

**COMMISSION DECISION**

**of 12 July 2006**

**fixing the definitive amount of the periodic penalty payment  
imposed on Microsoft Corporation by Decision C(2005)4420 final  
and amending that Decision as regards  
the amount of the periodic penalty payment  
(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 the Agreement on the European Economic Area,

Having regard to Council Regulation (EC) 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<sup>1</sup>, and in particular Article 24 thereof,

Having regard to the Commission Decision of 24 March 2004 relating to a proceeding under Article 82 of the EC Treaty (Case COMP/C-3/37.792 Microsoft),<sup>2</sup>

Having regard to the Commission Decision of 10 November 2005 imposing a periodic penalty payment pursuant to Article 24(1) of Regulation (EC) No 1/2003 on Microsoft Corporation,<sup>3</sup>

Having given the undertaking concerned the opportunity to make known its views on the objections raised by the Commission pursuant to Article 27(1) of Regulation (EC) No 1/2003 and Article 12 of

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<sup>1</sup> OJ L 1, 4.1.2003, p.1. Regulation as amended by Regulation (EC) No 411/2004 (OJ L 68, 6.3.2004, p. 1).

<sup>2</sup> C(2004)900 final, not yet published.

<sup>3</sup> C(2005)4420 final, not yet published.

Commission Regulation (EC) No 773/2004 of 7 April 2004 relating to the conduct of proceedings by the Commission pursuant to Articles 81 and 82 of the EC Treaty,<sup>4</sup>

After consulting the Advisory Committee on Restrictive Practices and Dominant Positions,

Having regard to the final report of the hearing officer in this case,<sup>5</sup>

Whereas:

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<sup>4</sup> OJ L 123, 27.4.2004, p. 18.

<sup>5</sup> [Not yet published]

## 1. INTRODUCTION

- (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 that decision (“the Decision”), the Commission found, *inter alia*, that Microsoft had infringed Article 82 of the EC Treaty and Article 54 of the Agreement on the European Economic Area 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.<sup>6</sup>

### 1.1. Article 5 of the Decision

- (2) Article 5 of the Decision reads as follows:

“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;
- (b) Microsoft Corporation shall ensure that the Interoperability Information made available is kept updated on an ongoing basis and in a Timely Manner;
- (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;
- (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 preliminary 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;
- (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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<sup>6</sup> 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*”.
- (4) 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*”.
- (5) The terms “*Windows Work Group Server Operating Systems*” and “*Windows Client PC Operating Systems*” correspond respectively to certain specified software products of Microsoft, “*and updates (including, without limitation, security patches), upgrades and successors*” to such products, as well as “*updates and upgrades of such successors*”.<sup>7</sup>
- (6) It is settled case-law that the operative part of a decision should be interpreted in the light of the statement of the reasons for the act.<sup>8</sup>
- (7) As set out in recital 1003 of the Decision, the objective of the Decision “*is to ensure that Microsoft’s competitors can develop products that interoperate with the Windows domain architecture natively supported in the dominant Windows client PC operating system and hence viably compete with Microsoft’s work group server operating system*”. In this regard, Recital 182 of the Decision explains that “*the common ability to be part of [the 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.*”
- (8) As was made clear in Recital 998 *et seq.* of the Decision, Article 5 of the Decision essentially orders Microsoft to supply that which it wrongfully refused to supply to, among others, Sun, this refusal to supply having been found to constitute an abuse of a dominant position.

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<sup>7</sup> 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*”.

<sup>8</sup> See e.g. Judgment in Joined Cases T-213/95 and T-18/96, SCK and FNK [1997] ECR II-1739, at paragraph 104.

- (9) Sun's request is described in detail in Section 4.1.2 of the Decision. Recital 186 of the Decision states that Sun's request to "*provide native support for the complete set of Active Directory technologies on Solaris*" concerned 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 (including security, directory service).<sup>9</sup> 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.*"
- (10) Recitals 736 to 763 of the Decision clarify that Interoperability Information must be understood as "information necessary for interoperability" within the meaning of Council Directive 91/250/EEC of 14 May 1991 on the legal protection of computer programs.<sup>10</sup> In the relevant recitals of the Decision, the Commission rejects Microsoft's definition of "*full interoperability*".<sup>11</sup>
- (11) Finally, regard should be had to the Decision's description of the interoperability problems encountered as a result of non-disclosure<sup>12</sup> and to the shortcomings of alternative interoperability solutions.<sup>13</sup>

## 1.2. The concept of protocol specifications

- (12) The Interoperability Information consists of protocol specifications. As highlighted in recital 999 of the Decision: "*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.*"
- (13) The term "specification" is a general term of art referring to a certain type of technical documentation. It is well-known to engineers skilled in the art of programming and there is a vast amount of academic literature on how to write specifications.<sup>14</sup> As explained at

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<sup>9</sup> There are other passages in the Decision outlining what the information requested by [Company D], which Microsoft refused to provide, is supposed to achieve: "[t]he objective of the requested disclosure of information is thus seamless communication between the [third party] environment and the Windows environment" (recital 207 of the Decision). This is further illustrated by [Company D]'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 as a primary domain controller (or backup domain controller) in a Windows NT domain*" (recital 213 of the Decision).

<sup>10</sup> OJ L 122, 17.5.1991, p. 42. Directive as amended by Directive 93/98/EEC (OJ L 290, 24.11.1993, p. 9)

<sup>11</sup> See in particular recitals 755 *et seq.* of the Decision.

<sup>12</sup> See for example recitals 240, 250 and 266 of the Decision.

<sup>13</sup> See recitals 666 to 687 of the Decision. 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).

<sup>14</sup> See, for example, C. Ghezzi, M. Jazayeri, and D. Mandrioli, *Fundamentals of Software Engineering*, Prentice Hall, 2003, chapter 5 ("Specification"). In its *Standard Glossary of Software Engineering Terminology*, the IEEE ("Institute of Electrical and Electronics Engineers") defines "Specification" as: "[a] document that specifies in a complete, precise, verifiable manner, the requirements, design, behaviour, or other

recital 24 of the Decision, “*In considering the process of development of software products, it is common to distinguish between ‘specifications’ and ‘implementation’. A specification is a description of what the software product must achieve, whereas the implementation relates to the actual code that will run on the computer*”. The distinction between implementation and specification can also be expressed by saying that a specification describes *what* an implementation must achieve, not how it can achieve it.<sup>15</sup>

- (14) This point is also made by Professor David Parnas, a leading expert in software specification, who defines a specification as “*a statement of some of the properties required of a product, or a set of products. A product is considered faulty if the statement made in its specification are not true of that product.*” (emphasis added)<sup>16</sup>
- (15) As recital 571 of the Decision stresses, it is common industry practice to provide interface specifications without giving access to all implementation details.
- (16) Many of the details of a given implementation will not be revealed by properly written specifications. By way of illustration, a report by Professor Wirsing, a computer science professor, which is quoted by the Decision,<sup>17</sup> notes 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)*”.<sup>18</sup>
- (17) The specifications that Microsoft is ordered to provide under the Decision must explicitly set out what is *required* to achieve the interoperability sought by the Decision, and not merely to *describe* the choices that Microsoft has made when developing its own implementation of the protocols. As such, they significantly differ from a mere general description of Microsoft’s existing implementation of the protocols.

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*characteristics of a system or component, and, often, the procedures for determining whether these provisions have been satisfied.*” (IEEE Std 610.12-1990, New York, 1990). More generally, in the context of standards, a “Specification” is defined as a “[s]tandard that sets out detailed requirements, to be satisfied by a product, material, process, service or system, and the procedures for checking conformity to these requirements. A specification shall be drafted as a coherent set of absolute requirements, each being objectively verifiable and constructed from the point of view of a third party called upon to verify conformity.” (British Standards – A standard for standards – Part 2: Structure and drafting Requirements and guidance, 2005, British Standard BS 0-2:2005).

<sup>15</sup> See also C. Ghezzi, M. Jazayeri, and D. Mandrioli, *Fundamentals of Software Engineering*, Prentice Hall, 2003, on page 161.

<sup>16</sup> David L. Parnas, *Software Fundamentals: Collected Papers*, 2001, on page 95. Professor Parnas is director of the Software Quality Research Laboratory at the University of Limerick in Ireland. He is also advisor to the Monitoring Trustee.

<sup>17</sup> Recital 570 of the Decision.

<sup>18</sup> See Martin Wirsing *et al.*, *Specification and Implementation of Interoperable Systems*, on page 1, in [Company D]’s submission of 31 October 2003.

## 2. PROCEDURE

### 2.1. The procedure leading to the adoption of the Decision pursuant to Article 24(1) of Regulation (EC) No 1/2003

- (18) By letter of 27 May 2004,<sup>19</sup> Microsoft submitted a first description of the measures it intended to take in order to comply with Article 5(a) to (c) of the Decision.
- (19) On 7 June 2004, Microsoft lodged an application for annulment of the Decision with the Court of First Instance of the European Communities (Case T-201/204). On 25 June 2004, Microsoft submitted an application for interim measures with the Court of First Instance, seeking to suspend the operation of the Decision pending the outcome of the proceedings in Case T-201/04.<sup>20</sup>
- (20) On 25 June 2004, the Commission decided on its own initiative not to enforce Article 5(a), 5(b), 5(c), 5(e), and Article 6(a) and 6(b) of the Decision, pending the outcome of the application for interim measures. This decision not to enforce certain provisions of the Decision did not in any way affect the time limits set out in the Decision, to which Microsoft remained subject.
- (21) The Commission responded to Microsoft's letter of 27 May 2004 on 30 July 2004,<sup>21</sup> expressing doubts as to whether the information supplied by Microsoft was indeed detailed enough to comply with Article 5(d) of the Decision. In particular, the Commission asked Microsoft to provide (i) the technical documentation (specifications) that Microsoft had thus far prepared for the relevant protocols (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 reiterated its request for more detailed information by letter of 15 October 2004.<sup>22</sup> For the purposes of this decision, the material that Microsoft has so far submitted to document all the relevant protocols will be referred to as "Technical Documentation".
- (22) Microsoft responded to these letters on 29 October 2004.<sup>23</sup> 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) of the Decision.<sup>24</sup> 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*

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<sup>19</sup> Letter of 27 May 2004 from the Deputy General Counsel of Microsoft to the Director of Directorate C, DG Competition.

<sup>20</sup> Case T-201/04 R.

<sup>21</sup> Letter of 30 July 2004 from the Director of Directorate C, DG Competition to the Deputy General Counsel of Microsoft.

<sup>22</sup> Letter of 15 October 2004 from the Director of Directorate C, DG Competition to the Deputy General Counsel of Microsoft.

<sup>23</sup> Letter of 29 October 2004 from the Deputy General Counsel of Microsoft to the Director of Directorate C, DG Competition.

<sup>24</sup> Microsoft did not provide any reasoning substantiating this assertion. In particular, it did not explain how the information previously supplied was by itself sufficient "*to enable the Commission to make a preliminary assessment as to whether the said measures will ensure effective compliance with the Decision*", in the words of Article 5(d) of the Decision.

*of license agreement that Microsoft plan[ned] 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[ned] 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 Agreement”)* (together, “the 2004 WSPP Agreement”).<sup>25</sup>

- (23) The Commission sent a letter to Microsoft on 8 December 2004,<sup>26</sup> 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 Article 5(a) and (c) of the Decision.
- (24) By e-mail of 11 December 2004,<sup>27</sup> Microsoft announced that it was providing the Commission with access to the Technical Documentation. On 14 December 2004, the Commission thus received a first version of the Technical Documentation (“the December 2004 version of the Technical Documentation”).
- (25) On 22 December 2004, the President of the Court of First Instance rejected Microsoft’s application for suspension of the Decision in its entirety.<sup>28</sup>
- (26) By e-mail of 26 January 2005,<sup>29</sup> 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 Court of First Instance. These agreements were slightly modified versions of the 2004 WSPP Development and Distribution Agreement and the 2004 WSPP Evaluation Agreement.
- (27) On 17 March 2005, the Commission expressed a number of concerns to Microsoft regarding its compliance with Article 5 of the Decision.<sup>30</sup> Following a number of exchanges of views between the Directorate General, the Member of the Commission responsible for Competition and Microsoft, Microsoft presented revised versions of the WSPP Agreements on 20 May 2005,<sup>31</sup> 31 May 2005,<sup>32</sup> and 9 June 2005<sup>33</sup>. The 9 June 2005 version of the WSPP Agreements 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”

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<sup>25</sup> The 2004 WSPP Evaluation Agreement and the 2004 WSPP Development and Distribution Agreement are referred to together as “the 2004 WSPP Agreements”.

<sup>26</sup> Letter of 8 December 2004 from the Director of Directorate C, DG Competition to the Deputy General Counsel of Microsoft.

<sup>27</sup> E-mail of 11 December 2004 from a senior attorney of Microsoft to the Director of Directorate C, DG Competition, the Head of Unit C-3 of DG Competition and Case Officer A.

<sup>28</sup> Order of the President of the Court of First Instance of 22 December 2004 in Case T-201/04 R, not yet reported.

<sup>29</sup> E-mail of 26 January 2005 from Microsoft’s Director of Competition Law EMEA to the Head of Unit C-3 of DG Competition.

<sup>30</sup> Letter of 17 March 2005 from the Director General of DG Competition to Microsoft’s General Counsel, Microsoft.

<sup>31</sup> Letter of 20 May 2005 from Microsoft’s Director of Competition Law EMEA to the Head of Unit C-3 of DG Competition.

<sup>32</sup> E-mail of 31 May 2005 from Microsoft’s Director of Competition Law EMEA to the Director General of DG Competition.

<sup>33</sup> E-mail of 9 June 2005 from Microsoft’s Director of Competition Law EMEA to Case Officer B.

(“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”). One difference between the 3-day Evaluation Agreement and the 30-day Evaluation Agreement is that, unlike the former, the latter provides for a “cooling off period”<sup>34</sup> for the individual having carried out the evaluation.

- (28) While reviewing the December 2004 version of the Technical Documentation with a view to assessing certain arguments put forward by Microsoft to justify the remuneration required under the WSPP Agreements, Organisation Technology Research (“OTR”), the Commission’s external technical experts, came across issues as regards the completeness and accuracy of the Technical Documentation. OTR provided a report on these issues on 11 June 2005 (“OTR’s Report on the December 2004 version”).<sup>35</sup> On 15 June 2005, the Commission sent this report to Microsoft for comments. Microsoft provided its response to OTR’s Report on the December 2004 version on 8 July 2005<sup>36</sup> and provided an updated version of the Technical Documentation in PDF format on 8 August 2005 (“the August 2005 version of the Technical Documentation”).<sup>37</sup>
- (29) OTR carried out a review of the August 2005 version of the Technical Documentation, and reported its conclusions on 28 September 2005 (“OTR’s Report on the August 2005 version”).
- (30) On 3, 11 and 23 October 2005, following discussions with the Commission, Microsoft sent letters discussing the relevant standard for the documentation of the Interoperability Information and announcing that another revised version of the Technical Documentation would be provided.<sup>38</sup> On 14 October 2005<sup>39</sup> and on 20 October 2005,<sup>40</sup> Microsoft submitted further revised versions of the WSPP Agreements.

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<sup>34</sup> The “cooling off period” is a restriction period laid down in Section 5 (b) of the 30-day evaluation agreement, and according to which “[...] *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. [...]*”. Commencing at the end of the evaluation period, the period during which this restriction applies varies from 3 to 6 months, depending on the protocols concerned.

<sup>35</sup> This report was originally submitted to the Court of First Instance 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 the Director of Directorate C, DG Competition to Microsoft’s Director of Competition Law EMEA. Letter of 8 July 2005 from Microsoft’s Director of Competition Law EMEA to the Director of Directorate C, DG Competition.

<sup>37</sup> Letter of 8 August 2005 from Microsoft’s Director of Competition Law EMEA to the Head of Unit C-3 of DG Competition. Microsoft indicated in this letter that the version provided was only a beta test version.

<sup>38</sup> Letter of 3 October 2005 from Microsoft’s General Counsel to the Director General of DG Competition; letter of 11 October 2005 from Microsoft’s CEO to the Commissioner Kroes, which was followed by a letter of the same day from Microsoft’s General Counsel to the Director General of DG Competition; letter of 23 October 2005 from Microsoft’s CEO to the Commissioner Kroes.

<sup>39</sup> Letter of 14 October 2005 from Microsoft’s Deputy General Counsel to the Head of Unit C-3 of DG Competition.

<sup>40</sup> E-mail of 20 October 2005 from Microsoft’s Director of Competition Law EMEA to the Head of Unit C-3 of DG Competition.

- (31) In September and October 2005, four companies entered into 3-day Evaluation Agreements with Microsoft.<sup>41</sup> The Commission requested those companies to submit both a detailed description of how the evaluation took place on-site, and an assessment of whether the Technical Documentation examined in the course of the evaluation provided 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.<sup>42</sup>
- (32) On 10 November 2005, the Commission adopted a decision imposing a periodic penalty payment pursuant to Article 24(1) of Regulation (EC) No 1/2003 on Microsoft (“the Article 24(1) Decision”).<sup>43</sup> Article 1 of the Article 24(1) Decision reads as follows:
- “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.”
- (33) On 11 November 2005, Microsoft submitted revised Technical Documentation relating to the Directory Replication Service (“DRS”) protocol.<sup>44</sup>
- (34) On 23 November 2005, Microsoft submitted revised Technical Documentation for the WSPP protocols other than the DRS protocol (“the November 2005 version of the Technical Documentation”).<sup>45</sup>
- (35) Following its submissions of 11 and 23 November 2005, on 30 November 2005, Microsoft confirmed to the Commission that it had completed delivery of the “enhanced” protocol documentation.<sup>46</sup>

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<sup>41</sup> [Company D], [Company C], [Company B], [Company A].

<sup>42</sup> Requests for information pursuant to Article 18 of Regulation (EC) No 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, from [Company B] on 13 October 2005 and from [Company A] on 21 October 2005.

<sup>43</sup> See footnote 3. The Article 24(1) Decision preliminarily identified two aspects of Microsoft’s non-compliance with its obligations under Article 5(a) and (c) of the Decision: first, its failure to provide complete and accurate technical documentation embodying the Interoperability Information it is ordered to provide under the Decision; and second, its failure to charge reasonable remuneration levels in the WSPP Agreements.

<sup>44</sup> Letter of 11 November 2005 from Microsoft’s Director of Competition Law EMEA to the Head of Unit C-3 of DG Competition.

<sup>45</sup> Letter of 22 November 2005 from Microsoft’s Corporate Vice President and Deputy General Counsel to the Head of Unit C-3 of DG Competition.

## 2.2. Appointment of the Monitoring Trustee

(36) Article 7 of the Decision provides that:

“Within 30 days of the date of notification of this Decision, Microsoft Corporation shall submit a proposal to the Commission for the establishment of a suitable mechanism assisting the Commission in monitoring Microsoft Corporation’s compliance with this Decision. That mechanism shall include a monitoring trustee who shall be independent from Microsoft Corporation.

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

(37) In accordance with the first paragraph of Article 7 of the Decision, Microsoft submitted by letter of 28 April 2004 a first proposal for the establishment of a monitoring mechanism.<sup>47</sup>

(38) The Commission responded to that first proposal in a letter dated 19 May 2004,<sup>48</sup> in which a number of concerns were expressed as regards the suitability of the monitoring mechanism proposed in Microsoft’s submission. Several exchanges of views between the Commission and Microsoft followed, which led to Microsoft’s submission, on 28 January 2005, of a new proposal for a monitoring mechanism pursuant to Article 7 of the Decision.<sup>49</sup> The Commission analysed this proposal and, by letter of 22 March 2005,<sup>50</sup> informed Microsoft that its preliminary view was that the proposal was not suitable and that it intended to adopt a decision imposing a suitable monitoring mechanism, on the basis of Article 7(1) of Regulation (EC) No 1/2003 and the second paragraph of Article 7 of the Decision. The Commission invited Microsoft to comment on its preliminary findings.

