result, the protocols could not be implemented from information on the face of the documentation as provided*"[102].

(89)   As noted in the second OTR report, in its response to the first OTR report: *"Microsoft seeks to answer to the point made* […]*, but only refers to the example* […] *provided to support it and the terminology used in this example"*[103].

3.1.4.3.3 No revision history is provided

(90)   Although Technical Documentation allowing backward compatibility has to be provided, OTR highlights that "*a revision history of the protocols was not provided by Microsoft. Nor does Microsoft provide information about the correlation of protocol revisions with operating system revisions.*"[104] [105]

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98   [COMPANY C]'s response of 11 October 2005 to a request for information, on page 7.

99   See also [COMPANY A]: "*Contrary to normal practice in making proper descriptions of protocol information, there is no information that meaningfully associates protocols with one another or even discloses the proper sequences in which the protocols must be used.*" ([COMPANY A]'s response of 21 October 2005 to a request for information, at paragraph 6).

100   First OTR report on the Technical Documentation, on page 2.

101   *"Examples of missing items concern Microsoft extension of certain standards, description of certificate structures, or description of protocols in the public domain but further extended by Microsoft. For example, the degree of Microsoft's modifications to the IETF RFCs on IPSEC is not fully documented. Almost no information directly stated what had been changed or why it had been changed has been provided"*. Second OTR report, on page 7.

102   [COMPANY D]'s response of 20 September 2005 to a request for information, on page 5.

103   Second OTR report, on page 6.

104   Second OTR report, on page 8.

105   This finding is also confirmed by [COMPANY D] in its report: "*The protocol commonly lacked detailed information concerning changes between revisions. As well, the materials often lacked information mapping particular protocol revisions, features and elements to particular versions of Microsoft operating systems*" ([COMPANY D]'s response of 20 September 2005 to a request of information, on page 5). [COMPANY A] raised similar concerns: "*There are serious problems with respect to updates and versioning of the documentation.*" ([COMPANY A]'s response of 21 October 2005 to a request for information, at paragraph 9).

3.1.4.3.4 The documentation is outdated

(91)   The companies which have reviewed the Technical Documentation also pointed out that Vista[106] protocols were generally missing from the Technical Documentation. As stressed by [COMPANY C]'s expert, *"in some instances, Microsoft included references to the applicability of the protocols or portions thereof to Longhorn. Superficially and unscientifically, not much seemed changed or new within existing protocols. Significantly, however, there were no new Longhorn protocols – something I would have expected."*[107]. Similarly, [COMPANY D] states that *"in general, Vista protocols were missing from the documentation. Vista is now in widespread beta release."*[108]

3.1.4.4 Conclusion

(92)   The conclusion to be drawn from OTR's reports, which is supported by the observations of the companies which have carried out an evaluation of the Technical Documentation,[109] [110] is that due to the lack of the essential information on behaviours and dependencies in the Technical Documentation, it is virtually impossible to develop work group server operating systems which interoperate with Windows Work Group Server/Client PCs Operating Systems in the way contemplated by the Decision on the basis of the Technical Documentation in its current form.

(93)   Moreover, both OTR reports note that, as a general matter, the Technical Documentation was not provided in a form conceived to facilitate use for the creation of implementations envisioned by the Decision. The Technical Documentation required a laborious, forensic-like examination in order for a reader to try and work out what was going on.

3.1.5   Microsoft's position on its obligations with regard to the completeness and accuracy of the Technical Documentation

(94)   In Appendix 2 to the WSPP Agreements, Microsoft describes the content of the Technical Documentation as follows: *"This specification covers the documentation requirements and styles for Microsoft proprietary protocols and extensions to published/industry standard protocols used <u>on the wire</u> in networks."* (emphasis added). Equally, in its response to the first OTR report, Microsoft explains that the *"Technical Specification contains reference topics that define the on-the-wire packets used in the interoperation between Windows*

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[106]   Vista, formerly code-named Longhorn, is the name of Microsoft's next generation operating system. The PC operating system version is currently in beta release, and is due for commercial release towards the end of 2006.

[107]   [COMPANY C]'s response of 11 October 2005 to a request for information, on page 7.

[108]   [COMPANY D]'s response of 20 September 2005 to a request for information, on page 5.

[109]   [COMPANY A] indicates that *"the information disclosed will not permit [COMPANY A] to develop sufficiently interoperable substitute server products [...]"*, see [COMPANY A]'s response of 21 October 2005 to a request for information, at paragraph 3.

[110]   [COMPANY C] states that *"Microsoft's disclosure of its protocol specification is inadequate to permit their use by third parties in the development of interoperable products in a commercially practicable manner."* See [COMPANY C]'s response of 11 October 2005 to a request for information, on page 2.

client and server operating systems."[111] The letters from Microsoft of 11 and 16 October 2005 confirm that the Technical Documentation provided by Microsoft is based solely on the documentation of the "on the wire" information.[112] At this juncture, it is necessary to note that the concept or notion of "on-the-wire" information is by no means a concept or notion stemming from the Decision. It is Microsoft's own interpretation which Microsoft uses under its sole responsibility.

(95)   As outlined in Section 3.1.4.1 above, the exclusive documentation of what Microsoft terms "on the wire" information in the Technical Documentation is by some significant degree insufficient to allow competitors to interoperate with the Windows domain architecture in a way that would allow them to viably compete with Microsoft's work group server operating system. Such a limited disclosure of Interoperability Information is therefore not compatible with the wording and objective of the Decision.

(96)   Microsoft asserts that any information that goes beyond the description of the "on-the-wire" packets would disclose the "internal implementation of Windows".[113] As regards this assertion, it has to be stressed again that the Decision requires Microsoft to disclose protocol specifications and not its own implementation. As outlined in recital (64) above, these terms have to be distinguished.[114]

(97)   It must be underlined that it is not necessary to reveal the source code or the implementation details of Microsoft's products when disclosing the information on so-called "behaviour and dependencies".[115] This information only encompasses the data transmitted over a connection and the impact that this data transfer may have upon other elements of the computer system. In this latter respect, [COMPANY C]'s expert Mr. [...] states: "*Microsoft's disclosures do not reveal a single line of source code or implementation detail. Correctly written specifications should reveal little or nothing, more likely nothing, about internal structure, algorithms and other innovative aspects of the operating systems. While Microsoft's output to date has been insufficient, correcting it will not require disclosure of such information.*"

(98)   The argument that "*the specifications will teach competitors a great deal about how important components of Windows server operating systems, such as Active Directory, work*" was already brought forward by Microsoft during the procedure on its application for interim measures in the CFI.[116] [117] The President of the CFI concluded on this point

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[111]   Letter of 8 July 2005 from Jean-Yves Art to Ángel Tradacete Cocera, Annex B, at paragraph 1.1.
[112]   Letters of 11 and 16 October 2005 from Bradford Smith to Philip Lowe.
[113]   Letter of 3 October 2005 from Bradford Smith to Philip Lowe.
[114]   Recital 570 of the Decision.
[115]   See page 3 of [COMPANY C]'s response to a request for information of 11 October 2005 in which Mr. […] reiterates what he has already maintained in the proceedings on interim measures. See Order of the President of the Court of First Instance of 22 December 2004 in Case T-201/04 R, not yet reported, at paragraph 262.
[116]   Order of the President of the Court of First Instance of 22 December 2004 in Case T-201/04 R, not yet reported, at paragraph 261.

that "*in the absence of other precise material produced by Microsoft, it is not possible to take as established the allegations that the specifications will reveal more than is necessary to ensure the interoperability sought by the Commission*".[118] No further information has been brought forward by Microsoft since the Order of the President of the CFI.

(99)   Therefore, it must be concluded that Microsoft's limitation of the disclosure of Interoperability Information to the "on-the-wire" packets runs counter to the wording and objective of the Decision, and cannot be justified by any legitimate interest on Microsoft's part.

(100)   In its response to the first OTR report, Microsoft answered only evasively to the other points raised by OTR (outlined in Sections 3.1.4.2 and 3.1.4.3.1 above). Concerning the issue of sequencing of messages, Microsoft states that "*sequencing is clearly explained in the Technical Specification for those protocols that require an explanation*"[119], without explaining what criterion it uses to determine whether a protocol does or does not require such an explanation. Microsoft provided a similar answer on the issue of the lack of introductory, explanatory material, stating that: "*Wherever possible, care has been taken to include links to publicly accessible introductory and explanatory material at the appropriate places in the Technical Specification*"[120] (the example of such a link is also provided). However, Microsoft does not explain when and why it considers it possible to include such material. It can therefore be concluded that Microsoft does not consider it appropriate to provide such material for most of the Technical Documentation, even if this is at odds with industry standards.

3.1.6   Conclusion on Microsoft's compliance with Article 5(a) and (c) of the Decision

(101)   In light of what is stated in recitals (53) to (100) above, the Technical Documentation provided by Microsoft is neither accurate nor complete and is therefore not in conformity with Microsoft's obligation under the Decision. It must therefore be concluded that Microsoft has failed to comply with Article 5(a) and (c) of the Decision.

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[117]   See also paragraph 68 of Microsoft's application for annulment of 11 June 2004 in Case T-201/04, where Microsoft asserted that: "*licensing communications protocol* [sic] *necessarily entails providing competitors with information about the internals of the server operating systems with which that communications protocol is used.*"

[118]   Order of the President of the Court of First Instance of 22 December 2004 in Case T-201/04 R, not yet reported, at paragraph 263.

[119]   Letter of 8 July 2005 from Jean-Yves Art to Ángel Tradacete Cocera, Annex B, at paragraph 1.4.

[120]   Letter of 8 July 2005 from Jean-Yves Art to Ángel Tradacete Cocera, Annex B, at paragraph 1.1.

3.2 Compliance with Article 5(a) of the Decision: the availability of the Interoperability Information on reasonable and non-discriminatory terms

3.2.1 Level of the remuneration required under the WSPP Agreements

3.2.1.1 Framework for the assessment of the remuneration

(102) Recital 1008(ii) of the Decision states that "*the requirement for the terms imposed by Microsoft to be reasonable* […] *applies in particular* […] *to any remuneration that Microsoft might charge for supply*". Indeed, any non-nominal remuneration required by Microsoft constitutes a tax that Microsoft's competitors in the work group server operating system market have to pay to Microsoft, and thus has the potential of limiting their ability and incentives to compete on this market with Microsoft. Any such non-nominal remuneration should thus be justified by showing that it represents a fair compensation for the value that is transferred by Microsoft to recipients of the Interoperability Information.[121] In this regard, recital 1008(ii) of the Decision further notes that "*such a remuneration should not reflect the 'strategic value' stemming from Microsoft's market power in the client PC operating system market or in the work group server operating system market*".

