EXHIBIT B

ORACLE USA, INC., ET AL

V.

SAP AG, ET AL

CASE NO. 07-CV-01658

SUPPLEMENTAL EXPERT REPORT OF PAUL K. MEYER

TM FINANCIAL FORENSICS, LLC.
FEBRUARY 23, 2010

Paul K. Meyer

PAUL K. MEYER

I. Introduction

A. Background and Experience

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2. I am a Certified Public Accountant (CPA), Certified Fraud Examiner (CFE), Certified in Financial Forensics (CFF) and accredited in business valuation (CPA ABV). I am a Consulting Professor at Stanford University in the Graduate School of Engineering, where I have been teaching a course covering accounting, quantitative methods and financial issues for over fifteen years. I am also a member of the Advisory Board for the McIntire School of Commerce at the University of Virginia. I graduated from the University of Virginia in 1979. I lecture on intellectual property valuation, including at the Sedona Patent Conference, the USC Intellectual Property Institute, the Licensing Executive Society and Law Seminars International.

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4. I have over twenty five years of experience consulting on financial, accounting, economic and damages matters. I am experienced in financial, economic, damage, and accounting matters related to the scope of my work, analysis and study on this matter. I have consulted on numerous intellectual property infringement, misappropriation, valuation and licensing related matters. I have analyzed hundreds of claims for lost profits and other financial and economic impacts, and have analyzed and determined reasonable royalty rates. I have consulted on matters involving software including operating systems, natural language search software, ETL software, Unicenter software, mainframe application development tools, business analytics software, CAD verification software, sales management application software, hard drive partitioning software and server synchronization software, among others. I have consulted on numerous matters related to claims of copyright infringement including software, audio streaming, training materials, hardware service manuals, online business methods, website designations and architectural plans, as examples. I have testified in over two hundred depositions and approximately seventy trials and major arbitrations, including over thirty jury trials.

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V. Quantification of SAP's "Value of Use" of Oracle's Copyrighted Property – Overview and Methodology

A. Overview

91. I understand that in matters of copyright infringement, a plaintiff's available damages remedies include the plaintiff's actual damages, as well as the disgorgement of the infringer's profits, to the extent they are not taken into account in the computation of plaintiff's actual damages. In the alternative, the plaintiff may seek statutory damages.[258] A plaintiff's actual damages resulting from copyright infringement can be measured in alternate ways: "Actual damages are usually determined by the loss in the fair market value of the copyright, measured by the profits lost due to the infringement or by the value of the use of the copyrighted work to the infringer."[259] One articulation of the "value of use" measure of damages is explained as:

[258] *Nimmer on Copyrights*, August 2009, Volume 4, Chapter 14 "Infringement Actions Remedies", at §14.01[A] and 14.01[B] (pgs. 14-5, 14-6 and 14-9).

[259] *See Polar Bear Prods. v. Timex Corp.*, 384 F.3d 700, 708 (9th Cir. 2004) (quoting *McRoberts Software, Inc. v. Media 100, Inc.*, 329 F.3d 557, 566 (7th Cir. 2003)). *See also* Nimmer on Copyrights, at §14.02 (pgs. 14-13 and 14-20.1 through 14-

"It amounts to a determination of what a willing buyer would have been reasonably required to pay to a willing seller for plaintiff's work. That is a different measure than the determination of defendant's actual profits from the infringement. An author might license the use of his copyright either for a lump sum based on the reasonable value of the work or for a royalty derived from the licensee's profits, or for a combination of both."[260]

92. I understand that courts, including the Ninth Circuit, have held that the actual damages for the defendant's "value of use" may be determined on the basis of a fair market value license fee paid for use of the plaintiff's work.[261] I understand that the Ninth Circuit Model Civil Jury Instruction on actual damages in copyright infringement matters states, "The reduction of the fair market value of the copyrighted work is the amount a willing buyer would have been reasonably required to pay a willing seller at the time of the infringement for the actual use made by the defendant of the plaintiff's work."[262] As noted in *Nimmer on Copyrights*, the similarities between the

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31). *See also Mackie v. Rieser*, 296 F.3d 909, 917 (9th Cir. 2002); *Frank Music Corp. v. Metro Goldwyn Mayer, Inc.*, 772 F.2d 505, (9th Cir. 1985); and *Jarvis v. K2, Inc.*, 486 F.3d 526, 533 (9th Cir. 2007).

[260] The decision of the U.S. Court of Appeals for the Ninth Circuit acknowledges, "This same distinction is recognized in patent cases." *Sid & Marty Krofft Television Prods., Inc. v. McDonald's Corp.*, 562 F.2d 1157, (9th Cir. 1977).

[261] *Polar Bear Prods. v. Timex Corp.*, 384 F.3d 700, 708 (9th Cir. 2004); *Jarvis v. K2, Inc.*, 486 F.3d 526, 533 (9th Cir. 2007); *Mackie v. Rieser*, 296 F.3d 909, 917 (9th Cir. 2002); *Frank Music Corp. v. Metro Goldwyn Mayer*, 772 F.2d 505, (9th Cir. 1985); and *Sid & Marty Krofft Television Prods., Inc. v. McDonald's Corp.*, 562 F.2d 1157, (9th Cir. 1977); January 28, 2010 Order of Judge Hamilton, Order Denying Defendants' Motion for Partial Summary Judgment, pg. 3. Relevant case law may refer to the standard of measurement as the "fair market value" or "market value," which can be terms of art in the context of valuation of particular assets, and with respect to financial reporting. For purposes of my analysis, references to "fair market value" throughout this declaration refer to the amount at which property would exchange between a willing buyer and willing seller, in an arm's length transaction, neither being under compulsion, and each having reasonable knowledge of the relevant facts. This definition is consistent with guidance of the American Institute of Certified Public Accountants (AICPA) and relevant treatises on the valuation of intellectual property. *See, e.g.,* the June 2007AICPA Statement on Standards for Valuation Services No. 1, "Valuation of a Business, Business Ownership Interest, Security, or Intangible Asset", pg. 44; *see also Intellectual Property, Valuation, Exploitation, and Infringement Damages*, by Gordon V. Smith and Russell L. Parr. 2005 Edition, pg. 143.

[262] Ninth Circuit Model Civil Jury Instruction 17.23 Copyright Damages Actual Damages.

"value of use" theory of copyright damages and the reasonable royalty rule in patent law are apparent.[263]

B. Methodology

93. What a willing buyer would have paid a willing seller for use of the infringed PeopleSoft/J.D. Edwards, Siebel and Oracle Database copyrighted software and software support materials ("copyrighted materials in suit") can be determined based on analyses indicating the fair market value of the copyrighted materials in suit to the parties at the time of first infringement. I have determined what Oracle, as a willing seller, would have accepted from SAP, as a willing buyer. I understand from Judge Hamilton's January 28, 2010 ruling Denying Defendants' Motion for Partial Summary Judgment, "Oracle in the present instance is not required to prove that it would have successfully negotiated a license with SAP, nor is it precluded from seeking license damages simply because it has never before licensed what SAP infringed."[263A] The copyrighted materials in suit are set forth in Oracle's Fourth Amended Complaint and are also summarized in Oracle's technical expert reports.[264]

94. SAP's "value of use" is measured as it impacts Oracle's consolidated operations and family of entities, although the successor in interest to the relevant copyright owners or exclusive licensees at the time of the valuation is Oracle International Corporation. In entering into a license with SAP, Oracle International Corporation would act on behalf of its predecessors in interest,

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[263] *Nimmer on Copyrights,* at §14.02[B][1] (pgs. 14-22).

[263A] January 28, 2010 Order of Judge Hamilton, Order Denying Defendants' Motion for Partial Summary Judgment, pg. 4.

[264] *See* Oracle USA, Inc. et al v. SAP AG et al, Fourth Amended Complaint in Case No. 07-CV-01658 dated August 18, 2009, pgs. 6 and 51-55; November 16, 2009 Expert Report of Paul Pinto, pg. 2; February 12, 2010 Supplemental Expert Report of Kevin Mandia, pgs. 10 and 98-99.

affiliates, and ultimate parent and SEC Registrant, Oracle Corporation. I understand this approach is consistent with the *Union Carbide Chemicals and Plastics Technology Corporation, et al., v Shell Oil Company et al*., matter.[265]

95. As addressed below, I have determined SAP's "value of use" of the copyrighted materials in suit based on commonly accepted valuation methodologies: the market approach, income approach and cost approach. I have also evaluated relevant financial, economic and other factors, consistent with determination of the fair market value under the framework of the well known patent case, *Georgia Pacific Corp. v. U.S. Plywood Corp. ("Georgia Pacific"),* for determining the outcome of a hypothetical license negotiation for the copyrighted materials.

96. I have employed these valuation methodologies throughout my twenty five years of experience in consulting on financial, accounting, economic and damages matters, and specifically as it relates to the valuation of intellectual property and related financial damages. I have testified at trial, arbitration and deposition on the determination of financial damages using valuation techniques including the determination of reasonable royalties in the context of a hypothetical negotiation based on the evaluation of economic and other factors, including the *Georgia Pacific* factors. I have offered expert witness testimony on the valuation of intellectual property, including copyrighted works, after considering and using the cost, market and income valuation approaches. I have analyzed, and testified to, the damages for copyright

[265] *Union Carbide Chemicals & Plastics Technology Corp., et al., v. Shell Oil Company, et al.*, 425 F. 3d 1366. *Union Carbide* is a patent case where the federal circuit upheld the district court's admission of evidence regarding the impact of infringer's sales on the parent of a holding company that holds the title to the intellectual property. The federal circuit found "Simply put, the holding company would not enter any negotiation without considering the competitive position of its corporate parent."

infringement based on the above described framework of a hypothetical license negotiation as well as using accepted valuation methodologies.

97. As previously explained in my September 23, 2009 Declaration in Support of Oracle's Opposition to Defendants' Motion for Partial Summary Judgment Regarding Plaintiffs' Hypothetical License Damages Claim, there are well established, widely accepted techniques for the valuation of intangible assets, including intellectual property such as the copyrighted materials in suit. These techniques include the market approach, income approach and cost approach.[266]

98. The market approach involves determining the fair market value of intellectual property based on a comparison to what others have agreed upon in arm's length transactions involving similar assets.[267]

99. Using the income approach, the fair market value of the intellectual property is determined based on the value of the future economic benefits that are expected to be generated by the asset.[268] A variation of the income approach is the relief from royalty approach, whereby intellectual property is valued based on the present value of the royalties that the property owner is relieved from paying as a result of owning the asset.[269]

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[266] *Intellectual Property, Valuation, Exploitation, and Infringement Damages*, by Gordon V. Smith and Russell L. Parr, 2005 Edition, pgs. 148-154.

[267] *Intellectual Property, Valuation, Exploitation, and Infringement Damages*, by Gordon V. Smith and Russell L. Parr, 2005 Edition, pg. 169.

[268] *Intellectual Property, Valuation, Exploitation, and Infringement Damages*, by Gordon V. Smith and Russell L. Parr, 2005 Edition, pg. 185.

[269] *Intellectual Property, Valuation, Exploitation, and Infringement Damages*, by Gordon V. Smith and Russell L. Parr, 2005 Edition, pg. 194. I refer to the Relief-from-Royalty Approach and the Income Approach collectively as the "Income Approach."