(39) By letter dated 14 April 2005, Microsoft submitted a third proposal for a monitoring mechanism, incorporating the monitoring mechanism outlined in the Annex to the Commission’s letter of 22 March 2005, subject only to those textual changes necessary to reflect the fact that the provisions were being proposed by Microsoft.<sup>51</sup>

(40) On 28 July 2005, the Commission adopted a decision pursuant to Article 7 of the Decision and Article 7(1) of Regulation (EC) No 1/2003 establishing the monitoring mechanism provided for in Article 7 of the Decision, in accordance with the substantive terms envisaged in the Commission’s letter of 22 March 2005 and Microsoft’s April 2005

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<sup>46</sup> E-mail of 30 November 2005 from a Senior Corporate Attorney of Microsoft to the Trustee, copied to Case Officers B and C.

<sup>47</sup> Letter of 28 April 2004 from Microsoft’s Deputy General Counsel to the Director, of Directorate C, DG Competition.

<sup>48</sup> Letter of 19 May 2004 from the Director, of Directorate C, DG Competition to Microsoft’s Deputy General Counsel

<sup>49</sup> Letter of 28 January 2005 from Microsoft’s Director of Competition Law EMEA to the Head of Unit C-3 of DG Competition.

<sup>50</sup> Letter of 22 March 2005 from Commissioner Kroes to Microsoft’s CEO.

<sup>51</sup> Letter from the Associate General Counsel of Microsoft EMEA to Commissioner Kroes.

monitoring mechanism proposal (“the Trustee Decision”)<sup>52</sup>. The Trustee Decision provides, *inter alia*, for the appointment of a Monitoring Trustee.

- (41) By letter of 12 August 2005,<sup>53</sup> Microsoft proposed four candidates for the position of Monitoring Trustee. Having interviewed all four candidates, the Commission appointed one of the candidates proposed by Microsoft, Professor Neil Barrett, as Monitoring Trustee (the “Trustee”) by letter of 4 October 2005.<sup>54</sup>
- (42) By letter of 10 November 2005,<sup>55</sup> the Commission approved the Trustee Mandate<sup>56</sup> that had been proposed by Microsoft and agreed by the Trustee, in accordance with Article 2.7 of the Trustee Decision.
- (43) By letter of 12 December 2005, the Commission, approved, with Microsoft’s agreement<sup>57</sup>, the appointment of Professor David Parnas and Professor John McDermid as advisors to the Trustee.<sup>58</sup>

### **2.3. The Statement of Objections of 21 December 2005 and the subsequent procedural steps**

- (44) At the request of the Commission, the Trustee undertook to analyse the November 2005 version of the Technical Documentation, and submitted a Preliminary Report on 30 November 2005 (the “Trustee’s Preliminary Report on the November 2005 version”).<sup>59</sup>
- (45) By letter of 8 December 2005,<sup>60</sup> the Trustee’s Preliminary Report on the November 2005 version was sent to Microsoft.
- (46) On 15 December 2005, Microsoft submitted various reports purporting to justify the remuneration levels charged by Microsoft in the WSPP Agreements,<sup>61</sup> and a report responding to the concerns expressed in the Trustee’s Preliminary Report on the November 2005 version.<sup>62</sup> In the cover letter, Microsoft informed the Commission that it had completed “*a revised version of the technical documentation*” and that this revised version

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<sup>52</sup> Commission Decision of 28 July 2005 relating to a proceeding under Article 82 of the EC Treaty (Case COMP/C-3/37.792 Microsoft), C(2005) 2988 final.

<sup>53</sup> Letter of 12 August 2005 from Microsoft’s Director of Competition Law EMEA to Commissioner Kroes.

<sup>54</sup> Letter of 4 October 2005 from Commissioner Kroes to Microsoft’s CEO.

<sup>55</sup> Letter of 10 November 2005 from Commissioner Kroes to Microsoft’s CEO.

<sup>56</sup> The contract between Microsoft and the Trustee.

<sup>57</sup> E-mail of 8 December 2005 from Microsoft’s Director of Competition Law EMEA to Case Officer C.

<sup>58</sup> Letter of 12 December 2005 from the Director General of DG Competition to Microsoft’s General Counsel and to the Trustee. Professor Parnas is director of the Software Quality Research Laboratory at the University of Limerick in Ireland. Professor McDermid chairs the Software Engineering Department at the University of York, United Kingdom.

<sup>59</sup> Letter of 30 November 2005 from the Trustee to the Head of Unit C-3 of DG Competition.

<sup>60</sup> Letter of 8 December 2005 from the Head of Unit C-3 of DG Competition to Microsoft’s Director of Competition Law EMEA.

<sup>61</sup> Letter of 15 December 2005 from Microsoft’s General Counsel to the Director General of DG Competition, Annexes 1, 3, 4 and 5.

<sup>62</sup> Letter of 15 December 2005 from Microsoft’s General Counsel to the Director General of DG Competition, in Annex 2 (“Microsoft Response to Trustee Report ‘WSSP Documentation Review Preliminary Report – 30<sup>th</sup> November 2005’”).

was “available for onsite inspection immediately”<sup>63</sup>. Annex 2 to that letter contains Microsoft’s response to the preliminary conclusions of the Trustee.

- (47) Because of the particular relevance for the assessment of the further procedural steps taken by the Commission, the content of Annex 2 to Microsoft’s letter of 15 December 2005 merits more detailed consideration. Annex 2 is divided into four headings: “A. Trustee Concerns Regarding Usability of the Technical Documentation”, “B. Trustee Concerns Regarding Completeness of the Documentation”, “C. Trustee Concerns Regarding Accuracy of Documentation”, and “D. Response to the Conclusion of the Preliminary Report”.
- (48) Under heading A. of Annex 2 Microsoft responds to “[usability] concerns identified by the Trustee relat[ing] to presentational issues with documentation (e.g. format, hyperlinks, consistency of structure, spelling, page numbering).” Microsoft notes that “these formatting issues will be remedied in the revised version of the documentation that Microsoft will make available for review on 15 December 15 (sic) 2005 (hereinafter “December 15 release”) here on Microsoft’s Redmond campus.”<sup>64</sup>
- (49) Under heading B. of Annex 2 Microsoft explains that it “[...] continues to believe that the Technical Documentation as provided is complete and accurate as required under the Decision. The supplemental documentation provided to the Commission and Trustee in November was produced because of the clarification which was recently provided by the Commission regarding the level of Interoperability information which was required.”
- (50) It is apparent from the context that this statement refers to the version of the Technical Documentation provided by Microsoft in November 2005, essentially because the Annex goes on to try to rebut the Trustee’s conclusions in his Preliminary Report on the November 2005 version, and explicitly refers to the “15 December release” only in two instances where (according to Microsoft) the Trustee’s concerns would be alleviated by this specific release of the Technical Documentation.<sup>65</sup>
- (51) Under heading C. of Annex 2 Microsoft makes the following statement:  
*“The Technical Documentation is prepared to the documentation standard defined in the WSP license, Appendix 2 which fulfils the Decision’s requirement that Microsoft provide the Interoperability Information required by a Licensee. Accordingly Microsoft believes that the documentation is complete and accurate.  
[...]  
Based upon the Commission’s recent clarification on the scope of disclosure required, Microsoft created the Supplementary Documentation which was provided to the Trustee and the Commission during the month of November, 2005. [...].”*

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<sup>63</sup> Letter of 15 December 2005 from Microsoft’s General Counsel to the Director General of DG Competition, on page 3.

<sup>64</sup> Letter of 15 December 2005 from Microsoft’s General Counsel to the Director General of DG Competition, in Annex 2 (“Microsoft Response to Trustee Report ‘WSSP Documentation Review Preliminary Report – 30<sup>th</sup> November 2005’”), on page 1.

<sup>65</sup> Effectively these two instances concern “formatting” issues raised by the Trustee, namely that references were missing or electronic references did not work properly. Letter of 15 December 2005 from Microsoft’s General Counsel to the Director General of DG Competition, in Annex 2 (“Microsoft Response to Trustee Report ‘WSSP Documentation Review Preliminary Report – 30<sup>th</sup> November 2005’”), on page 4 (subheading: “some parts are missing”) and on page 5 (subheading: “reference without access”).

- (52) However, Microsoft fails to address how the December 2005 version of the Technical Documentation sought to improve the November 2005 version of the Technical Documentation, which the Trustee had criticised in his Preliminary Report as being “*not fit for use by developers, totally insufficient and inaccurate for the purpose it is intended, namely to develop work group server operating system products able to viable [sic] compete with Microsoft’s own products.*”<sup>66</sup>
- (53) As a conclusion to its observations on the Trustee’s Preliminary Report on the November 2005 version, Microsoft reiterates that in its view “[...] *the documentation developed by Microsoft and available for licensing is fit for use by developers in developing work group server operating system products*” and that “[...] *the documentation offered clearly meets the requirements of the Decision [...]*”.<sup>67</sup>
- (54) It follows from these statements that in the December 2005 version of the Technical Documentation Microsoft did not address the main concerns raised by the Commission in the Article 24(1) Decision with regard to the completeness and accuracy of the Technical Documentation, but merely the “formatting” issues identified by the Trustee’s Preliminary Report on the November 2005 version.
- (55) The Trustee’s subsequent review of the December 2005 version of the Technical Documentation indeed confirms that the serious deficiencies concerning the completeness and accuracy of the Technical Documentation which have been identified with regard to earlier versions are still present in this version.<sup>68</sup>
- (56) In this context, it may be noted that Microsoft is not only under an obligation to make Interoperability Information available to interested undertakings as provided for by the Decision but is obliged, pursuant to Article 5(d) of the Decision, to inform the Commission in sufficient detail about such disclosure, to enable the Commission to make a preliminary assessment about Microsoft’s compliance. In practical terms, the only way to provide enough detail to the Commission in order to allow an effective assessment of the vast material contained in the Technical Documentation is to provide the Commission with electronic copies thereof. This practice had indeed been followed by Microsoft with regard to all the other versions of the Technical Documentation that are relevant to this decision.
- (57) On 15 December 2005, the Trustee submitted a final report on the November 2005 version of the Technical Documentation (the “Trustee’s Final Report on the November 2005 version”).<sup>69</sup> The Trustee commented on Microsoft’s Response to his Preliminary Report on the November 2005 version in a letter dated 16 December 2005<sup>70</sup>, observing that apart from claiming to address the formatting issues he had identified, Microsoft had apparently not addressed his concerns relating to the Technical Documentation.<sup>71</sup>

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<sup>66</sup> Trustee’s Preliminary Report on the November 2005 version, on page 4.

<sup>67</sup> Letter of 15 December 2005 from Microsoft’s General Counsel to the Director General of DG Competition, in Annex 2, in Annex 2 (“Microsoft Response to Trustee Report “WSSP Documentation Review Preliminary Report – 30<sup>th</sup> November 2005”), on page 7.

<sup>68</sup> Letter of 3 March 2006 from the Trustee to the Head of Unit C-3 of DG Competition (subsequently referred to as the “Trustee’s Report on the December 2005 version”), on page 3.

<sup>69</sup> Letter of 15 December 2005 from the Trustee to the Head of Unit C-3 of DG Competition.

<sup>70</sup> Letter of 16 December 2005 from the Trustee to the Head of Unit C-3 of DG Competition.

<sup>71</sup> Letter of 16 December 2005 from the Trustee to the Head of Unit C-3 of DG Competition. In the annex to that letter, the Trustee refuted point by point each of Microsoft’s arguments. He concluded on page 1 that: “*In the concluding paragraph of the Microsoft Response it is stated that ‘the documentation [...] is fit for use by*

- (58) In the light of the Trustee's reports and Microsoft's letter of 15 December 2005<sup>72</sup>, the Commission came to the preliminary conclusion that Microsoft had not yet complied with the obligations set out in Article 5(a) and (c) of the Decision. Accordingly, on 21 December 2005, the Commission issued a Statement of Objections ("the Statement of Objections") stating that it intended to adopt a decision pursuant to Article 24(2) of Regulation (EC) No 1/2003 fixing the definitive amount of the periodic penalty payment which was imposed on Microsoft by the Article 24(1) Decision for non-compliance with its obligation to make Interoperability Information available to interested undertakings pursuant to Article 5(a) and (c) of the Decision, for the period between 15 December 2005 and the date to be specified in the decision pursuant to Article 24(2) of Regulation (EC) No 1/2003. The Statement of Objections also made clear that such date would be not later than the date of the adoption of the decision pursuant to Article 24(2) of Regulation (EC) No 1/2003, or the date on which Microsoft complied with that obligation, whichever was earlier.
- (59) On 21 December 2005, Microsoft was provided with the Statement of Objections, together with copies of the Trustee's reports which the Commission used in formulating its objections. The Commission further informed Microsoft that it would give Microsoft access to all documents on the case file (excluding business secrets and other confidential information) obtained, produced and/or assembled by the Commission for the purpose of the procedure pursuant to Article 24 of Regulation (EC) No 1/2003, in so far as they had led the Commission to raise its objections. A list of these documents was attached. Finally, the same letter informed Microsoft that it was entitled under Article 27(1) of Regulation (EC) No 1/2003, in conjunction with Article 10 of Regulation No 773/2004, to make known in writing to the Commission its views on the objections within five weeks of the date of receipt of the same letter.<sup>73</sup>
- (60) On 23 December 2005, Microsoft requested access to the file,<sup>74</sup> which it was given on the same day, at the Commission's premises.
- (61) On 24 December 2005 and 2 January 2006, Microsoft requested further access to the documents in the Commission's file.<sup>75</sup>
- (62) On 26 December 2005, Microsoft submitted a new version of the Technical Documentation ("the December 2005 version of the Technical Documentation") to the Commission. This is the version which Microsoft claimed was ready on 15 December 2005

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*developers'. It remains my position that this is not the case – and in fact, following further analysis work recently completed and communicated to you, my position if anything has hardened further. [...] All the concerns I raised about the technical completeness of the documentation appear to have been dismissed, with a statement that the descriptions are in fact complete."*

<sup>72</sup> See footnotes 59, 69 and 62.

<sup>73</sup> The letter clarified that this deadline took the Christmas holidays into account.

<sup>74</sup> E-mail of 23 December 2005 from Microsoft's Director of Competition Law EMEA to the Head of Unit C-3 of DG Competition.

<sup>75</sup> Letters of 24 December 2005 and 2 January 2006 from Microsoft's legal counsel to the Hearing Officer.

(see recital (46) above).<sup>76</sup> The Trustee received this version from Microsoft on 29 December 2005.<sup>77</sup>

- (63) On 13 January 2006, the Hearing Officer, in response to Microsoft's request for further access to documents in the Commission's file, informed Microsoft that it could not be granted access to correspondence between the Commission and the experts OTR or the Trustee which were neither necessary to understand the methodology applied in the experts' and the Trustee's reports nor to test their technical correctness.<sup>78</sup> In her letter, the Hearing Officer identified a document on the "Sufficiency Test"<sup>79</sup> as an item for which access might be required "*for the adequate understanding of the methodology or the proper verification of the Trustee's report*".<sup>80</sup> This document described the test that had been undertaken by the Trustee in verification of the adequacy of the Technical Documentation. In the same letter, the Hearing Officer informed Microsoft that it had asked the Commission services to draw up a descriptive list of all potentially related documents that Microsoft had not received because they were either internal or confidential in nature.
- (64) On 17 January 2006, the Commission, following the Hearing Officer's letter of 13 January 2006, forwarded to Microsoft the document on the "Sufficiency Test" drafted by the Trustee.<sup>81</sup> On 23 January 2006, Microsoft asked the Hearing Officer to check whether the document forwarded by the Commission with its letter of 17 January 2006 "*was indeed the document that [...] was prepared at the time the Trustee conducted his Sufficiency Test*" and in case it were not, to provide access "*to the contemporaneous document, in whatever form it was maintained [...] and without any subsequent revisions.*"<sup>82</sup> The Hearing Officer informed Microsoft that the Trustee confirmed that the contemporaneous notes, i.e. the document on the "Sufficiency Test" drafted by him, "*were the only notes taken and communicated to the Commission*".<sup>83</sup>
- (65) On 17 January 2006 Microsoft requested further access to documents in the Commission's file as well as an extension of the time-limit to respond to the Statement of Objections.<sup>84</sup> On 23 January 2006, the Hearing Officer granted Microsoft an extension until 15 February 2006 to respond to the Statement of Objections.<sup>85</sup> On 30 January 2006, the Hearing Officer reiterated her position that Microsoft could not be granted access to correspondence between the Commission and the experts OTR and the Trustee which was neither necessary to understand the methodology applied in the experts' and the Trustee's reports nor to test their technical correctness.<sup>86</sup>

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<sup>76</sup> Letter of 22 December 2005 from Microsoft's Corporate Vice President and Deputy General Counsel to the Head of Unit C-3 of DG Competition.

<sup>77</sup> See E-mail of 30 December 2005 from the Trustee to Case Officers B and C. See also e-mail from the Monitoring Trustee's secretary to a Microsoft's Senior Corporate Attorney of 29 December 2005, copied to Case Officer C.

<sup>78</sup> Letter of 13 January 2006 from the Hearing Officer to Microsoft's legal counsel.

<sup>79</sup> The "Sufficiency Test" was attached to an e-mail of 15 December 2005 from the Trustee to Case Officer C.

<sup>80</sup> Letter of 13 January 2006 from the Hearing Officer to Microsoft's legal counsel.

<sup>81</sup> Letter of 17 January 2006 from the Head of Unit C-3 of DG Competition to Microsoft's legal counsel.

<sup>82</sup> Letter of 23 January 2006 from Microsoft's legal counsel to the Hearing Officer.

<sup>83</sup> Letter of 30 January 2006 from the Hearing Officer to Microsoft's legal counsel.

<sup>84</sup> Letter of 17 January 2006 from Microsoft's legal counsel to the Hearing Officer.

<sup>85</sup> Letter of 23 January 2006 from the Hearing Officer to Microsoft's legal counsel.

<sup>86</sup> Letter of 30 January 2006 from the Hearing Officer to Microsoft's legal counsel.

- (66) On 18 January 2006 and on 13 February 2006 the Commission transmitted a copy of the Statement of Objections to the parties admitted as interested third parties in the procedure leading to the adoption of the Decision.<sup>87</sup>
- (67) On 20 January 2006, the Commission, following the Hearing Officer's letter of 13 January 2006, forwarded to Microsoft a descriptive list of all potentially related documents that Microsoft had not received because of their internal or confidential nature.<sup>88</sup>
- (68) On 25 January 2006, Microsoft announced the possibility, for undertakings which signed a WSP Development and Product Distribution Agreement, to obtain access to the Windows source code by means of a reference licence.<sup>89 90</sup>
- (69) On 30 January 2006 Microsoft provided a new version of the Technical Documentation ("the January 2006 version of the Technical Documentation"), during a meeting between Commission officials and Microsoft engineers that took place in Redmond on 30-31 January 2006.
- (70) On 30 January 2006, Microsoft renewed its request for further access to the file and a further extension of the deadline to reply to the Statement of Objections.<sup>91</sup> On 8 February 2006, the Hearing Officer rejected Microsoft's request for a further extension of the deadline to reply to the Statement of Objections and reiterated the position stated in her letters of 13 January 2006 and 30 January 2006 with regard to the requested access to internal documents.<sup>92</sup> On 8 February 2006, Microsoft asked the Hearing Officer to reconsider her position with regard to access to internal documents.<sup>93</sup> On 23 February 2006, the Hearing Officer informed Microsoft that she maintained her position in this regard.<sup>94</sup>
- (71) After having given third parties the possibility to make known their position on the confidentiality of certain documents<sup>95</sup>, the Commission, on 13 February 2006, provided

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<sup>87</sup> Letters of 18 January 2006 from the Director of Directorate C, DG Competition to the following third parties: [a third party], [Company A] (as successor to [a third party] in the administrative procedure), [Company B], [a third party], [a third party], [Company D], [a third party] and [a third party]; letter of 13 February 2006 from the Director of Directorate C, DG Competition to [Company C] and [a third party].

<sup>88</sup> Letter of 20 January 2006 from the Head of Unit C-3 of DG Competition to Microsoft's legal counsel. On 27 January 2006, the Commission forwarded to Microsoft copies of four e-mails that, although included on the descriptive list enclosed with the Commission letter of 20 January 2006, were of a non-confidential nature (Letter of 27 January 2006 from the Head of Unit C-3 of DG Competition to Microsoft's legal counsel).