(103) In the WSPP Agreements, Microsoft recognises that it should not be remunerated for the strategic value stemming from its market power. The WSPP Pricing Principles, which are contained in each WSPP Agreement,[122] make clear that "*the remuneration proposed and/or established by Microsoft is appropriate if it: (i) enables implementation of the protocols by a licensee in a commercially practicable manner; <u>and</u> (ii) reflects value conferred upon a licensee to the exclusion of the strategic value stemming from Microsoft's market power in the client PC operating system market or in the work group server operating system market*".[123] The WSPP Pricing Principles go on to state that the assessment of what reflects such value conferred upon a licensee to the exclusion of strategic value should in particular take into account: "*whether the protocols described in the specifications are Microsoft's own creations (as opposed to Microsoft's implementation of a publicly available standard, such as IETF RFCs, W3C standards or other comparables); whether these creations by Microsoft constitute innovation; and a*

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[121] It should nevertheless be noted that even if Microsoft were to receive no remuneration for the Interoperability Information, it would still be remunerated through the increased value conferred on its primary product (i.e. the PC operating system) which would result from its disclosures. This is because of the greater level of interoperability this product would have with non-Microsoft work group server operating systems, which would in turn increase the willingness of customers using client-server networks to pay for Windows client PC operating systems (see recital 727 of the Decision).

[122] These WSPP Pricing Principles were included in the WSPP Agreements following several discussions and exchanges of written views between the Commission services and Microsoft - see e-mail of 30 May 2005 from Jean-Yves Art to Philip Lowe.

[123] Appendix 1 of the WSPP Agreements.

market valuation of technologies deemed comparable, excluding the strategic value that stems from the dominance of any such technologies".

(104)   The <u>first of these conditions</u> is that the protocols are Microsoft's own creation. If Microsoft simply uses protocols that it takes from the public domain, the only information that it will be providing pursuant to the Decision is which of the protocols available in the public domain it is actually using. The only appropriate price for that information is zero.

(105)   Similarly, if the protocol technology used by Microsoft, although different to protocol technology available in the public domain, is obvious to persons skilled in the art (i.e. if there is no innovation in the Interoperability Information), Microsoft should not be able to charge for such non-innovative protocols. The <u>second condition</u> for Microsoft to receive non-nominal remuneration is therefore that Microsoft's protocols must be innovative.[124]

(106)   The <u>third condition</u> to evaluate whether any remuneration required is reasonable is whether this remuneration is in line with a market valuation for technologies deemed comparable to any innovations identified by Microsoft.

(107)   The WSPP Pricing Principles also acknowledge that "*the effectiveness of the Decision in accordance with Article 82 may be hampered if royalties are excessive.*" In line with the analysis outlined in recital (7) above, the Commission would share this view. Any remuneration requested by Microsoft which is not in compliance with the three conditions outlined in recitals (104) to (106) above will be unreasonable since they will reflect the "strategic value" stemming from Microsoft's market power. They would therefore have to be considered inconsistent with the Decision as they would act as an unreasonable disincentive for potential competitors to enter into a WSPP Agreement with Microsoft. Such remuneration would distort competition by means of continuing to prevent competitors from viably competing with Microsoft in the work group server operating system market.

3.2.1.2   The WSPP Agreement remuneration scheme

3.2.1.2.1   General framework

(108)   The WSPP Agreements contain a Royalty Table (Appendix 1, Table A-1) which specifies the remuneration Microsoft intends to charge for either the provision of the relevant Technical Documentation under the No Patent Agreement, or the licensing of the relevant patents under the Patent Only Agreement, or both under the All IP Agreement. According to the agreements, the WSPP Protocols are grouped, and may be provided in four ways. Therefore: (i) it is possible to have access to the Technical Documentation; (ii) it is

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[124]   Microsoft itself explicitly acknowledges this, when it states that "*if the DRS protocol consisted solely or mainly of [...] mundane material, it would be appropriate to offer it royalty-free or nearly so.*" (See letter of 20 October 2005 from Bradford Smith to Philip Lowe, on page 3).

possible to license the relevant patents for all WSPP Protocols or for a specific task;[125] (iii) a recipient may also choose a specific scenario within a task;[126] or (iv) a recipient may opt for the provision of Interface Definition Language ("IDL") files only. The remuneration set out in the Royalty Table corresponds to the different agreements (All IP, No Patent, Patent Only) and the tasks, scenarios or IDL files which the recipient chooses. As regards the level of remuneration for the tasks, scenarios or IDL files, Microsoft distinguishes between four price categories: Gold, Silver, Bronze and the royalty-free category. The remuneration to be paid under these categories is either based on the recipient's net revenue generated by products implementing the WSPP Protocols, or is on a per server basis. Microsoft applies a minimum and maximum remuneration to the tasks, scenarios or IDL files chosen by recipients. For the sake of convenient reference, the Royalty Table, as provided by Microsoft, is outlined below.

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[125]   The available tasks are: File/Print, User and Group Administration and General Networking.
[126]   Microsoft lists 18 different scenarios that may be licensed individually.

Task	Scenario	Price				Minimum				Maximum				Category
		All IP	Patent Only – No. of patents covered	Trade Secret Only	IDL Only	All IP	Patent Only	Trade Secret Only	IDL Only	All IP	Patent Only	Trade Secret Only	IDL Only	
	CIFS	$0												RF
File/ Print	Base File Services	$8/srv	$5.20/srv 4(2) US 1 EU	$4/srv	$3/srv	$8/srv	$5.20/srv	$4/srv	$3/srv	$8/srv	$5.20/srv	$4/srv	$3/srv	Bronze
	DFS (Distributed File System)	2%	1.3% - 2 US 1 EU	1%	N/A	$18/srv	$11.70/srv	$9/srv	N/A	$422/srv	$274.30/srv	$211/srv	N/A	Silver
	FRS (File Replication Service)	1%	N/A	.5%	N/A	$9/srv	N/A	$4.50/srv	N/A	$211/srv	N/A	$105.50 /srv	N/A	Silver
	Print RPC	$8/srv	N/A	$4/srv	$6/srv	$8/srv	N/A	$4/srv	$6/srv	$8/srv	N/A	$4/srv	$6/srv	Bronze
	Internet Print	$8/srv	$5.20/srv 1 US	$4/srv	N/A	$8/srv	$5.20/srv	$4/srv	N/A	$8/srv	$5.20/srv	$4/srv	N/A	Bronze
All File/Print Protocol Groups		4.5%	2.93% - 7(2) US 2 EU	2.25%	1.7%	$40/srv	$26/srv	$20/srv	$15/srv	$950/srv	$713/srv	$475/srv	$356/srv	Silver
UGA	Base Authentication & Authorization	$25/srv	$16.25/srv 4(3) US	$12.50/srv	$9.50/srv	$25/srv	$16.25/srv	$12.50/srv	$9.50/srv	$25/srv	$16.25/srv	$12.50/srv	$9.50/srv	Bronze
	Domain Services Interaction	$25/srv	$16.25/srv 4 US	$12.50/srv	$9.50/srv	$25/srv	$16.25/srv	$12.50/srv	$9.50/srv	$25/srv	$16.25/srv	$12.50/srv	$9.50/srv	Bronze
	Multi-Factor Authentication & Certificate Services	1.5%	N/A	.75%	.75%	$8/srv	N/A	$4/srv	$4/srv	$190/srv	N/A	$95/srv	$95/srv	Silver
	Group Policy	1.0%	N/A	5%	N/A	$8/srv	N/A	$4/srv	N/A	$127/srv	N/A	$63.50/s rv	N/A	Silver
	Systems and Systems Health Management	1.0%	.65% 2 US	.5%	.35%	$8/srv	$5.20/srv	$4/srv	$3/srv	$127/srv	$82.55/srv	$63.50/s rv	$47.50 per srv	Silver
	Directory & Global Catalog Replication	6.5%	4.23% - 2(3) US 1 EU	3.25%	N/A	$35/srv	$22.75/srv	$17.50/srv	N/A	$823/srv	$534.95/srv	$411.50 /srv	N/A	Gold
	Kerberos Group Membership Protocols*	$0												RF
	Window Remote Registry Services*	$0												RF
	Windows Event Logging*	$0												RF
	Network Time Services*	$0												RF
	Network Connection Mgmt*	$0												RF
	MSDN networking protocols*	$0												RF
	Remote Procedure Calls	$0												RF
	All UG&A Protocol Groups	7.5%	4.88% 8(6) US 1(0) EU	3.75%	N/A	$40/srv	$26/srv	$20/srv	N/A	$950/srv	$617.50/srv	$475/srv	N/A	Gold
	Networking Transport	$8/srv	$5.20/srv 6(4) US 1 EU	$4/srv	N/A	$8/srv	$5.20/srv	$4/srv	N/A	$8/srv	$5.20/srv	$4/srv	N/A	Bronze
	Combined File Print, U&GA	8.5%	5.53%	4.25%	N/A	$50/srv	$32.50/srv	$25/srv	N/A	$950/srv	$617.50/srv	$475/srv	N/A	Gold

3.2.1.2.2 No Patent Agreement

(109)   Under the No Patent Agreement, Microsoft allows recipients to develop work group server operating system products on the basis of the Technical Documentation and to distribute these products worldwide.[127] As shown in the Royalty Table annexed to the agreement (Table A-1), for the protocols associated with the File/Print task, a remuneration rate of 2.25% of the recipient's net revenues is charged, whilst for the protocols associated with the User and Group Administration task, a rate of 3.75% of the recipient's net revenues is charged. A rate of 4.25% of the recipient's net revenues is charged for all the protocols. The Directory and Global Catalogue Replication scenario is categorised as "gold", and has a rate of 3.25% of the recipient's net revenues. The minimum rate for all the protocols is USD 25 per server, whereas the maximum royalty rate is USD 475 per server.

3.2.1.2.3 Patent Only Agreement

(110)   Under the Patent Only Agreement, Microsoft provides a licence to those patents which allegedly read on the technology necessary to interoperate with Windows Client PCs and Windows work group server operating systems.[128] As shown in the Royalty Table annexed to the agreement (Table A-1), for the protocols associated with the File/Print task, a royalty rate of 2.93% of the recipient's net revenues is charged, whilst for the protocols associated with the User and Group Administration task, a royalty rate of 4.88% of the recipient's net revenues is charged. A royalty rate of 5.53% of the recipient's net revenues is charged for all the protocols. The Directory and Global Catalogue Replication scenario has a royalty rate of 4.23% of the recipient's net revenues. The minimum royalty rate for all the protocols is USD 32.50 per server, whereas the maximum royalty rate is USD 617.50 per server.