100. The cost approach measures the market value of intellectual property based on the cost to replace the future service capability of the copyrighted asset. The Cost Approach does not directly consider the future economic benefits of the assets.[270]

101. In the valuation of intellectual property, it is common to consider analysis of the fair market value under multiple valuation approaches.[271] In litigation matters, it is common for practitioners to value intellectual property using a hypothetical negotiation considering financial, economic and other factors addressed in *Georgia Pacific.* As explained in Oracle's Opposition to Defendants' Motion for Partial Summary Judgment Regarding Plaintiffs' Hypothetical [Fair Market Value] License Damages, I understand that the *Georgia Pacific* hypothetical license methodology and factors mirror those used in copyright infringement cases, including in the Ninth Circuit.[272]

102. For PeopleSoft/J.D. Edwards and Oracle Database, when used in conjunction with providing support for PeopleSoft/J.D Edwards customers, the hypothetical negotiation for a license to Oracle's copyrighted materials in suit would occur at or around the date of SAP's first infringement, January 2005, when SAP first acquired TomorrowNow. For Siebel and Oracle Database, when used in conjunction with providing support for Siebel customers, the hypothetical negotiation would occur at or around the date of SAP's first infringement, September 2006, when TomorrowNow first

[270] *Intellectual Property, Valuation, Exploitation, and Infringement Damages*, by Gordon V. Smith and Russell L. Parr, 2005 Edition, pg. 156.

[271] *Intellectual Property, Valuation, Exploitation, and Infringement Damages*, by Gordon V. Smith and Russell L. Parr, 2005 Edition, pg. 155.

[272] Plaintiffs' Opposition to Defendants' Motion for Partial Summary Judgment Regarding Plaintiffs' Hypothetical [Fair Market Value] License Damages, September 23, 2009, pgs. 15-16.

contracted to provide Siebel service to a customer.[273] For all licenses the term end date is October 31, 2008.[274]

103. Based on my analysis of the relevant factors, including consideration of the circumstances confronting SAP prior to acquiring TomorrowNow in 2005, I have determined the amount that SAP as a willing buyer would pay Oracle, and that Oracle as a willing seller would accept from SAP in the form of a license fee to represent SAP's "value of use" of Oracle's PeopleSoft related copyrighted materials in suit. TomorrowNow needed access to Oracle Database in order to provide support to a portion of its PeopleSoft/J.D. Edwards customer base, which was running applications on Oracle Database. I have also considered the value of use of Oracle Database copyrighted materials in suit. Separately, based on my analysis of the relevant factors, including consideration of the circumstances confronting SAP prior to expanding TomorrowNow's support offerings to include Siebel products, I have determined the amount that SAP as a willing buyer would pay Oracle, and that Oracle as a willing seller would accept from SAP in the form of a license fee to represent SAP's "value of use" for Oracle's Siebel related copyrighted materials in suit.

104. I understand there are limitations on the fair market value license measure of copyright actual damages. I understand it must relate to the fair market value of a license that allows for SAP's actions that constitute copyright infringement, and cannot allow for more or different infringement

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[273] TN-OR07717977, Siebel Services.xls. On September 29, 2006, TomorrowNow entered into a Support Services Agreement with its first Siebel customer, MKS, Inc.

[274] I understand that Oracle alleges Defendants' infringing activity continued until the closing of TomorrowNow's operations in October 2008 (*See* section IV.E of this Report).

than actually occurred.[275] A business arrangement between the two companies that involved a license reflecting the full spectrum of use of the copyrighted and non copyrighted materials by Defendants, beyond the actions that constitute copyright infringement in this matter, and which is indifferent to whether particular foreign Oracle subsidiaries are named plaintiffs on the cause of action, would likely have a higher value than the fair market value licenses determined herein. Some of that difference is captured by Oracle's interference claims.

105. SAP's benefits from the ability to reproduce, disseminate or make derivative works of the copyrighted materials in suit include enhanced revenues, improved market position, enhanced customer retention, avoided costs, avoided risks and ease of market entry. Additionally, SAP benefits as Oracle, its most significant competitor, is negatively impacted by SAP's use of Oracle's copyrighted materials in suit. I have determined the overall fair market value of these benefits to SAP. I understand that the copyrighted materials in suit are essential, and without a license to the Oracle copyrighted materials in suit, SAP could not offer a level of support services to Oracle's PeopleSoft, J.D. Edwards, Siebel and Oracle Database customers as quickly as

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[275] E.g., *Wall Data v. Los Angeles County Sheriff's Dep't*, 447 F.3d 769, 786-787 (9th Cir. 2006). In addition, I understand that, for standing reasons, the hypothetical license would not allow for the sale of software or support services in EMEA (Europe, the Middle East and Africa) for the J.D. Edwards EnterpriseOne versions 8.11 and earlier and Siebel versions 7.8 and earlier product lines. I understand that J.D. Edwards Europe Ltd. and Siebel Systems Ireland Holdings Ltd. own exclusive licenses to the relevant copyrights for these products in EMEA, and thus are the entities that would have legal standing to bring claims for copyright infringement related to those exclusive licenses. These are not named plaintiffs to Oracle's copyright infringement claim, so while damage occurred to Oracle entities, I understand it may not be recovered under the copyright infringement claim in this suit.

SAP desired, or comparable to the level of service and at the price provided by TomorrowNow.[276]

VI. Quantification of SAP's "Value of Use" of Oracle's Copyrighted Property - PeopleSoft/J.D. Edwards Copyright Infringement

106. Both Oracle and SAP value support contract revenue, profits and related customer relationships. These profits are the base on which research and development is funded, customer relationships are enhanced, and future software license sales occur.[277] Both companies seek to protect this valuable revenue and profit stream by maintaining exclusivity over advanced levels of

[276] For purposes of this Report, "level of service" refers to the depth and breadth of support services offered. Oracle refers to support services generally by "levels" of service. Colleen Kelly, Oracle's Senior Director of Global Practices, defined support by level as, "First level support typically involves responding to telephone, email or web-based requests for support, incident tracking and resolving customer issues. Second level support may include the same services provided in first level of support, but could involve more complex issues, and might also involve the partner helping the customer create and manage an incident request that is sent to Oracle's support team seeking Oracle's assistance." Oracle then provides an additional level of support which pertains to using Oracle's application software and support materials in order to create fixes, patches or updates for customers. Declaration of Colleen A. Kelly in Support of Oracle's Opposition to Defendants' Motion to Compel Discovery concerning Third party Support Provided by Oracle's Partners, dated January 23, 2009, pgs. 1-2. *See* also, SAP Presentation, January 17, 2007 SAP-OR00141563-66 (Ziemen Exhibit 470), at 565 citing a Gartner industry analysts opinion that Systime, a third-party provider of support for SAP software, "can not be seen as a real alternative because without access to the SAP source code the whole offering is more or less useless." Oracle expert Kevin Mandia concluded that TomorrowNow's entire business model relied upon the alleged infringement and misuse of Oracle's Software and Support Materials, and the unauthorized downloading and copying of Oracle's intellectual property [February 12, 2010 Supplemental Expert Report of Kevin Mandia, pgs. 1- 3].

[277] Email from Leo Apotheker to Erwin Guust, Re: Maintenance, dated March 20, 2007, SAP-OR00206971 (Ziemen Exhibit 467) [SAP and Oracle have similar business models where profits from support services are used to fund future R&D efforts]; Deposition of Charles Phillips (Oracle Co-President), April 17, 2009, pg. 63 [support dollars fund product development]; Deposition of Hasso Plattner (SAP Supervisory Board Chairman), June 2, 2009, pgs. 53-54 [acquiring companies are looking to get revenue streams from the maintenance that the customer base pays; acquirers are hoping to sell new licenses to acquired customer base];.EWeek.com article "SAP Touts Synergies in Business Objects Deal," October 8, 2007 ["We have many clients asking for highly, tightly integrated solutions, and we can expand our customer base and exploit up-selling opportunities," Kagermann said]; Deposition of Safra Catz (Oracle Co-President), March 27, 2009, pgs. 77-78 [goals of PeopleSoft acquisition included enlarging customer base to fund more R&D].

support, and maintaining controls over proprietary software and support materials through their respective intellectual property.[278]

107. In its acquisition of PeopleSoft, Oracle understood that it was acquiring an entity with customer relationships that had significant recurring/on going revenue from support contracts, which was largely protected by PeopleSoft intellectual property. Oracle Senior Executives were well aware that PeopleSoft's products, services and customer support revenue stream were largely protected by copyright or other intellectual property.[279] Strategically, Oracle's senior executives understood the overall importance of the PeopleSoft acquisition to Oracle's future. Oracle has been highly successful in seamlessly integrating acquired software companies on a large and small scale, and Oracle has acquired at least 11 notable software companies since January 2005.[280]

108. The fair market value of SAP's access to Oracle's copyrighted materials in suit related to PeopleSoft, through its acquisition of TomorrowNow, was significant, as it paralleled in time Oracle's acquisition of PeopleSoft, and was based on expectations that similarly anticipated the value of PeopleSoft's intellectual property and on going support contracts. The PeopleSoft/J.D.

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[278] Deposition of Thomas Ziemen (SAP Vice President, Service Solution Management), October 1, 2008, pg. 438. [SAP does not have contracts with non-SAP entities that allows them to service SAP applications.]; Oracle Corporation Form 10-K for the fiscal year ended May 31, 2007, pg. 26 [acquisition program "expands our customer base and provides greater scale to increase our investment in research and development to accelerate innovation, grow our earnings and increase stockholder value."]; Bernstein Research Call, November 4, 2004, pg. 3. ["By buying PSFT, ORCL is in effect purchasing a maintenance annuity stream and some incremental license, service, and maintenance revenue opportunities."]

[279] Discussions with Safra Catz (Oracle Co-President and Executive Board Member); eWeek.com article, "Oracle Warns SAP to Step Lightly," January 26, 2005 (Ellison Exhibit 404) [Quoting Larry Ellison as saying, "SAP has every right to provide support for PeopleSoft applications as long as they don't violate our intellectual and contractual property rights."]; Deposition of Larry Ellison (Oracle CEO and Executive Board Member), May 5, 2009, pgs. 117-119.

[280] *See* **SCHEDULE 2.SU.**

Edwards copyrighted materials in suit were necessary for TomorrowNow to offer its customers "comparable" or "superior" support at half Oracle's price, in the time and manner offered, as well as enable SAP to be ready to support future customers.[281]

109. In this matter, copyrights cover the creative works of software developers, including the programming code that ensures that software products, upgrades and bug fixes function as intended.[282] Unlike a patent license that only provides "use" rights and requires technology development by the licensee, in this instance, the copyright license provides for access to and use of existing software code. That software code has already been licensed by a large installed base of customers, and is already running at customer locations, thereby creating 'demand' for related support services. This built in ready demand and support revenue stream, as well as the ability to deepen the customer relationship and sell more software, are key reasons SAP would desire to license the copyrighted materials in suit.

110. Just before SAP announced it was acquiring TomorrowNow to target the PeopleSoft support customer base, Oracle had agreed to pay $11.1 billion for PeopleSoft, including its significant annual support revenue stream.[283] The value that Oracle paid for PeopleSoft in an arm's length market transaction, virtually identical in time to SAP's acquisition of TomorrowNow, is particularly relevant to understanding the fair market value of SAP's value of

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[281] Discussions with Kevin Mandia; February 12, 2010 Supplemental Expert Report of Kevin Mandia, pgs. 1, 3, 25 and 32.

[282] Discussion with Doug Lichtman; November 16, 2009 Expert Report of Doug Lichtman, pgs. 21-23. Oracle USA, Inc. et al v SAP AG et al, Fourth Amended Complaint in Case No. 07-CV-01658 dated August 18, 2009, pgs. 16-17.