<sup>89</sup> Letter of 25 January 2006 from Microsoft's CEO to Commissioner Kroes. In a letter of 15 February 2006 to Microsoft's CEO, Commissioner Kroes recalled that the Decision does not oblige Microsoft to provide source code but rather complete and accurate specifications.

<sup>90</sup> According to the source code reference licence submitted by Microsoft to the Commission on 9 February 2006 the Source Code for the following commercially released Microsoft products will be available to the licensee: Microsoft Windows NT Server 4.0, Windows 2000 Server Standard Edition, Windows Server 2003 Standard Edition, Microsoft's server operating system successor to Windows Server 2003 Standard Edition (currently code-named Longhorn (Letter of 8 February 2006 from Microsoft's Corporate Vice President and Deputy General Counsel to the Head of Unit C-3 of DG Competition).

<sup>91</sup> Letters of 30 January 2006 from Microsoft's legal counsel to the Hearing Officer.

<sup>92</sup> Letter of 8 February 2006 from the Hearing Officer to Microsoft's legal counsel.

<sup>93</sup> Letter of 8 February 2006 from Microsoft's legal counsel to the Hearing Officer.

<sup>94</sup> Letter of 23 February 2006 from the Hearing Officer to Microsoft's legal counsel.

<sup>95</sup> In accordance with the case law, the applicable rules require the Commission to have regard to the legitimate interest of undertakings in the protection of their business secrets. See Judgment in Case 53/85, AKZO Chemie BV and AKZO Chemie UK Ltd [1986] ECR 1965, at paragraphs 24 to 28.

Microsoft with copies of all the documents included on the descriptive list enclosed with the Commission letter of 20 January 2006.<sup>96</sup>

- (72) On 15 February 2006, Microsoft submitted its response to the Statement of Objections (the “Response to the Statement of Objections”).<sup>97</sup> At the same time, Microsoft requested an oral hearing and that this hearing be public. On 23 February 2006, the Hearing Officer informed Microsoft that, in accordance with Article 14(6) of Regulation (EC) No 773/2004, which provides that “[o]ral hearings shall not be public”, the hearing could not be public.<sup>98</sup>
- (73) On 17 February 2006, the Commission sent formal requests for information to several undertakings concerning Microsoft’s source code reference licence offer.<sup>99</sup>
- (74) On 24 February 2006, the Commission sent formal requests for information to [Company C] pertaining to a second evaluation of the (revised) Technical Documentation which [Company C] undertook in February 2006. Similar requests were sent on 9 March 2006 and 10 March 2006 to [Company D] and [Company A], which also evaluated the (revised) Technical Documentation for a second time in March 2006.<sup>100</sup>
- (75) On 2 March 2006, Microsoft submitted a “Supplemental Response of Microsoft Corporation to the Statement of Objections by the European Commission dated 21 December 2005” (“the Supplemental Response to the Statement of Objections”).<sup>101</sup> On the same date, Microsoft requested the Hearing Officer to grant access “to any material that Microsoft’s adversaries, notably [Company D], [Company A], and [Company C], have

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<sup>96</sup> Letter of 13 February 2006 from the Head of Unit C-3 of DG Competition to Microsoft’s legal counsel.

<sup>97</sup> Letter of 15 February 2006 from Microsoft’s legal counsel.

<sup>98</sup> Letter of 23 February 2006 from the Hearing Officer to Microsoft’s legal counsel.

<sup>99</sup> Requests for information pursuant to Article 18 of Regulation (EC) No 1/2003 were sent on 17 February 2006 to the following undertakings: [A third party], [a third party], [a third party], Company X, [Company A], [Company B], [Company C], [a third party] and [Company D]. The full text of the questions reads as follows: “1. Please evaluate Microsoft’s offer to provide a source code licence to undertakings having entered into a WSPP agreement from your company’s technical and legal perspective. In your response, please indicate advantages and drawbacks you see in complementing the provision of the WSPP protocol specifications with a source code licence. 2. Please indicate whether you consider the terms of the source code licence reasonable. Please, substantiate your answer with respect to the different contractual clauses.” The non-confidential responses were forwarded to Microsoft on 20 April 2006 (Letter of 20 April 2006 from the Head of Unit C-3 of DG Competition to Microsoft’s legal counsel).

<sup>100</sup> 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 [Company A] 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?”. [Company A]’s and [Company C]’s non-confidential responses were forwarded to Microsoft on 23 March 2006 (Letter of 23 March from the Head of Unit C-3 of DG Competition to Microsoft’s legal counsel). [Company D]’s non confidential response was forwarded to Microsoft on the same date it was received by the Commission (Letter of 24 March from the Head of Unit C-3 of DG Competition to Microsoft’s legal counsel).

<sup>101</sup> Letter of 2 March 2006 from Microsoft’s legal counsel to the Director General of DG Competition.

*submitted directly to the Trustee and OTR*” and reiterated its previous request for access to internal documents.<sup>102</sup>

- (76) On 2 March 2006, TAEUS, the Commission’s external technical experts hired in succession to OTR, provided the Commission with a report on the completeness and accuracy of the January 2006 version of the Technical Documentation (“TAEUS’ Report on the January 2006 version”).<sup>103</sup>
- (77) On 3 March 2006, the Trustee provided the Commission with a report (“the Trustee’s Report on the December 2005 version”) on the completeness and accuracy of the December 2005 version of the Technical Documentation.<sup>104</sup> On 7 March 2006, the Trustee submitted a letter outlining his opinion on the source code reference licence offer.<sup>105</sup>
- (78) On 10 March 2006, the Commission sent Microsoft a letter enclosing TAEUS’ Report on the January 2006 version, the Trustee’s Report on the December 2005 version and the Trustee’s 7 March 2006 letter,<sup>106</sup> and invited Microsoft to comment on these reports. With its 10 March 2006 letter (“the 10 March 2006 letter”), the Commission informed Microsoft of its assessment that the objections raised on 21 December 2005 as regards the completeness and accuracy of the Technical Documentation had not been addressed in the December 2005 version of the Technical Documentation nor in the part of the January 2006 version reviewed by TAEUS,<sup>107</sup> and thus remained valid. In its 10 March 2006 letter, the Commission invited Microsoft to submit comments within two weeks from receipt thereof.
- (79) On 14 March 2006, Microsoft requested an extension of the deadline to reply to the 10 March 2006 letter and a postponement of the oral hearing scheduled for 30 and 31 March 2006, on the grounds that the 10 March 2006 letter constituted a new Statement of Objections.<sup>108</sup> In the same letter, Microsoft reiterated its request that the oral hearing be public.
- (80) On 17 March 2006, the Hearing Officer granted Microsoft an extension to respond to the 10 March 2006 letter until 14 April 2006, but rejected the request for a postponement of the oral hearing scheduled for 30 and 31 March 2006.<sup>109</sup> In the same letter, the Hearing Officer maintained her position that oral hearings were not to be public.
- (81) On 22 March 2006, Microsoft reiterated its request to postpone the oral hearing.<sup>110</sup> In the same letter, Microsoft requested access to the latest responses to formal requests for information addressed by the Commission to third parties as well as to “documents that Microsoft’s adversaries have sent to the Trustee” and “to all correspondence between the Commission and its new experts, TAEUS”.

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<sup>102</sup> Letter of 2 March 2006 from Microsoft’s legal counsel, to the Hearing Officer.

<sup>103</sup> E-mail of 2 March 2006 from TAEUS to Case Officer C.

<sup>104</sup> Letter of 3 March 2006 from the Trustee to the Head of Unit C-3 of DG Competition.

<sup>105</sup> Letter of 7 March 2006 from the Trustee to the Head of Unit C-3 of DG Competition.

<sup>106</sup> Letter of 10 March 2006 from the Director of Directorate C, DG Competition to Microsoft’s General Counsel.

<sup>107</sup> TAEUS’s Report on the January 2006 version, by way of example, examines the Technical Documentation on one protocol of the 30 January version (FRS - FRS stands for File Replication Service).

<sup>108</sup> Letter of 14 March 2006 from Microsoft’s legal counsel to the Hearing Officer.

<sup>109</sup> Letter of 17 March 2006 from the Hearing Officer to Microsoft’s legal counsel.

<sup>110</sup> Letter of 22 March 2006 from Microsoft’s legal counsel to the Hearing Officer.

- (82) On 24 March 2006, the Hearing Officer rejected Microsoft’s contention that the 10 March 2006 letter should be characterised as a new Statement of Objections, again rejected the request for a postponement of the oral hearing scheduled for 30 and 31 March 2006 and informed Microsoft that it was not entitled to access the internal correspondence between the Commission and its experts TAEUS.<sup>111</sup>
- (83) Following Microsoft’s request for access to documents provided by third parties to the Trustee and OTR,<sup>112</sup> the Commission asked the Trustee to disclose and transmit to the Commission any documents he had directly received from third parties or Microsoft in carrying out his functions pursuant to Article 3.1 of the Trustee Decision and Section C.1 of the Trustee Mandate as well as any minutes he had taken as regards communications with third parties or Microsoft.<sup>113</sup> The Commission also asked OTR to disclose any document they had directly received from third parties or Microsoft in carrying out their functions pursuant to their contract with the Commission.<sup>114</sup>
- (84) On 9 March 2006, the Trustee transmitted the documents directly received from third parties or Microsoft in carrying out his functions pursuant to Article 3.1 of the Trustee Decision and Section C.1 of the Trustee Mandate.<sup>115</sup> On 10 March 2006, OTR confirmed that they had not received any such documents either from third parties or from Microsoft.<sup>116</sup>
- (85) After having given third parties the possibility to make their position on the confidentiality of these documents known to the Commission<sup>117</sup>, the Commission, on 28 March 2006, provided Microsoft with those documents exchanged between the Trustee and [Company A], [Company C] and [Company D], respectively, which were not confidential or which were not unrelated to the subject matter of the Statement of Objections.<sup>118</sup> With the same letter, the Commission also provided the non confidential versions of the comments submitted by third parties to the Statement of Objections. [A third party]’s comments on the Statement of Objections were provided to Microsoft on 29 March 2006, on the same day they were provided to the Directorate General for Competition.<sup>119</sup>
- (86) On 30 and 31 March 2006 an oral hearing was held in Brussels.
- (87) On 5 April 2006, the Trustee submitted a report to the Commission entitled “Analysis of WSPP Algorithms” (“the Algorithms report”).<sup>120</sup> On 7 April 2006, the Commission

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<sup>111</sup> Letter of 24 March 2006 from the Hearing Officer to Microsoft’s legal counsel.

<sup>112</sup> Letter of 2 March 2006 from Microsoft’s legal counsel to the Hearing Officer.

<sup>113</sup> Letter of 7 March 2006 from the Head of Unit C-3 of DG Competition to the Trustee.

<sup>114</sup> Letter of 7 March 2006 from the Head of Unit C-3 of DG Competition to OTR’s Managing Director.

<sup>115</sup> E-mail of 9 March 2006 from The Trustee to Case Officer D.

<sup>116</sup> Letter of 10 March 2006 from OTR’s Managing Director to the Head of Unit C-3 of DG Competition. On 28 March 2006, the Commission informed Microsoft about OTR’s confirmation in this regard (letter of 28 March 2006 from the Head of Unit C-3 of DG Competition to Microsoft’s legal counsel).

<sup>117</sup> See Judgment in Case 53/85, AKZO Chemie BV and AKZO Chemie UK Ltd [1986] ECR 1965, at paragraphs 24 to 28.

<sup>118</sup> Letter of 28 March 2006 from the Head of Unit C-3 of DG Competition to Microsoft’s legal counsel. Attached to the same letter was a list of the documents which were not transmitted to Microsoft on the grounds that they were confidential or unrelated to the subject matter of the Statement of Objections (see Annex to letter of 28 March 2006 from the Head of Unit C-3 of DG Competition to Microsoft’s legal counsel).

<sup>119</sup> Letter of 29 March 2006 from the Head of Unit C-3 of DG Competition to Microsoft’s legal counsel.

<sup>120</sup> The Algorithms report was handed over by the Trustee at the Commission’s premises on 5 April 2006.

provided Microsoft with the Algorithms report.<sup>121</sup> With the same letter, the Commission also transmitted to Microsoft summarising the Trustee’s review of the material purported to justify the remuneration levels charged by Microsoft in the WSPP Agreements submitted on 15 December 2005 (“the Innovations report”).<sup>122</sup>

- (88) On 7 and 8 April 2006, a meeting took place in London between the Trustee and representatives of Microsoft and the Commission in order to discuss Microsoft’s project plan for the delivery of a revised version of the Technical Documentation.<sup>123</sup>
- (89) On 11 April 2006, Microsoft submitted a revised version of the Technical Documentation (“the March 2006 version of the Technical Documentation”).<sup>124</sup> Since this Technical Documentation submitted in April 2006 is dated 22 March 2006, this version of the Technical Documentation is hereinafter referred to as the “March 2006 version of the Technical Documentation”.
- (90) On 13 April 2006, the Member of the Commission responsible for Competition addressed a letter to Microsoft’s Chief Executive Officer, referring to the meeting in London on 7 and 8 April 2006 and recording the tentative timetable set out by Microsoft on that occasion for the delivery of complete and accurate Technical Documentation.<sup>125</sup>
- (91) On 14 April 2006, Microsoft responded to the Commission’s 10 March 2006 letter.<sup>126</sup>
- (92) On 22 April 2006, following the meeting in London on 7 and 8 April 2006 and the letter of 13 April 2006,<sup>127</sup> Microsoft provided the Trustee with a work plan for the delivery of complete and accurate Technical Documentation.<sup>128</sup> This work plan foresees that revised Technical Documentation for the majority of protocols described therein will be delivered by 30 June 2006 and that the Technical Documentation for the remaining protocols described therein will be delivered by 18 July 2006. On 1 May 2006, Microsoft submitted documentation for three protocols. Since then, and up to 20 June 2006, Microsoft has submitted documentation for a small portion of the relevant protocols. i.e. documentation for 24 out of 64 protocols.<sup>129</sup>
- (93) On 4 May 2006, Microsoft submitted its response to the Algorithms report.<sup>130</sup> On the same day, Microsoft also submitted its response to the Innovations report, in which Microsoft

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<sup>121</sup> Letter of 7 April 2006 from the Director General of DG Competition to Microsoft’s General Counsel.

<sup>122</sup> Fax of 17 March 2006 from the Trustee to Case Officer C.

<sup>123</sup> A second meeting took place in London on 4 and 5 May 2006. This meeting also covered the revision of the Technical Documentation of the NTP, SMB and Kerberos protocols.

<sup>124</sup> Letter of 11 April 2006 from a Microsoft’s Senior Corporate Attorney to Case Officer B and C. The Technical Documentation’s copyright notice is dated 22 March 2006.

<sup>125</sup> Letter of 13 April 2006 from Commissioner Kroes to Microsoft’s CEO.

<sup>126</sup> Letter of 14 April 2006 from Microsoft’s legal counsel to the Director of Directorate C, DG Competition. Microsoft’s legal counsel refers to this response as “The Second Supplemental Response to the Statement of Objections”.

<sup>127</sup> See footnote 125.

<sup>128</sup> E-mail of 22 April 2006 from Microsoft’s General Manager, Windows Core Networking and Collaboration to the Trustee. On 1 May 2006, the Trustee forwarded this e-mail to the Commission (see e-mail of 1 May 2006 from the Trustee to Case Officer B and C).

<sup>129</sup> According to Microsoft, the number of protocols it has to disclose under the Decision amounts to 64. See letters of 30 June 2006 and of 6 July 2006 from Microsoft’s General Counsel to the Director of Directorate C, DG Competition.

<sup>130</sup> Letter of 4 May 2006 from Microsoft’s General Counsel to the Director General of DG Competition.

announced a review of the remuneration levels in the light of the revision of the Technical Documentation started on 1 May 2006.<sup>131</sup>

- (94) On 15 May 2006, the Trustee submitted two reports: one providing comments on the reports from Microsoft's technical experts Professors Finkelstein and Broy, that were enclosed with Microsoft's letter of 14 April 2006 ("the 15 May 2006 Trustee report on the reports from Professors Finkelstein and Broy") and a second report providing an assessment of the completeness and accuracy of the March 2006 Technical Documentation ("the Trustee's Report on the March 2006 version").<sup>132</sup>
- (95) On 15 May 2006, TAEUS submitted a report providing an assessment of the completeness and accuracy of the March 2006 Technical Documentation and providing comments on the reports of Professors Finkelstein and Broy, which were enclosed with Microsoft's letter of 14 April 2006 ("the TAEUS Report on the March 2006 version").<sup>133</sup>
- (96) On 19 May 2006, the Commission sent a letter to Microsoft enclosing the TAEUS Report on the March 2006 version, the 15 May 2006 Trustee report on the reports from Professors Finkelstein and Broy and the Trustee's Report on the March 2006 version<sup>134</sup>, and invited Microsoft to comment. With that letter ("the 19 May 2006 letter"), the Commission informed Microsoft of its assessment that the objections raised on 21 December 2005 as regards the completeness and accuracy of the Technical Documentation had not been addressed and thus remained valid. In the 19 May 2006 letter, the Commission invited Microsoft to submit comments within two weeks from receipt thereof.
- (97) On 23 May 2006, Microsoft requested that the deadline to respond to the 19 May 2006 letter be extended until 9 June 2006.<sup>135</sup> In the same letter, Microsoft requested further access to the file.
- (98) On 30 May 2006, the Hearing Officer agreed to extend the deadline for Microsoft to respond to the Commission's 19 May 2006 letter until 9 June 2006.<sup>136</sup> On 2 June 2006, the Hearing Officer granted Microsoft access to communications between the Commission and third parties and reiterated her position on the non accessibility of internal documents.<sup>137</sup> On 14 June the Commission provided Microsoft with copies of those communications.<sup>138</sup>

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<sup>131</sup> Letter of 4 May 2006 from Microsoft's General Counsel to the Director General of DG Competition: "[...] *To the extent that the scope of the documentation or assessment of innovations has changed, we would take another look at our suggested royalties and would let you know of any proposed changes to them. As with the documentation and the innovations, we would propose to do this on a rolling basis. It is worth noting in this regard that most of the suggested royalties we established last June are done on the basis of scenarios that include groups of protocols, rather than individual protocols. Therefore, we'll need to complete the work for all of the relevant protocols for a particular scenario before reviewing again the royalty for that particular scenario.*", on pages 1 and 2.

<sup>132</sup> Fax of 15 May 2006 from the Trustee to Case Officer C.

<sup>133</sup> E-mail of 15 May 2006 from TAEUS's Project Manager to the Head of Unit C-3 of DG Competition and Case Officer B, C and D.

<sup>134</sup> Letter of 19 May 2006 from the Director of Directorate C, DG Competition to Microsoft's General Counsel.

<sup>135</sup> Letter of 23 May 2006 from Microsoft's legal counsel to the Hearing Officer.

<sup>136</sup> Letter of 30 May 2006 from the Hearing Officer to Microsoft's legal counsel.

<sup>137</sup> Letter of 2 June 2006 from the Hearing Officer to Microsoft's legal counsel.

<sup>138</sup> Letter of 14 June 2006 from the Head of Unit C-3 of DG Competition to Microsoft's legal counsel.

- (99) On 9 June 2006, Microsoft responded to the 19 May 2006 letter. This response included two further reports of Microsoft’s technical experts: one report from Professor Finkelstein and one report from Professor Broy.

### **3. REVIEW OF THE RELEVANT VERSIONS OF THE TECHNICAL DOCUMENTATION BY THE COMMISSION’S EXPERTS AND BY THE TRUSTEE**

- (100) The following sections outline the results of the reviews of the December 2004, August 2005, November 2005, December 2005, January 2006 and March 2006 versions of the Technical Documentation (“the relevant versions of the Technical Documentation”) undertaken by the Commission’s experts and the Trustee. With regard to all examined versions, five types of deficiencies have been identified: missing information on behaviours and dependencies, the lack of sequencing information, the lack of introductory and explanatory material, the unreasonable level of required prerequisite knowledge and difficulties with the usability of the Technical Documentation.
- (101) Whilst these types of deficiencies may not have the same importance with regard to the achievement of the objective of the Decision, all have to be remedied in order to render the Technical Documentation complete and accurate.