3.2.1.2.4 All IP Agreement

(111)   Under the All IP Agreement, Microsoft provides a licence to those patents which allegedly read on the technology necessary to interoperate with Windows Client PCs and Windows work group server operating systems as well as access to the Technical Documentation.[129] As shown in the Royalty Table annexed to the agreement (Table A-1), for the protocols associated with the File/Print task, a rate of 4.5% of the recipient's net revenues is charged, whilst for the protocols associated with the User and Group Administration task, a royalty rate of 7.5% of the recipient's net revenues is charged. A royalty rate of 8.5% of the recipient's net revenues is charged for all the protocols. The Directory and Global Catalogue Replication scenario has a royalty rate of 6.5% of the recipient's net revenues.

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[127]   See the "licence grant" in Section 2.1 and the definition of "Licensed Server Implementation" in Section 2.2 of the No Patent Agreement.

[128]   See the "licence grant" in Section 2.1 of the Patent Only Agreement.

[129]   See the "licence grant" in Section 2.1 of the Patent Only Agreement.

The minimum royalty rate for all the protocols is USD 50 per server, whereas the maximum royalty rate is USD 950 per server.

(112)   To date, no company has entered into any of the above-mentioned three agreements with Microsoft.

3.2.1.2.5 The non-nominal nature of the pricing levels

(113)   On 13 June 2005, the Commission services sent requests for information relating to the WSPP Agreements of 9 June 2005 to various enterprises ([COMPANY B], [COMPANY D], [a third party], [COMPANY C], [a third party], [a third party] and two other companies which requested that their identity not be disclosed). In their replies, several third parties stressed that Microsoft's remuneration rates were significant, that they could not be justified in terms of what the Interoperability Information actually comprised, and that as such they constituted disincentives to take the Interoperability Information.[130]

(114)   For example, on page 49 of its submission of 1 July 2005, [COMPANY A] states that "*the royalties* […] *are not commercially viable in many circumstances. In fact, the royalty percentages applied to the price of an entire server (including the hardware) are crippling*". Similarly, on page 26 of its submission of 23 June 2005, [COMPANY B] states that "*the royalties demanded by Microsoft are extravagantly high. The normal price for the complete set of WSPP Protocols (all IP) is 8.5% of the Licensee's total revenues for the products. It is simply inconceivable that the protocols could genuinely have that value* […] *For [COMPANY B], this royalty rate would imply payments to Microsoft of tens of millions of dollars per year.*" This view is echoed by Company N, which on page 4 of its submission of 8 July 2005 states that "*the royalties envisaged are grossly excessive for mere interoperability protocols and wrongly imply that such protocols are a major element of the value of an entire operating system.*" In a similar vein, on page 3 of its submission of 18 July 2005, [a third party] notes that the "*royalty rates remain outrageously high, and represent fully 25% of* [a third party] 's *current operating margin.*"

(115)   For a practical illustration of what the effective remuneration rates in the WSPP Agreements are likely to be, it is useful to refer to the price of Microsoft's own work group server operating system product, since it is against this product that potential recipients of the Interoperability Information will have to compete. This product, Windows 2003 Server, Standard Edition, costs USD 999 (with a 5-user Client Access Licence).[131] That

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[130]   Microsoft has since slightly revised downwards the remuneration rates for the No Patent and the Patent Only agreements. By way of illustration, the remuneration for the combined file/print and user and group administration task under the 9 June 2005 Patent Only Agreement and the No Patent Agreement was 6.4 % of net revenues. Under the Patent Only Agreement of 20 October 2005, this figure is 5.53%, and under the No Patent Agreement of 20 October 2005, it is 4.25%. The All IP agreement remuneration rates remain the same as those in the WSPP Agreements of 9 June 2005. The current remuneration rates are outlined in Section 3.2.1.2.

[131]   See http://www.microsoft.com/windowsserver2003/howtobuy/licensing/pricing.mspx, printed on 18 October 2005.

this is a useful point of reference is illustrated by the fact that [COMPANY B]'s work group server operating system product, […] Server, is priced virtually identically - USD 995 for the product with a 5-user licence.[132]

(116)   The first point to note in this regard is that if the remuneration rates in each WSPP Agreement for all the tasks and scenarios are hypothetically applied to Microsoft's product (or therefore in practice to that of [COMPANY B]), then the minimum rates of each WSPP Agreement will always be exceeded. For the No Patent Agreement, a remuneration rate of 4.25% leads to a fee of USD 42.46, well above the minimum of USD 25. For the Patent Only Agreement, a remuneration rate of 5.53% leads to a fee of USD 55.24, well above the minimum of USD 32.5. For the All IP Agreement, a remuneration rate of 8.5% leads to a fee of USD 84.92, well above the minimum of USD 50.

(117)   A second point to note is that the maximum remuneration level of USD 950 for the All IP Agreement is virtually the same as the price of Microsoft's entire work group server operating system product (USD 999), and that this price can often be reached. For example, on pages 49-50 of its submission of 1 July 2005, [COMPANY A] points out that "*the maximum royalty of $950 is quickly reached*", noting that "*the 8.5 percent royalty is calculated against Net Revenues for the Licensee SKU […] (A SKU is defined as the stock keeping unit maintained in the ordinary course of the Licensee's business […]) Thus, if the Licensee distributes its implementation as part of a server costing a little over $11,000 it will reach the maximum $950 per server. (The same is true of the patent only and Trade Secret only maxima).*" In this regard, it should be noted that the Decision highlights that work group server operating systems are generally installed on hardware costing under USD 25,000[133]. It is therefore likely that there will be many servers with a work group server operating system installed which will be subject to the maximum royalty (i.e. those costing USD 11,176 and above).[134] [135]

(118)   In such a scenario, it is clear that the potential recipient of the Interoperability Information would be placed at a significant commercial disadvantage vis-à-vis Microsoft if the royalty that it has to pay is the same as the stand-alone price of Microsoft's work group server operating system product.

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132   See http://www.novell.com/products/openenterpriseserver/howtobuy.html, printed on 18 October 2005.
133   Recital 479 of the Decision.
134   This is also pointed out by [COMPANY D], which on page 5 of its response to the request for information of 13 June 2005 states that "*percentage royalties are calculated as a percentage of a distributed Licensee SKU. The Licensee SKU includes not only the price of the software, but the price of hardware and services which the vendor may include. There is no legitimate basis for Microsoft to demand compensation based upon the sale of hardware and services which have nothing to do with software protocols.*"
135   It should therefore be noted that given that the same percentage royalty rate is applied to work group server operating system vendors irrespective of whether they sell their product as stand-alone software or integrated with hardware, vendors of integrated software/hardware solutions are likely to pay a significantly higher level of royalty than vendors of stand-alone software.

(119)   A third point to note is that even if the maximum royalty level is not attained, the effective remuneration that would in practice be due to Microsoft could still represent a significant obstacle to competing with it in the work group server operating system market. This is illustrated by Company N, which on page 5 of its submission of 8 July 2005 states that: "*based on* [N]*'s revenue figures and the details set out in Exhibit B and Table A-1, the Table A-1 royalties would be over 20% of the lowest royalties per copy which* [N] *pays under a Windows server operating system licence. Therefore, the Table A-1 royalties imply that over one fifth of the value of Microsoft's entire server operating system derives from the WSPP Protocols alone. This is incredible given that the protocols, a mere set of rules of interconnection and interaction, are a very small input into the server operating system*".

(120)   Naturally, it is a significant constraint on the ability of a work group server operating system vendor to compete if the cost of interoperating with the dominant product in the market (which is necessary to be able to viably compete) is one fifth of the value of the dominant vendor's entire work group server operating system product.

3.2.1.2.6   Conclusion

(121)   The analysis outlined in recitals (113) to (120) above demonstrates that the remuneration levels in the WSPP Agreements are not only non-nominal, but are likely to be significant in practice, both in absolute and in relative terms. As such, they would provide disincentives for interested undertakings in developing competing work group server operating system products that interoperate with the Windows domain architecture, and must in the absence of an objective justification brought forward by Microsoft be considered unreasonable. It is consequently for Microsoft to objectively justify the level of remuneration charged in the WSPP Agreements (as outlined in Section 3.2.1.1 above).

3.2.1.3   Assessment of the reasonableness of the WSPP remuneration scheme

3.2.1.3.1   Introduction

(122)   As outlined in Section 3.2.1.1 above, a necessary but not sufficient condition for Microsoft to be able to charge a non-nominal royalty for the Interoperability Information is that Microsoft must demonstrate innovation in the technology embodied in the Interoperability Information. The following two sub-sections examine this issue with respect to: (i) the No Patent Agreement (Section 3.2.1.3.2) and (ii) the All IP Agreement/Patent Only Agreement (Section 3.2.1.3.3).

3.2.1.3.2 No Patent Agreement

3.2.1.3.2.1 Introduction

(123)   The No Patent Agreement allows recipients to develop work group server operating system products on the basis of the Technical Documentation, but without granting a licence to the patents which allegedly read on the technology necessary to interoperate with Windows client PC and Windows work group server operating systems. It cannot be presumed that there is innovation in the technology disclosed with the Technical Documentation. Microsoft nevertheless argues that there is such innovation embodied in the Technical Documentation. In the remainder of this section, these claims will be examined with respect to: (i) all the WSPP Protocols (91 in total); and (ii) the DRS protocol, for which Microsoft's claims relating to innovation are more detailed. Following this examination, the methodology used by Microsoft's economic consultants, PwC, will be examined in relation to the appropriateness of the level of remuneration in the No Patent Agreement.

3.2.1.3.2.2 Assessment of innovation with regard to all WSPP Protocols

(124)   In a response to a request for information of 27 January 2005 about the technical and commercial value[136] of the disclosed Interoperability Information to competitors, Microsoft argues the following:[137] "*The Specifications will assist competitors in improving the group and user administration and/or file and print functionality of their own server operating system. This is so for at least two related reasons. First, functionality and performance capabilities are an integral part of the communications protocols to be disclosed because they were designed and developed to perform difficult and complex tasks in the most efficient, compact, and secure manner. Second, as has been previously explained, the communications protocols used by multiple copies of Active Directory in particular are 'tightly coupled', so that specifications of the protocol information necessarily carries with it substantial information about the implementation of related functionality and performance characteristics. In other words, techniques used by Microsoft to achieve greater levels of functionality and performance in Windows server operating systems will help competitors to be able to incorporate such functionality and performance into their own products. These techniques are part of the protocols themselves and are disclosed in the Specifications.*"

(125)   With respect to the first of Microsoft's contentions, namely that the functionality and performance capabilities are an integral part of the protocols to be disclosed, Microsoft has

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[136]   Question 8 of the request reads as follows: "*Please specify if the disclosed Interoperability Information will help to improve the performance of a competitor's work group server operating system products beyond the mere ensuring of interoperability with Microsoft's products. If so, please specify:*
- in which way the disclosed Interoperability Information will help to improve the performance of a competitor's work group server operating system products beyond the mere ensuring of interoperability with Microsoft's products; and
- what commercial value you would attribute to these improvements."
[137]   Microsoft's response of 15 February 2005 to a request for information, on page 11.

failed to adduce persuasive evidence to prove that these functionality and performance capabilities allegedly inherent in the protocols would be disclosed together with the Technical Documentation and, if this were the case, that they are indeed innovative.