[283] Oracle Annual Report for the fiscal year ended May 31, 2005, pgs. 72-74; "Oracle Corporation: Estimation of the Fair Value of Certain Assets and Liabilities of PeopleSoft, Inc. as of December 28, 2004," ORCL00313160-253, at 171 and 204.

use of the infringed materials in the assessment of damages in this matter. Of particular relevance is the value to Oracle of the acquired PeopleSoft on going support customer revenue and enhanced customer relationships, which were expected to lead to additional license sales of PeopleSoft and/or other Oracle software. Without the copyrighted materials in suit, no support competitor could offer the same breadth and depth of support services as Oracle could as the copyright owner. In the alternative, massive investments in research and development to attempt to independently create the copyrighted materials in suit would be required. I understand that the PeopleSoft/J.D. Edwards copyrighted materials in suit would have been very costly to independently develop.[284]

111. As explained further below, I have taken these issues into consideration in my determination of the fair market value of the copyrighted materials in suit using the market, income and cost valuation approaches, as well as in my analysis of financial, economic and other factors relevant to the determination of the outcome of a hypothetical negotiation between Oracle and SAP for SAP's use of the copyrighted materials in suit.

A. PeopleSoft/J.D. Edwards Copyright Infringement - Determination of SAP's "Value of Use" Based on the Market Approach, Income Approach and Cost Approach

112. In the following sections, I analyze the fair market value of the copyrighted materials in suit in the context of these three valuation approaches. These fair market values reflect the amount that SAP as a willing buyer would pay Oracle, and that Oracle as a willing seller would

[284] Discussions with Paul Pinto; November 16, 2009 Expert Report of Paul Pinto, pg. 43 (Mr. Pinto calculated a total development cost for selected PeopleSoft and JDE applications he evaluated of $1.275 billion [$320 million for JDE Enterprise One + $707 million for PeopleSoft + $248 million for JDE World]).

accept in January 2005 to secure access to, and use of, Oracle's PeopleSoft and J.D. Edwards related copyrighted materials in suit. I understand that the scope of copyrighted materials in suit is extensive and involves access to virtually every PeopleSoft/J.D. Edwards software application, software and support materials.[285] I understand that SAP would have access to the copyrighted materials in suit it needed to provide service to PeopleSoft/J.D. Edwards customers until at least October 2008.

1. Market Approach

113. The market approach provides a determination of fair market value based on a comparison of the subject intellectual property to relevant licensing and sales transactions involving the subject intellectual property and/or transactions involving the parties in suit or comparable transactions within the industry. In the market approach, I consider market transactions involving sales of all or part of the subject intellectual property, the consideration paid by Oracle to PeopleSoft to acquire the property and other market transactions involving software.

a. Oracle's Acquisition of PeopleSoft

114. Theoretically, in lieu of illegally accessing the copyrighted materials in suit, SAP could have entered into a fair market value transaction and acquired a portion of the PeopleSoft/J.D. Edwards customer base and the associated revenue stream. The value that Oracle paid on a per customer basis for PeopleSoft/J.D. Edwards reflects an arm's length transaction to acquire those customer relationships, revenue and future business opportunities. Oracle

[285] Discussions with Paul Pinto and Kevin Mandia; February 12, 2010 Supplemental Expert Report of Kevin Mandia, pgs. 1-3, Section VI (pgs. 34-58), Section VII.A-G (pgs. 59-73) and Appendices D-H; Deposition of Edward Screven (Oracle Chief Corporate Architect), November 30, 2009, pgs. 31-32 (explaining that newer versions of PeopleSoft and J.D. Edwards applications incorporate almost all of the code of the older versions).

acquired the entire PeopleSoft, Inc. company for $11.1 billion in January 2005.[286] As part of Oracle's acquisition of PeopleSoft, Oracle acquired the intellectual property of PeopleSoft, including the PeopleSoft copyrighted materials in suit related to: PeopleSoft Enterprise, J.D. Edwards Enterprise One and J.D. Edwards World software applications and then existing software and support materials.[287] In addition, Oracle acquired access to approximately 9,920 PeopleSoft customers who were, at the time of acquisition, under support contracts with PeopleSoft.[288] PeopleSoft projected 2004 total revenues, including license and services, of $2.7 billion.[289] Oracle's acquisition price was approximately 4 times PeopleSoft's then reported annual revenues.[290]

115. As discussed in section III.B above, Oracle Senior Executives viewed the PeopleSoft acquisition as providing important new or deepened access to PeopleSoft's customer base and technology. The $11.1 billion acquisition price equates to an investment of approximately $1 million per customer, on average. Oracle Senior Executives have indicated that one way they would consider the impact of a hypothesized PeopleSoft/J.D. Edwards license to SAP would be to consider the volume of customers they would have expected to lose to SAP as a result of the license. For example, if 30% of support customers would be lost to SAP, Oracle Senior Executives would consider the fair market

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[286] Oracle Annual Report for the fiscal year ended May 31, 2005, pgs. 72-74.

[287] Oracle Annual Report for the fiscal year ended May 31, 2005, pgs. 72-74.

[288] "Oracle Corporation: Estimation of the Fair Value of Certain Assets and Liabilities of PeopleSoft, Inc. as of December 28, 2004," ORCL00313160-253, at 188.

[289] **SCHEDULE 2.SU**

[290] **SCHEDULE 2.SU**

value of that loss to be approximately $3.33 billion, or 30% of PeopleSoft's acquisition price.[291]

116. Oracle acquired significant intangible asset value with the PeopleSoft acquisition. Oracle retained Standard & Poor's ("S&P") to value certain PeopleSoft assets and liabilities acquired and allocate the $11.1 billion acquisition price for financial reporting purposes.[292] S&P determined that the intangible assets were worth approximately $9.9 billion, including the value of goodwill, patents/core technology, maintenance agreements and related customer relationships and tradenames/trademarks.[293] The purpose of S&P's valuation was to provide individual asset category values which could be recognized as separate assets in Oracle's financial reporting resulting from the acquisition. Table 6 summarizes the intangible asset valuation for Oracle's acquisition of PeopleSoft as reported on Oracle's financial statements.

[291] Discussions with Larry Ellison (Oracle CEO and Executive Board Member), Safra Catz and Charles Phillips (Oracle Co-Presidents and Executive Board Members).

[292] "Oracle Corporation: Estimation of the Fair Value of Certain Assets and Liabilities of PeopleSoft, Inc. as of December 28, 2004," ORCL00313160-253, at 161 and 205.

[293] "Oracle Corporation: Estimation of the Fair Value of Certain Assets and Liabilities of PeopleSoft, Inc. as of December 28, 2004," ORCL00313160-253, at 249.

Table 6: Intangible Asset Valuation[294] Oracle's Acquisition Price of PeopleSoft ($ In Millions)		
Goodwill	$	6,487
Other Intangible Assets:		
Existing Technology		614
Patents/Core Technology		349
Maintenance Agreements and Customer Relationships		2,101
Customer Relationships		250
Tradenames/Trademarks		70
Subtotal Other Intangible Assets	$	3,384
Total	$	9,871

117. S&P's valuation of PeopleSoft's intangible assets provides a contemporaneously prepared indication of the fair market value of the PeopleSoft/J.D. Edwards related copyrighted materials in suit. While S&P did not specifically value solely the copyrighted materials in suit, relevant portions of the S&P intangible asset valuation include the value of using the

[294] Amounts in Table 6 reflect Oracle's financial statement disclosures regarding the accounting for the acquisition. S&P's allocation of acquisition value to intangible assets varies slightly from the accounting in the financial statements [*See* Oracle Annual Report for the fiscal year ended May 31, 2005, pgs. 16 and 72-74; **SCHEDULE 3]**; "Oracle Corporation: Estimation of the Fair Value of Certain Assets and Liabilities of PeopleSoft, Inc., as of December 28, 2004," ORCL00313160-253, at 204. S&P's valuation of PeopleSoft's other intangible assets, excluding goodwill, totaled $3.6 billion. Oracle's financial statement disclosures recorded certain support agreements, valued at $208 million, for which PeopleSoft had not been paid as of the acquisition, within prepaid expenses and other current assets, rather than in intangible assets. Additionally, In-Process Technology valued at $33 million was recorded as "In-process research and development" in the financial statement disclosures and not included in the total identified intangible assets. These two adjustments reduce the intangible asset value on the financial statements to $3.4 billion [$3,625 (S&P) less $208(prepaid expense) less $33 (R&D) = $3,384]. S&P's asset valuation includes $2.3 billion for maintenance agreements and customer relationships. I have used $2.1 billion for these intangible assets in this report based on S&P's valuation excluding consideration of $208 million of support contracts mentioned above.

copyrighted materials in suit to provide service and enhance customer relationships. S&P's separate valuations performed for the following intangible asset categories include value attributable to the copyrighted materials in suit: maintenance agreements and related customer relationships, the cost to replace customer relationships, and residual value attributable to goodwill.[295] As addressed earlier in this Report, SAP acknowledged that it required PeopleSoft's software and support materials in order to solicit comparable or better support services to PeopleSoft customers.[296] Without the PeopleSoft copyrighted materials that SAP obtained without a license from Oracle, SAP would not be able to represent to PeopleSoft customers that it could meet the support service contract requirements, nor garner the customer referrals that eased customer concerns about the quality of service.[297] The illegally obtained copyrighted materials in suit enabled SAP to provide customer support.

[295] S&P's valuation of Existing and In-Process Technology is not relevant to the determination of the copyright value in this matter because it measures the capability of the technology to generate new license revenues for that technology. In these circumstances, since SAP would not be selling licenses for the copyrighted software applications, this measure of value is unrelated to the alleged improper actions of SAP and TomorrowNow. Although, I understand that in some cases, TomorrowNow may have or did distribute CD's, instruction manuals and/or other items containing PeopleSoft trade names or trademarks, for purposes of this valuation, I have excluded any value associated with those alleged actions. SAS-TN-OR04446719-OR-00220 238 (Baugh Exhibit 1537); WMIFIX-TN-OR-01823634-OR-00039 51 (Russell Exhibit 304); SAS-TN-OR00009569-OR-00221 226 (Hyde Exhibit 116); TN-OR00809640-760 (Hyde Exhibit 118).

[296] *See* section IV.B.4 of this Report.

[297] The importance of getting client references was regularly noted in TomorrowNow "Win" announcements. Deposition of Andrew Nelson (Co-Founder of TomorrowNow), February 26, 2009, pgs. 202-203. *See*, as examples, TomorrowNow email from Bob Geib to all TomorrowNow employees, Re: TomorrowNow WINS! High Industries (PeopleSoft) Part TWO, TN-OR00061877-78 (Hurst Exhibit 167), at 78; TomorrowNow email from Andrew Nelson to all TomorrowNow employees, Re: TomorrowNow WINS AGAIN! Telapex, Inc., TN-OR 03752526 (A. Nelson Exhibit 1022). Lesley Loftus, TomorrowNow Vice President of Global Marketing, testified that customer referrals were important because "it's a good foundation for a decision." [Deposition of Lesley Loftus, June 13, 2008, pg. 196]. As part of its marketing of the Safe Passage program, SAP sought to get TomorrowNow customer testimonials [Deposition of Terry Hurst (SAP Director of Competitive Programs), April 30, 2008, pg. 145-146; Home Depot reference quotes, SAP-OR00066889-91 (Hurst Exhibit 163)].