#### **3.1. Review of the December 2004 and the August 2005 versions of the Technical Documentation**

- (102) In their reports on the December 2004 and August 2005 versions of the Technical Documentation, OTR expressed a number of concerns on the completeness and accuracy of those versions of the Technical Documentation.
- (103) Firstly, they indicated that they could neither find nor infer information on behaviours and dependencies<sup>139</sup> from the reading of the Technical Documentation. In their first report, OTR detected “*a lack of introductory material, protocol state diagrams plus complete message and attribute inventories*”.<sup>140</sup> In their second report, OTR noted 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’*”.<sup>141</sup> This was also pointed out by the third parties which reviewed the August 2005 version of the Technical Documentation.<sup>142</sup>
- (104) Secondly, both OTR reports also stressed that the documentation on the types of messages exchanged and the timing for the sending of messages (“sequencing information”) was inadequate and insufficient.<sup>143</sup>

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<sup>139</sup> For further explanation of these terms see footnote 207.

<sup>140</sup> OTR’s Report on the December 2004 version, on page 2.

<sup>141</sup> OTR’s Report on the August 2005 version, on page 6.

<sup>142</sup> See also [Company C]’s response of 11 October 2005 to a request for information, on page 7; [Company B]’s response of 13 October 2005 to a request for information, at paragraph 19; [Company D]’s response to a request for information of 20 September 2005, on page 6.

<sup>143</sup> Under certain circumstances messages have to be sent to the operating system in a special order to trigger specific reactions. OTR noted that most of the sequences had to be guessed from the names of the Interface Definition Language (“IDL”) used. In most cases, Microsoft did not provide sequencing information. On pages 6 and 7 of its second report, OTR also stressed that the few descriptions of sequencing provided by

- (105) Thirdly, OTR’s report on the December 2004 version highlighted the fact that introductory and explanatory material was lacking for the protocols in the Technical Documentation.<sup>144</sup> As such, the Technical Documentation essentially comprised only a large collection of protocol disclosures, which were individually incomplete and which were without sufficient overall description and explanation of the interrelationships between the protocols.<sup>145</sup>
- (106) Fourthly, as expressed by OTR in both their reports, the Technical Documentation presupposed and required knowledge of or access to Microsoft’s programming environment. It was virtually unusable without looking into other Microsoft documentation. OTR mentioned as an example that “*calls were made [in the documentation] to programming methods without there being any explanation of what they did*”<sup>146</sup>. They stressed this point again in their second report: “*we therefore reiterate that the WSPP Technical Documentation would not be usable by someone without access to the Microsoft environment.*”<sup>147</sup>
- (107) Fifthly, OTR indicated in their report on the August 2005 version that the Technical Documentation in its current form could not be considered as usable: “*to use it requires a lengthy, forensic examination.*”<sup>148</sup>

### 3.2. Review of the November 2005 version of the Technical Documentation

- (108) As regards the November 2005 version of the Technical Documentation, it must be stressed that, when delivering it, Microsoft confirmed to the Trustee and the Commission that: “*Microsoft has now completed delivery of the ‘enhanced’ protocol documentation described. This additional documentation consists of the Further Explanatory Material and Server Rules documentation for the DRS, FRS and DFS protocols.*”<sup>149</sup> *We believe this provides the additional information needed for implementing a ‘drop-in’ Windows server replacement [...]. This additional documentation has been provided, at the request of the EC, for these server-to-server protocols because they each involve at least to some degree an interaction which requires each instance of a server to share internal implementation knowledge in order to jointly provide these services. Such additional information is not required for other WSPP protocols because they are designed to interoperate between servers that do not share such internal implementation information.*”<sup>150</sup> The DRS, FRS and DFS protocol scenarios for which Microsoft provided “enhanced” documentation represent only 5 protocols out of the 55 protocols that were included in the December 2004 and August 2005 versions of the Technical Documentation. Therefore, the conclusions drawn

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Microsoft in the Technical Documentation were not consistent with the kind of description commonly used in the industry.

<sup>144</sup> OTR’s Report on the December 2004 version, on page 1: “[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”.

<sup>145</sup> OTR’s Report on the August 2005 version, on page 5.

<sup>146</sup> OTR’s Report on the December 2004 version, on page 2: “*calls were made [in the documentation] to programming methods without there being any explanation of what they did.*”.

<sup>147</sup> OTR’s Report on the August 2005 version, on page 6.

<sup>148</sup> OTR’s Report on the August 2005 version, on page 8.

<sup>149</sup> DRS stands for Directory Replication Service; FRS stands for File Replication Service; DFS stands for Distributed File System.

<sup>150</sup> E-mail of 30 November 2005 from a Microsoft’s Senior Corporate Attorney to the Trustee, copied to Case Officer B and C.

by OTR with regard to the overall content of the December 2004 version and August 2005 version of the Technical Documentation remain applicable to the November 2005 version of the Technical Documentation.

- (109) Furthermore, the Trustee’s Preliminary Report and Final Report on the November 2005 version concur with OTR’s conclusions as regards the five issues discussed in recitals 103 to 107.
- (110) Firstly, according to the Trustee, essential information on behaviours and dependencies was missing from the November 2005 Technical Documentation. By way of illustration, the Trustee’s Final Report on the November 2005 version states: *“As a general rule, no explanation is provided as to the events or reasons which might cause a particular event to be triggered.”*<sup>151</sup>
- (111) Secondly, as regards sequencing information, the Trustee indicated that *“there is no description as to the circumstances in which the different return values might arise, nor is there any indication as to how my program might recognise the different types of status so as to prompt those return values.”*<sup>152</sup>
- (112) Thirdly, the Trustee found that the November 2005 version of the Technical Documentation lacked introductory and explanatory material. The Preliminary Report on the November 2005 version thus noted: *“the Technical Documentation has neither a beginning nor an end and lacks a general explanation on the structure of the document as a whole”*.<sup>153</sup> The Final Report on the November 2005 version confirmed this finding, drawing in particular on an example concerning Active Directory related protocols.<sup>154</sup>
- (113) Fourthly, as regards the knowledge assumed from the user of the Technical Documentation the Trustee expressed concerns in line with those of OTR. He mentioned a certain number of concepts that remained unexplained, which rendered the November 2005 Technical Documentation unusable: *“For example, the DRS explanatory document describes the directory as containing “system information”, but does not explain what it means with that and it is impossible to infer it from the rather obscure content of the text.”*<sup>155</sup>
- (114) Fifthly, as regards usability of the Technical Documentation, the Trustee’s Final Report on the November 2005 version states: *“the following restrictions [...] render the use of the [November 2005] Technical Documentation extremely difficult, time consuming and cumbersome: inconsistencies in the titles of the headings [...], no adequate search facility, [...] useless links.”*<sup>156</sup>

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<sup>151</sup> Trustee’s Final Report on the November 2005 version, on page 3.

<sup>152</sup> Trustee’s Final Report on the November 2005 version, on page 3.

<sup>153</sup> Trustee’s Preliminary Report on the November 2005 version, on page 3.

<sup>154</sup> Trustee’s Final Report on the November 2005 version, on page 3: *“For example, the introductory material (headed ‘Purpose’) for the Active Directory documentation states that it describes the ‘protocols, network objects, and state changes required for Active Directory domain controller interoperation’ and that the directory service ‘provides a data store for network objects’. But it is by no means obvious what a ‘network object’ might be, and whether or not the data representing a user’s name and password might be considered as such. A search in the documentation for the term ‘network object’ for a definition or explanation results in the discovery that the term appears only in the introductory section on page 1 of the document and is never repeated, let alone explained.”*

<sup>155</sup> Trustee’s Preliminary Report on the November 2005 version, on page 3.

<sup>156</sup> Trustee’s Final Report on the November 2005 version, on page 2.

- (115) The Trustee concluded that “*any programmer or programming team seeking to use the [November 2005 version of the] Technical Documentation for a real development exercise would be wholly and completely unable to proceed on the basis of the documentation. The Technical Documentation is therefore totally unfit at this stage for its intended purpose.*”<sup>157</sup> The Trustee also stated that “*the documentation appears to be fundamentally flawed in its conception, and in its level of explanation and detail. Entire error code files are included verbatim; but the definitions of vital structures are left blank. Function arguments are named but not explained. Function calls are described but the sequence must be guessed at. Overall, the process of using the documentation is an absolutely frustrating, time-consuming and ultimately fruitless task. The documentation needs quite drastic overhaul before it could be considered workable.*”<sup>158</sup>

### 3.3. Review of the December 2005 version of the Technical Documentation

- (116) In his report on the December 2005 version of the Technical Documentation, the Trustee stated: “*nothing substantial was added to the Technical Documentation between versions 2 [the November 2005 version] and 3 [the December 2005 version]. [...] Those elements which were previously unsatisfactorily covered therefore remain unsatisfactorily covered in this documentation.*”<sup>159</sup>
- (117) In particular, the Trustee stated that the December 2005 version of the Technical Documentation was incomplete due to the lack of information on behaviours and dependencies.<sup>160</sup>
- (118) Secondly, the Trustee pointed out that a considerable amount of information, in particular on sequencing information, was still lacking in the December 2005 version of the Technical Documentation: “*without that additional material, the Technical Documentation continues to be unusable*”<sup>161</sup> In particular, “*it continues to be the case that sequencing information about the order of particular operations is missing from the Technical Documentation.*”<sup>162</sup>
- (119) Thirdly, the Trustee highlighted that “*the explanations provided in the Technical Documentation are often insufficient or limited in scope*”<sup>163</sup> and that “*there is still insufficient explanatory material of an appropriate kind to be found in the Technical Documentation.*”<sup>164</sup> The Trustee also specified that a number of terms were still not defined in the December 2005 version of the Technical Documentation: “*it remains the case that the definition of many of the terms used within the Technical Documentation are missing*”<sup>165</sup>, for example: “*the explanation of the context handle as used in WSPP is [...] not complete.*”<sup>166</sup>

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<sup>157</sup> Trustee’s Final Report on the November 2005 version, on page 1.

<sup>158</sup> Trustee’s Final Report on the November 2005 version, on page 5.

<sup>159</sup> Trustee’s Report on the December 2005 version, on page 3.

<sup>160</sup> Trustee’s Report on the December 2005 version, on page 19.

<sup>161</sup> Trustee’s Report on the December 2005 version, on page 16.

<sup>162</sup> Trustee’s Report on the December 2005 version, on page 17.

<sup>163</sup> Trustee’s Report on the December 2005 version, on page 20.

<sup>164</sup> Trustee’s Report on the December 2005 version, on page 20.

<sup>165</sup> Trustee’s Report on the December 2005 version, on page 14.

<sup>166</sup> Trustee’s Report on the December 2005 version, on page 16.

- (120) Fourthly, as regards the prerequisite knowledge required from a user of the December 2005 version of the Technical Documentation the Trustee stated that: *“It is accepted that the Technical Documentation can be considered to be supplementary to (or preferably, to be supplemented by) authoritative external material. Without that additional material, the Technical Documentation continues to be unusable; and in some cases, since there are contradictions between the Technical Documentation and those external sources, even including that material leaves the documentation wanting.”*<sup>167</sup>
- (121) Fifthly, as regards usability of the Technical Documentation, the Trustee pointed to continuing problems of linking and inconsistencies within the December 2005 version of the Technical Documentation. The Trustee stated that *“the index was found to be almost completely unusable”*<sup>168</sup>, but also that *“the Technical Documentation continues to be plagued by the problems of linking – both from text element to text element within the file, and from text element to external reference.”*<sup>169</sup> He also pointed out that *“there are inconsistencies and problems of use with the specification of server rules through a variety of different forms of pseudo-code, textual explanations and snippets of source code samples in poor formatting”*<sup>170</sup>, that the search facility was still inadequate: *“the searching and general navigation facilities remain far from adequate”*,<sup>171</sup> and that definitions of terms as well as examples were still lacking: *“it remains the case that the definition of many of the terms used within the Technical Documentation are missing”*.<sup>172</sup>
- (122) The Trustee concluded that the December 2005 version of the Technical Documentation could not be used to develop an interoperable work group server operating system. The Trustee stated that *“the Technical Documentation in its current form is still not yet fit for use by developers in a way that would give them confidence that it would be sufficient and found to be complete; indeed, it is not yet complete with some obvious gaps remaining. The analyses conducted illustrate that the documentation is unable to answer some of the simplest questions that would necessarily be raised in such an exercise.”*<sup>173</sup>

### **3.4. Review of the January 2006 and March 2006 versions of the Technical Documentation**

- (123) The Trustee highlighted in his report on the March 2006 version that the problems identified in the previous versions of the Technical Documentation remained unaddressed.<sup>174</sup>
- (124) The Trustee’s Report on the March 2006 version concluded that: *“substantially the same findings as before were again discovered in the [March 2006 version of the] Technical Documentation.”*<sup>175</sup> TAEUS stated that: *“After examining the [March 2006 version of the*

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<sup>167</sup> Trustee’s Report on the December 2005 version, on page 16.

<sup>168</sup> Trustee’s Report on the December 2005 version, on page 10

<sup>169</sup> Trustee’s Report on the December 2005 version, on page 12.

<sup>170</sup> Trustee’s Report on the December 2005 version, on page 3.

<sup>171</sup> Trustee’s Report on the December 2005 version, on page 9.

<sup>172</sup> Trustee’s Report on the December 2005 version, on page 14.

<sup>173</sup> Trustee’s Report on the December 2005 version, on page 21.

<sup>174</sup> Trustee’s Report on the March 2006 version, on page 3.

<sup>175</sup> Trustee’s Report on the March 2006 version, on page 2.

Technical Documentation], TAEUS finds that no substantive changes have been made to address the previously cited defects”<sup>176</sup>

- (125) In particular the Trustee maintained, firstly, that the March 2006 Technical Documentation was incomplete due to the lack of information on behaviours and dependencies<sup>177</sup>. These deficiencies were also pointed out by TAEUS: “*The WSPP protocol documentation fails to specify many behaviours, such as what actions are triggered in response to sending and/or receiving specific messages and error codes.*”<sup>178</sup>
- (126) Secondly, the Trustee noted that sequencing information was still lacking in the March 2006 version of the Technical Documentation: “*it continues to be the case that sequencing information about the order of particular operations is missing from the Technical Documentation*”<sup>179</sup>.
- (127) Thirdly, the Trustee noted that “*the explanations provided in the Technical Documentation are often insufficient or limited in scope*”<sup>180</sup> and that “*there is still insufficient explanatory material of an appropriate kind to be found in the Technical Documentation.*”<sup>181</sup> The Trustee stated that a number of terms were still not defined in the March 2006 Technical Documentation: “*it remains the case that the definition of many of the terms used within the Technical Documentation are missing*”<sup>182</sup>, “*to give a few of the examples already encountered in previous reviews and not yet resolved in this version: ‘Netlogon Authenticator’, ‘DACL’ and ‘Version Vector’.*”<sup>183</sup> This point was also made by TAEUS: “*many definitions in the WSPP documentation are either ambiguous or absent completely.*”<sup>184</sup>
- (128) Fourthly, as to the required prerequisite knowledge, the Trustee maintained that without pointers to external authoritative material the March 2006 version of the Technical Documentation continued to be unusable.<sup>185</sup>
- (129) Fifthly, as regards usability issues, some progress appears to have been made as regards the usability of the Technical Documentation with the provision of the March 2006 Technical Documentation in MHTML format to the Trustee, which has not been provided to the Commission, but on which the Trustee notes that: “[the] search facility – although not as full-flexible as might be desired – is a considerable improvement over the PDF search. [...]. One might still wish for a yet more powerful search tool to be incorporated, but the now-existing search facility must be recognised as addressing most of the problems raised previously regarding searching.”<sup>186</sup> However, as regards the PDF version of the March 2006 Technical Documentation provided to the Commission and reviewed by TAEUS,

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<sup>176</sup> TAEUS’s Report on the March 2006 version, on page 12.

<sup>177</sup> Trustee’s Report on the March 2006 version, on page 6.

<sup>178</sup> TAEUS’s Report on the March 2006 version, on page 13.

<sup>179</sup> Trustee’s Report on the March 2006 version, on page 5.

<sup>180</sup> Trustee’s Report on the March 2006 version, on page 6.

<sup>181</sup> Trustee’s Report on the March 2006 version, on page 6.

<sup>182</sup> Trustee’s Report on the March 2006 version, on page 4.

<sup>183</sup> Trustee’s Report on the March 2006 version, on page 4.

<sup>184</sup> TAEUS’s Report on the March 2006 version, on page 13.

<sup>185</sup> Trustee’s Report on the March 2006 version, on page 5.

<sup>186</sup> Trustee’s Report on the March 2006 version, on page 3

TAEUS noted “*the WSPP protocol documentation is not usable – the indexing is unusable, the searching painfully clumsy; the format being used appears badly suited to the task.*”<sup>187</sup>

- (130) The Trustee thus concluded that “[t]he [March 2006 version of the] *Technical Documentation appears still to be fundamentally flawed in its conception, and in its level of explanation and detail [...]. Entire error code and definition files (easily accessible in ‘the art’) are included verbatim; function calls are described but the sequence must be guessed at. For these reasons, it remains the case that the Technical Documentation is incomplete, difficult to use and not yet in a satisfactory state as a specification rather than a description.*”<sup>188</sup>
- (131) Similarly, TAEUS concluded that the March 2006 version of the Technical Documentation “*is not accurate and much of it is self-contradictory. [...] is not complete – many messages, data types, data structures, missing behaviours and dependencies, etc., are left entirely undefined, [...] is not usable – the indexing is unusable, the searching painfully clumsy; the format being used appears badly suited to the task*”.<sup>189</sup>
- (132) The Trustee’s and TAEUS’s conclusions are consistent with the conclusions drawn by third parties after the evaluation of the Technical Documentation.<sup>190</sup>

### 3.5. Conclusion

- (133) The review undertaken by the Commission’s experts, OTR and TAEUS, and by the Trustee as to the completeness and accuracy of the relevant versions of the Technical Documentation lead them to state that these relevant versions do not, in their view, provide the Interoperability Information to interested undertakings required by the Decision. Since Microsoft contests this assessment it is appropriate to address the arguments put forward by Microsoft in response to the concerns of the Commission’s experts and the Trustee.

## 4. MICROSOFT’S POSITION WITH REGARD TO ITS OBLIGATION TO PROVIDE COMPLETE AND ACCURATE TECHNICAL DOCUMENTATION

- (134) This section summarises Microsoft’s position with regard to its obligation to provide complete and accurate Technical Documentation embodying the Interoperability Information. First, it deals with Microsoft’s allegation that the Commission has changed

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<sup>187</sup> TAEUS’s Report on the March 2006 version, on page 12.

<sup>188</sup> Trustee’s Report on the March 2006 version, on page 7.

<sup>189</sup> TAEUS’s Report on the March 2006 version, on page 15.

<sup>190</sup> [Company A] concludes its response to the request for information of 9 March 2006, on page 10 by stating: “*The disclosures have improved somewhat but, taken as a whole, are inadequate, and therefore, not commercially useful. Moreover, the form and content of the disclosures are not consistent with what [Company A] would expect to receive even in normal commercial circumstances in the industry [...].*” [Company C]’s expert makes a similar statement in the response to the request for information of 24 February 2006, on page 37: “*My review of the WSPP Materials, as they were updated by Microsoft in January 2006, confirms my earlier finding that they are unusable, incomplete and inaccurate. These defects are likely to be sufficient to dissuade many firms from entering the market for or expanding their investment in interoperable products.*” [Company D] in its response to the request for information of 9 March 2006, on page 2 remarks that: “*Microsoft has disclosed certain information concerning protocols which are used at a connection between operating systems, but has generally excluded information concerning behaviors and dependencies [...]. Such behaviors and dependencies must be disclosed in order for interoperability to be achieved. Implementation is effectively prevented by these omissions*”.

the scope of the disclosure order (Section 4.1). Second, it contains an assessment of Microsoft's experts' reports enclosed with Microsoft's response to the Statement of Objections,<sup>191</sup> with Microsoft's response to the Commission's 10 March 2006 letter<sup>192</sup> and with Microsoft's response to the Commission's 19 May 2006 letter.<sup>193</sup> (Section 4.2). It then continues with an assessment of Microsoft's source code offer, including an assessment of whether the provision of a source code reference license ensures compliance by Microsoft with its obligations under the Decision (Section 4.3). Finally, it examines the probative value of the comparison with the US Microsoft Communication Protocol Program ("MCP") with regard to the question whether the Technical Documentation supplied by Microsoft complies with its obligations under Article 5 (a) and (c) of the Decision (Section 4.4).