(126) Microsoft's above-mentioned response to the request for information of 27 January 2005 contains a table which is intended to list the performance improvements that a recipient could achieve by implementing the Technical Documentation, and also to assess the commercial value, including the value to customers, that would be associated with these improvements.[138] Apart from the mere provision of this list, Microsoft does not in any way support its assertions (for example through use of technical evidence) that the Technical Documentation does indeed contain the description of the technology leading to these improvements. Nor does Microsoft show that the improvements would be realisable by competitors implementing the Technical Documentation. In its response, Microsoft instead limits itself to stating that "*the specifics of how functionality and performance capabilities are inherent in the communications protocols to be licensed, or are disclosed by the Specifications, would require a detailed technical discussion that would be different for each of the protocols covered by the Decision*", and that Microsoft would make technical staff for discussion available to the Commission as well as providing additional written information.[139]

(127) In addition, this list does not contain any evidence that the discussed performance improvements constitute innovation when compared to the state of the art in protocol technology. In fact, the list does not even provide a description of the technology that was used as a comparator to determine the alleged performance improvements. At the Commission's request, OTR reviewed the list from a technical point of view, concluding that it "*does not appear to identify any secret, intrinsically-valuable invention that Microsoft would have to disclose to competitors pursuant to the Decision.*"[140]

(128) The additional written information on the allegedly innovative character of the protocols at stake that Microsoft has provided to the Commission following its response to the request for information is very limited. In an annex to its reply to the CFI in the pending case on Microsoft's application for annulment of the Decision (Case T-201/04), Microsoft submitted a paper drafted by Mr. [X], one of Microsoft's engineers ("Mr. [X]' paper"). [141] [142]   This annex, entitled "*Innovation in Communications Protocols that*

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138 Microsoft's response of 15 February 2005 to a request for information, on pages 12 to 16.
139 Microsoft's response of 15 February 2005 to a request for information, on page 11.
140 OTR, *Comments on Annex C.4 to the Reply*, 10 June 2005 ("OTR report on the DRS protocol"), on page 20. The report was originally submitted to the CFI as annex D.02 to the Commission's rejoinder in Case T-201/04. It was subsequently transmitted to Microsoft for comment. See letter of 15 June 2005 from Ángel Tradacete Cocera to Jean-Yves Art.
141 Annex C. 4 to Microsoft's Reply in Case T-201/04 of 28 February 2004.
142 Together with its observations in the interventions in Case T-201/04, Microsoft submitted to the CFI another paper drafted by two of its engineers entitled "*Innovation in the Creation of the FRS Protocol*", in which they describe the alleged innovations in the so called File Replication Service Protocol (Annex I.12 to Microsoft's observations on

Microsoft is ordered to license to its server operating system competitors", contrary to what its title would suggest, only focuses on the allegedly innovative aspects of the so-called Directory Replication Service ("DRS") Protocol. As regards the innovative aspects of other protocols, the paper by Mr. [X] limits itself to providing the list of alleged performance improvements and the associated commercial value which Microsoft had already included in its response to the request for information of 27 January 2005.[143] On 21 October 2005, Microsoft submitted a new report on the alleged innovations in the DRS protocol (the report was dated 20 October 2005). With this report, Microsoft provided additional information on the allegedly innovative aspects of the DRS protocol.

(129)   As regards the second assertion made by Microsoft (the fact that a specification "*necessarily carries with it substantial information about the implementation of related functionality and performance characteristics*"), it must again be stressed that the Decision requires Microsoft to disclose protocol specifications, rather than its own implementation. As outlined in Section 3.1.2 above, a clear distinction should be drawn between these two concepts.[144]

(130)   The argument that the specifications will reveal substantial information about the implementation of related functionality and performance characteristics is unfounded and has already been addressed in recitals (96) to (98) above. As recital 571 of the Decision emphasises, it is possible to provide interface specifications without giving access to implementation details, and indeed this is common industry practice.

(131)   As such, it must be concluded that Microsoft has failed to objectively justify the remuneration rates charged for the WSPP Protocols other than DRS, because it has failed to adduce persuasive evidence about the innovative nature of the technologies allegedly disclosed with these protocols. For the DRS protocol, Microsoft has made more detailed claims. Therefore, an examination of the claims in Mr. [X]' paper and Microsoft's report on DRS now follows.

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the interventions, filed on 13 June 2005). This paper was never actually transmitted to the Commission by Microsoft other than through the Court of First Instance. For the sake of completeness, it should be stressed that the Commission experts, OTR, have in their report on the DRS protocol also briefly examined the FRS Protocol and come to the conclusion that "FRS" is based on a well-established concept and that there are several commercial products that perform the same task; a randomly-selected example is "RDS" (Repliweb Deployment Suite); see OTR report on the DRS protocol, on page 5. In a similar vein, [COMPANY D] submits: "[w]*hat is disclosed in the FRS protocol documentation is the FRS API. File replication, itself, is common to virtually all operating systems. The FRS API is an RPC interface for managing certain aspects of the file replication process. It is used to identify the destination server, obtain parameters from AD* [Active Directory]*, and force an immediate replication between two servers. None of these features of the API are unique to Microsoft. Other file replication systems include features which are substantially similar. What is disclosed are the particular ways these features are called in the Microsoft system, which is pure access to interoperability with the Microsoft system.*" See [COMPANY D]'s response of 20 September 2005 to a request for information, on page 11.

[143]   Mr. [X]' paper, on pages 16 - 20.
[144]   Recital 570 of the Decision.

3.2.1.3.2.3 Assessment of innovation with regard to the DRS protocol

(132)   Mr. [X]' paper describes the DRS protocol as a protocol that provides group and user administration services[145] and is used for functions such as configuration of the replication, installation, validation of names, validation of and searching for security information, translation of names from one format to another and the retrieval of state information.[146] Apart from a general introduction into innovation in Active Directory, Mr. [X] mentions a number of reasons why the DRS protocol is specifically innovative. According to Mr. [X], the DRS protocol is self-defining, free-form extensible, customizable for each application or process, and provides "distributed virtual memory" style of computation. It provides a framework for the division of work between different servers and is state-based.

(133)   On 10 June 2005, OTR has drawn up a report examining Mr. [X]' assertions.[147] To this end, OTR examined the Technical Documentation which Microsoft provided to the Commission. According to OTR, there is "*considerable prior and parallel art in Mr [X]' claimed innovations concerning protocol design and it is not evident why competitors would be interested in the 'technology' described, apart from their commercial requirement to interoperate with Windows work group servers*".[148]

(134)   With respect to the specific innovations in the DRS protocol claimed by Mr. [X], OTR has come to the following conclusions.

(135)   Mr. [X] states that the DRS protocol is used to define, or initialise itself. OTR concludes that "*the DRS protocol is not the first, self-defining protocol in the field of directory services. LDAP[149], itself, is self-defining. It uses ASN.1 syntax (Abstract Syntax Notation), which was inherited from the X.500 standard and can therefore be 'used to define, or initialize itself'. Microsoft uses the self-defining property of LDAP in the DRS protocol.*"

(136)   Mr. [X] mentions the "dynamic syntax" which makes the protocol free of form and completely extensible. Mr. [X] explains that "*instead of a small infinite set of expressible actions, the protocol can express whatever operations are meaningful to the programs using the directory*"[150] By contrast, OTR finds that these features "*are not specific to DRS, but are a general property of extensible self-defining messaging systems, of which there are many.*"[151] Mr. [X] argues that "*the DRS protocol provides a new kind of communication paradigm for applications and processes*".[152] OTR counters that "*the 'kind of communication paradigm' described by Mr [X] is in itself not new.*" To support this

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[145]   For a definition of "group and user administration services", see recitals 54-55 of the Decision.
[146]   Mr. [X]' paper, at paragraph 14.
[147]   See OTR report on the DRS protocol.
[148]   See OTR report on the DRS protocol, on page 2.
[149]   LDAP stands for "Lightweight Directory Access Protocol" and is a standard maintained by the IETF. See also recital 55 of the Decision.
[150]   Mr. [X]' paper, at paragraph 28.
[151]   For further details, see OTR report on the DRS protocol, on page 11.
[152]   Mr. [X]' paper, at paragraph 31.

finding, OTR discusses the examples given by Mr. [X] of "*earlier attempts with smaller scope*"[153] to provide these functionalities. OTR arrives at the conclusion that "*the description of the DRS protocol as constituting a completely 'new kind of communication model' is not appropriate.*"[154]

(137) Furthermore, Mr. [X] claims that "*the DRS protocol provides a framework for the division of work in distributed computation*", which is innovative.[155] OTR, on the other hand, finds in this respect that "*such a delegation framework, however, is common to almost all multi-master replication systems (of which we have seen that there are many that predate Active Directory)*".[156] Mr. [X] goes on to argue that "*the DRS protocol is 'state-based', which gives it significant advantages over 'log-based' protocols*". Mr. [X] explains that "*with a 'state-based' protocol, servers simply communicate up-to-date information in the directory (its current status or 'state') to each other, rather than communicating the list ('log') of all the changes that have occurred in the directory since the last time the servers communicated*". OTR responds to this assertion that Active Directory is not the only directory with state-based replication. OpenLDAP, iPlanet SunOne, Novell eDirectory are all state-based. Mr. [X] argues further that "*the value of the DRS protocol also comes from the fact that all the replicas of Active Directory in a network will 'converge' (or eventually agree) on the same view of the data in the directory*".[157] OTR replies that "*the fact that the DRS protocol enables convergence simply means that it is a working directory replication protocol. It does not mean that it is innovative.*"[158] [159]

(138) Mr. [X] also brings forward two additional arguments of a more general nature to back his claims on the innovativeness of the DRS protocol. Firstly, he contends that the innovative nature of the DRS protocol is recognised by the fact that patents reading on it have been granted.[160] In its submissions before the CFI, the Commission has already expressed significant doubts about whether these patents do indeed read on the DRS protocol. These doubts were also expressed by third parties. In any case, this notwithstanding, if a company chooses to take the No Patent Agreement, it by definition considers that it does not need a licence to the patents in question or conceivably, that it already has such a

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[153] Mr. [X]' paper, at paragraph 31.
[154] See OTR report on the DRS protocol, on page 11.
[155] Mr. [X]' paper, at paragraph 34.
[156] OTR report on the DRS protocol, on page 13.
[157] Mr. [X]' paper, at paragraph 40.
[158] OTR report on the DRS protocol, on page 15.
[159] OTR also notes that "*whether or not the DRS protocol allows for convergence in a particularly innovative way, such innovation does not seem to be documented in the Technical Documentation (at least judging from what a preliminary review of it has allowed us to see). From information already available in the public domain (Active Directory manuals, or articles like the above-mentioned publication by Saito and Shapiro), it seems that Microsoft essentially uses variations of standard techniques to ensure that the DRS protocol converges. Saying that this constitutes innovation is surprising. Computer practitioners would certainly not view that to be the case.*" See OTR report on the DRS protocol, on page 16.
[160] Mr. [X] cites one already granted EU patent and four US patents that allegedly read on "a number of aspects" of the DRS protocol. See Mr. [X]' paper, on pages 12 and 13.

licence (e.g. by way of a cross-licence). As such, the claim by Microsoft that patents read on the DRS protocol is irrelevant to the question of whether or not there is any innovation in this protocol, since the patents do not play a role in assessing innovation in the context of the No Patent Agreement.