118. S&P's analysis provides separate values for each asset category. S&P valued PeopleSoft acquired maintenance agreements and related customer relationships at $2.1 billion. S&P used a discounted cash flow approach that considered projections through May 31, 2015 of future support revenues and costs resulting from Oracle's use of the copyrighted materials in suit to service the 9,920 customers of PeopleSoft software as of the date of Oracle's acquisition.[298] S&P's valuation deducts costs from projected support revenues related to providing service. The cash flow from operations is then discounted to January 2005 at 10%, resulting in a present value of cash flows of $1.86 billion.[299]

119. For the "market approach," I have considered the value assigned to the ongoing and future servicing of PeopleSoft customers, which have been valued at $2.1 billion. While the $2.1 billion valuation includes Oracle's rights to these annual agreements as well as the copyrighted materials, SAPs access and use of Oracle's copyrighted materials in suit enabled SAP to attempt to supplant Oracle as the support provider and, if successful, to receive the benefit of the support agreements which Oracle understood it was acquiring in the transaction (which were protected by PeopleSoft copyrights). Because the support contracts renew annually, SAP could dislodge Oracle at any time the contracts were up for renewal by offering comparable levels of service at discounted prices. Because the contemplated license terms presume that SAP would only be using the copyrighted materials in suit until October 2008, SAP would not dislodge all of Oracle's PeopleSoft support customers, and

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[298] "Oracle Corporation: Estimation of the Fair Value of Certain Assets and Liabilities of PeopleSoft, Inc. as of December 28, 2004," ORCL00313160-253, at 229.

[299] "Oracle Corporation: Estimation of the Fair Value of Certain Assets and Liabilities of PeopleSoft, Inc. as of December 28, 2004," ORCL00313160-253, at 229.

therefore some downward adjustment from the entire intangible asset value related to customer support contracts is warranted. My analysis takes this into consideration by apportioning the total value down to Oracle's anticipated customer loss.

120. S&P separately valued the cost to replace its estimate of approximately 4,200 new customer relationships Oracle acquired from PeopleSoft at $250 million.[300] This valuation assumes that by acquiring the customer base, Oracle avoided the cost of a 6 month sales cycle required to place a customer in a PeopleSoft license. Although SAP's use of the copyrighted materials was such that it was still required to solicit and attempt to establish TomorrowNow support relationships (e.g., TomorrowNow would still need to solicit the customer to obtain a support contract), SAP avoided the time and effort to get the customer to license PeopleSoft, instead spending a much shorter time to convince the customer to switch support providers. However, SAP indicates that it had less customer overlap with the PeopleSoft customer base than Oracle. A SAP presentation indicates that SAP's customer base overlapped with only approximately 2,000 PeopleSoft customers. Therefore, approximately 7,900 PeopleSoft customers would be new to SAP. I have considered that the $250 million fair market value for customer relationships represents the value of fewer customers than SAP would gain access to (4,200 versus 7,900), but will involve less SAP effort and time to complete the sales cycle than what was assumed for Oracle. Since those two considerations would have inverse impacts on the $250 million valuation, I conclude that using the $250 million as the fair market value for SAP's access to new

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[300] "Oracle Corporation: Estimation of the Fair Value of Certain Assets and Liabilities of PeopleSoft, Inc. as of December 28, 2004," ORCL00313160-253, at 193-194.

customer relationships would be relevant and additive to the fair market value of the support contracts discussed previously in valuing the fair market value of SAP's use of the copyrighted materials in suit. As with the fair market value of the support contracts, the total customer relationship value would have to be apportioned for an appropriate number of relevant customers.

121. The residual value of $6.5 billion for goodwill[301] includes value related to the copyrighted materials in suit as they provide for the generation of support revenues from customers that will purchase PeopleSoft products after Oracle's acquisition date, as well as revenues from sales of other Oracle software to PeopleSoft customers.[302] As addressed in section IV.B.3 of this Report, a primary benefit to SAP of supplanting Oracle in providing support for PeopleSoft and J.D. Edwards customers was SAP's ability to market and sell SAP software. As such, a portion of the goodwill Oracle recorded from the acquisition also reflects the value of SAP's use of Oracle's copyrighted materials in suit.

122. In order to determine the fair market value of Oracle's copyrighted materials for SAP's use in providing PeopleSoft support services, and new or enhanced customer relationships, the following indicators from Oracle's acquisition of PeopleSoft are relevant:

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[301] Goodwill is the excess of the purchase price paid for PeopleSoft over the value of the separately identified acquired assets.

[302] I consider the value of the copyrighted materials in suit in terms of their ability to generate sales of other Oracle products not to quantify the lost profits associated with Oracle's lost cross-sell and up-sell opportunities to TomorrowNow support customers, but as considerations that would inform and be relevant to the fair market value of Defendants' use of the allegedly infringed materials. I understand from Oracle's counsel, Defendants specifically did not seek preclusion of this measure of Oracle's copyright damages in its Motion for Sanctions Pursuant to Fed. R. Civ. P. 37(c) and 16(f).

- The Oracle acquisition of PeopleSoft was contemporaneous, in the same software market, involved the copyrighted materials in suit, and is a directly relevant market metric to determining the economic value gained by SAP.
- The copyrighted materials are key and enabling to providing support services and maintaining customer relationships. Additionally, the copyrighted materials or comparable independently developed materials are required resources to meet Oracle/PeopleSoft related customer support contract commitments.
- The copyrighted materials fair market value would include a portion of $8.85 billion, which includes the fair market value of all PeopleSoft support agreements and related customer relationships at the time of acquisition ($2.1 billion), the avoided cost of developing certain new customer relationships ($250 million) and Oracle's recorded goodwill ($6.5 billion).
- SAP's business strategy at the time of the alleged access to the Oracle copyrighted materials indicated that it planned to convert 3,000 PeopleSoft customers to SAP/TomorrowNow support services. Comparing the 3,000 customers to the total PeopleSoft customers of 9,920 indicates a targeted percentage of 30.2%. Applying this percentage to the value of the total support contracts, customer relationships and goodwill of $8.85 billion indicates a fair market value of the copyrighted

materials of $2.67 billion.[303] Applying the percentage that would result from 2,000 customers converting to SAP would result in a valuation of $1.78 billion.[304]

- Theoretically, in lieu of accessing the copyrighted Oracle materials, SAP could have entered into a fair market value transaction and acquired a portion of the PeopleSoft customer base and the associated support revenue stream. The value that Oracle paid on a per customer basis for PeopleSoft of approximately $1 million reflects an arm's length transaction to acquire those customer relationships, existing support revenue and future revenue expansion opportunities.[305]
- Although SAP targeted 3,000 PeopleSoft customers to convert to support contracts, using 2,000 potential customer relationships (enabled by the alleged copyright infringement) at $1 million per customer indicates a $2 billion valuation of the copyrighted materials.

123. The above factors and consideration indicate that the fair market value of SAP's alleged use of Oracle's copyrighted material for use in providing PeopleSoft's customer support services would be no less than $2 billion.

303 $8.85 billion * 30.2% = $2.67 billion. The income approach in the following section of this Report provides another perspective to the valuation estimate for the support agreements and related customer relationships.

304 $8.85 billion * 20.16% = $1.78 billion.

305 Oracle acquired PeopleSoft and its 9,920 customers for $11.1 billion, or approximately $1.1 million per customer. Data related to Oracle's acquisition of PeopleSoft provides directly comparable metrics of the fair market value for the copyrighted materials in suit.

b. PeopleSoft Acquisition of J.D. Edwards

124. On July 18, 2003, PeopleSoft acquired J.D. Edwards, a leading provider of enterprise software as well as related consulting, education and support services, for $2 billion.[306] For 2003, PeopleSoft reported revenues of $309.4 million for license, maintenance and professional services attributed to J.D. Edwards acquired software products.[307] PeopleSoft's acquisition price was approximately 6 times annual revenues.[308] PeopleSoft's acquisition of J.D. Edwards provides relevant market comparable information as it was an arms length transaction that included a portion of the copyrighted materials in suit. PeopleSoft allocated $532.6 million of the acquisition price to J.D. Edwards intangible assets, and separately $951.0 million to goodwill.[309] The intangible asset value included $411 million of value attributable to customer contracts, maintenance agreements and related relationships.[310] As an alternative to the illegal acquisition of the copyrights in suit, SAP could have paid for access to the intellectual property either through purchasing all, or part, of J.D. Edwards. This transaction provides relevant information towards determining the fair market value of SAP's use of the J.D. Edwards copyrights in suit of up to $1.36 billion.[311] I have considered that this value would not only relate to the J.D. Edwards related copyrighted materials in suit, but would also include the value of all J.D. Edwards customer contracts, maintenance agreements and related relationships projected beyond October

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[306] PeopleSoft Form 10-K for the fiscal year ended December 31, 2003, pg. 30.

[307] PeopleSoft Form 10-K for the fiscal year ended December 31, 2003, pg. 21.

[308] $2,000 million ÷ $309.4 million = 6.46.

[309] PeopleSoft Form 10-K for the fiscal year ended December 31, 2003, pg. 31.

[310] PeopleSoft Form 10-K for the fiscal year ended December 31, 2003, pg. 32.

[311] $951.0 million + $411 million = $1.36 billion.

2008, as well as goodwill. The transaction included a large revenue multiplier, significant goodwill, and included some of the copyrighted materials in suit.

c. SAP Acquisition of Business Objects

125. In 2008, SAP acquired Business Objects, a business intelligence software and services company for $7.1 billion.[312] For the year ended December 31, 2006, Business Objects' reported revenues were $1.25 billion.[313] SAP's acquisition price was approximately 6 times annual revenues.[314] SAP allocated REDACTED - NOT RELEVANT of the acquisition price to Business Objects' intangible asset value including goodwill.[315] SAP's acquisition of Business Objects provides some relevant market information as it is an arm's length transaction in the software industry (broad portfolio of software tools and applications designed to optimize across business networks), involving one party to the suit. The considerable acquisition price of Business Objects demonstrates that SAP was willing to pay significant amounts to secure software license and support services revenue streams, intangible assets and related technology.[316] Table 7 summarizes the intangible asset valuation for the Business Objects acquisition.

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[312] "SAP AG Fair Value of Certain Assets, Liabilities and Legal Entities of Business Objects S.A. As of January 21, 2008," SAP-OR 00832546-721, at 547.

[313] "SAP AG Fair Value of Certain Assets, Liabilities and Legal Entities of Business Objects S.A. As of January 21, 2008," SAP-OR 00832546-721, at 561.

[314] $7.1 billion ÷ $1.25 billion = 6.

[315] "SAP AG Fair Value of Certain Assets, Liabilities and Legal Entities of Business Objects S.A. As of January 21, 2008," SAP-OR 00832546-721, at 556.

[316] EWeek.com article, "SAP Touts Synergies in Business Objects Deal," October 8, 2007 (Addresses that with forty percent overlap in SAP and Business Objects' customers, SAP can expand its customer base and exploit up-selling opportunities); *See* also, The Channel Insider.com article, "SAP Cautious on 2008 Outlook," January 30, 2008 (addressing SAP's willingness to make other large acquisitions if the right opportunity were to present itself, despite acquisitions not being SAP's general strategy.)

Table 7: Intangible Asset Valuation[317]
SAP's Acquisition Price of Business Objects
($ In Millions)

Goodwill	REDACTED - NOT RELEVANT TO OPPOSITION
Developed Product Technology	
In Process R&D	
Customer Relationships	
Tradenames	
Total	

126. The categories of asset valuation most relevant for comparison to the fair market value of SAP's value of use would be the value of customer relationships at REDACTED - NOT RELEVANT and the goodwill at REDACTED - NOT RELEVANT. Customer relationships related to maintenance contracts were valued using a discounted cash flow method at REDACTED - NOT RELEVANT projecting cash flow for 16 years, through 2023, and including a terminal value.[318] At the time of SAP's acquisition, Business Objects was generating about half the revenue of PeopleSoft when PeopleSoft was acquired by Oracle.

d. Summary: Fair Market Value Using The Market Approach

127. After considering the three transactions described above, and focusing on the valuation of Oracle's acquisition of PeopleSoft, in my opinion, the Market Approach indicates a fair market value of SAP's use of Oracle's copyrighted materials in suit of no less than $2 billion.