#### 4.1. The scope of the disclosure order

- (135) In its Response to the Statement of Objections, Microsoft contends that the Commission has over time undergo a "*dramatic change in [its] position as to what information was necessary for compliance*".<sup>194</sup> Microsoft essentially asserts that the Commission first accepted that Microsoft only documented what it describes as "on-the-wire" protocols and that only in September 2005 did the Commission request Microsoft to document according to a different, broader standard.<sup>195</sup> Furthermore, Microsoft asserts that Technical Documentation which goes beyond the mere documentation of the "on-the-wire" protocols would reveal the internal operations of Windows operating systems.<sup>196 197 198</sup>
- (136) The concept or notion of "on-the-wire" protocols is by no means a concept or notion stemming from the Decision. It seems that there is no exact definition of the term "on-the-wire". For example, Microsoft's technical expert Professor Finkelstein defines the concept of "on-the-wire" protocol as "[t]he set of rules that govern the exchange between client and server (and between servers assuming these roles) and the precise formats that describe how the data is exchanged across the network infrastructure [...]".<sup>199</sup> Microsoft's technical expert Professor Broy uses slightly different terms to define an "on-the-wire" specification. He describes it as containing "*documentation for rules of information exchange that govern the format, semantics, timing, sequencing, and error control of message exchanged*

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<sup>191</sup> These are Professor Finkelstein's report (hereinafter "Finkelstein Report I") and Professor Broy's report (hereinafter "Broy Report I"), both enclosed as Annexes 3 and 4, respectively, with Microsoft's response to the Statement of Objections.

<sup>192</sup> These are Professor Finkelstein's report (hereinafter "Finkelstein Report II") and Professor Broy's report (hereinafter "Broy Report II"), both enclosed as annexes 1 and 2, respectively, with Microsoft's letter of 14 April 2006.

<sup>193</sup> These are Professor Finkelstein's report (hereinafter "Finkelstein Report III") and Professor Broy's report (hereinafter "Broy Report III"), both enclosed as annexes 1 and 2, respectively, with Microsoft's letter of 9 June 2006.

<sup>194</sup> Response to the Statement of Objections, at paragraph 34.

<sup>195</sup> Response to the Statement of Objections, at paragraphs 29 to 36.

<sup>196</sup> Response to the Statement of Objections, at paragraph 18.

<sup>197</sup> See also Microsoft's response of 15 February 2005 to a request for information, on page 11, where Microsoft asserts: "[...] *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.*"

<sup>198</sup> Letter of 3 October 2005 from Microsoft's General Counsel to the Director General of DG Competition, on page 1.

<sup>199</sup> Finkelstein Report I, at paragraph 1.6.

over a network”<sup>200</sup> However, it seems to be Microsoft’s position that the term “on -the-wire” specification or Technical Documentation does not in any event cover the documentation of behaviours and dependencies.<sup>201</sup>

- (137) In order to bolster the assertion that the Commission initially only required the Technical Documentation of the “on-the-wire” protocols Microsoft refers to statements allegedly made in this respect by parties intervening in support of the Commission during the hearing in Case T-201/04 R and which, according to Microsoft, have not been corrected by the Commission.<sup>202</sup> Apart from the fact that Microsoft’s reliance on statements of interveners to interpret its obligations under the Decision is of highly questionable legal relevance, it appears that the actual facts do not support this contention by Microsoft.
- (138) At the administrative hearing Microsoft made available to the Commission an unofficial transcript of the hearing in Case T-201/04 R drawn up by a third party employed by Microsoft (the “transcript”).<sup>203</sup> The Commission only relies on this unofficial transcript because it was provided by Microsoft and because Microsoft makes extensive reference to it in the Response to Statement of Objections.<sup>204</sup>
- (139) Irrespective of whether Microsoft is correct in its interpretation of the interveners’ statements, it is apparent from the transcript that Microsoft effectively did not rely on these statements as to the scope of the Decision’s disclosure order. According to the transcript, Microsoft’s legal counsel pointed out, immediately after the statements of the interveners, that he had doubts as to whether the provision of specifications of only “on-the-wire” protocols would be in conformity with the Decision and that Microsoft interpreted the Decision as covering more than the “on-the-wire” protocols.<sup>205</sup> Contrary to Microsoft’s assertion the Commission did not in any way endorse that it might be sufficient under the Decision to disclose “on-the-wire” information only. The Commission made quite clear at the hearing in Case T-201/04 R that what must be disclosed is Interoperability Information as defined in the Decision.<sup>206</sup> Accordingly, Microsoft cannot validly claim to have been

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<sup>200</sup> Broy Report I, at paragraph 1.2.5.

<sup>201</sup> This follows from the report of Microsoft’s technical expert Professor Broy, who states that for certain server-to-server interoperation “*information carried over the wire is insufficient to show what the server does with the information*”, Broy Report I, at paragraph 1.2.4; Professor Finkelstein confirms that dependencies are not visible “on-the-wire”, Finkelstein Report I, at paragraph 1.10.

<sup>202</sup> Response to the Statement of Objections, at paragraph 68.

<sup>203</sup> Minutes of proceedings transcribed from the shorthand notes of [name] (Solicitor of the Supreme Court of England & Wales, Attorney-at-law for the State of New York) submitted to the Commission by e-mail of 31 March 2005 from Microsoft’s legal counsel to Case Officer E.

<sup>204</sup> Response to the Statement of Objections, at paragraph 67.

<sup>205</sup> The transcript quotes Microsoft’s legal counsel, on pages 76 to 77: “*I have a boring legal comment. It is that there is a difference between what the representatives of SAMBA are saying now and the Commission position as taken in the contested Decision. In paragraphs 181 and 182 it is made clear that what has to be disclosed is far more than just what I believe are called wire protocols. [...] Even if they are completely right, that which is ordered by the Commission is something different.*”

<sup>206</sup> The transcript, on page 78, quotes Case Officer E, who answered the relevant question of the President of the Court of First Instance on behalf of the Commission following Microsoft’s legal counsel’s intervention, as follows: “[...] *In the portion which Mr [...] has quoted, I do not see anything which goes beyond interoperability. Paragraph 181 says you need things for interaction and interconnection. The Commission stands by the statement that what will be discovered through the disclosure of specifications is something that these competitors are allowed to get access to using Article 5 or Article 6 of the Software Directive. [Directive 91/250/EEC]. I think there is no debating that we are talking about interoperability information and [sic], indeed, discussed at length in the Commission’s Decision.*”

misled by statements made at the hearing in Case T-201/04 R as to the scope of the Technical Documentation to be provided under the Decision.

- (140) The Decision requires Microsoft to provide Interoperability Information, in the form of specifications for the protocols, including 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. From a technical point of view, and in line with standard engineering practice and with the wording of the Decision, the Trustee states that the description of the rules of interconnection and interaction must encompass a specification of the syntax of the exchanged messages, the sequencing of the messages, the semantics of the messages and the meaning of the messages, including error conditions and expected behaviour.<sup>207</sup> These general technical requirements are evident from the objectives and the wording of the Decision and are well understood by Microsoft's engineers and technical experts. As evidenced by Professor Broy's statement with regard to the term "on-the-wire" cited in recital (136), Microsoft's experts agree that format, semantics, timing, sequencing, and error control of messages exchanged over a network must be properly documented.<sup>208</sup>
- (141) As regards the necessity of documenting behaviours and dependencies, Professor Broy explicitly confirms, in what he labels and describes as the basic requirements of "Substitutability Specification Contents and Methods", that "*the causality between request and response messages must be documented.*"<sup>209</sup> In Professor Broy's words: "*This point is most difficult. It deals with the dynamics of behaviour.*"<sup>210</sup>
- (142) The documentation solely of what Microsoft terms "on-the-wire" information in the Technical Documentation omits essential information, in particular on behaviours and dependencies, and therefore falls well short of what is sufficient 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 not compatible with the wording and objective of the Decision.
- (143) Nevertheless, in its Response to the Statement of Objections Microsoft reaffirms that the documentation supplied in December 2004 "*was written to provide 'on-the-wire' protocol specifications*".<sup>211</sup>
- (144) In order to further defend this position Microsoft contends that the Decision is vaguely-worded<sup>212</sup> as to the required standard and that only in September 2005 did the Commission

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<sup>207</sup> Algorithms Report, on page 4. What the Trustee describes as "*the activities required to create or to respond to the messages*" is in this decision also referred to as "information on behaviours and dependencies".

<sup>208</sup> Broy Report I, at paragraph 1.2.5.

<sup>209</sup> Broy Report I, at paragraph 1.3.4.

<sup>210</sup> Broy Report I, at paragraph 1.3.4. Professor Broy's expression "causality between request and response messages" is a synonym for the term "behaviours".

<sup>211</sup> Response to the Statement of Objections, at paragraph 69.

<sup>212</sup> Response to the Statement of Objections, at paragraph 64.

contest that Microsoft should only provide documentation of “on-the-wire” protocols.<sup>213</sup> Both of these contentions are unfounded.

- (145) First, as has already been set out in Section 1.1, the wording of the Decision read in the light of its primary objective as defined in recital 1003 leaves no doubt as to the standard with which the Technical Documentation has to comply.
- (146) Second, Microsoft misinterprets the role of the Commission as regards the establishment of compliance with the Decision. To state the obvious, it is primarily Microsoft’s responsibility to provide complete and accurate Technical Documentation. No conclusion regarding the sufficiency of a given approach can be drawn from the Commission’s silence on that point during a given period. Having said this, the Commission effectively informed Microsoft about its preliminary concerns as regards the Technical Documentation by letter of 15 June 2005 in which OTR’s Report on the December 2004 version was transmitted to Microsoft.
- (147) Contrary to Microsoft’s assertion in its Response to the Statement of Objections<sup>214</sup>, that report already highlights major deficiencies in the scope of the Technical Documentation supplied by Microsoft. For instance the report mentions the lack of “introductory material, protocol state diagrams plus complete message and attribute inventories” (emphasis added)<sup>215</sup>, thereby making clear that essential information on behaviours and dependencies was missing from the documentation.<sup>216</sup> Microsoft’s technical expert Professor Broy confirms that “state machines with their state spaces and state transitions” are frequently used in the protocol descriptions to document the “causality between request and response messages”, which in Professor Broy’s words must be documented in what he terms “a substitutability specification.”<sup>217 218</sup>
- (148) Following the transmission of OTR’s Report on the December 2004 version Microsoft did not react to the main criticisms of OTR by substantially changing the Technical Documentation. Instead it maintained that “*the WSPP Technical Specification is complete and accurate. It represents nearly a year of unique work by dozens of support staff, engineers, technical writers, and editors, and support staff at Microsoft.*”<sup>219</sup> This failure to

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<sup>213</sup> Response to the Statement of Objections, at paragraph 73.

<sup>214</sup> Response to the Statement of Objections, at paragraph 75

<sup>215</sup> The Free Online Dictionary of Computing defines state diagram or state transition diagram as “*a diagram consisting of circles to represent states and directed line segments to represent transitions between the states. One or more actions (outputs) may be associated with each transition. The diagram represents a finite state machine.*”, see <http://foldoc.org/foldoc.cgi?query=state+diagram&action=Search>, printed on 12 May 2006.

<sup>216</sup> OTR’s Report on the December 2004 version, on page 2.

<sup>217</sup> Broy Report I, at paragraph 1.3.4.

<sup>218</sup> In its response to OTR’s Report on the December 2004 version, Microsoft tries to dismiss OTR’s concerns about the lack of state information in the Technical Documentation by artificially distinguishing between server state and protocol state: “[...] *The formal definition of a protocol defines only packets and packet sequences. Servers providing a distributed service like Active Directory that must handle multiple sessions in parallel do keep state, since each session may be at a different state. Server state is defined in the design specifications of a server. Server state is separate from protocol state.* [...]”, letter of 8 July 2005 from Microsoft’s Director of Competition Law EMEA to the Director of Directorate C, DG Competition, Annex B, section 1.3. This argument is a mere variation of the argument that only “on-the-wire” protocols are to be documented and is therefore without merits. Furthermore, it seems in contradiction with Professor Broy’s statements about the necessity to document the causality between request and response messages.

<sup>219</sup> Letter of 8 July 2005 from Microsoft’s Director of Competition Law EMEA to the Director of Directorate C, DG Competition, Annex B, section 1.

address earlier criticisms was confirmed by OTR's Report on the August 2005 version of the Technical Documentation.

- (149) Following discussions with the Commission during which Microsoft was informed about the negative feedback on the completeness and accuracy of the Technical Documentation the Commission had received from those third parties who evaluated the Technical Documentation in September and October 2005, Microsoft reiterated the argument “*that Microsoft has provided documentation concerning technical information of its communications protocols under the Decision, as informed by the statements to the court [in case T-201/04 R].*” In its letter of 3 October 2005, Microsoft also stated that “*if the Commission wishes to determine that a scope of disclosure that is greater than previously articulated is required, Microsoft will prepare additional documentation to satisfy that obligation as well, subject only to obtaining a clear and written position that preserves our right to seek court review of the Commission's position in this regard.*”<sup>220</sup>
- (150) The Commission responded to this letter with reference to the Decision and its clarity on the necessary scope of disclosure, stressing that it was “[...] *therefore not the case [...] that the Commission might wish 'to determine that a scope of disclosure that is greater than previously articulated is required.'*”<sup>221</sup> Subsequently, Microsoft reiterated in its letter of 15 December 2005 that “*enabling of plug replaceability required [it] to add a number of additional categories of information into the Technical Documentation that are not protocols, but are the internal implementation of Windows functionality.*”<sup>222</sup> Microsoft enumerated five categories of algorithms and information which would have to be disclosed with the Technical Documentation.<sup>223</sup>
- (151) 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 put forward by Microsoft during the procedure on its application for interim measures in the Court of First Instance.<sup>224 225</sup> The President of the Court of First Instance concluded on this point 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*”.<sup>226</sup>

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<sup>220</sup> Letter of 3 October 2005 from Microsoft's General Counsel to the Director General of DG Competition, on page 1.

<sup>221</sup> Letter of 7 October 2005 from the Director General of DG Competition to Microsoft's General Counsel, on page 2.

<sup>222</sup> Letter of 15 December 2005 from Microsoft's General Counsel to the Director General of DG Competition, in Annex 2 (“Microsoft Response to Trustee Report “WSSP Documentation Review Preliminary Report – 30<sup>th</sup> November 2005”), on pages 6 and 7.

<sup>223</sup> The Replication Algorithms, the Topology Algorithms, the Error Correction Algorithms, the Active Directory Performance Algorithms and Architectural information concerning internal AD [Active Directory] components and their relationships.

<sup>224</sup> 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.

<sup>225</sup> 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.*”

<sup>226</sup> 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.

- (152) As already pointed out in recital (139), Microsoft cannot validly claim that the President of the Court of First Instance has been misled on this point in his assessment by the statements of the Commission in those proceedings, as Microsoft seems to imply in its Response to the Statement of Objections.<sup>227</sup>
- (153) However, the Commission asked the Trustee to review the assertions made by Microsoft in the 15 December 2005 letter, which are in fact the only attempt at a concrete substantiation that Microsoft has made in this context after the order of the President of the Court of First Instance. The Trustee provided a report thereon in which he concludes that “*the internal details described by Microsoft are not in fact required, or if they are required are not required in an expression of Microsoft implementation.*”<sup>228</sup> Effectively he states that, contrary to Microsoft’s contentions about the necessity of disclosing implementation details with regard to the five categories of information, the necessary Interoperability Information can be provided by way of a general description of the algorithms without there being a need “*to expose the ‘internal operation’ of the Windows server implementation*”.<sup>229</sup>
- (154) Microsoft responded to this report from the Trustee by letter of 4 May 2006.<sup>230</sup> In this letter Microsoft’s seems to agree with the Trustee that it is possible to apply documentation methods, which, “*while not describing Microsoft’s implementation of the algorithm, should nonetheless be specific enough to enable a licensee to write code that ‘gives identical results under identical situations.’*” Microsoft, however, points out that in its view such “*a behavioral model based only on inputs and outputs may not be feasible for some categories of algorithms.*”<sup>231</sup> These specific categories of algorithms are, however, not sufficiently identified in Microsoft’s letter. Instead, Microsoft suggests that an algorithm by algorithm examination should be undertaken by the Trustee in order to determine the correct method of documentation for each algorithm.
- (155) It follows from the foregoing that the Commission has not changed its position as to the scope of the disclosure order. The standard for the scope of the Interoperability Information which Microsoft is obliged to disclose pursuant to Article 5(a) and (c) of the Decision is clearly described in the Decision, and has at no stage been altered by any subsequent statements from the Commission. Therefore Microsoft cannot validly claim that the Commission has been unclear, or has even misled Microsoft, about the scope of the disclosure order under the Decision.

#### **4.2. Microsoft’s experts’ reports**

- (156) In its Response to the Statement of Objections, Microsoft asserts that its technical experts “[...] *have concluded that the Technical Documentation fully conforms to industry standards in providing a basis for prospective licensees to develop work group server operating systems that can work on an equal basis with Microsoft’s own products within the Windows domain architecture.*

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<sup>227</sup> Response to the Statement of Objections, at paragraph 29.

<sup>228</sup> Algorithms report, on page 10.

<sup>229</sup> Algorithms report, on page 8.

<sup>230</sup> Letter of 4 May 2006 from Microsoft’s General Counsel to the Director General of DG Competition.

<sup>231</sup> Letter of 4 May 2006 from Microsoft’s General Counsel to the Director General of DG Competition, on page 2.

*The criticisms by the Trustee and others do not establish otherwise. They are mistaken, outdated, or resolvable by a process of continued interaction with Microsoft, of the sort Microsoft has repeatedly suggested.*<sup>232</sup>

- (157) In their reports, Microsoft's technical experts assert that the Technical Documentation complies with the Decision, for the following reasons:
- (a) it complies with the definition of a specification,
  - (b) most of the information that the Trustee considers should be added is common industry knowledge that most engineers working in the industry already have or can easily retrieve,
  - (c) it is consistent with industry practice,
  - (d) the examples put forward by the Trustee and TAEUS to justify their conclusions are refutable.
- (158) This section summarises Microsoft's technical experts' arguments as to the completeness and accuracy of the Technical Documentation, as recorded in their respective reports enclosed with Microsoft's response to the Statement of Objections,<sup>233</sup> with Microsoft's response to the Commission's 10 March 2006 letter<sup>234</sup> and with Microsoft's response to the Commission's 19 May 2006 letter.<sup>235</sup>

#### *4.2.1. The relevant versions of the Technical Documentation are not specifications*

- (159) The Trustee concludes in his 15 May 2006 report on the Technical Documentation that *"the Technical Documentation is incomplete, difficult to use and not yet in a satisfactory state as specification rather than a description."*<sup>236</sup>
- (160) In its letter of 14 April 2006, Microsoft contends that *"contrary to the assertions of the Trustee and others at the hearing, Microsoft's Technical Documentation would be recognized in the industry as a set of specifications. The Trustee has taken the view that only documentation in a particular form, namely the one described in the RFC 2119 document, qualifies as a specification. Both Professor Finkelstein and Professor Broy demonstrate that this is an unreasonably narrow view of specifications, and, more importantly, a view that is inappropriate in the context of the WSPP Technical Documentation."*<sup>237</sup>
- (161) The Trustee mentioned in his reports and at the hearing, by way of example, several documents which in abstract define the concept of a specification.<sup>238</sup> He does not, however,

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<sup>232</sup> Response to the Statement of Objections, at paragraphs 167 and 168.