(139)   Mr. [X]' second additional argument is his reference to the effort involved in developing the DRS protocol.[161] However, this alone cannot be used as a proof that the protocol is innovative, since the number of person-hours that has been spent on a protocol is in itself unrelated to the question of whether there is innovation in that protocol.

(140)   Accordingly, in its report on the DRS protocol, OTR has responded in detail to the assertions made in Mr. [X]' paper on the innovative features contained in this specific protocol.[162] The Commission gave Microsoft the opportunity to comment on the OTR report by letter of 15 June 2005. However, in its reply of 8 July 2005, Microsoft did not comment on OTR's technical findings, but simply asserted that "*the DRS report prepared by OTR does not constitute an appropriate basis to assess the reasonableness of Microsoft's DRS Protocol royalty.*"[163] In this regard, Microsoft claims that OTR did not follow the agreed "WSPP Pricing Principles" in preparing the report.

(141)   These assertions by Microsoft are, however, not substantiated. In any case, the purpose of the OTR report was to respond to Mr. [X]' arguments on the allegedly innovative features of the DRS protocol. It therefore limits itself to such a discussion, and does not draw any conclusion on the price which Microsoft would be allowed to charge for the DRS protocol under the Decision. The test and methodology applied by OTR are absolutely consistent with the above-mentioned principles underlying the Decision insofar as OTR identifies those features of the DRS protocol which are comparable to already existing technology, that is to say the state of the art, and which are therefore not innovative.[164] Contrary to Microsoft's assertions, the findings of the OTR report on the DRS protocol can therefore be used as a point of reference in the assessment of the reasonableness of the royalties charged by Microsoft for the Directory and Global Catalogue Replication scenario under the No Patent Agreement.

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[161]   Mr. [X]' paper, on pages 13 - 15.
[162]   OTR's findings are backed up by the observations of those companies that have evaluated the documentation. See for example [COMPANY B]: "[DRS] *provides directory replication services, which at higher levels are similar to other products such as [COMPANY B] [...]. The protocol does not provide any evidence that it would contribute to superior technical performance relative to those products .*" [COMPANY B]'s response of 13 October 2005 to a request for information, on page 13. See also [COMPANY D]'s response: "*The DRSUAPI documentation consisted of a description of 24 RPC functions. […] I was not able to identify a call which provided functionality dissimilar from the functions and features of other directory products known to and available in the industry,*" [COMPANY D]'s response of 20 September to a request for information, on page 9.
[163]   Letter of 8 July 2005 from Jean-Yves Art to Ángel Tradacete Cocera, on page 3.
[164]   See OTR report on the DRS protocol, on page 2. See also recital (105).

(142)   The additional report from Microsoft on the DRS protocol of 20 October 2005 does not involve any reassessment as it similarly fails to provide evidence that there is innovation in this protocol. A substantial part of the report is devoted to analysing and discussing the innovations that are allegedly disclosed with the documentation of the DRS protocol. In this respect,[165] Microsoft lists 31 "innovations" to substantiate the classification of the DRS protocol as a "gold" protocol deserving the highest remuneration under the WSPP Agreements. Microsoft subdivides the 31 "innovations" into three categories (relating to: (i) topology optimizations; (ii) replication optimizations; and (iii) directory structure, deployment and security). The list provided by Microsoft then seeks to identify the value conferred by each of the listed 31 innovations.

(143)   At the Commission's request, OTR provided an analysis of Microsoft's report on the DRS protocol.[166] In this report, OTR concludes that "*any innovative characteristics* [of the DRS protocol] *would have to be assessed in comparison to prior or parallel art. Microsoft does not provide any point of comparison.*"[167] Microsoft's list does indeed not contain any evidence that the discussed features constitute innovation when compared to the state of the art in protocol technology. As OTR points out, the list of innovations does not even provide a description of the technology that was used as a comparator to assess the alleged innovative character of the technology. Microsoft's report simply states that the "innovations" present in the DRS protocol allow for "higher resilience", "better performance", "lower network utilization", "higher performance", "higher replication performance" and "more flexible deployment"[168] without disclosing the point of reference for these statements. Mr. [X] adopted a similar approach in his paper, as OTR points out in its report on the DRS protocol.[169] With regard to the description of the 31 innovations listed by Microsoft, OTR states that "*most of them correspond to problems that have already been solved, and no information has been provided by Microsoft that the protocol specifications would describe a more innovative solution than the ones known in the industry.*" In its report of 27 October 2005, OTR then goes on to list the public standards or the common industry practice to which the alleged "innovations" compare, and concludes that "*none of the 'innovations' described appear to be innovative*".[170]

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[165]   Microsoft also claims that six additional patents read on the technology disclosed for the so-called "drop-in" server documentation as opposed to the "on the wire" documentation. See Microsoft report on the DRS protocol, on page 5. As regards the relevance of patents to the pricing of the DRS protocol, see recital (138).
[166]   OTR report of 27 October 2005.
[167]   OTR report of 27 October 2005, on page 5.
[168]   Microsoft report on the DRS protocol, pages 9 - 12.
[169]   See OTR report on the DRS protocol, on page 18: "*Section E of Annex C.4 aims to show that many protocols covered by the Decision are intrinsically valuable. [...] The most striking feature of this table is that the wording used suggests that a comparison is being made between the Microsoft protocols and something else. However that 'something else' is never identified. This is particularly obvious in the third column on 'Commercial Value', Mr [X] states that the identified 'performance improvements' provide 'improved', 'enhanced', 'increased', 'simplified' or 'extended' functionality. In addition, they provide 'reduced' or 'lower' cost. However, he never mentions in comparison to what. As a result, the claims of 'commercial value" made by Mr [X] remain unsupported.*"
[170]   OTR report of 27 October 2005, on page 7.

(144) It must be concluded that Microsoft has failed to objectively justify the remuneration rates charged for the Directory and Global Catalogue Replication scenario because it has failed to adduce persuasive evidence about the innovative nature of the technologies allegedly disclosed with the DRS protocol specifications.[171] In the absence of such objective justification, the remuneration rates must be considered unreasonable.

3.2.1.3.2.4 The March 2005 PwC report

(145) In its letter of 31 March 2005 to Mr. Lowe, Microsoft states that it "*has commissioned a report by PricewaterhouseCoopers ('PwC') to explain why this* […] *royalty arrangement is reasonable*".[172] The methodology of this March 2005 PwC report must therefore be examined.

(146) PwC's general approach to the issue of what constitutes a reasonable value for the royalties which Microsoft can charge is summarised at the beginning of Section 3 of the report (page 12). Here, PwC states that:

> "Due to the commercial value of the functional benefits enabled by the Microsoft Protocols, the licence has value to prospective licensees. We understand that in many respects, these protocols are a product of extensive research and development efforts, and contain significant amounts of innovation as described by Microsoft and others."

(147) The "value" identified by PwC in this quote is the innovative value in the protocols for which Microsoft could, according to the WSPP Pricing Principles, potentially be allowed to receive non-nominal remuneration. However, by making such assumptions about the nature of this value, PwC deprives the March 2005 report of any relevance it might otherwise have. This is because PwC's entire reasoning is predicated on the assumption that there is innovation in the technology disclosed with the Interoperability Information. However, as highlighted in Sections 3.2.1.3.2.2 to 3.2.1.3.2.3 above, Microsoft has not been able to demonstrate this, and it is incumbent on it do so if it is to objectively justify the significant remuneration it charges for the Interoperability Information.

(148) This crucial but unsubstantiated assumption pervades the entire March 2005 PwC report. For example, with regard to group and user administration protocols, PwC states on page 14 that:

> "We understand that the Microsoft Protocols a licensee needs to successfully interoperate within a Windows domain architecture will reveal significant amounts of information about how Microsoft accomplishes its entire distributed system value proposition to end customers."

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[171] In fact, this scenario also includes the so-called "SMTP Replication Protocol Extension". However, Microsoft has not claimed that these extensions should be considered innovative.

[172] Letter from David Heiner to Philip Lowe of 31 March, 2005, Annex A, on page 15.

(149)   On page 15, PwC goes on to state that:

> "Revealing the innovative protocol technology used by Microsoft to achieve an efficient distributed system will thus give competitors the advantage of being able to sell products that participate in the efficiency enabled by Microsoft's technology."

(150)   In the same vein, with respect to the file and print protocols, PwC states on page 18 that:

> "The File and Print Microsoft Protocols have value because they, among other things, enable licensees to develop and distribute products that:
>
> - Increase security and reliability of file transfer
> - Improve business continuity through globally distributed file service, protecting customers against network outages and server failure
> - Improve customer end-user experience through quicker response time in file requests
> - Reduce management costs by allowing network administrators to access and manage files remotely, regardless of the network location
> - Print to any network printer."

(151)   These assertions are vague and unsubstantiated. They are also misleading, as without any substantiation, they appear to suggest that it is the Microsoft protocols themselves which constitute the very essence of potential recipients' server products by "enabling" their core functionality (e.g. the ability to manage files remotely, or the ability to print to any network printer). This is clearly not the case. It will be recipients' implementations (of the specifications in the Technical Documentation provided by Microsoft) which in fact "enable" (or constitute) these functionalities.

(152)   Since in the first instance, it has not been demonstrated that there is innovation in the technology disclosed with the Interoperability Information, in the context of the No Patent Agreement, it is moot to examine the various methodologies which PwC subsequently uses to reach its conclusion that Microsoft's non-nominal royalty rates are reasonable.