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[317] "SAP AG Fair Value of Certain Assets, Liabilities and Legal Entities of Business Objects S.A. As of January 21, 2008," SAP-OR 00832546-721, at 556.

[318] "SAP AG Fair Value of Certain Assets, Liabilities and Legal Entities of Business Objects S.A. As of January 21, 2008," SAP-OR 00832546-721, at 638 (Exhibit A.4A).

2. Income Approach

128. The income approach values intellectual property based upon the additional cash flows a business is expected to generate in the future from the exploitation of the technology at issue. The income approach measures the net present value of these future cash flows as of the date of the valuation. I have employed the income approach by determining the incremental net cash flows Oracle would expect to lose to SAP as a result of licensing the copyrighted materials in suit. I have also considered in the income approach analyses performed contemporaneously by SAP or TomorrowNow indicating either the revenues they expected to receive or the amount of Oracle's business they expected to displace.

a. Income Approach Applied To Oracle's Expected Losses

129. S&P's overall valuation of Oracle's PeopleSoft acquisition was measured using a discounted cash flow model for revenues and profits from PeopleSoft's support customers lost to TomorrowNow and SAP (post October 2008), lost incremental license revenue (up sell) and related support, and lost new license revenue (cross sell) and related support. In modeling the incremental value of customers Oracle would expect to lose under a license to SAP, I have used various assumptions from the S&P valuation, including the size of the PeopleSoft customer base acquired, annual attrition rates, average annual maintenance fees, duration of the model to at least 2014, cost of sales and certain other expenses, and present value factors. I have also considered the terminal value of losing support customers, and incremental licenses and support as a result of licensing the copyrighted materials in suit to SAP.

130. I have addressed three scenarios varying the number of customers that switch their applications to SAP; one model assumes 1,375 customer switches;

another model assumes 2,000 customer switches; and lastly, a model with 3,000 customer switches. In each case I have assumed that Oracle would lose 3,000 of its PeopleSoft support customers to SAP and TomorrowNow between January 2005 and October 2008, with terminal value of up sell license and support revenue losses through December 31, 2014.[319] Based on estimates of incremental costs including cost of goods and sales related expenses, I have deducted costs from the revenues at 20% for cost of support revenues, 30% for cost of incremental license sales to existing customers, and 50% for cost of new license revenues.[320] I have used a terminal value based on lost license and support profits, capitalized at 8.3%, to estimate the ongoing loss to Oracle of customers that would switch to SAP as a result of licensing the copyrighted materials in suit.[321] All amounts have been discounted to January 2005.

131. The results of these calculations are summarized in **SCHEDULES 11.SU-13.SU**, and indicate the fair market value under various assumptions regarding the number of customers Oracle would lose to SAP as a result of licensing the copyrighted materials in suit, of between $2.0 billion and $3.8 billion, assuming terminal value.[322]

b. Income Approach Applied To SAP's Expected Gains

132. Separately, SAP valued the access and use of the PeopleSoft copyrighted materials in suit. In December 2004, SAP prepared a "Business Opportunity" projecting that as a result of its "PeopleSoft Attack Program," of which TomorrowNow was a key part, it would obtain 3,000 PeopleSoft maintenance

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319 *See* **SCHEDULES 11.SU-13.SU.**

320 *See, e.g.* **SCHEDULES 11.1** and **11.2SU**.

321 *See, e.g.* **SCHEDULE 11.1**. "Oracle Corporation: Estimation of the Fair Value of Certain Assets and Liabilities of Siebel Systems, Inc. as of January 31, 2006, dated July 20, 2006, ORCL00312747 819 at 812.

322 *See* **SCHEDULES 11.SU-13.SU.**

customers by 2007, 2,250 of which would have purchased other SAP applications software ("cross sell") by 2007 (at an average deal size of $70K), and 1,375 of which would purchase an SAP application to replace, at some point, their PeopleSoft application with a SAP application ("up switch").[323] SAP's revenue projection for 2005 through 2007 using these metrics was $897 million.[324]

133. I have used SAP's projections estimating $897 million in revenue over 3 years to construct three scenarios. All three calculations assume TomorrowNow gains 3,000 PeopleSoft support customers. One calculation assumes SAP gains 1,375 new customers that purchase a mySAP license. The other two calculations assume SAP gains 2,000 new customers that purchase mySAP licenses. I have also determined the terminal value of the support revenues from the new mySAP licenses. In all calculations, I have deducted costs from revenues at 30%, based on 20% of incremental cost to provide licenses and support services, and 10% of incremental sales and marketing expense as supported by SAP's financial statements.[325] In addition, I have discounted SAP's profits back to January 2005 using a 14% discount rate based

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[323] SAP email, December 23, 2004, Subject: PeopleSoft Attack Program with attached document, "PS Attack Program 12 2004 v6.ppt", SAP-OR00253278-301 (Ziemen Exhibit 447), at 288; Deposition of Thomas Ziemen (SAP Vice President, Service Solution Management), September 30, 2008, pgs. 85-86.

[324] SAP email, December 23, 2004, Subject: PeopleSoft Attack Program with attached document, "PS Attack Program 12 2004 v6.ppt", SAP-OR00253278-301 (Ziemen Exhibit 447), at 288. Other financial projections include a April 25, 2006 email from Andrew Nelson to Lon Fiala, which projects TomorrowNow eventually taking $1.1 billion in maintenance revenues from Oracle between 2005 and 2014, with an assumption that TomorrowNow will capture 15% of PeopleSoft support customers. TN-OR00591548 (Nelson Exhibit 1019). SAP has admitted that the $897 million value "does not 'project a customer's value over the lifecycle of a customer as, for example, it only includes assumptions for the years 2005-2007." [Defendants' Ninth Amended and Supplemental Response to Plaintiffs' Fourth Set of Interrogatories to Defendant TomorrowNow, Inc. and Third Set of Interrogatories to Defendants SAP AG and SAP America, Inc., Second Supplemental Response to Interrogatory 69, pgs. 21-22; Email from Bernd Welz to Bernd-Michael Rumpf Re: PeopleSoft Attack Program, with attached presentation, "A Roadmap for PSFT Customers to SAP", SAP-OR 00493900-923 (Scholten Exhibit 1782), at 910].

[325] **SCHEDULES 15.SU, 15.1.SU, 16** and **19**.

on the discount rates used in the asset valuation performed for SAP's acquisition of Business Objects.[326]

134. The results of my three scenarios are included as **SCHEDULES 15.SU, 15.1.SU** and **16**, and indicate anticipated gains of SAP ranging between $881 million and $2.7 billion.

135. TomorrowNow estimated that $1 of TomorrowNow revenue equaled $10 of SAP strategic license revenue pipeline.[327] TomorrowNow estimated that at 15% of PeopleSoft customer base, approximately 1,500 customers, SAP's strategic license revenue pipeline would increase by $1 billion. This computation assumes an approximate $600,000 license opportunity per customer. With support revenues priced at 17% of license fees, over a 10 year period this would result in a $600,000 license plus $1.0 million in support revenues, or a $1.6 million per customer, revenue projection. At a 30% margin that is a $1.1 million per customer profit projection.[328] These calculations provide additional indication that estimating SAP's value of use at $1 million per customer residual value is reasonable.

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[326] A 14% discount rate is consistent with the rate used in SAP's valuation of its acquisition of Business Objects "SAP AG Fair Value of Certain Assets, Liabilities and Legal Entities of Business Objects S.A. As of January 21, 2008," SAP-OR00832546-721, at 605.

[327] TN-OR00609470-471 (Nelson Exhibit 1018) ["It allows us to build $10 of strategic future SAP license pipeline for every $1 of TN Stand-alone business we get through this independence. By winning these customers, TN rips away Oracle's 'home-field advantage' jacking up the likelihood of SAP eventually replacing these Oracle-owned systems."].

[328] Email from Andrew Nelson to Lon Fiala Re: Working financial Impact notes, TN-OR 00591548 (A. Nelson Exhibit 1019). $600,000 + ($600,000 * 17% * 10 years) = $1,620,000 * 0.7 = $1.134 million. Various documents indicate that an ongoing customer relationship has a present value of one million dollars or greater. "Update TomorrowNow Status: January 30, 2006," TN-OR00608668-691, at 671; Email from Juergen Viehl to Bernd Welz, et al. Re: Service Initiatives Reports October 2007 UPDATE, and attached 071017 Services Initiatives Reporting update.zip, SAP-OR000565364-431, at 422; January 11, 2005 Bernstein Research Call "ORCL: A Look at the Combined ORCL-PSFT Concerns and Uncertainties Abound Pending Details from Management," pgs. 3-4.

136. TomorrowNow also estimated that $1 of TomorrowNow revenue equaled an $18 to $20 impact on Oracle revenues.[329] Using SAP's Business Opportunity as a Base Case, which assumes that 3,000 customers have left for TomorrowNow by 2007 with an annual support revenue stream of $102 million (adjusted for TomorrowNow 50% price discount), the value multiplier of $18 would equate to approximately $1.8 billion revenue loss for Oracle.[330] Using a 80% profit margin, based on a 15% cost of support services and a 5% cost of sales support per Oracle financial documents, would result in $1.47 billion loss of profits to Oracle.[331]

137. SAP regularly monitored TomorrowNow's performance against SAP's goal of taking revenue away from Oracle. In its regular reporting of TomorrowNow results, one of the "key performance indicators" tracked and reported to SAP executives was the amount of support and license revenue

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[329] April 25, 2006 email from Andrew Nelson to Lon Fiala, Re: Working financial impact notes , which indicates $1 of TomorrowNow revenue is equivalent to $20 of Oracle support revenues taken from a "10-year maintenance-based justification for the PeopleSoft/JDE takeover" [TN-OR00591548 (Nelson Exhibit 1019)]. A March 26, 2006 email from Andrew Nelson to Lon Fiala, et al, (with cc to SAP Co-Chief Executive Officer and Executive Board Member, Leo Apotheker) indicates that "$1 of TN Stand-alone revenue this year represents $18 of originally expected Oracle revenue" [TN-OR00609470-471 (Nelson Exhibit 1018)]. Mr. Apotheker did not disagree or contradict Mr. Nelson's analysis [Deposition of Andrew Nelson (Co-Founder of TomorrowNow), February 26, 2009, pgs. 163-166].

[330] **SCHEDULE 21.1.SU**. Email from Andrew Nelson to Lon Fiala, Re: TN Standalone deals to Safe Passage, dated 3/26/06, TN-OR00609470-471 (Nelson Exhibit 1018), at 470.

[331] **Schedule 21.1.SU**. Mr. Nelson and SAP employees created, discussed, and routed externally, including to the investment community, estimates that TomorrowNow would take $1.1 billion from Oracle in maintenance revenue alone. Those estimates are based on the assumption that, on average, customers are worth at least $100,000 annually or $1 million over a ten year period. See, for example: Email from Andrew Nelson to Lon Fiala Re: Revised PDF with attached document "Financial Impact on Maintenance Revenue over 10 years.pdf," TN-OR07165549-550, at 550. Email from Anke Mongannam (TomorrowNow Director of Marketing, Americas) to Michael Myers (SAP Analyst Relations Manager, Services, SAP Global Communications), TN-OR00141848-849; Email from Lon Fiala to Michael Prosceno (SAP Global Communications) Re: Impact on Vendor, TN-OR07160446; Email from Lon Fiala to J. Bonasia (Investors.com) with attached document "Financial Impact on Maintenance Revenue over 10 years.pdf," TN-OR07162308; Emails between Bob Geib (TomorrowNow Senior Vice President) and Daniel Jay (TomorrowNow Manager Services Marketing, Americas), TN-OR02774870-871; Email from Anka Mongannam (TomorrowNow Director of Marketing, Americas) to Mandy Wheller (Assistant to Andrew Nelson) with attached document "Brent Thill 060504 VED edits.doc," TN-OR07163894-899, at 896 and 899.