<sup>233</sup> Finkelstein Report I and Broy Report I.

<sup>234</sup> Finkelstein Report II and Broy Report II.

<sup>235</sup> Finkelstein Report III and Broy Report III.

<sup>236</sup> Trustee's Report on the March 2006 version, on page 7.

<sup>237</sup> Letter of 14 April 2006, at paragraph 34.

<sup>238</sup> See Algorithms Report, on page 3 where he refers to the definitions of IEEE and British Standards.

refer to RFC<sup>239</sup> 2119 or any other specific document as a template that must be followed by Microsoft when drawing up its specifications.

- (162) Microsoft’s technical experts try to play down the distinction between a specification and a description of an implementation and assert that, contrary to the Trustee’s conclusions, the Technical Documentation in its current form constitutes “*what all working software engineers would recognise as a specification*”<sup>240</sup> and therefore the Trustee’s concerns in this regard are unfounded. Professor Broy states that: “*Any description can be turned into a specification by stating that the properties described in the description are properties the system or product must or should have*.”<sup>241</sup> (emphasis added). In his third report Professor Broy states that “*it does not make sense to apply phrases like ‘MAY’ and ‘MUST’ to the WSPP specification*”, as for “*interoperability information such differences do not appear*.”<sup>242</sup> On the other hand, Professor Broy points out that “[p]roviding the WSPP Technical Documentation involves the task to find out for an existing system, in fact, systems in many variants and releases, the information, the properties that are required to ensure that another workgroup server operating system is interoperable with Microsoft’s workgroup server operating systems.”<sup>243</sup> (emphasis added)
- (163) By acknowledging that one of the tasks involved in providing the Technical Documentation is “*to find out for an existing system [...] the properties that are required*”, Professor Broy appears to agree that one of the essential features of a specification is that the required properties are documented. However, as pointed out by the Trustee,<sup>244</sup> the relevant versions of the Technical Documentation do not actually state the required properties.
- (164) Furthermore, in contrast to the definition of an interface specification used in recital 570 of the Decision (namely that a specification describes what an implementation must achieve, not how it achieves it), and contradicting the aforementioned statements that the required properties must be documented, Professor Broy states that “[a] *specification describes what a system does or what it should do*.”<sup>245</sup> (emphasis added)
- (165) Irrespective of these conceptual ambiguities in what Microsoft’s experts deem a specification, it is evident from the Trustee’s reports that the Technical Documentation provided by Microsoft does not explicitly state what an implementation must achieve in order to be interoperable (*i.e.* it does not state the requirements for interoperability). Professor Barrett has made clear that a specification is clearly not a description of a particular implementation and that, in his opinion, the Technical Documentation in its current form is such a description of a given implementation (that of Microsoft), rather than a description of requirements: “*The WSPP technical documentation is not a form of specification; it is in fact a description, poorly presented, of the Windows implementation. It is simply not sufficient – a fact now recognised by Microsoft and leading to the total*

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<sup>239</sup> RFC stands for “Request for Comments”. For further explanation see footnote 61 of the Decision.

<sup>240</sup> Finkelstein Report II, at paragraph 8.2.

<sup>241</sup> Broy Report II, on page 5.

<sup>242</sup> Broy Report III, on page 10.

<sup>243</sup> Broy Report III, on page 11.

<sup>244</sup> See recital (165). The importance of the distinction between incidental and required properties is also highlighted by Professor Parnas in David L. Parnas, *Software Fundamentals: Collected Papers*, 2001: “*The distinctions are important because we want software developers to be able to distinguish between incidental and required properties of products. If we use models or descriptions as specifications, they will be unable to do so.*” (on page 97).

<sup>245</sup> Broy Report I, on page 15.

*overhaul of the technical documentation. It is not ‘as good as can be expected’: it is very poor. [...]*”<sup>246</sup>

- (166) As pointed out in recital (17), the specifications must explicitly set out what is required to achieve interoperability. Due to the lack of specified requirements, the Commission concludes that the Technical Documentation in its current form, cannot be considered as a specification in the sense of the Decision.

#### 4.2.2. *The prerequisite knowledge assumed on the part of the user of the Technical Documentation is unreasonable*

- (167) Professors Finkelstein and Broy also assert that the Technical Documentation is complete, as it contains all the relevant information. More precisely, they contest the fact that the Technical Documentation does not contain enough explanatory information about the Windows programming environment. As outlined in Microsoft’s letter of 14 April 2006, “*Professor Finkelstein calls ‘ludicrous’ the ‘explicit requirement’ described in the Trustee’s report that the Technical Documentation ‘not assume a level of Microsoft Windows knowledge on the part of the developer beyond that which is to be expected of any developer familiar with the use of Windows systems.’ Professor Finkelstein asks: ‘Why should anybody employ somebody so unfamiliar with the engineering context to build Work Group Operating System services that require complex interoperation in a Windows setting and where there is a need to integrate a licensee server into the Windows domain?’ Moreover, the knowledge required ‘is readily available and held by many engineers working in the industry.’*”<sup>247 248</sup>
- (168) In this respect, the Trustee, in his 15 May 2006 Report, takes the position that: “*it was never the case that the documentation was expected to be self-standing but rather that it was expected to provide references to authoritative additional material where that material already existed outside of the WSPSP technical documentation. That some of this easily-accessible external material is included whereas other material is not illustrates all too clearly that the technical documentation itself was poorly specified.*”<sup>249</sup>
- (169) Moreover, the Trustee makes the point that the necessary knowledge is clearly not held by many engineers working in the industry: “*Is it reasonable to assume that a skilled developer in an environment other than Windows will be sufficiently familiar with the contents of, say, TechNet for the Technical Documentation team to rely on it as art understood before approaching the material? I would argue that it is not reasonable to make this assumption. TechNet and MSDN – the principal sources of technical information on Windows – are truly immense collections of information, updated frequently and examined by those with a day-to-day requirement. A network engineer working in the UNIX field would not have the day-to-day requirement to make this examination, nor can they be expected to be intimately familiar with the various contents of these collections. As*

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<sup>246</sup> 15 May 2006 Trustee report on the reports from Professors Finkelstein and Broy, on page 11.

<sup>247</sup> Letter of 14 April 2006, on page 18.

<sup>248</sup> A similar point is made in Broy Report III, on page 6.

<sup>249</sup> 15 May 2006 Trustee report on the reports from Professors Finkelstein and Broy, on page 13.

*such, close familiarity with the Microsoft material before approaching the Technical Documentation cannot be assumed.”<sup>250</sup>*

- (170) The Decision requires Microsoft to provide specifications which contain the necessary information for competitors to be able to develop interoperable products. In order for the specifications to fulfil this requirement, they must either physically contain the required information or explicitly refer the reader to externally available authoritative sources of information.
- (171) Microsoft can assume that its competitors’ engineers are reasonably skilled developers, so that concepts universally used in computer science do not have to be defined in the Technical Documentation. It is, however, not consistent with Microsoft’s obligations under the Decision to require in-depth knowledge of Windows from a user of the Technical Documentation and therefore to omit pointers to externally available authoritative sources of information on Windows in the Technical Documentation. Therefore, the relevant versions of the Technical Documentation, due to the lack of authoritative references to external material, are not complete and accurate.

#### 4.2.3. *The relevant versions of the Technical Documentation are inconsistent with industry practice*

- (172) In its Response to the Statement of Objections, Microsoft asserts that *“it is absolutely common practice that specification documents of the kind involved here are improved iteratively while being used in a dialogue between users and documenters.”<sup>251</sup>* Microsoft thus contends that the Commission unreasonably *“demands a standard of immediate perfection and unchallengeable clarity in every particular of the many thousand pages of documentation provided by Microsoft.”<sup>252</sup>*
- (173) It is apparent from the Decision that Microsoft must make available information that allows interested undertakings to develop interoperable products that can viably compete with Microsoft’s work group server operating system products. The Commission acknowledges that an “iterative process” with third parties might be useful during a development process, once Microsoft has provided sufficient information to allow undertakings to embark on such a development process. However, as pointed out in section 3, the relevant versions of the Technical Documentation are deficient to such an extent that they do not provide such information. This point was also made by third parties.<sup>253</sup>
- (174) Furthermore, as will be outlined in section 4.4, the “iterative process” undertaken to improve the documentation in the framework of the US Microsoft Communication Protocol Program has, more than three and half years after its inception, still not led to satisfactory documentation.

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<sup>250</sup> Trustee’s Report on the December 2005 version, on page 7.

<sup>251</sup> Microsoft’s Response to the Statement of Objections, at paragraph 191.

<sup>252</sup> Microsoft’s Response to the Statement of Objections, at paragraph 245.

<sup>253</sup> [Company A] in its response to the request for information of 9 March 2006, on page 10, states that: *“It was and remains [Company A]’s desire to license the technical information [...]. Regrettably, the documentation, in its current form, does not justify taking that next step.”*, [a third party] in its comments on the Statement of Objections of 29 March 2006, at paragraph 56, states that: *“[a third party] does not per se argue that an iterative process is inappropriate or without value. However, for such a process to in fact be meaningful [...] there must first be a solid basis for iteration and interaction [...].”*

- (175) Both Professors Finkelstein and Broy have compared the Technical Documentation with another set of specifications, OMG CORBA, and asserted that they could demonstrate “*clear similarities between [CORBA] and the WSPP documentation thus supporting the contention that the competitors, OTR and the Trustee have unreasonable expectations of the WSPP documentation and have not made a reasonable determination of its compliance with the Commission’s decision.*”<sup>254</sup>
- (176) In his first report, Professor Finkelstein contends that he has “*performed a detailed comparison of the WSPP documentation with an equivalent set of open specifications, OMG CORBA, that support interoperability and constitute an established industry standard [...]. This comparison clearly shows that the WSPP documentation is similar in all significant respects to that of CORBA and that on this basis the criticisms levelled at the WSPP documentation are unreasonable.*”<sup>255 256</sup>
- (177) However, as pointed out by TAEUS<sup>257</sup>, CORBA cannot be considered as a relevant comparator. As a matter of fact, “*CORBA is provided as an entirely open standard, available to absolutely anybody. For CORBA, there is no lack of introductory books, tutorials, how-to manuals, and such to support a developer in this area. This allows anybody who wishes to do so to write and publish tutorial material related to and based on that standard – and indeed, that is common practice. The WSPP program, by contrast, is entirely closed. [...] It should be noted that Finkelstein highlights a series of professional books on CORBA, but does not mention the counterpart books for WSPP.*” This is indeed acknowledged by Professor Finkelstein when he states that: “*Nobody who wants to understand CORBA, build a CORBA-based distributed system, or build interoperability products based on CORBA would exclusively rely on, or even start by, consulting the CORBA specifications. They would instead use informative references. In case of CORBA these are provided outside the OMG specification in a series of professional books published by John Wiley and Sons (for example, Duddy & Vogel 1997); engineers also use training courses, reference examples provided by organizations other than OMG and academic text books for that purpose.*”<sup>258</sup>
- (178) As evidenced by these statements, one of the main differences between CORBA and the Technical Documentation is that a vast amount of publicly available, complementary information exists on CORBA, whilst this is not the case for the Technical Documentation. Therefore, the CORBA specification does not require the same level of detail and cannot be considered as a relevant comparator for the Technical Documentation.
- (179) In its Response to the 19 May 2006 letter, Microsoft refers to the J2EE specification and contends that: “*[...] the Java 2 Enterprise Edition (J2EE) specification clearly demonstrates that commercially-important specifications supporting substantial interoperable markets have adopted a style closely resembling that of Microsoft’s Technical Documentation. The J2EE specification does not conform to RFC 2119 or other IETF conventions.*”<sup>259</sup> However, the J2EE specifications, like CORBA, are developed as an

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254 Finkelstein Report I, on page 28.

255 Finkelstein Report I, on page 5.

256 For a description of CORBA, see recital 166 of the Decision.

257 TAEUS’s Report on the January 2006 version, on page 19.

258 Finkelstein Report I, at paragraph A 8.

259 Microsoft’s Response to the 19 May 2006 letter, at paragraph 17.

open standard which is maintained through the “Java Community Process”<sup>260</sup> and cannot therefore be compared to the Technical Documentation the elaboration of which is solely in Microsoft’s hands.<sup>261 262</sup> Moreover, the Trustee stated that: “[...] *the J2EE is much smaller, much better written and considerably more useable than the WSPP technical documentation of December 2005.*”<sup>263</sup>

- (180) Due to the futility of an iterative development process based on the versions of the Technical Documentation submitted to date and in view of the inappropriateness of the CORBA and J2EE specifications as comparators with the Technical Documentation it is concluded that Microsoft’s arguments that the relevant versions of the Technical Documentation are consistent with industry practice are unfounded.

#### 4.2.4. Microsoft’s criticism of the Trustee’s and TAEUS’ Reports

- (181) With its letter of 14 April 2006, Microsoft submitted two additional reports (Finkelstein Report II and Broy Report II) in which Professors Finkelstein and Broy *inter alia* analysed the Trustee’s methodology and criticism of the lack of sequencing information and error handling in the relevant versions of the Technical Documentation.
- (182) On the basis of these reports, Microsoft asserts that “*the Commission continues to rely on reports that point out individual purported errors as the basis for finding the documentation inadequate. In many cases, the supposed error is not an error at all, but rather reflects misconceptions in the part of the critic.*”<sup>264</sup>
- (183) However, in their respective reports<sup>265</sup>, the Trustee and TAEUS extensively rebutted the arguments of Professors Finkelstein and Broy, and explained why they maintained the points they had made in their previous reports.
- (184) With its letter of 9 June 2006, Microsoft submitted two additional reports (Finkelstein Report III and Broy Report III) ,which essentially reiterated the points previously made in their reports with regard both to the completeness and accuracy of the Technical Documentation and to the Trustee’s and TAEUS’ arguments.<sup>266</sup>
- (185) The main points brought forward by Microsoft’s technical experts and the Trustee’s rebuttals are further detailed in sections 4.2.4.1, 4.2.4.2 and 4.2.4.3.

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<sup>260</sup> See <http://www.jcp.org/en/home/index>, printed on 12 June 2006.

<sup>261</sup> Martin Wirsing *et al.*, *Specification and Implementation of Interoperable Systems*, on page 22: “*Another example of an open platform is the Java 2 Platform Enterprise Edition (J2EE). The J2EE Platform consists of application servers that provide functionalities like transaction services, and components that run inside the application servers and implement the business logic of the application (so-called Enterprise Java Beans (EJBs)). The specification of this platform is publicly available.*”

<sup>262</sup> A further indication of the non-comparability with either CORBA or Java is provided in Finkelstein report II, at paragraph 13.4, where he asserts that error-handling deficiencies in the Technical Documentation, as compared to CORBA or Java, are attributed to the fact that the WSPP protocols were not designed for public use.

<sup>263</sup> 15 May 2006 Trustee report on the reports from Professors Finkelstein and Broy, on page 7.

<sup>264</sup> Letter of 14 April 2006, at paragraph 30.

<sup>265</sup> 15 May 2006 Trustee report on the reports from Professors Finkelstein and Broy and TAEUS report on the March 2006 version.

<sup>266</sup> Microsoft admits that the 19 May 2006 letter does not introduce new technical evidence (see Microsoft’s Response to the 19 May 2006 letter, at paragraph 1).

#### 4.2.4.1. Lack of sequencing information

- (186) Professor Finkelstein claims that the Trustee’s objection concerning the lack of sequencing information is inappropriate as “[t]here are clearly parts of the WSPP documentation where sequencing information is necessary and indeed it is provided in these situations. We are not convinced that message sequence charts (or similar) would in most of these cases be very informative, however if there are particular cases that can be identified where this might illustrate particular important scenarios they could be seen as a useful enhancement. No such examples have, it should be said, been identified to date. The bulk of the WSPP documentation concerns APIs (Application Programmer Interfaces), not really protocols in the sense this word is usually understood. These APIs offer an extremely large number of alternative sequences, for this reason it is certainly not common practice nor would it be sensible, to give sequencing or state machine information.”<sup>267</sup> This point was reiterated by Professor Finkelstein in his subsequent report.<sup>268</sup>
- (187) This argument has been refuted by the Trustee: “This is simply not a viable position to adopt. Sequencing information appears to be presented for only the simplest of situations; in other places, it must be deduced, involving tracking across a large number of pages with little or no confidence that the tracking is accurate. In examples explored by the Trustee and his team, broad assumptions had to be made on sequencing based on the implied passing of handles from call to call – with no corresponding confidence that these were indeed the same handles being passed. In others, greater confidence could be gained because preceding calls were quoted (for example, as discovered in the ‘Add New User’ task), but even here it was necessary to extrapolate sequencing – frustrating when a simple statement of the sequence could and should have been provided. A further problem, though, is expounded in Professor Finkelstein’s response: that “the bulk of the WSPP documentation concerns APIs ... not really protocols in the sense this word is usually understood.” Therein lies a root of the problems encountered: that the technical documentation is not specifying protocol requirements but rather documenting existing APIs. This does not allow a licensee to extract the required behaviour, but rather simply to attempt to implement a duplicate with no idea of the required behaviour. This is not what is required.”<sup>269</sup>
- (188) Even Microsoft’s own technical expert Professor Broy acknowledges that sequencing information is essential for interoperability purposes (see recital (140)). Furthermore, the lack of adequate sequencing information in the relevant versions of the Technical Documentation has also been confirmed by third parties.<sup>270</sup>
- (189) On the basis of this evidence it is concluded that the relevant versions of the Technical Documentation are not complete and accurate to the extent that they lack sequencing information, and that Microsoft’s arguments to the contrary are unfounded.

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<sup>267</sup> Finkelstein Report II, at paragraph 13.1.

<sup>268</sup> Finkelstein Report III, at paragraph A7.

<sup>269</sup> 15 May 2006 Trustee report on the reports from Professors Finkelstein and Broy, on page 9.

<sup>270</sup> [Company D] in its response to the request for information of 9 March 2006, on page 2 states that: “Further an implementer needs to know the conditions under which a particular RPC [Remote Procedure Call] is used, how it is used, and the sequence in which it is used relative to other events and other RPCs. [...] Microsoft disclosures in a large number of areas fail to include this vital information necessary for interoperability.”

#### 4.2.4.2. Error handling

- (190) The Trustee found that *“the [November 2005] Technical Documentation contains several hundred pages on error handling, but the contents of error definitions are simply listed with no explanation. A description of errors should indicate why or how such errors are generated, what functions need to do if an error is to be handled correctly, and whether or not the error is “fatal” or recoverable. None of that detail is present in the Technical Documentation.”*<sup>271</sup>
- (191) When addressing the Trustee’s concerns about the absence of an appropriate description of error handling, Professor Finkelstein attempts to justify such absence, arguing that the Technical Documentation is not a public interface designed from scratch and that due to the extensive use of RPCs in the protocols, which, according to him do not allow for a more powerful error handling, *“the documentation is as good as it possibly can be in this respect”*.<sup>272</sup>
- (192) Nevertheless, as pointed out by the Trustee, *“[t]his seems to be an attempt to excuse Microsoft’s poor documentation on the basis that the protocols themselves were poorly specified and poorly documented at the time of implementation. Whilst this may or may not be true, it is irrelevant. The requirement under the Decision is to provide a complete and accurate specification, not documentation which is – in Professor Finkelstein’s words – “as good as it possibly can be” given the poor nature of the error handling itself.”* Again, *it is reiterated, the technical documentation must present the requirements in the form of a specification not the description of the Microsoft implementation – whether that implementation is of an inferior or a superior quality.*<sup>273</sup>
- (193) Microsoft’s expert Professor Finkelstein does not dispute the shortcomings of the description of error handling in the relevant versions of the Technical Documentation.<sup>274</sup>
- (194) The Decision requires Microsoft to provide specifications which contain the necessary information for competitors to be able to develop interoperable products. This includes, as pointed out by Microsoft’s own technical expert Professor Broy, an appropriate description of error handling (see recital (140)). The mere provision of several hundred pages on error handling without further explanation cannot remedy this deficiency. In consequence, it is concluded that the relevant versions of the Technical Documentation are not complete and accurate to the extent that they lack an appropriate description of error-handling, and that Microsoft’s arguments to the contrary are unfounded.