(153)   Nevertheless, it is useful to examine in greater detail one of the two methodologies used by PwC to illustrate this point further, the "Income Approach".[173] Under that approach, which PwC calls *the most commonly accepted and applied method of valuation for assets with significant unique attributes*", there is an evaluation of "*the expected economic income to be generated by the asset*" (page 37). PwC explains that the "*income approach estimates the incremental profits from the licenses intellectual property, and allocates these profits*

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[173]   The second approach used by PwC, the "Market Approach", is examined in Section 3.2.1.3.3 in the context of the comparables analysis in that Section. PwC also outlines a third possible approach, the "Cost Approach", but for various reasons outlined in its report, considers it unsuitable.

between the licensee and the licensor." In other words, the Income Approach is premised firstly, on the basis that the use of the protocols increases the licensee's profits, and secondly, that a share of these profits should go to the licensor (i.e. Microsoft in this case).

(154)   However, as outlined in Section 3.2.1.1 above, non-nominal remuneration to Microsoft might only be appropriate if, *inter alia*, there is innovation contained in the Microsoft protocols. In such a scenario, an "Income Approach" using the general parameters outlined by PwC (i.e. calculating the increase in licensees' profits from taking the protocols and then apportioning a share to Microsoft) could be appropriate.

(155)   However, PwC does not recognise this point, and simply proceeds on the basis that Microsoft should receive some portion of any increase in profits to the licensee as a result of its use of the protocols. Without any proof of innovation in the protocols, the actual valuation by PwC of both the estimated increase in licensee profits, and the appropriate share to Microsoft of that increase, is moot.

(156)   This notwithstanding, it should also be pointed out that PwC's specific parameters when it employs the Income Approach do not appear appropriate. By way of summary, PwC finds that a reasonable royalty rate according to the Income Approach is in the 11-16.75% range (and hence that the remuneration charged by Microsoft, which is lower, is reasonable). It does so by calculating that as a result of using the relevant Microsoft protocols, competitors will achieve an incremental profit margin [174] of 55-67%, and that it is reasonable for Microsoft to receive 20-25% of this incremental profit margin.[175]

(157)   In the first instance, the Commission finds it extremely unlikely, given Microsoft's strong dominant position in the work group server operating system market (with a market share in the region of 60-70% - see recital 494 of the Decision), that any company releasing a product in that market will come close to achieving a profit margin in the 55-67% range.

(158)   Secondly, the 20-25% apportionment to Microsoft of the incremental profit margin derives from Robert Goldscheider's 1971 25% "rule of thumb", and ensuing literature over the next 30 years suggesting that typical figures should be in the 20-33% range. Quoting Mr. Goldscheider, on page 71 of the March 2005 report, PwC states that:

> "The basic assumption of the 25 percent rule is that a licensor who brings a relatively strong arsenal of assets to a licensing negotiation ought to be entitled to a 25 percent participation in the pre-tax profitability 'pie' expected to be generated by the licensee as a result of the operation of the licensee."

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[174]   Defined as "*additional revenue the licensee received for each product sale motivated by the licensed IP*" in the March 2005 PwC report, on page 66.

[175]   The lower end of PwC's "reasonable" range - 11% - is 20% of 55%. The higher end of PwC's "reasonable" range - 16.75% - is 25% of 67.5%.

(159)   This then comes back to the basic problem of the March 2005 PwC report, which is the unsubstantiated assumption that there is innovation in the Microsoft protocols - in other words, to use Mr. Goldscheider's phrase, that Microsoft is bringing a relatively strong arsenal of assets to the "negotiation". Without prejudice to whether or not 25% is an appropriate figure when there is a relatively strong arsenal of assets, it is certainly not when there is no such arsenal.

(160)   In conclusion, the March 2005 PwC report is fundamentally flawed, since its estimates of what is a reasonable remuneration for Microsoft to receive for the Interoperability Information are based on the unsubstantiated assumption that there is innovation in the protocols. PwC's reliance on the core assumption that the protocols provide functional/technical benefits to recipients appears to be founded exclusively on statements by Microsoft and its advisors.[176] However, this does not alter the fact that in the context of the No Patent Agreement, as outlined in Sections 3.2.1.3.2.2 to 3.2.1.3.2.3 above, this assumption has not been demonstrated. Without any such demonstration, the whole report is fatally undermined.

3.2.1.3.2.5 Conclusion

(161)   Microsoft has failed to adduce evidence that the technologies allegedly disclosed with the Technical Documentation are innovative, either as regards the DRS protocol, or as regards the remaining 90 protocols. Moreover, the March 2005 PwC report which Microsoft puts forward as a demonstration that its remuneration rates are reasonable is, in the context of the No Patent Agreement, moot, because it is entirely predicated on the unsubstantiated assertion that the technologies allegedly disclosed with the Technical Documentation are innovative.

(162)   As such, given the significant royalties which Microsoft charges under the No Patent Agreement and the absence of any substantiation by Microsoft as to the innovative features of the technologies allegedly disclosed with the Technical Documentation, the conclusion must be reached that Microsoft has failed to objectively justify these remuneration rates which would otherwise be unreasonable (with reference to the necessity and the proportionality of these remuneration levels in terms of protecting Microsoft's legitimate interests). Therefore, the remuneration levels foreseen by Microsoft in the No Patent Agreement have to be considered unreasonable under Article 5(a) of the Decision.

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[176]   For example, on page 12, PwC states that "*We understand that in many respects, these protocols are a product of extensive research and development efforts, and contain significant amounts of innovation as described by Microsoft and others.*" Indeed, throughout the PwC report, there are references to papers submitted by Microsoft's advisors on the nature of the innovations in the protocols.

3.2.1.3.3 All IP Agreement[177]

3.2.1.3.3.1 Introduction

(163)   The All IP Agreement allows recipients to develop work group server operating system products on the basis of the Technical Documentation, and also provides a licence to the patents which allegedly read on the technology necessary to interoperate with Windows client PC and Windows work group server operating systems. In the following sub-sections, the relevance of these patents is analysed in the context of the pricing criteria underlying the Decision (as reflected by the WSPP Pricing Principles). Following this, and in line with these pricing criteria (as reflected by the WSPP Pricing Principles), an analysis of potential comparables is carried out.

3.2.1.3.3.2 Application of pricing criteria underlying the Decision to patents

(164)   In order to determine the reasonableness of the royalty levels charged under the All IP Agreement, the pricing criteria underlying the Decision as reflected by the WSPP Pricing Principles have to be taken into account.

(165)   As regards the innovative character of the technology allegedly covered by patents, Microsoft has not provided information to the Commission about the specific technical value of the patents at stake. Rather, in its comments on the report from OTR regarding the DRS protocol, Microsoft asserts that protocols may be innovative *per se* because they are covered by patents.[178]   Whilst it is true that a granted patent[179] provides evidence that certain technology is indeed novel and involves an inventive step, that does not necessarily entail that no further investigation into the patented technology is needed in order to establish a reasonable price.

(166)   By way of preliminary observation, it has not been shown that the patent claims actually read on the technology which is being priced.[180] In this respect, it has to be stressed that in the All IP Agreement, Microsoft does not provide information as to which patent would (in its view) read on a specific scenario or task. Microsoft limits itself in the All IP Agreement to providing a list of patents that are available to licence, and to claiming that a number of unidentified patents read on various scenarios and tasks. In order to be able to assess whether the price charged by Microsoft for a patent licence covering a specific scenario or task is indeed reasonable, it would obviously be necessary to relate the patents to the

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[177]   In light of the analysis and conclusion for the All IP agreement in this Section, the same conclusion is reached, *mutatis mutandis*, for the Patent Only Agreement.

[178]   Letter of 8 July 2005 from Jean-Yves Art to Ángel Tradacete Cocera, at section I.A.ii, and Microsoft's report on the DRS protocol, on page 5.

[179]   In its letter of 8 July 2005, Annex A, Microsoft relies on two already-granted US patents and one European patent which allegedly read on the DRS protocol technology, and three pending US patent applications.

[180]   This is disputed by the Commission in the ongoing court case on the annulment of the case (T-201/04) as regards the European Patents so far put forward by Microsoft. See in particular paragraphs 24 - 35 of the Commission's Rejoinder.

scenarios or tasks. This information must be available for licensees before they enter into an All IP Agreement in order for them to make an informed choice about the patents they wish to license and the risk involved with not taking a patent licence for a specific task or scenario.

(167)   Furthermore, in terms of setting reasonable royalties, not every patented technology is equal as regards its technical and commercial value. Nor does the number of patents determine the technical and commercial value of a technology. For example, Microsoft requests the same level of royalty, namely USD 5.20 per server, for a scenario which is allegedly covered by one US patent (internet print scenario) as it does for a scenario which it asserts is covered by six US patents and one EU patent (networking transport scenario).[181] Neither the mere existence nor the number of patents which read on the technology to be disclosed therefore *per se* justifies the royalty levels set by Microsoft.

(168)   Nevertheless, and without prejudice to the validity of the patents which Microsoft puts forward, or to whether or not these patents read on the technology disclosed with the Technical Documentation, for the purposes of the present assessment of the reasonableness of the relevant remuneration rates in the All IP Agreement, it will be assumed at this stage that the fact that the patents have been granted presumes innovation. Therefore, as the WSPP Pricing Principles make clear, if the innovative character of a technology is established, a market valuation of comparable technologies has to be carried out.

3.2.1.3.3.3 Market valuation of comparable technologies

3.2.1.3.3.3.1 Comparable protocols are provided royalty-free

(169)   The following recitals provide an outline of the pricing of protocols comparable to the WSPP Protocols, that is to say of protocols that are used to deliver file and print services or group and user administration services.

(170)   The LDAP ("Lightweight Directory Access Protocol") protocol, which is partly supported by Active Directory[182], is an IETF[183] standard licensed royalty-free.

(171)   The Kerberos security protocol, that was originally developed by the Massachusetts Institute of Technology (MIT), of which Microsoft implements an extended version,[184] is also an IETF standard licensed royalty-free.[185]

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[181]   Table A-1 (Royalty Table) annexed to the Patent Only Agreement.
[182]   Recital 243 of the Decision.
[183]   IETF stands for Internet Engineering Task Force.
[184]   Recital 251 of the Decision.
[185]   Recital 153 of the Decision.