"taken away from Oracle."[332] For the period of 2005 through September 2007, SAP reported $142.7 million in support revenue taken from Oracle by TomorrowNow, and amounts ranged up to $631.5 million in license volume taken from Oracle through its Safe Passage program.[333] The $631.5 million amount that SAP claims to have taken from Oracle does not include the on going support revenue associated with those licenses.

138. I have also reviewed other sources for SAP license and other revenues per customer that support a value even higher than the $1 million terminal value of a customer used in my analysis above. First, I have reviewed the information reported related to Signed Safe Passage Deals for the period 2005 through September 2007. This information indicates that, on average, customers purchased Safe Passage Licenses with fees exceeding $1.0 million per customer and ranging to average annual per customer fees of as high as $1.6 million.[334]

139. I have also reviewed the information provided to date by SAP regarding 86 of the 93 customers that SAP acknowledges purchased SAP software or service either simultaneously with purchasing TomorrowNow support services, or that were existing TomorrowNow customers at the time that they purchased new SAP software or service.[335] The SAP revenue data produced

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[332] For example, see "Business Case TomorrowNow 2006," November 16, 2005, SAP-OR00136760-768 (Oswald Exhibit 608), at 762.

[333] **SCHEDULE 8.U**. 3Q 2007 was the latest period for which I have seen TomorrowNow and Safe Passage financial metrics reported.

[334] SAP email from Juergen Viehl to Bernd Welz, October 17, 2007 and attachment "071017 Service Initiatives Reporting update.zip"; SAP-OR00565364-431 (Bamberger Exhibit 792) at 422 and Table 17: "SAP Safe Passage Program Results" at paragraph 443, herein.

[335] I understand that Defendants' list of relevant overlapping TomorrowNow/SAP customers has changed over time. I have based my calculations on the latest version provided to me, which I understand was served by Defendants on July 15, 2009 (a list of 83 customers), and supplemented on October 17, 2009 to add 3 additional customers. See SAP

for these customers indicates that over a 4 year period from 2005 through 2008, the customers purchased in total REDACTED - NOT RELEVANT in SAP software licenses, support, training and other services.[336] This equates to revenues per customer over the period of REDACTED - NOT RELEVANT, or annualized revenue per customer of REDACTED - NOT RELEVANT REDACTED - NOT RELEVANT.[337]

140. These sources indicate that SAP would expect to achieve average annual customer purchases of $1 million to $4.0 million, and indicate that the $1 million customer terminal value that I use in my scenario described above, would tend to underestimate the value to SAP of obtaining new SAP licenses and associated support contracts with former PeopleSoft customers.

c. Summary: Fair Market Value Using Income Approach

141. In my opinion, the income approach would indicate a fair market value of SAP's use of Oracle's copyrighted materials in suit of between $881 million and $3.8 billion, depending on different expectations of the impact on Oracle and the benefits inuring to SAP.

3. Cost Approach

142. The cost approach attempts to measure the future benefit of the intellectual property by quantifying the cost to develop alternative technology or replace the technology being valued. The underlying assumption is that the cost to buy or develop alternative intellectual property is commensurate with

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file: List of 83.xls; Email from Jason McDonnell (Jones Day) to Geoff Howard, et al. (Bingham McCutchen) Re: Customer list adds, October 17, 2009; Letter from Jason McDonnell (Jones Day) to Geoff Howard (Bingham McCutchen) Re: List of 86, November 3, 2009. On November 3, 2009 Defendants identified seven more TomorrowNow customers who purchased SAP applications though they have not produced relevant SAP purchase information. See November 10 Joint Discovery Conference Statement at Section 5, p.19-20. I understand Oracle has asked for this information and it was not forthcoming. I reserve the right to revise this section of the report and schedules accordingly if additional information becomes available.

[336] **SCHEDULE 24.U**.

[337] **SCHEDULE 24.U.**

the economic benefit, or value, of the intellectual property. In this circumstance, I have considered the acquisition cost to Oracle of purchasing the subject intellectual property as well as the investment in research and development by Oracle in the copyrighted materials in suit since the acquisition. I have also considered the amounts PeopleSoft and J.D. Edwards spent on research and development of their intellectual property (which Oracle subsequently acquired), and the estimates of Oracle's expert, Paul Pinto, on the costs SAP would have incurred had it independently developed certain of the copyrighted materials in suit.

143. In the valuation of intellectual property, the cost approach presents certain limitations. For example, the cost approach does not directly measure the magnitude or expected duration of the potential future benefit. In addition, the cost approach also does not directly account for the risk associated with receiving the potential future benefits (i.e., it is assumed that the expected benefits justify the expense). While the cost to develop or replace intellectual property may not reflect the full potential future benefits of the resulting intellectual property, it may serve as a reasonableness check on the valuations derived from the other approaches.

a. Oracle Application Software and Support Research And Development Cost

144. As discussed above, Oracle acquired the rights to developed PeopleSoft technology and its installed customer base for $11.1 billion in 2005. Since 2005, Oracle has continued to incur development expenses related to PeopleSoft products, including development efforts primarily for support or "sustaining" the existing products, as well as other development efforts primarily related to updates or new product versions. The identifiable research and development

efforts for applications and the specific products covered by the copyrights in suit are addressed in the remainder of this section of the Report.

145. For Oracle's fiscal years 2005 through 2009 (June 1, 2005 through May 31, 2009), Oracle recorded total company research and development expense of over $11 billion for applications, middleware and database software and support materials.[338] For comparison purposes, for the calendar years 2005 through 2008, SAP recorded research and development expenses of $7.4 billion.[339]

146. Oracle recorded research and development expenses broken down by general product categories: application, database, middleware. Oracle recorded expenses of $1.3 billion for application software development for PeopleSoft, J.D. Edwards and Siebel applications for the period December 2004 through August 2008.[340]

147. For the period December 2004 through August 2008, (3.75 years), Oracle personnel prepared reports identifying direct research and development expenses by product line, with allocations of associated overhead. These reports provide development expenses for the PeopleSoft products including Enterprise, World, and EnterpriseOne. Over this period, Oracle spent $1.1 billion on PeopleSoft product applications development.[341] On average, Oracle spent approximately $290 million a year developing PeopleSoft software application and software and support materials.[342]

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[338] *See* **SCHEDULE 1**.

[339] *See* **SCHEDULE 5.**

[340] *See* **SCHEDULE 10.**

[341] *See* **SCHEDULE 10.**

[342] $1,087.7 million/3.75 years = $290.1 million per year.

148. Although Oracle's financial systems historically have not tracked research and development employee time by task, Oracle employees have analyzed the percentage of resources Oracle devotes to maintenance related, as opposed to new product related, research and development.[343] I understand that based on these analyses, Oracle has estimated that 60 65% of its research and development expense of its applications products related to support related development efforts.[344] Therefore, for the period of December 2004 through September 2008, support related research and development expense for PeopleSoft and J.D. Edwards products was approximately $660 million to $715 million.[345] However, given that TomorrowNow copied Oracle's PeopleSoft and J.D. Edwards support materials, as well as underlying applications, such apportioning of research and development expense between new product and support related efforts is not necessary.

b. SAP Research And Development Costs

149. SAP produced reports containing amounts identified as "SAP Cost of Support Development." This account is described as "collect the costs provided for maintenance (code corrections) of existing software after Release to customer."[346] This account appears most directly correlated to the costs to provide sustaining development for application software. Although not identifiable to a particular software application or product family, I have totaled expenses included in this account for the period 2005 through 2008.

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343 Discussion with Houman Behazadi (Oracle Director of Business Planning and Operations).

344 *See, e.g.,* Oracle Presentation: "Applications Strategy November 2007,"ORCL 00560527-566, at 533. Fusion research and development expenses are excluded from this analysis [Discussion with Houman Behazadi (Oracle Director of Business Planning and Operations)].

345 $1.1 billion * 60% = $660 million; $1.1 billion * 65% = $715 million.

346 SAP Presentation: "Research, Development, Maintenance Costs and Headcount," SAP-OR00842955-980, at 959-961.

During this period, SAP spent over REDACTED - NOT RELEVANT on support development for its own software applications, indicating that SAP would be well aware of the significant cost associated with providing support to an existing installed base of software licensees at the time of its negotiation with Oracle.[347]

c. Estimated Costs To Independently Create PeopleSoft/J.D. Edwards Copyrighted Materials in Suit

150. I understand that Oracle's expert Paul Pinto was retained to estimate the costs that Defendants would have had to incur to independently develop the Oracle copyrighted materials in suit that Defendants allegedly illegally accessed, copied and misused. I understand that Mr. Pinto has concluded that it would have cost Defendants approximately $1.275 billion with a range of $936 million to $2.903 billion to develop 7 specific PeopleSoft and J.D. Edwards software applications.[348]

151. Additionally, I understand that Mr. Pinto has concluded that, if it were possible to be completed in two years, it would take Defendants 2,374 appropriately trained personnel to complete the development of the 7 PeopleSoft/J.D. Edwards software applications he analyzed.[349] As explained in section IV.B.2 of this Report, the timing of SAP's offering of TomorrowNow support services was critical to its overall strategy to disrupt Oracle's business and convert Oracle's PeopleSoft, J.D. Edwards and Siebel customer base over

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[347] **SCHEDULE 28.SU.**

[348] Discussion with Paul Pinto (Sylvan VI, Inc.); November 16, 2009 Expert Report of Paul Pinto, pg. 43 ($320 million for JDE Enterprise One + $707 million for PeopleSoft + $248 million for JDE World = $1.275 billion. $221 million + $543 million + 172 million = $936 million. $749 million + $1,573 million + 581 million = $2.903 billion).

[349] Discussion with Paul Pinto (Sylvan VI, Inc.); November 16, 2009 Expert Report of Paul Pinto, pgs. 42 and 44. 67,863 total person months effort, less 10,890 Siebel person months, divided by 24 months = 2,373.9. According to Mr. Pinto, "A development effort of this scope and complexity would be an extremely large project, very aggressive, and of high-risk to be pursued within this timeframe." [November 16, 2009 Expert Report of Paul Pinto, pg. 7].

to SAP (i.e., it was critical for SAP to announce its offering of support on Oracle products immediately following Oracle's acquisitions of PeopleSoft and Siebel). If faced with a multi year development timeframe in lieu of using Oracle's copyrighted property, SAP may have determined that offering TomorrowNow support services as an integral part of its Safe Passage program was not an attractive business decision. Therefore, SAP would likely be willing to pay more than the cost to independently develop the intellectual property in order to receive a time to market advantage and to avoid the risk of unsuccessful development.

d. Summary: Fair Market Value Using Cost Approach

152. In my opinion, the cost approach would indicate a fair market value of SAP's use of Oracle's copyrighted materials in suit of no less than $936 million, with other considerations indicating that development costs, and the risks of development failure, would be much higher. I am relying on Mr. Pinto, who has estimated the costs to independently develop certain software applications that were accessed by TomorrowNow and SAP.[350]

B. Summary: "Value of Use" of PeopleSoft/J.D. Edwards Copyrighted Materials Based on Market, Income and Cost Approaches

153. Table 8 summarizes the fair market values of the PeopleSoft/J.D. Edwards copyrighted materials in suit based on the market, income and cost approaches. In my opinion, these metrics and the valuation analysis previously described indicate that no less than $2 billion is the fair market value for the PeopleSoft/J.D. Edwards copyrighted materials in suit.