#### 4.2.4.3. Trustee methodology

- (195) In his Final Report on the November 2005 version, the Trustee set out a test in order to establish whether the Technical Documentation *“contain[ed] sufficiently detailed information to allow a developer or team of developers to create software for a conformant system – which means to implement a server capable of interacting with Microsoft servers (and clients) in a functionally-equivalent manner”*.<sup>275</sup> The test in question (“the Add User

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<sup>271</sup> Trustee’s Final Report on the November 2005 version, on page 4.

<sup>272</sup> Finkelstein Report II, at paragraph 13.6.

<sup>273</sup> 15 May 2006 Trustee report on the reports from Professors Finkelstein and Broy, on page 10.

<sup>274</sup> Finkelstein Report II, at paragraph 13.4.

<sup>275</sup> Trustee’s Final Report on the November 2005 version, on page 6.

Test”) consists in attempting to locate the necessary information in the Technical Documentation to add a new user to the system, or, as the Trustee further explained in his 3 March 2006 report, “*an attempt to find the necessary information involved in the adding of a new user to an account database.*”<sup>276</sup>

- (196) Microsoft’s technical experts Professors Finkelstein and Broy consider the Trustee’s methodology inappropriate. Quoting its expert Professor Broy, Microsoft asserts that “[t]rying to do an experiment on a system and a specification of the size of a server by trying to implement a particular function [the add-user function], which in addition requires substantial functionality, on which it is based, is not trivial. To carry out such an attempt without solid background within a few days is again quite impossible and frankly speaking naïve.”<sup>277</sup>
- (197) However, it is clear from the Trustee’s report of 15 December 2005 that he did not intend to implement the functionality in question while conducting his sufficiency test. As further explained in his report of 3 March 2006, “*the purpose of [the Add User Test], however, was to evaluate the usability of the Technical Documentation, not actually to implement the functionality itself. The purpose was to determine whether or not there were immediate questions that could not be answered by the Technical Documentation or the external, authoritative art that can be assumed.*”<sup>278</sup>
- (198) It is indeed apparent from the Appendix to the Trustee’s report of 3 March 2006 in which he describes how he conducted the Add User Test, that he did not intend to implement a functionality to add a new user to the system but, rather, that he had looked for the relevant information within the Technical Documentation. This test allowed him to conclude that the Technical Documentation was neither complete nor accurate in this respect.
- (199) Microsoft’s criticism of the Trustee’s methodology in this respect is therefore mistaken and the Commission concludes that it is entitled to rely upon the advice given by the Trustee which is founded upon the methodology in question.

#### 4.2.5. Conclusion

- (200) In summary, Microsoft has not provided sufficient evidence showing that the conclusions of the Trustee and TAEUS concerning the relevant versions of the Technical Documentation are inaccurate or that any of their arguments are flawed. The criticism put forward by Microsoft’s experts has been convincingly refuted and the Commission is entitled to rely upon the advice given by the Trustee and TAEUS as regards the points in issue in concluding that the relevant versions of the Technical Documentation are not complete and accurate.

### 4.3. The source code offer

- (201) The Decision does not require Microsoft to license or to reveal any of the Windows source code. Recital 999 outlines that: “*Microsoft should be ordered to disclose complete and accurate specifications [...]. The use of the term “specifications” makes clear that*

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<sup>276</sup> Trustee’s Report on the December 2005 version, on page 22.

<sup>277</sup> Microsoft’s Response to the Statement of Objections, at paragraph 199.

<sup>278</sup> Trustee’s Report on the December 2005 version, on page 22.

*Microsoft should not be required to disclose its own implementation of these specifications, that is to say, its own source code.” It is also stressed in several other instances in the Decision, for example in recital 714, that “the Commission does not envisage ordering compulsory licensing of Microsoft’s source code.”*

- (202) On 25 January 2006, Microsoft offered the possibility for undertakings which sign a WSPP Development and Product Distribution Agreement to get access to the Windows source code<sup>279</sup> by means of a reference licence. Microsoft indicated that it *“is not offering to license this valuable source code as a substitute for the Technical Documentation it has already offered to licensees. The source code is offered in addition to this extensive documentation of protocol specifications”*.<sup>280 281</sup>
- (203) Microsoft therefore acknowledges that access to source code cannot substitute for the provision of complete and accurate Technical Documentation. Microsoft nevertheless contends that source code *“provides valuable guidance for a licensee seeking to implement the functionality in question in its operating system.”*<sup>282</sup>
- (204) However, the Trustee has stated to the Commission that a disclosure of the source code along with the Technical Documentation does not render the Technical Documentation complete and accurate. In his letter to the Commission dated 7 March 2006, the Trustee indicated that source code *“is not the appropriate mechanism whereby to deliver that information. For the development of an interoperable product a licensee requires information which specifies the interface and required behaviour for emulating a Windows server (be that 2000, 2003 or whatever). That is, they require the specification of necessary detail.”*<sup>283</sup>
- (205) The Trustee states that the source code, being only an example of the implementation of a protocol, does not make it possible to distinguish between what must be implemented in a third party implementation of the protocols, and what are merely Microsoft’s implementation choices. The Trustee puts it in the following way: *“source code is a representation of one particular way in which that specification of necessary detail has been realised. It includes elements which realise the specification alongside incidental details representing the particular implementation choices made by the programmer. And this with no way of separating the ‘wheat’ from the ‘chaff’.”*<sup>284</sup> This point was also made by third parties.<sup>285</sup>

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<sup>279</sup> According to the source code reference licence submitted by Microsoft to the Commission on 9 February 2006 the Source Code for the following commercially released Microsoft products will be available to the Licensee: Microsoft Windows NT Server 4.0, Windows 2000 Server Standard Edition, Windows Server 2003 Standard Edition, Microsoft’s server operating system successor to Windows Server 2003 Standard Edition (currently code-named Longhorn).

<sup>280</sup> Response to the Statement of Objections, at paragraph 232.

<sup>281</sup> In its Response to the 19 May 2006 letter, at paragraph 35, Microsoft reiterates this position: “[...] *the source code reference licence is being made available to complement, not to replace, the specifications [...]*”.

<sup>282</sup> Response to the Statement of Objections, at paragraph 229.

<sup>283</sup> Trustee’s letter of 7 March 2006, on page 1.

<sup>284</sup> Trustee’s letter of 7 March 2006, on page 1.

<sup>285</sup> For example, [a third party]’s and [a third party]’s answer to the Article 18 letter on source code, on page 5: *“source code exposure [...] can result in false dependencies on the particular implementation (Microsoft’s source code) from which they have extracted the protocol information. This means that their products would be more subject to failure when Microsoft introduces updates as well as new versions or variants of its server products. A specification eliminates the problems of false dependencies.”*

- (206) The Trustee also states that *“if there is no complete and accurate specification provided then the licensee faced with the source code must attempt to ‘reverse engineer’ that specification from the particular implementation. They must try to decide which aspects of the source code represent necessary elements and which are incidental details. First, this is giving them substantially more work to do; and second, there is no guarantee that their decisions will be correct – and if those decisions are incorrect then their implementation will not work.”*<sup>286</sup>
- (207) He therefore concludes that *“if a complete and accurate specification is available, source code is nothing more than a partially-useful demonstration of a specific implementation; if a complete and accurate specification is not available, source code is neither useful nor desirable and in fact detrimental.”*<sup>287</sup>
- (208) These points have also been stressed by third parties in answers to requests for information regarding Microsoft’s source code offer.<sup>288</sup> Moreover, most of the third parties also expressed concerns that, by accepting a source code reference licence, they would face a risk of copyright infringement claims by Microsoft resulting from their engineers having had access to Microsoft’s source code.<sup>289</sup> They therefore reach the same conclusion as the Trustee.<sup>290</sup>
- (209) These arguments have not been refuted by Microsoft. Rather, as evidence of the value and the helpfulness of the source code, Microsoft recalled that the Trustee himself is given

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<sup>286</sup> Trustee’s letter of 7 March 2006, on page 2.

<sup>287</sup> Trustee’s letter of 7 March 2006, on page 3.

<sup>288</sup> For example, see [a third party]’s response to the request for information on Microsoft’s source code offer (on page 1) : *“By no means we think that this offer can replace or reduce the burden to prepare sufficiently detailed, correct and comprehensive information. It could be a useful source of fine grained information that have already been displayed on general grounds in the documentation, or to cross check possibly erroneous or incomplete information, but the two kind of documents are at entirely different levels. As we have publicly said, it is like one party is requested to produce a map of a city, and in reply it provides the blueprints of any single building.”*

<sup>289</sup> For example, in [a third party]’s and [a third party]’s response to the request for information on Microsoft’s source code offer (on page 5): *“[...] source code exposure [...] creates real and substantial risks for third parties of copyright infringement claims against them by Microsoft. [...] [T]hird parties that accept the source code would face the possibility of copyright infringement actions based on their access to Microsoft design and implementation materials through the source code exposure (as a result of the so-called “contamination problem”). Absent success to the source code, third parties have an absolute defence against such claims because they have not seen the protected expression. That defence obviously disappears once they are exposed to the source code, with the resulting risk of disagreements over whether Microsoft’s copyrights have been infringed. This means that third parties would be forced to erect elaborate barriers, sealing off developers with access to source code from those without access. However, even with such protections in place, once there has been source code exposure, the company is at risk for charges of copyright violation. Managing these risks would inevitably lead to significant administrative burdens and costs placed on third parties wishing to develop interoperable products, which is especially problematic for SMEs.”*

<sup>290</sup> For example, [Company C]’s response to the request for information on Microsoft’s source code offer (on page 1): *“Our conclusion is that source code disclosure will increase the risk to licensees, increase the risk associated with the license, and ultimately increase the time required to market with interoperable products. In effect, source code disclosure transfers the responsibility of achieving the goals of the WSPP program from Microsoft to the licensee and increases the risk to the licensee.”*

access to the source code<sup>291</sup> and claimed that it is common industry practice to look into the source code to clarify details of specifications.<sup>292</sup>

- (210) However, access to the source code has been granted to the Trustee in accordance with his mandate and the Trustee uses the source code for a totally different purpose: not as a complement to the Technical Documentation, but to cross-check that all necessary protocols have been included and to test whether the Technical Documentation is indeed complete and accurate, namely tasks that he has to carry out within his mandate. As for the use of the source code together with the Technical Documentation (claimed to be normal industry practice by Microsoft), the Trustee has already stated that the Technical Documentation has not yet reached a stage at which such a process would be useful. The Commission takes the same view, on the basis of this advice.
- (211) In view of the foregoing, the offer of a source code reference licence by Microsoft in addition to the Technical Documentation, particularly in its current incomplete and inaccurate state, cannot be considered to constitute compliance by Microsoft with its obligations under the Decision.

#### **4.4. The US Microsoft Communication Protocol Program**

- (212) As outlined in recitals 14 *et seq.* of the Decision a protocol disclosure programme has been set up in the United States following a settlement between the United States and Microsoft of 2 November 2001.<sup>293</sup> This settlement has been endorsed by the US District Court for the District of Columbia on 1 November 2002 (“Final Judgment”).<sup>294</sup> According to the Final Judgment, Microsoft “[...] shall make available for use by third parties, for the sole purpose of interoperating or communicating with a Windows Operating System Product, on reasonable and non-discriminatory terms [...], any Communications Protocol that is, on or after the date this Final Judgment is submitted to the Court, (i) implemented in a Windows Operating System Product installed on a client computer, and (ii) used to interoperate, or communicate, natively (i.e., without the addition of software code to the client operating system product) with a Microsoft server operating system product.”<sup>295</sup>
- (213) In order to comply with these obligations under the Final Judgment, Microsoft has set up the Microsoft Communications Protocol Program (“MCPP”), under which Microsoft discloses the relevant communications protocols.
- (214) In its Response to the Statement of Objections Microsoft asserts that “a number of the 52 protocols covered by the WSPP have already been made available to licensees under the

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<sup>291</sup> Response to the Statement of Objections, at paragraph 237.

<sup>292</sup> Letter of 14 April 2006, at paragraph 58: “More importantly, as both Professor Finkelstein and Professor Broy explain, the use of reference implementations in the form of source code is both common in the industry and very helpful to developers.”; and at paragraph 59: “Professor Broy points out that the question is not the usefulness of the source code by itself, but rather its usefulness in conjunction with the Technical Documentation.”

<sup>293</sup> See recital 18 of the Decision.

<sup>294</sup> United States District Court for the District of Columbia, Memorandum Opinion with Findings of Fact and Final Judgment of 1 November 2002 *in re State of New York et al. v. Microsoft Corporation*, Civil Action No. 98-1233 (CKK); Memorandum Opinion with Findings of Fact and Final Judgment of 1 November 2002 *in re United States of America v. Microsoft Corporation*, Civil Action No. 98-1233 (CKK), see also recital 19 of the Decision.

<sup>295</sup> Section III.E of the Final Judgment.

*MCP*P [...]”<sup>296</sup> and that “[...] *through the MCP*P program companies are licensing much of the same documentation and are shipping products incorporating the documented protocols.” Microsoft also confirms that for these “[...] *common protocols, a single source is used to generate both the WSPP documentation of those protocols and the MCP*P documentation”<sup>297</sup> [...]” and that “*even those protocols newly documented in WSPP were documented by the same team of technical writers, editors and supervisors, using the same standards for documentation content, format and level of detail, as under the MCP*P program.”<sup>298</sup>

- (215) Microsoft tries to draw a parallel between its obligations under the Final Judgment and under the Decision, relying on the fact that (according to Microsoft) 42 protocols are subject to both programmes (MCPP and WSPP).<sup>299</sup> In its Response to the Statement of Objections, Microsoft essentially relies on two arguments based on the workings of the MCPP to show that the Commission’s considerations with regard to the completeness and accuracy of the Technical Documentation are unfounded. First, Microsoft claims that the documentation process which has been established under the Final Judgment is a “*more realistic and constructive*” process than that followed by the Commission with the assistance of the Trustee.<sup>300</sup> Second, Microsoft refers to the fact that 28 companies have signed licences under the MCPP and that 12 out of these 28 companies are actually shipping products incorporating MCPP protocols.<sup>301</sup>
- (216) In its Response to the Statement of Objections Microsoft further asserts that “*both the suitability of the protocol specifications Microsoft has provided under the MCP*P programme and the process for continued cooperation by Microsoft to work with the other parties in that program provide relevant evidence of Microsoft’s willingness and ability to comply with the requirements of the WSPP program”<sup>302</sup>. In this respect Microsoft explains that it is engaged in a process of continuous improvement of the Technical Documentation made available under the MCPP with the Technical Committee that advises the US Department of Justice on technical issues relating to the implementation of the Final Judgment.<sup>303</sup> Microsoft implies that this process of improving the Technical Documentation iteratively using implementation experience is more realistic and constructive than the Commission’s approach.<sup>304</sup>
- (217) Microsoft’s assertions are in contrast to the Joint Status Reports regularly filed with the US District Court for the District of Columbia by Microsoft and the plaintiffs in the US Microsoft case, namely the US Department of Justice and several States (together, “the Plaintiffs”) on Microsoft’s compliance with the Final Judgment which bear witness that such satisfactory results have not yet been achieved through this process.

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<sup>296</sup> Response to the Statement of Objections, at paragraph 151.  
<sup>297</sup> Response to the Statement of Objections, at paragraph 151.  
<sup>298</sup> Response to the Statement of Objections, at paragraph 151.  
<sup>299</sup> Annex 2 to the Response to the Statement of Objections, at paragraph 8.  
<sup>300</sup> Response to the Statement of Objections, at paragraph 154.  
<sup>301</sup> Response to the Statement of Objections, at paragraph 152.  
<sup>302</sup> Response to the Statement of Objections, at paragraph 161.  
<sup>303</sup> Response to the Statement of Objections, at paragraphs 155 *et seq.*  
<sup>304</sup> Response to the Statement of Objections, at paragraph 154.

- (218) The Joint Status Reports are filed as part of the monitoring by the US District Court for the District of Columbia of Microsoft's compliance with the Final Judgment.<sup>305</sup>
- (219) In a recent Joint Status report of 12 May 2006 the Plaintiffs explain that *"In light of its continuing difficulty in addressing open issues with the technical documentation, Microsoft assigned one of its most senior executives -- Robert Muglia, Senior Vice President of Microsoft's Server and Tools Business -- to conduct a thorough analysis of the problem and determine the most efficient method for producing technical documentation that is of a sufficiently high quality to assure Plaintiffs and the TC that Microsoft is meeting its obligations to licensees. Mr. Muglia and his team ultimately concluded that the current process of trying to fix issues identified by the TC one at a time was unlikely, in the foreseeable future, to result in documentation that is satisfactory. Microsoft therefore has concluded that a broader "reset" would be much more effective and efficient, meaning that Microsoft will rewrite substantial portions of the documentation, taking advantage of what it has learned during the last several years, including all of the specific reports from the TC."*<sup>306</sup> (emphasis added)
- (220) As evidenced by these excerpts of a Joint Status Report filed by the US authorities with the responsible District Court, the documentation process in the US is still "work in progress", after three and a half years of what Microsoft characterises in its Response to the Statement of Objections as *"a realistic and constructive process to improve the documentation iteratively"*.<sup>307</sup> Microsoft itself has admitted that a substantial rewrite is necessary to render the technical documentation that Microsoft has so far disclosed under the MCPP satisfactory.
- (221) Microsoft tries to play down the deficiencies identified in the technical documentation supplied under the MCPP by reference to the alleged *"significant interest in licensing the MCPP protocols and the ability of licensees to successfully develop products incorporating such technology"*.<sup>308</sup> In Annex 2 to the Response to the Statement of Objections, Microsoft mentions that twelve companies currently ship products that incorporate MCPP protocol technology. According to Microsoft two of these companies, [a third party] and [a third party], have licensed the "File Server task" and are therefore using protocols licensed under the WSPP.<sup>309</sup> In order to support this contention Microsoft has submitted six customer statements by MCPP licensees.<sup>310</sup> These statements are submitted in order to prove that the technical documentation provided by Microsoft under the MCPP and consequently under the WSPP is *"indeed fit for their intended purposes"*.<sup>311</sup>
- (222) Of the six companies from which Microsoft has submitted statements, three (namely [a third party], [a third party] and [a third party]) actually licensed streaming media protocols

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<sup>305</sup> In fact Joint Status Reports are filed on the enforcement of both the Final Judgments in *United States v. Microsoft*, CA No. 98-1232 (CKK), and *New York, et. al. v. Microsoft*, CA No. 98-1233 (CKK) which in terms of substance are substantially similar.

<sup>306</sup> Joint Status Report on Microsoft's Compliance with the Final Judgments, dated 12 May 2006, Section II.A.2. For further reference, see also the Joint Status Report on Microsoft's Compliance with the Final Judgments, dated 14 April 2004, Section II.A.2; the Joint Status Report on Microsoft's Compliance with the Final Judgments, dated 8 February 2006, Section II.A.2.

<sup>307</sup> Response to the Statement of Objections, at paragraph 154.

<sup>308</sup> Annex 2 Response to the Statement of Objections, at paragraph 12.

<sup>309</sup> Annex 2 Response to the Statement of Objections, at paragraph 15.

<sup>310</sup> Letter of 14 April 2006, Annex 3.

<sup>311</sup> Response to the Statement of Objections, at paragraph 152.

under the MCPP. These are protocols not used in communications with work group server operating systems and therefore are outside the scope of the disclosure remedy imposed by the Decision. Apart from this fact, it can also be assumed that Microsoft's incentives to propagate the use of its streaming media protocols by other vendors are different from the incentives to disclose work group server related protocols.