(172)   The specifications of the NFS ("Network File System") protocol designed by Sun, which provides transparent remote access to shared files across a network are equally freely available on the internet.[186]

(173)   Other comparable protocol specifications for the file and print tasks are also provided royalty-free. Examples are the LPR ("Line Printer Daemon Protocol")[187] or the CUPS ("Common Unix Printing System").[188]

(174)   Moreover, Microsoft has provided similar protocols on a royalty-free basis in the past.[189] As outlined in recitals 237 to 240 of the Decision, in 1997, Microsoft made the specifications for the CIFS 1.0 ("Common Internet File System") protocol to request file and print services from server systems over a network available royalty-free through the IETF. Updated CIFS specifications are now available from Microsoft under a royalty-free licence, which, according to Microsoft, has been introduced to address concerns of the Commission.[190]

(175)   The "Royalty-free CIFS Technical Reference Licence Agreement"[191] includes a royalty-free licence to any Microsoft patent necessarily infringed by implementing the CIFS specifications. Indeed, Microsoft specifically mentions in this licence two US patents which allegedly read on the disclosed technology.[192]

(176)   In its response to the request for information of 7 February 2005, Microsoft lists a number of protocols which are available royalty-free either over the MSDN ("Microsoft Developers Network") or which have been submitted to standard-setting bodies. As an explanation of why these protocols are licensed royalty-free, Microsoft submits that the protocols available over MSDN are "*historical or legacy connectivity protocols or relatively minor extensions to published protocols*", and that they are made available according to Microsoft's voluntary commitment under the US Settlement.[193] [194]   As

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[186]   See http://www.freesoft.org/CIE/RFC/1813/index.htm, printed on 14 October 2005.
[187]   See http://www.ietf.org/rfc/rfc1179.txt, printed on 14 October 2005.
[188]   See http://www.cups.org, printed on 14 October 2005.
[189]   For example, Microsoft, IBM, and Verisign developed the Web Services Security (WS-Security) specification. This was submitted to the Organization for the Advancement of Structured Information Standards ("OASIS") and provides a royalty-free license that includes rights to its applicable patents. (See section 2.2 of the Royalty Free Web Services Security Specification Licence Agreement. The text of the licence is available at http://download.microsoft.com/download/8/e/5/8e59dce6-2b27-4fc3-bd00-0531c5514ae3/WSS_License-Agreement.pdf, printed on 18 October 2005).
[190]   In a response of 15 February 2005 to an information request, Microsoft states the following: "*In order to provide clarity regarding rights to the use of this protocol (for which some documentation had been previously published in approximately 1997), and in response to concerns expressed by the European Commission in its first Statement of Objections, Microsoft made public an express royalty-free license along with restated technical documentation.*"
[191]   The licence agreement is available at http://msdn.microsoft.com/library/default.asp?url=/library/en-us/dnkerb/html/cifs_license_agreement.asp, printed on 18 October 2005.
[192]   See Section 3.2 of the Royalty-free CIFS Technical Reference Licence Agreement.
[193]   On the US settlement, see recitals 14-20 of the Decision.
[194]   Microsoft's response of 15 February 2005 to an information request, on page 6.

regards the protocols submitted to standard-setting bodies, Microsoft argues that it felt it would be beneficial to make these protocols available through a standard-setting body.[195]

(177) In this regard, technologies comparable to those which might be covered by Microsoft's patents and which are also covered by different patents are also licensed royalty-free. For instance, Sun offers a royalty-free licence to OpenSolaris,[196] which includes a royalty-free patent licence.[197]

(178) Other royalty-free patent licences include the Apple Public Source License, which provides a world-wide royalty-free grant of patent rights for licensees to use, reproduce, distribute, and modify technologies including Kerberos security, Open Directory directory services, OpenPlay network communication technology, and Bonjour network communications technology.[198] Likewise, IBM offers a licensing scheme for its open source projects. The IBM Public License contains a royalty-free patent grant.[199]

(179) There are also other examples of communications protocols that are provided royalty free: NNTP ("Network News Transfer Protocol") is a protocol for the distribution, inquiry, retrieval and posting of Usenet news articles over the Internet. It is defined in RFC 977,[200] [201] for which specifications are available royalty-free; [202] SNMP ("Simple Network Management Protocol") is a set of protocols for managing complex networks. SNMP works by sending messages, called protocol data units (PDUs), to different parts of a network. The specifications for SNMP are available royalty-free;[203] DNS ("Domain Name Service") is a protocol that searches for resources using a database distributed among different name servers. The specifications for DNS are available royalty-free;[204] IDENT (the "Identification Protocol") provides a means to determine the identity of a user of a particular TCP connection;[205] HTTP ("Hyper Text Transfer Protocol") is an application

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[195] On the "Teredo" protocol "*Microsoft felt that standardization of Teredo (a major enabling technology facilitating broader multi-vendor adoption of peer to peer communications technologies) will be an important factor for adoption by ISPs and also in being able to have a stable IPv6 address prefix dedicated by IANA to the Teredo service.*" See Microsoft's response of 15 February 2005 to an information request, on page 6. On the RDMA Protocol Specification, "*Microsoft felt it would benefit all to work for the multi-vendor adoption of the wire protocol, as a basis for all industry participants to provide value through IP protected application binary compatibility and network manageability in their products.*" See Microsoft's response of 15 February 2005 to a request for information, on page 6.

[196] According to Sun, OpenSolaris is an "*open development effort based on the source code for the Solaris Operating System […] The OpenSolaris project includes source for the Solaris OS core kernel, networking support, libraries and commands.*" For further details, see http://www.opensolaris.org/os/about/faq/general_faq/, printed on 28 October 2005.

[197] For the royalty-free patent licence, see Section 2.1.(b) of the OpenSolaris License, at http://www.opensolaris.org/os/licensing/opensolaris_license/, printed on 28 October 2005.

[198] http://www.opensource.apple.com/apsl/, printed on 18 October 2005.

[199] http://www-128.ibm.com/developerworks/library/os-ipl.html, printed on 18 October 2005.

[200] For a definition of RFC, see footnote 61 of the Decision.

[201] TCP stands for Transmission Control Protocol

[202] See specification at http://www.ietf.org/rfc/rfc0977.txt?number=977, printed on 18 October 2005.

[203] See specification at http://www.ietf.org/rfc/rfc1157.txt?number=1157, printed on 18 October 2005.

[204] See specification at http://www.ietf.org/rfc/rfc1035.txt?number=1035, printed on 18 October 2005.

[205] See specification at http://www.ietf.org/rfc/rfc1413.txt?number=1413, printed on 18 October 2005.

protocol which defines how files on the world wide web are transferred. The specifications for HTTP are available royalty-free;[206] FTP ("File Transfer Protocol")[207] provides a mean to exchange files over the Internet. The specifications for FTP are available royalty-free.[208]

(180) Many of the protocols outlined in recitals (170) to (179) above are provided in the context of standard-setting bodies. PwC, on behalf of Microsoft, argues that "*licensing under standard setting process is not an appropriate comparable*".[209] Its main argument in this respect is that "*in general, entities voluntarily participate in a standard setting process when they expect that this will allow them to obtain access to, and encourage the creation of, complementary technologies and products, thereby increasing sales of their own technologies and products.*"[210] PwC argues that this does not apply to Microsoft, since:

> "The business purposes that drive companies to participate in standard setting and contribute their IP to such efforts are not present here. Microsoft does (and did) not need access to additional complementary technology, nor will granting WSPP licenses give Microsoft access to any additional complementary technology. Furthermore, Microsoft does not need to contribute the technology being licensed under WSPP to a standard setting process in order to promote the sale of complementary products. In fact, to the extent that some of the functionality that drives the sale of Microsoft's server software products is the functionality that WSPP licensees will be able to offer in their products due to having a WSPP license, such licensee sales are likely to displace Microsoft products as opposed to stimulating Microsoft sales as a typical complementary product would."[211]

(181) It is indeed the case that the focus of standard-setting bodies, particularly in hi-tech industries, is to promote specifications that will allow all players in the market to interoperate with one another's products. In this context, PwC's argument to disregard standard-setting bodies as comparables is puzzling, since it essentially relies on the fact that since Microsoft holds a monopoly position in the PC operating system market, it has no interest in disclosing its protocols for the purposes of interoperability, particularly since it may lose some server sales from such disclosure.[212]

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[206]   See specification at http://www.ietf.org/rfc/rfc1945.txt?number=1945, printed on 18 October 2005.
[207]   See http://www.ietf.org/rfc/rfc959.txt, printed on 14 October 2005.
[208]   See http://www.w3.org/Protocols/rfc959/Overview.html, printed on 24 October 2005.
[209]   PwC standards report (see recital (32).
[210]   PwC standards report, on page 1.
[211]   PwC standards report, on page 7.
[212]   This assessment by PwC is also in contrast to Microsoft's general statement on the importance of standards for interoperability: Microsoft stresses that *"[s]tandards are an important element in Microsoft's business. Microsoft believes that standards help ensure interoperability, data exchange, and portability across the widest range of products and services, and bring great benefits to customers. [...] As part of this process, Microsoft often commits to license its patents on royalty-free and other reasonable and nondiscriminatory (RAND) terms to implementers of the industry standards."* See www.microsoft.com/mscorp/ip/standards, printed on 19 October 2005.

(182)   However, the subject matter of the Decision was precisely that Microsoft's refusal to
         disclose prevented rivals from achieving the necessary level of interoperability and was
         abusive. It is therefore inappropriate for PwC to base its argument on the incentives which
         lay behind Microsoft's abusive refusal to disclose. In contrast, what companies do to
         achieve such interoperability in other fora, where they do not have incentives to foreclose
         competition, is highly appropriate.

(183)   In conclusion therefore, comparable protocols to the WSPP Protocols are provided royalty-
         free. The fact that some of these protocols are provided in the context of standard-setting
         bodies does not mean that these protocols should be disregarded as comparables, as
         Microsoft suggests, especially given that the main aim of standards bodies in this area is to
         promote interoperability, which is precisely the stated aim of the Decision.

3.2.1.3.3.3.2 Microsoft's comparables are not appropriate

(184)   Further claims on the nature of comparables are made on Microsoft's behalf in the March
         2005 PwC report. The second valuation approach in this report, the Market Approach (see
         Section 3.2.1.3.2.4 above for an examination of the Income Approach) consists of
         "*empirical evidence of value through a comparison of past occurrences in similar
         companies or other market prices*"[213]. Section 9.1 of the report details how PwC used the
         Market Approach to identify potentially comparable licences to the WSPP. Using a variety
         of database search methods, PwC initially identifies 257 potentially comparable
         transactions.   It then carries out what it calls an "economic qualification" of these
         transactions, which reduces to 155 the number of potentially comparable transactions.
         This "economic qualification" disqualifies as potentially comparable those transactions: (i)
         for which no financial terms are available; and (ii) where the technology is publicly
         available, or available through a royalty-free licence.

(185)   It goes without saying that transactions for which no financial terms are available should
         be disqualified - clearly, there is nothing with which to compare. However, there is no
         justification for disqualifying transactions which are royalty-free, and PwC provides no
         justification for doing so. In this respect, it is obvious that when carrying out a report on
         comparable licences, if all the royalty-free licences are ruled ineligible at an early stage,
         the conclusion will by definition be that a positive royalty (whatever it is) is reasonable.
         As outlined in Section 3.2.1.3.3.3.1 above, common industry practice is to provide
         interoperability protocols of the type which Microsoft is required to disclose for no charge.