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[350] Discussions with Paul Pinto; November 16, 2009 Expert Report of Paul Pinto (see Mr. Pinto's explanation of his assignment and summary of opinions at pgs. 1-2).

Table 8: Copyrighted Software and Support Materials PeopleSoft/J.D. Edwards Fair Market Values With Projections of Up To 3,000 Oracle Lost Customers ($ In Millions)		
Market Approach		
Based on PeopleSoft Acquisition	$1,780	$2,670
Income Approach		
Oracle Potential Losses	$1,979	$3,762
SAP Potential Gains	$881	$2,690
SAP Projected Impact On Oracle Profits		$1,468
Cost Approach		
Avoided Development Costs (Mr. Pinto)	$ 936	$2,903
Fair Market Value	No less than	**$2,000**

C. PeopleSoft / J.D. Edwards Copyright Infringement – Determination of SAP's "Value of Use" Based on Hypothetical Negotiation Approach to Establishing Intellectual Property Value

1. Methodology

154. As set forth above, I understand the hypothetical negotiation concept for copyright infringement is recognized by the Ninth Circuit and other courts. The relevant financial, economic and other factors considered are reflected in case law and the Ninth Circuit's relevant jury instruction. They are likewise articulated in the *Georgia Pacific Corp v. US Plywood Corp.*[351] opinion, which identifies fifteen factors for consideration in determining a reasonable royalty for a patent license. The *Georgia Pacific* factor format is an appropriate

[351] *Georgia Pacific Corp. v. U.S. Plywood Corp.*, 318 F. Supp. 1116, (S.D.N.Y. 1970), modified, 446 F.2d 295, 170 USPQ 369 (2d Cir. 1971), cert. denied (1971).

structure to use for determining the value of intellectual property in addition to patents. I have considered those same fifteen factors in my analysis of SAP's "value of use" of the copyrighted PeopleSoft and J.D. Edwards materials at issue. Those factors are relevant to this case in the determination of what SAP as a willing buyer would reasonably pay Oracle as a willing seller, as of the time of first infringement. The fifteenth *Georgia Pacific* factor (which sets forth the theoretical construct for the hypothetical negotiation) uses essentially the same test as the above cited Ninth Circuit copyright infringement actual damages model jury instruction:

> "The amount that a licensor (such as the [plaintiff]) and licensee (such as the [infringer]) would have agreed upon (at the time the [copyright] infringement began) if both had been reasonably and voluntarily trying to reach an agreement; that is, the amount which a prudent licensee who desired, as a business proposition, to obtain a license to manufacture and sell a particular article embodying the [copyrights] would have been willing to pay as a royalty and yet be able to make a reasonable profit and which amount would have been acceptable by a prudent [licensor] who was willing to grant a license." [352]

155. The following paragraphs address the fifteen *Georgia Pacific* factors, (which are relevant in copyright cases and in the other IP valuation approaches described above) and summarize facts and issues relevant to determining SAP's value of use for Oracle's copyrighted property related to PeopleSoft and J.D. Edwards software. A hypothetical negotiation framework assists in determining the value that, under these circumstances, SAP reasonably should be willing to pay to Oracle, and the amount that Oracle

[352] *Georgia Pacific Corp. v. U.S. Plywood Corp.*, 318 F. Supp. 1116, (S.D.N.Y. 1970), modified, 446 F.2d 295, 170 USPQ 369 (2d Cir. 1971), cert. denied (1971). It should be noted that "copyright" replaces "patent."

should be willing to accept from SAP, for use of Oracle's copyrighted property, and provides another measure of SAP's "Value of Use" damages.

156. This negotiation will determine the value to allow SAP to use Oracle's PeopleSoft and J.D. Edwards software applications and support materials exactly as SAP and TomorrowNow actually did. I assume that the hypothetical negotiation would take place between Oracle and SAP, as rational and willing parties.[353] The negotiation would occur on or about January 2005,[354] with both parties knowledgeable of key relevant facts, such as the duration of the license, the scope of what can be copied and any use restrictions, the expectations the parties have for themselves at the commencement of the license (including monetary and non monetary benefits), and the likely cost and time delays SAP avoids by licensing. I understand that the copyrighted property that is the subject of this matter is fundamental to providing the support of PeopleSoft's software applications in the manner that TomorrowNow did (and that it advertised), and without the

[353] I understand that the hypothetical negotiation would be conducted by a willing licensor (Oracle) and a willing licensee (SAP) acting in a rational manner in January 2005. I have assumed that the particular Oracle and SAP signatories to the license would include the entities and/or subsidiaries necessary to grant use rights consistent with the actual infringing use by SAP. Oracle senior executives Larry Ellison and Safra Catz have attested to their involvement with any such negotiations [Declaration of Larry Ellison in Support of Oracle's Opposition to Defendants' Motion for Partial Summary Judgment Regarding Plaintiffs' Hypothetical License Damages Claim, September 22, 2009; Declaration of Safra Catz in Support of Oracle's Opposition to Defendants' Motion for Partial Summary Judgment Regarding Plaintiffs' Hypothetical License Damages Claim, September 22, 2009]. I understand that some SAP witnesses have testified that TomorrowNow may be negotiating the hypothetical license directly with Oracle. However, given the significant dollars at stake, the strategic importance of SAP's access to Oracle's copyrighted materials at issue, and the SAP board-level involvement in the monitoring of TomorrowNow's activities, I would expect that SAP would be at the negotiating table with Oracle. SAP CFO, Werner Brandt, reluctantly agreed that he would be involved [Deposition of Werner Brandt (SAP CFO), November 12, 2008, pgs. 56-61].

[354] As explained in section VI.A. of this Report, above, the date of the hypothetical negotiation between Oracle and SAP would be on or around January 2005, the date of SAP's alleged first infringement (by virtue of its acquisition of TomorrowNow).

copyrighted property, SAP and TomorrowNow would not have a support service offering comparable to Oracle's/PeopleSoft's service offering.[355]

157. I understand that Oracle alleges that TomorrowNow began downloading PeopleSoft enterprise software applications and support materials starting in early 2002, prior to SAP's acquisition of TomorrowNow.[356] Consequently, a hypothetical negotiation would also take place between PeopleSoft and TomorrowNow in the early 2002 timeframe, before the alleged infringement first occurred. The license fee resulting from this hypothetical negotiation would reflect the value that TomorrowNow and PeopleSoft would have willingly agreed upon for TomorrowNow's use of PeopleSoft's copyrighted property between 2002 and January 2005.[357] However, I also understand that, as a legal matter, SAP would have had to negotiate with Oracle concerning a hypothetical license allowing TomorrowNow to use the PeopleSoft intellectual property, because SAP purchased TomorrowNow and non exclusive copyright licenses are personal and non assignable without the consent of the licensor (in this case, Oracle PeopleSoft's successor in interest).[358] Therefore, a separate hypothetical negotiation would have occurred between Oracle and SAP at or around the time SAP acquired TomorrowNow in January 2005.

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[355] Discussions with Kevin Mandia; February 12, 2010 Supplemental Expert Report of Kevin Mandia, pgs. 1, 3, 25 and 32. As described in section IV.B.4 of this Report, TomorrowNow and SAP acknowledged that access to Oracle's intellectual property was critical to providing PeopleSoft and J.D. Edwards support at the level of service and cost offered by TomorrowNow.

[356] Oracle USA, Inc. et al v SAP AG et al, Fourth Amended Complaint in Case No. 07-CV-01658 dated August 18, 2009, pg. 7.

[357] For purposes of this report, I have not determined the amount that PeopleSoft and TomorrowNow would have negotiated for a license for TomorrowNow's use of PeopleSoft's intellectual property since the license would not have covered the same scope of use and would not be transferrable to an acquiring entity.

[358] *See, e.g., Everex Sys., Inc. v. Cadtrak Corp. (In re CFLC Inc.)*, 89 F. 3d 673 (9th Cir. 1996); *SQL Solutions, Inc. v. Oracle Corp.*, 1991 U.S. Dist. LEXIS 21097 (N.D. Cal. 1991).

158. I have considered the opinions and relevant information of Oracle Senior Executives as to what Oracle would be willing to consider for a license fee paid by SAP to license the copyrighted materials in suit and understand, as a matter of law, that this is appropriate.[359] I also understand that although these parties are direct competitors, and even though Oracle has not before licensed the infringed material to a competitor, a fair market value for a license is an available damage remedy. This remedy is based on establishing the appropriate consideration given up and received by both sides under the relevant factors.[360]

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[359] *See Polar Bear Prods., Inc. v. Timex Corp.* 384F.3d 700 (9th Cir. 2004). I understand that some of the relevant factors that would be considered by Oracle executives are stated in the declarations of Larry Ellison and Safra Catz in support of Oracle's Opposition to Defendants' Motion for Partial Summary Judgment [Declaration of Larry Ellison in Support of Oracle's Opposition to Defendants' Motion for Partial Summary Judgment Regarding Plaintiffs' Hypothetical License Damages Claim, September 22, 2009; Declaration of Safra Catz in Support of Oracle's Opposition to Defendants' Motion for Partial Summary Judgment Regarding Plaintiffs' Hypothetical License Damages Claim, September 22, 2009].

[360] That Oracle and SAP could have reached an agreement on the fair market value for the license to the PeopleSoft/J.D. Edwards copyrighted materials at issue is supported by the fact that, although Oracle is aware that SAP promotes other database vendors such as Microsoft and IBM, and sells its own database product, Oracle and SAP have had a long-standing license for SAP to resell Oracle's database products. *See* Reseller Sublicense Addendum between SAP and Oracle Corporation dated November 30, 1999, ORCL00669957-964; Reseller Agreement Between Oracle Deutschland GmbH and SAP AG dated August 1, 1994, ORCL00670076-87; Declaration of Larry Ellison in Support of Oracle's Opposition to Defendants' Motion for Partial Summary Judgment Regarding Plaintiffs' Hypothetical License Damages Claim, September 22, 2009, pg. 3.

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D. Value of Use Under the Hypothetical Negotiation – Summary

231. The hypothetical negotiators would have considered the financial, economic and other valuation inputs that I have identified and analyzed, and then determined a reasonable royalty (i.e. license fee) by engaging in a "back and forth" negotiation.[490] Below, I summarize the hypothetical negotiation and refer to the various financial metrics in the market, income and cost approach section which would be relevant to determining the license fee in the hypothetical negotiation.

1. Summary of Factors Considered by Oracle and SAP

232. As discussed above, in determining the license fee that it would be willing to accept from SAP for SAP's use of the PeopleSoft/J.D. Edwards copyrighted materials in suit, Oracle would consider at least the following factors:

[490] I understand that the hypothetical negotiation would be conducted by a willing licensor (Oracle) and a willing licensee (SAP) acting in a rational manner in or around January, 2005.