- (223) As a consequence, the quality of the documentation of the disclosed media streaming protocols under the MCPP does not necessarily correlate with the quality of the documentation of other protocols. In a Joint Status Report of 16 January 2004 the plaintiffs refer to this point: *“Microsoft had previously licensed its media streaming CPs [communications protocols] through another licensing program. In other words, Microsoft believed that its own business interest in enabling certain industry members to use its media technology outweighed whatever risks might have been associated with doing so.”*<sup>312 313</sup>
- (224) Therefore, the example of media streaming protocols is not an appropriate comparator with which to demonstrate that the quality of the technical documentation to be disclosed under the MCPP is similar to that of the Technical Documentation.
- (225) The fourth customer statement presented by Microsoft relates to a company, [a third party], that has developed a graphical desktop interface by using protocols disclosed under the MCPP. As this task is manifestly unrelated to work group server operating system tasks the probative value of this statement in relation to the protocol disclosures at stake is far from evident.
- (226) Finally, Microsoft refers to statements by [a third party] and [a third party], which have licensed protocols under the MCPP which are also covered by the disclosure remedy imposed by the Decision.
- (227) Firstly, it has to be emphasised that [a third party] and [a third party] ship so called network attached storage (“NAS”) file servers which do not fall within the work group server market definition<sup>314</sup>. Secondly, as pointed out in recital 634 of the Decision, a NAS device does not provide group and user administration services and therefore does not require the use of the protocols that are related to these services.<sup>315</sup> Thirdly, it appears that both companies have made use of the disclosure under the MCPP to fill in gaps in already pre-existing (i.e. prior to the signing of an MCPP license) implementations of Microsoft's publicly available protocols.<sup>316</sup> Both companies also state that they use network analysis (a reverse engineering technique) in order to cross-check their existing implementations

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<sup>312</sup> Joint Status Report on Microsoft's Compliance with the Final Judgments, dated 16 January 2004, Section II.A.2.

<sup>313</sup> The customer statement of [a third party] actually confirms this: “[a third party] had already licensed under a separate program the Windows source code for the relevant streaming media protocols”, Letter 14 April 2006, Annex 3.

<sup>314</sup> See recitals 633 to 635 of the Decision.

<sup>315</sup> More specifically, and significantly, NAS servers do not require interoperability with Microsoft's Active Directory services.

<sup>316</sup> [a third party] states that: *“The MCPP documentation has been an important and helpful resource [...] as a reference guide to fill in gaps in [a third party]'s existing implementation of the file server protocols, particularly the SMB protocol.”* [A third party] confirms that it “[...] entered into a MCPP license in December 2002 to help to ensure that its protocol implementations would remain up to date as Microsoft protocol technology evolved.” (Letter of 14 April 2006, Annex 3.)

against the documentation supplied by Microsoft.<sup>317</sup> Therefore their situation is fundamentally different from that of a potential beneficiary of the disclosure order under the Decision who will be confronted with the task of implementing protocols which have so far not been fully or partly disclosed by Microsoft, especially the protocols related to the provision of Active Directory services. For these protocols therefore, no up-to-date third party implementation exists against which to compare the Technical Documentation.

- (228) Furthermore, it is noteworthy that both companies refer to the particular relevance of the SMB (“Server Message Block”) protocol to provide file services to Windows clients, and the use made thereof in their implementations. In fact, the SMB protocol is the only protocol explicitly mentioned by both companies as highly relevant to their business. As outlined in the Decision (recitals 237 to 242), specifications of the CIFS (“Common Internet File System”)/SMB protocol have been made available by Microsoft prior to and independently of the MCPP. Therefore the quality of the documentation of the specifications of the CIFS/SMB protocol is not necessarily the same as that of other protocols covered by the Final Judgment or the Decision. Indeed, Microsoft’s technical expert Professor Finkelstein seeks to distinguish the CIFS/SMB specification from the other parts of the WSPP Technical Documentation: “*CIFS (Common Internet File System) is a very mature and well-established backbone specification used extensively by application developers and which has been submitted to the IETF (Internet Engineering Task Force), it addresses a different community, of a vastly different scale and in a different context.*”<sup>318</sup> Microsoft is seeking to improve the quality of the Technical Documentation of the SMB protocol in the framework of its work plan.
- (229) In summary, the comparison Microsoft tries to establish between the MCPP and its alleged success and the WSPP is of very meagre probative value to the issue of whether the Technical Documentation supplied by Microsoft is complete and accurate, for essentially two reasons. Firstly, licensees of the MCPP have apparently focused so far on other protocols not covered by disclosure remedy imposed by the Decision, and have used the MCPP disclosures in a different manner from that in which potential beneficiaries of the disclosure remedy under the Decision would have to in order to develop interoperable products that can viably compete with Microsoft’s work group server operating system products. Secondly, Microsoft admits that the Technical Documentation provided so far to its licensees under the MCPP is not yet complete. This is further confirmed by the fact that Microsoft has agreed not to charge royalties to the licensee until the “*the technical documentation for all protocols licensed by a particular company is ‘substantially complete’*”.<sup>319</sup>
- (230) In its Response to the Statement of Objections Microsoft also mentions a number of private transactions where Microsoft has licensed complex technology.<sup>320</sup> This is raised evidently in an attempt to support the argument that Microsoft is able to provide detailed and usable documentation. The probative value of this submission is even more modest than the attempted comparison with the MCPP. It is not disputed that Microsoft is able to provide

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<sup>317</sup> In this context [a third party] states: “*The general approach [a third party] has taken to the MCPP documentation has been to review the changes that are flagged in the monthly updates, to run tests using a network analyzer to view communications between systems, and then to reference the documentation to verify the meaning of bits and packets whose functions are not immediately clear.*”, Annex 3 Letter 14 April 2006.

<sup>318</sup> Finkelstein Report I, at paragraph 10.3.

<sup>319</sup> Joint Status Report on Microsoft’s Compliance with the Final Judgments, dated 12 May 2006, Section II.A.3.

<sup>320</sup> Annex 2 to the Response to the Statement of Objections, at paragraphs 32 to 47.

protocol specifications in other areas that are valued by licensees. However, the incentive for Microsoft to provide these specifications for protocols in markets where it has not yet achieved considerable market power, such as protocol specifications that allow the synchronisation of Microsoft e-mail servers with mobile devices or that enable instant messaging, differ considerably from Microsoft's incentives to disclose protocols used to communicate with work group servers.

#### **4.5. Conclusion**

(231) In view of the above, it is concluded that the arguments put forward by Microsoft and its technical experts as regards the advice of the Trustee and the Commission's experts based on their review of the Technical Documentation must be rejected as unfounded. The Commission is therefore entitled to rely upon the advice in assessing whether or not the relevant versions of the Technical Documentation are complete and accurate.

#### **5. CONCLUSION ON THE ASSESSMENT OF MICROSOFT'S COMPLIANCE WITH ARTICLE 5(A) AND (C) OF THE DECISION**

(232) In view of the foregoing, and on the basis of the technical analysis by the Commission's experts and the Trustee, corroborated by the submissions of third parties regarding their evaluation of the Technical Documentation, it is concluded that the relevant versions of the Technical Documentation are neither complete nor accurate. No other version of the Technical Documentation purporting to document the entirety of the Interoperability Information was submitted by Microsoft between 11 April 2006 and 20 June 2006. From 1 May 2006, Microsoft started submitting documentation on the basis of the work plan provided to the Trustee on 22 April 2006. However, the submissions made by Microsoft up to 20 June 2006 relate only to a small portion of the Interoperability Information. Irrespective of their merits as specifications of the particular protocols covered, it follows, *ipso facto*, that these partial submissions of documentation cannot constitute complete and accurate specifications for all the relevant protocols.

(233) It is therefore concluded that Microsoft has not complied with its obligations to make Interoperability Information available to interested undertakings pursuant to Article 5(a) and (c) of the Decision.

#### **6. DEFINITIVE AMOUNT OF THE PERIODIC PENALTY PAYMENT**

##### **6.1. Relevant period of non-compliance**

(234) Article 5(a) and (c) of the Decision, in conjunction with Article 1(1) thereof, require Microsoft to make available 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.

(235) For the purposes of this decision, the Commission has assessed Microsoft's compliance with Article 5(a) and (c) of the Decision on the basis of an evaluation of the completeness and accuracy of the December 2005 version of the Technical Documentation, as well as of the versions of the Technical Documentation provided up to the March 2006 version of the Technical Documentation.

- (236) As outlined at recital (92), following the submission of the work plan of 22 April 2006 and up to 20 June 2006, Microsoft provided revised documentation for a limited number of protocols described therein. However, as is evident from Article 5(a) and (c) of the Decision, in conjunction with Article 1(1) thereof, Microsoft cannot fulfil its obligations by making only subsets of the relevant specifications available.
- (237) This decision only concerns the period from 16 December 2005 to 20 June 2006, the date on which the draft decision was sent to the members of the Advisory Committee in accordance with Article 14(3) of Regulation No 1/2003 (“the relevant period”). The Commission will carry out an assessment of the revised Technical Documentation, once Microsoft has provided such revised documentation for all protocols. The choice of the relevant period for the purposes of this decision is without prejudice to the continued applicability of the Article 24(1) Decision of 10 November 2005 (as amended by this decision) as regards the obligation to provide complete and accurate technical documentation embodying the Interoperability Information after the end of the relevant period. A further definitive amount may be fixed for non-compliance with Article 5(a) and (c) of the Decision as regards that aspect in respect of the period commencing on 21 June 2006. This choice of relevant period cannot be interpreted as implying that Microsoft can be considered to have complied with its obligations as regards the obligation to provide complete and accurate technical documentation embodying the Interoperability Information by making only subsets of the relevant specifications available.

## **6.2. Definitive amount of the periodic penalty payment for the relevant period**

- (238) Article 24(2) of Regulation (EC) No 1/2003 provides that, where the undertaking concerned has satisfied the obligation which the periodic penalty payment was intended to enforce, the Commission may fix the definitive amount of the periodic penalty payment at a figure lower than that which would arise under the original decision. The Commission must also have the power to fix a definitive amount in respect of a given period of time in a case where an undertaking has not, by the end of such period, satisfied the obligation which the periodic penalty payment was intended to enforce. Otherwise, an undertaking could escape from paying periodic penalty payments imposed on it by continuously failing to comply, which would void Article 24 of its useful effect.
- (239) Microsoft’s turnover for the fiscal year July 2004 to June 2005, which is Microsoft’s latest full business year<sup>321</sup>, was USD 39,788 million.<sup>322</sup> Microsoft’s average daily turnover was therefore USD 109 million (EUR 85.7 million)<sup>323</sup>. According to Article 24(1) of Regulation (EC) No 1/2003, the maximum periodic penalty payment that may be imposed

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<sup>321</sup> It should be noted, that the most recent figures available, are contained in Microsoft’s report of its third-quarter results, available on its website at:

[http://www.microsoft.com/msft/earnings/FY06/earn\\_rel\\_q3\\_06.msp?pf=true](http://www.microsoft.com/msft/earnings/FY06/earn_rel_q3_06.msp?pf=true) (printed 13 May 2006), show, if anything, increased revenues. Revenue for the most recent 3 quarters of the reporting year were \$10,900 million, up from \$9,260 million in the equivalent period in the previous year (an increase of 9.6%), and net income for the same periods was \$9,771 million, up from \$8,554 million (an increase of 14.2%).

<sup>322</sup> 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.

<sup>323</sup> 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.

by the Commission pursuant to that article cannot exceed 5% of that amount, that is to say USD 5.45 million (EUR 4.28 million).

- (240) In the Article 24(1) Decision, the Commission imposed a periodic penalty payment of EUR 2 million per day. In doing so, the Commission took into account the necessity of imposing a sufficiently high periodic penalty payment to ensure Microsoft's compliance with the Decision and the extent to which Microsoft's failure to meet its obligations under Article 5(a) and (c) of the Decision had reduced the effectiveness of the remedy. While the Statement of Objections, related exclusively to one aspect of Microsoft's non-compliance, namely its failure to provide complete and accurate technical documentation that embodies the Interoperability Information, it made clear that the level of the periodic penalty payment should reflect the extent to which this aspect of Microsoft's non-compliance had reduced the effectiveness of the remedy.<sup>324</sup>
- (241) At the time of the Article 24(1) Decision more than ten months had passed since the Decision had become enforceable, and despite the Commission's repeated calls for full compliance, Microsoft had still not taken the appropriate measures to comply with Article 5(a) and (c) of the Decision. Ten months constituted, in those circumstances, a long duration. Since the adoption of the Article 24(1) Decision Microsoft has persistently failed to comply with its obligations as regards the provision of complete and accurate technical documentation embodying the Interoperability Information for a further period of more than seven months.
- (242) In this respect, regard must be had to the fact that the continuing failure by Microsoft to comply with the Decision and to bring its very serious breach of Article 82 of the Treaty and of Article 54 of the EEA Agreement to an end<sup>325 326</sup> is liable to further increase the risk of elimination of effective competition in the work group server operating system market identified in the Decision.<sup>327</sup> It is necessary to set periodic penalty payments at a level which reinforces the incentive to comply with a decision taken pursuant Article 7 of Regulation (EC) No 1/2003 by rendering it economically rational for the undertaking concerned to comply with such a decision rather than to reap the benefits of non-compliance. Similarly, the Commission must take 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.<sup>328</sup>

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<sup>324</sup> See recital 112 of the Statement of Objections.

<sup>325</sup> See recitals 1068-1074 of the Decision.

<sup>326</sup> See in this regard also the Judgment in Joined Cases 46/87 and 227/88, *Hoechst* [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 [...]*."

<sup>327</sup> See recitals 590 to 692 of the Decision.

<sup>328</sup> 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. Microsoft is the world's third largest company by market capitalisation, behind Exxon Mobil and General Electric (source: FT Global 500 2006, [http://media.ft.com/cms/adb61f66-f7bf-11da-9481-0000779e2340,dwp\\_uuid=c9034b2c-f175-11da-940b-0000779e2340.pdf](http://media.ft.com/cms/adb61f66-f7bf-11da-9481-0000779e2340,dwp_uuid=c9034b2c-f175-11da-940b-0000779e2340.pdf), printed on 20 June 2006.) 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

- (243) The Commission concludes from section 5 above, that throughout the relevant period the Technical Documentation was incomplete and inaccurate to such an extent that it was not a suitable basis for an interested undertaking to start developing work group server operating systems which interoperate with Microsoft's products, as envisaged by the Decision.<sup>329</sup> Therefore, it is established that during the relevant period, the effectiveness of Article 5(a) and (c) of the Decision was entirely or at least largely eliminated, irrespective of whether or not the remuneration charged by Microsoft was reasonable with regard to the information provided.<sup>330</sup> In view of this, the Commission would be fully entitled to fix the definitive amount of the periodic penalty payment for the sole aspect of non compliance established by this decision on the basis of EUR 2 million per day throughout the relevant period.
- (244) However, it is possible that the Commission will also conclude that Microsoft has failed to comply with Article 5(a) and (c) of the Decision as regards the reasonableness of the remuneration charged after 15 December 2005 for information provided. At this stage, for the purposes of effective enforcement, it is therefore necessary to retain the possibility of fixing a definitive amount for this aspect of non-compliance from the date fixed in the Article 24(1) Decision.
- (245) It is therefore appropriate to calculate the definitive amount of the periodic penalty payment in respect of Microsoft's failure to comply with the obligations regarding the provision of complete and accurate technical documentation embodying the Interoperability Information pursuant to Article 5(a) and (c) of the Decision, on the basis of an amount of EUR 1.5 million per day throughout the relevant period.<sup>331</sup>

### 6.3. Conclusion

- (246) On the basis of the above, it is appropriate to fix the definitive amount of the periodic penalty payment imposed on Microsoft, pursuant to Article 24(2) of Regulation (EC) No 1/2003, for failing to comply with the obligations regarding the provision of complete and accurate technical documentation embodying the Interoperability Information laid down in Article 5(a) and (c) of the Decision at EUR 280.5 million for the period from 16 December 2005 to 20 June 2006 inclusive.

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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 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).

<sup>329</sup> It is therefore immaterial that Microsoft has slightly improved the usability of the Technical Documentation over the relevant period.

<sup>330</sup> Indeed, as Microsoft indicated in its letter of 4 May 2006 (see footnote 131), any change in the scope of the Technical Documentation makes a review of the remuneration necessary.

<sup>331</sup> Therefore, the aspect of non-compliance related to the reasonableness of the remuneration remains subject to a periodic penalty payment as from 16 December 2005 pursuant to the Article 24(1) Decision of 10 November 2005.

## 7. INCREASE OF THE PERIODIC PENALTY PAYMENTS

- (247) It is now more than 27 months since the Decision was adopted and more than 19 months since Microsoft's application for interim measures was rejected. Microsoft's delay in complying with its obligations under the Decision is liable to further increase the risk of elimination of effective competition on the market for work group server operating systems, where, at the time of the Decision, Microsoft had already achieved a dominant position and was likely to eliminate all competition (recital 1070 of the Decision). Market data indicate that Microsoft's market share continues to grow steadily.<sup>332</sup> Since the market for work group server operating systems is characterised by high barriers to entry (recitals 515 to 525 of the Decision), due among other things to indirect network effects that reinforce each other (see recital 653 of the Decision), this deterioration in the market structure risks becoming irreversible. As such, ensuring Microsoft's compliance is now a matter of even greater urgency than before.
- (248) Following the Article 24(1) Decision, which imposed a periodic penalty payment of EUR 2 million per day, Microsoft has not taken the necessary measures for at least seven months.<sup>333</sup> In the light of the urgent need to establish compliance, it is therefore appropriate to amend that decision and increase the level of the periodic penalty payment to EUR 3 million, with effect from 31 July 2006. Since it is possible that the disclosure order in Article 5(a) and (c) of the Decision can be entirely or largely deprived of its effectiveness either through Microsoft's failure to provide complete and accurate technical documentation embodying the Interoperability Information or by Microsoft requiring an unreasonable remuneration, this amount should apply equally to both aspects of Microsoft's non-compliance preliminarily identified in the Article 24(1) Decision. Consequently, if Microsoft does not comply with its obligations by 31 July 2006, the Commission may decide to fix definitively the full amount of this increased periodic penalty payment for any subsequent relevant period of non-compliance in respect of either aspect of Microsoft's non-compliance, taken in isolation, or for both, taken together.

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<sup>332</sup> According to IDC ('International Data Corporation'), in 2004, Windows' share for the "*file/print sharing*" workload amongst servers costing under USD 25,000 stood at 72.8% when measured by unit (increasing from 66.4% in the year 2002). For the "*networking*" workload, the corresponding figures were 74.6% when measured by unit shipments in 2004 (increasing from 66.7% in the year 2002). (Source: Server Workloads 2005: Understanding Server Deployment).

<sup>333</sup> This is without prejudice to the question of whether Microsoft has, since the end of the relevant period, taken the necessary measures to establish compliance.

HAS ADOPTED THIS DECISION:

*Article 1*

For the period between 16 December 2005 and 20 June 2006, the definitive amount of the periodic penalty payment imposed on Microsoft Corporation by Commission Decision C(2005)4420 final of 10 November 2005 for failure to comply with its obligation to make Interoperability Information available to interested undertakings pursuant to Article 5(a) and (c) of Commission Decision C(2004)900 final of 24 March 2004 is fixed at EUR 280.5 million.

*Article 2*

The definitive amount of the periodic penalty payment specified in Article 1 shall be paid, within 3 months of the date of notification of this Decision, into the following bank account:

Account N°

No 001-3953713-69 of the European Commission with  
FORTIS BANK S.A, Rue Montaigne du Parc, 3 at B-1000 Brussels  
(Code SWIFT GEBABEBB – Code IBAN BE71 0013 9537 1369)

After the expiry of the period of three months, interest shall automatically be payable at the interest rate applied by the European Central Bank to its main refinancing operations on the first day of the month in which this Decision was adopted, plus 3.5 percentage points.

*Article 3*

In Article 1 of Commission Decision C(2005)4420 final of 10 November 2005, the following sentence is added:

“If Microsoft Corporation has not complied with the obligations set out in Article 5(a) and (c) of Commission Decision C(2004)900 of 24 March 2004 by 31 July 2006, the periodic penalty payment imposed pursuant to the second paragraph of this Article shall be increased to EUR 3 million per day, calculated from that date.”

*Article 4*

This Decision is enforceable pursuant to Article 256 of the EC Treaty.

*Article 5*

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

Done at Brussels, 12 July 2006

*For the Commission*

Neelie KROES

*Member of the Commission*