(186)   PwC comes back to this point in a submission which is annexed to Microsoft's report on
         the DRS protocol of 20 October 2005. Here, PwC explains in greater detail what was
         meant by a royalty-free licence in its March 2005 report. In particular, it states that "*in

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[213]   March 2005 PwC Report, on page 38.

response to questions raised by the Commission, we have reviewed the licenses excluded under the criteria of 'available through a royalty free licence'. While we described the criteria as 'royalty free' we had in mind the fact that these licenses conveyed other compensation or benefits to the licensor and thus rendered the observed royalty rate inappropriate to use as a comparable. We have reaffirmed that none of these licenses were excluded solely because they had a royalty rate of zero. In all cases, other considerations, apart from a zero royalty rate, forced their exclusion from the list of comparable licenses."[214]

(187)   PwC goes on to state that "*these considerations include: the assumption of debt by the licensee; the license was part of an broader asset purchase agreement; equity and IP rights granted to the licensor; the license occurred as part of a broader systems implementation project; the licensor's management of support services; the license is part of an IT outsourcing agreement; the licensee must purchase proprietary computer chips from the licensor; the license is part of a joint venture to develop product/service for sale to the military; and the license is among related parties (i.e., the licensee controls the licensor).*"[215]

(188)   However, beyond these general descriptions, PwC has not provided any specifics about the excluded agreements. Without being able to examine them, the Commission is therefore not able, on the basis of the general statements made by PwC, to comment on the suitability of PwC's continued exclusion of these agreements.

(189)   It should nevertheless be noted that on page 23 of the same report, Microsoft states that "*PwC deemed a license economically qualified if its terms and conditions were sufficiently similar to the current Microsoft licensing situation, <u>ideally one where intellectual property is clearly and primarily licensed from one licensor to a licensee for a given fee or royalty rate</u>*" (underline added). This suggests that the aim of the PwC exercise is in fact to justify positive remuneration, as opposed to reasonable remuneration.

(190)   In any case, after the "economic qualification", PwC then carries out a "technical qualification" on the remaining 155 transactions to screen out those transactions which are not technically comparable with the Microsoft protocols. This leaves it with 11 comparable transactions. Of these, PwC identifies two [COMPANY A] licences as particularly comparable with the Microsoft protocols in the group and user administration area, and it notes that the functionalities enabled by the […] licence "*are an excellent match to the WSPP and are the best comparables found in our review*"[216]. The two [COMPANY A] licences feature running royalty rates ranging between 10 and 15 per cent

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[214]   Microsoft report on the DRS protocol, 20 October 2005, on page 49.
[215]   Microsoft report on the DRS protocol, 20 October 2005, on pages 49-50.
[216]   March 2005 PwC Report, on page 63.

of a licensee's product revenues, and it is on this basis that PwC concludes that Microsoft's royalty rates, which fall below this range, are reasonable.[217]

(191)   The Commission does not consider that the two [COMPANY A] licences in question are appropriate benchmarks, because as PwC itself indicates, both licences provide source code and object code. Object and source code are of a significantly different nature to protocol specifications. They are the underlying essence of a software product, and are distinct both in nature, and in terms of functional value, to protocol specifications, which describe how pieces of software interact together. This is highlighted at length in the Decision. It is therefore simply inappropriate to regard a licence for source and object code as comparable to one for protocol specifications (and hence to reach conclusions about what a reasonable royalty rate is on this basis).

(192)   PwC nevertheless comes back to this point in its submission annexed to Microsoft's report on the DRS protocol of 20 October 2005, where it states that "*source code, particularly when provided as part of a license to implement protocols on a different platform than the one for which that code was written, are* [sic] *not significantly additive to the value obtained from the documentation*".[218] This statement is vague, unsubstantiated, and contradicted by all the relevant evidence on the distinction between source code and protocol specifications. Moreover, it ignores the fact that the licence allows [a third party] to use [COMPANY A]'s object code in its products.[219]

3.2.1.3.3.4 Conclusion

(193)   In conclusion, in the absence of any demonstration that the royalty levels in the All IP Agreement reflect a market valuation of comparable technologies, Microsoft has failed to date to justify that these royalty rates are reasonable. Therefore, the royalty rates must be considered unreasonable under Article 5(a) of the Decision, since there is no apparent objective justification on the necessity and the proportionality of these royalty levels in terms of protecting Microsoft's legitimate interests. These considerations and analysis apply *mutatis mutandis* to the Patent Only Agreement.

3.3   Calculation of the periodic penalty payments

(194)   Under Article 24(1)(a) of Regulation 1/2003, the Commission may, by decision, impose on undertakings or associations of undertakings periodic penalty payments not exceeding 5%

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[217]   PwC also mentions Microsoft's licence with Network Appliance (which covers file protocols) as a potential comparable. The Commission does not consider it appropriate to take as potential comparables Microsoft licences, particularly in light of the fact that they are not concluded on the basis that Microsoft cannot receive remuneration which stems from its market power (and as such, are not concluded according to the WSPP Pricing Principles).

[218]   Microsoft report on the DRS protocol, 20 October 2005, on page 44 (footnote 9).

[219]   In addition, the WSPP Agreements contain a field of use restriction which by definition reduces their economic value. PwC mentions no such restrictions in its two most comparable licences.

of the average daily turnover in the preceding business year per day and calculated from the date appointed by the decision, in order to compel them to put an end to an infringement of Article 81 or Article 82 of the Treaty, in accordance with a decision taken pursuant to Article 7 of Regulation 1/2003.

(195)   More than ten months after the Decision became enforceable, and despite the Commission's repeated calls for full compliance, Microsoft has still not taken the appropriate measures to comply with Article 5(a) and (c) of the Decision. Ten months constitutes, in the present circumstances, a long duration.

(196)   This continuing failure by Microsoft to comply with the Decision and to bring its very serious breach of Article 82 to an end[220] [221] further increases the risk of elimination of competition in the work group server operating system market identified in the Decision.[222] Microsoft's competitors continue to be unable to develop interoperable products due to Microsoft's pattern of non-compliance.

(197)   The length of the delay and the serious risk of further elimination of competition in the relevant market are grounds for considering it necessary to impose a periodic penalty payment in this case.

(198)   In setting the level of the periodic penalty payments, the Commission has taken into account the following factors: (i) the extent to which Microsoft's failure to meet its obligations under Article 5(a) and (c) of the Decision has reduced the effectiveness of the remedy; and (ii) the necessity of imposing periodic penalty payments sufficient to ensure Microsoft's compliance with the Decision.

(199)   The extent of Microsoft's non-compliance with Article 5 of the Decision is fully set out in Sections 3.1 to 3.2 above.

(200)   In particular, Microsoft has failed in its obligation to make the Interoperability Information available in that the information has not proved to be either accurate or complete. Moreover the (inadequate) information which it has made available has only been offered on terms which *inter alia* impose unreasonable price conditions.

(201)   These failures have frustrated the effectiveness of the remedy and left in place the unlawful barriers hindering companies from competing in the work group server operating system market.

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[220]   See recitals 1068-1074 of the Decision.

[221]   See in this regard also the Judgment of the Court of Justice of 21 September 1989, <u>Hoechst</u>, in Joined Cases 46/87 and 227/88 [1989] ECR 2859, at paragraph 64 where the Court refers to the "*obligation imposed upon all persons subject to Community law to acknowledge that measures adopted by the institutions are fully effective so long as they have not been declared invalid by the Court and to recognize their enforceability unless the Court has decided to suspend the operation of the said measures* […]."

[222]   See recitals 590 - 692 of the Decision.

(202)   The Commission has also taken into account the necessity of setting periodic penalty payments which are proportionate and sufficient to compel compliance from an undertaking such as Microsoft, with its very substantial size and financial resources. [223] It is also necessary to set periodic penalty payments which show that it is not possible to avoid or delay complying with a requirement in a Decision imposed to bring an infringement to an end but instead to continue to receive the benefits of failing to comply with such a requirement.

(203)   Microsoft's turnover for the fiscal year July 2004 to June 2005 was USD 39,788 million.[224] Microsoft's average daily turnover was therefore USD 109 million (EUR 85.7 million[225]). Accordingly, the maximum daily periodic penalty payment which may be imposed under Article 24(1) is USD 5.45 million (EUR 4.28 million).

(204)   In view of the preceding considerations, the amount of the periodic penalty payment to be imposed on Microsoft is EUR 2 million per day.

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[223]   At the time of the Decision, Microsoft was the largest company in the world by market capitalisation. According to the same measure Microsoft has held a consistently high ranking in the list of the world's largest companies by market capitalisation, being the largest in 2000, the fifth largest in 2001, and the second largest in 2002 (Decision, at footnote 1342). More recently, Microsoft was the world's second largest company in 2004 and the third largest in 2005 (FT Magazine of June 11 2005, page 28.) As of 30 September 2005, Microsoft was the world's third largest company by market capitalisation, behind Exxon Mobil and General Electric (source: FT Global 500 September 2005, http://news.ft.com/cms/219fda04-3662-11da-bedc-00000e2511c8.pdf, printed on 14 October 2005.) Microsoft's resources and profits are also significant. Microsoft's Securities and Exchange Commission filing for the US fiscal year July 2004-June 2005 reveals that it possessed a cash (and short-term investment) reserve of USD 37,751 million on June 30, 2005. As regards profits, this Securities and Exchange Commission filing indicates that in the US fiscal year July 2004-June 2005, Microsoft earned net income (after taxes) of USD 12,254 million on revenues of USD 39,788 million (a net profit margin of 30.8%). Of these revenues, the Windows PC client PC operating system product during this period ("Client" product segment) earned operating income of USD 9,396 million on revenues of USD 12,048 million, and the "Server and Tools" product segment earned operating income of USD 2,888 million on revenues of USD 9,143 million (ibid).

[224]   Microsoft's Form 10-K Annual Report for the US fiscal year ending June 30, 2005, on page 9. See http://www.sec.gov/Archives/edgar/data/789019/000119312505174825/d10k.htm, printed on 27 September 2005.

[225]   The exchange rate used for the year July 1, 2004-June 30, 2005 is EUR 1 = USD 1.2726. This is the average of the average quarterly exchange rates for the third and fourth quarters of 2004, and the first and second quarters of 2005 (1.2220, 1.2977, 1.3113, 1.2594). Source: Eurostat.

HAS ADOPTED THIS DECISION:

Article 1

Microsoft Corporation shall ensure that, by 15 December 2005, it fully complies with the obligations set out in Article 5(a) and (c) of Commission Decision (C(2004)900) of 24 March 2004.

In the absence of such compliance, a periodic penalty payment of EUR 2 million per day, calculated from that date, shall be imposed on Microsoft Corporation.

Article 2

This Decision is addressed to Microsoft Corporation, One Microsoft Way, Redmond, WA 98052, United States.

Done at Brussels, 10.11.2005.

For the Commission

Neelie KROES
Member of the Commission