- The broad scope of the license, which would enable SAP to compete against Oracle in providing support services to its PeopleSoft/J.D. Edwards customers, and provide SAP with enhanced ability to convert those customers to SAP applications;
- Expected lost support revenue to SAP on customers that would go to TomorrowNow for support services, as well as lost up sell and cross sell revenues from those customers;
- The anticipated permanent impact on Oracle due to the lost future license revenue and ongoing support renewals for customers that would switch to SAP applications;
- Immediately prior to the contemplated hypothetical negotiation, Oracle paid approximately $11.1 billion to acquire PeopleSoft, including rights to the PeopleSoft/J.D. Edwards customer support contracts and related relationships and associated goodwill;
- Oracle's investment of over $1 billion in further research and development for its PeopleSoft and J.D. Edwards products since the acquisition, which Oracle would reasonably understand that it would have to spend, and that SAP would avoid spending by virtue of the license;
- The nature of the relationship between Oracle and SAP, as direct competitors in the software applications business, particularly in light of Oracle's goals for the PeopleSoft acquisition to enhance its competitive position with SAP in the applications market;

- Anticipated changes to Oracle's business practices in order to compete with SAP to provide support services to Oracle customers; and,
- Anticipated negative impacts to the level of profitability and customer renewal rates of the Oracle support products that embody the copyrighted materials at issue, and the resulting impact on Oracle's ability to use that support revenue stream to fund ongoing research and development.

233. Similarly, in determining the amount of a license fee that SAP would be willing to pay to Oracle for its use of the PeopleSoft/J.D. Edwards copyrighted materials in suit, SAP would consider at least the following factors:

- The license would allow SAP to use its TomorrowNow service offering to drive the conversion of Oracle's applications customers to SAP's platform;
- SAP's willingness to pay significant amounts to acquire intellectual property and customer relationships, as evidenced in particular by its 2007 acquisition of Business Objects for $7.1 billion;
- SAP's knowledge that access to Oracle's copyrighted materials is necessary for the level of support that it sought to provide and advertised to Oracle's PeopleSoft/J.D. Edwards customers;
- TomorrowNow's entire business model relied upon its access and use of Oracle's PeopleSoft/J.D. Edwards copyrighted materials in suit;

- The nature of the competitive relationship between Oracle and SAP in the software applications business, and in particular the increased competitive threat that Oracle posed to SAP as a result of its acquisition of PeopleSoft;
- The significant development time, effort and risk that SAP would avoid by entering into the contemplated hypothetical license;
- The importance of timing and speed of SAP's offering of PeopleSoft/J.D. Edwards support services (to coincide with Oracle's acquisition of PeopleSoft and take advantage of customers' fear, uncertainty and doubt);
- The goals of SAP's Safe Passage program, of which the TomorrowNow service offering was an integral part, to convert the majority of the PeopleSoft/J.D. Edwards customer base to SAP; and,
- SAP's expected benefits from offering TomorrowNow support service, selling additional SAP products to those customers, and ultimately converting a portion of those customers to SAP.

234. In establishing their respective negotiating positions, Oracle and SAP would have considered the financial implications of entering into a license. Oracle would consider discounted cash flow scenarios with potential license and support losses between $2.0 billion and $3.8 billion (**SCHEDULES 11.SU-13.SU**); SAP would consider scenarios reflecting financial and economic benefits of between approximately $881 million to $2.7 billion (**SCHEDULES 15.SU-16**). These discounted cash flow scenarios are explained in the Market

Approach section related to SAPs "Value of Use", see Section VI.A.2 of this report. By granting SAP a license, Oracle and SAP would have also considered the financial metrics (multipliers) developed by TomorrowNow and SAP reflecting the impact on Oracle of SAP/TomorrowNow converting license and/or support revenue that would have otherwise been earned by Oracle. For example, one such TomorrowNow metric estimated the financial impact to Oracle at $20 support revenue lost for every $1 TomorrowNow gained. The parties would also consider the actual sales of TomorrowNow to PeopleSoft customers along with TomorrowNow's strategic planning and selling activities.

235. The parties would have considered the acquisition price paid by Oracle for PeopleSoft/J.D. Edwards and the components of the intangible assets. Significant value was embedded in the ongoing support revenue anticipated from the acquired PeopleSoft/J.D. Edwards customers. The copyrighted materials accessed by SAP are required resources to meet Oracle's/PeopleSoft related customer support contract commitments, or comparable materials must be independently developed. The valuation of the support revenue stream and customer relationships of $2.1 billion would be heavily considered. The parties would contemplate doubling the $2.1 billion value of support agreements and customer relationships[491] to $4.2 billion to reflect the goodwill premium paid overall by Oracle to acquire PeopleSoft. Oracle Senior Executives have indicated that the transaction goodwill premium reflects Oracle's ability to gain additional monetary value over time from acquired

[491] *See* Market Approach in Section VI.1 of this report. The goodwill premium is actually 1.4 times the acquired tangible and intangible assets (tangible assets of $1.2 billion + intangible assets of $3.4 billion = $4.6 billion x 1.4 = $6.5 billion of goodwill).

customers through cross sell and up sell opportunities, as well as other financial benefits. Oracle would understand that, with the hypothetical license, there would be an immediate impact on its support revenue and customer goodwill.

236. Market value metrics and valuations would bring significant upward financial pressure to the negotiation, particularly as the hypothetical license coincides with Oracle's $11.1 billion acquisition of PeopleSoft.

2. Oracle Would Expect A Significant License Fee

237. Larry Ellison, Safra Catz and Charles Phillips informed me that Oracle would expect a significant license fee from SAP for the PeopleSoft/J.D. Edwards copyrighted materials in suit, and indicated the impact of licensing would be greater than $3 billion on Oracle. A further perspective on losing potentially 3,000 customers (whose support is enabled by the copyrighted materials) is illustrated by applying 30.2%[492] to the value of the total support contracts, customer relationships and goodwill of $8.85 billion to result in $2.67 billion of potential loss.[493] I understand that Larry Ellison, Safra Catz and Charles Phillips would be personally involved in these negotiations.

3. SAP Could Pay A Significant License Fee

238. Theoretically, as SAP was strategically interested in expanding its customer support footprint and disrupting the transition of PeopleSoft customers to Oracle, SAP could have attempted to acquire PeopleSoft customer relationships and support revenue through a third party acquisition. In January 2005, in an arms length transaction, Oracle paid approximately $1

[492] 3,000 customers / 9,920 customers = 30.2%.

[493] Discussion with Oracle Senior Executives: Larry Ellison, Safra Catz and Charles Phillips.

million per PeopleSoft customer.[494] PeopleSoft's customers have contracts for support services which were enabled by the PeopleSoft intellectual property, including the copyrighted materials in suit. SAP Senior Management would be aware of the value that Oracle paid, and that SAP would have had to pay, in a third party transaction to acquire similar customers, whose support services use the copyrighted materials.

239. SAP would be willing to pay a $2 billion license fee to compete head to head with Oracle for the acquired PeopleSoft support customers and to execute on its strategy to cross sell and up sell to PeopleSoft customers.

240. In 2004, SAP Group generated revenues of $4.1 billion[495] and had liquid assets of nearly $4.4 billion,[496] including cash and cash equivalents of $2.1 billion.[497] In 2005, SAP Group generated revenues of $4.7 billion[498] and had liquid assets of $3.8 billion,[499] including cash and cash equivalents of $2.4 billion.[500]

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[494] The PeopleSoft cost per acquired customer of $1.0 million has a nature and components relevant to an established license fee under *Georgia Pacific* factor 1, where consideration and analysis involves royalties paid for the subject intellectual property.

[495] SAP Annual Report for fiscal year ended December 31, 2005, pg. 151. €3.3 in year 2004, currency converted using exchange rate of $1.2490 to €1, per the SAP Annual Report 2005, p.98.

[496] SAP Annual Report for fiscal year ended December 31, 2005, pg. 152. €3.2 in year 2004, currency converted using exchange rate of $1.3621 to €1, per the SAP Annual Report 2005, p.98.

[497] SAP Annual Report for fiscal year ended December 31, 2005, pg. 152. €1.5 in year 2004, currency converted using exchange rate of $1.3621 to €1, per the SAP Annual Report 2005, p.98.

[498] SAP Annual Report for fiscal year ended December 31, 2005, pg. 151. €3.8 in year 2005, currency converted using exchange rate of $1.2360 to €1, per the SAP Annual Report 2005, p.98.

[499] SAP Annual Report for fiscal year ended December 31, 2005, pg. 152. €3.2 in year 2005, currency converted using exchange rate of $1.1797 to €1, per the SAP Annual Report 2005, p.98.

[500] SAP Annual Report for fiscal year ended December 31, 2005, pg. 152. €2.1 in year 2005, currency converted using exchange rate of $1.1797 to €1, per the SAP Annual Report 2005, p.98.

E. Opinion: Value of Use of PeopleSoft/J.D. Edwards Copyrighted Materials Based on Hypothetical Negotiation Approach to Establish Intellectual Property Value – Oracle and SAP Would Have Agreed Upon a License Fee of No Less Than $2 Billion

241. Based on my analysis of the fifteen *Georgia Pacific* factors and relevant economic, financial and valuation issues and considerations, in January 2005, it is my opinion that the parties would have agreed to a license fee of no less than $2 billion.[501]

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[501] Oracle and SAP may have entered into a hypothetical license, depending on the level of payment [Deposition of Safra Catz, (Oracle Co-President and Executive Board Member), dated March 27, 2009, pgs. 20-25; Deposition of Charles Phillips (Oracle Co-President and Executive Board Member), dated April 17, 2009, pgs. 118-120].

REDACTED - NOT RELEVANT TO OPPOSITION

257. According to records produced by the Defendants, in addition to the customers with local environments, and the customers for which it was determined that the customer received a fix from another customer's local environment, TomorrowNow appears to have had at least 58 additional PeopleSoft HRMS customers that may have benefited from fixes developed or tested on Oracle database environments. Due to TomorrowNow's business practices of cross use of environments, including those running on top of Oracle database software for the development and testing of fixes that were delivered across the PeopleSoft HRMS customer base, I further understand through discussion with Oracle's expert, Kevin Mandia, that over the course of TomorrowNow's operational lifetime, it is more likely than not that every PeopleSoft HRMS customer received support delivered, at least in part, through TomorrowNow's use of the Oracle database software. As a result, I have offered a further opinion based on a measurement where TomorrowNow's use required a license covering 172 customers, comprised of 71 local environments based on Oracle database, 43 customers where another customer's local environment based on Oracle database was used to provide fixes, and 58 additional customers that received support for HRMS applications. Using an income approach to establish a fair market value of SAP's value of use, I have determined SAP's value of use to be approximately $55.6 million for 172 customers.

F. Opinion: Value of Use for Siebel Copyrighted Materials Based on Hypothetical Negotiation Approach to Establish Intellectual Property Value – Oracle and SAP Would Have Agreed Upon a License Fee of No Less Than $ 100 million

350. Based on my analysis of the fifteen *Georgia Pacific* factors and relevant economic, financial and valuation issues and considerations, in September 2006, in my opinion the parties, as willing participants in a hypothetical negotiation for the above described license, would have agreed on a license fee of no less than $100 million.

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D. Opinion: Summary of Oracle's Lost Profits

433. As a result of the Defendants' alleged bad acts, it is my opinion that Oracle has experienced lost profits on support revenue lost to TomorrowNow, as summarized in the following table.

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Table 16: Summary of Oracle's Lost Profits		
	During TomorrowNow Service Period	Through May 2015
Scenario 1: Total Losses to Oracle		
Based on Total Lost Support Revenue	$99.6 million	$349.0 million
Excluding Sales of EnterpriseOne and Siebel in Europe	$92.7 million	$318.2 million
Scenario 2: Losses by Plaintiff Entity		
Oracle USA		
Gross of Fees Paid to OIC	$83.4 million	$276.9 million
Net of Fees Paid to OIC	$47.2 million	$156.9 million
Oracle International Corporation		
Revenue Ultimately Received by OIC	$37.0 million	$121.1 million
Including OTC and ORC Revenue	$42.2 million	$153.8 million
Oracle EMEA		
Gross of Fees Paid to OTC	$9.0 million	$41.0 million
Net of Fees Paid to OTC	$4.3 million	$14.1 million

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