

# EXHIBIT A

ORACLE USA, INC., ET AL

V.

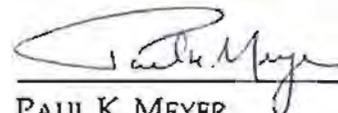
SAP AG, ET AL

CASE NO. 07-CV-01658

SUPPLEMENTAL EXPERT REPORT OF PAUL K. MEYER

TM FINANCIAL FORENSICS, LLC.

FEBRUARY 23, 2010

  
PAUL K. MEYER

TEXT REMOVED - NOT RELEVANT TO MOTION

## **II. Scope of Opinions/Summary of Damages**

20. I understand that much of the software technology accessed, downloaded, copied, distributed, modified and/or used by SAP is protected by Oracle copyright registrations. I understand that SAP had direct access to Oracle products protected by intellectual property rights. I have determined damages and offer opinions on the fair market value of SAP's actual use of Oracle's intellectual property (copyrighted materials), Oracle's lost profits related to support contracts, SAP's infringer profits/unjust enrichment and Oracle's additional costs caused by SAP's alleged actions. I understand, as allowed by the Court, I may also be asked to compute or provide opinions related to pre-judgment interest, attorney's fees and costs and punitive damages. Supporting analyses are described and provided throughout this Report. Table 1 presents a summary of my damages opinions.

TEXT REMOVED - NOT RELEVANT TO MOTION

**Table 1: Summary of Damages<sup>15</sup>  
Fair Market Value of SAP's Infringement of Oracle's Copyrights**

1. PeopleSoft/J.D. Edwards Fair Market Value <sup>16</sup>	No less than \$2.0 billion
2. Oracle Database Fair Market Value <sup>17</sup>	\$55.6 million
3. Siebel Fair Market Value <sup>18</sup>	No less than \$100 million
4. Oracle's Lost Profits – During TomorrowNow Service Period	\$99.6 million
5. Oracle's Lost Profits – Through May 2015	\$349.0 million
6. SAP's Unjust Enrichment/Avoided Costs	\$1.1 to 3.5 billion
7. SAP's Unjust Enrichment/Database License	\$55.6 million
8. Additional Oracle Costs:	
• Investigation Costs <sup>19</sup>	\$0.3 million
• Damages To Oracle's Data/Systems	Not quantified

TEXT REMOVED - NOT RELEVANT TO MOTION

<sup>15</sup> Table 1 reflects the values for elements of damages which I have been asked to quantify to date. I have not included in the table my assessment for infringers profits which is presented in Section X. I may also be asked to provide opinions and/or quantify pre-judgment interest, Oracle's attorney's fees and costs, and punitive damages. Elements in Table 1 represent different remedies for Oracle's allegations and certain elements may not be additive.

<sup>16</sup> See Sections VI.A.-D. and Table 8.

<sup>17</sup> See Section VII and components described in Tables 9, 10 and 10A.

<sup>18</sup> See Section VIII and Table 12.

<sup>19</sup> SCHEDULE 43.SU.

TEXT REMOVED - NOT RELEVANT TO MOTION

TEXT REMOVED - NOT RELEVANT TO MOTION

#### **8. Defendants' Improper Behavior Originated in the United States**

72. In response to interrogatories, TomorrowNow indicated that "Until recently, TomorrowNow conducted the downloads and stored the relevant materials on its computers. The downloads were conducted by TomorrowNow's employees using certain laptop and desktop computers as well as dedicated download servers located at TomorrowNow's data center in Bryan, Texas. TomorrowNow then transferred and stored downloaded materials on certain file servers."<sup>198</sup> Confirmation of this downloading activity to U.S.-based servers is also provided by the analysis of Kevin Mandia with Mandiant, computer forensic and security experts retained by Oracle in this litigation.<sup>199</sup>

73. As a result of all of the download activity occurring at the data center in Bryan, Texas, I understand copying, distribution and use of the improperly

---

TEXT REMOVED - NOT RELEVANT TO  
MOTION

<sup>198</sup> Defendant TomorrowNow, Inc.'s Eighth Amended and Supplemental Response to Plaintiff Oracle Corporation's First Set of Interrogatories (Set One), December 4, 2009, pgs. 11-20, at 12.

<sup>199</sup> Discussions with Kevin Mandia, Mandiant; February 12, 2010 Supplemental Expert Report of Kevin Mandia, pg. 34 (IP addresses were registered to SAP TN in Bryan, Texas).

accessed Software and Support Materials occurred out of the Bryan, Texas location including domestic and international distribution of Oracle's Software and Support Materials.

TEXT REMOVED - NOT RELEVANT TO MOTION

TEXT REMOVED - NOT RELEVANT TO MOTION

## 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.<sup>258</sup> 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."<sup>259</sup> One articulation of the "value of use" measure of damages is explained as:

---

TEXT REMOVED - NOT RELEVANT TO MOTION

<sup>258</sup> *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).

<sup>259</sup> 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.”<sup>260</sup>

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.<sup>261</sup> 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.”<sup>262</sup> As noted in *Nimmer on Copyrights*, the similarities between the

---

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

<sup>260</sup> 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, (9<sup>th</sup> Cir. 1977).

<sup>261</sup> *Polar Bear Prods. v. Timex Corp.*, 384 F.3d 700, 708 (9<sup>th</sup> Cir. 2004); *Jarvis v. K2, Inc.*, 486 F.3d 526, 533 (9<sup>th</sup> Cir. 2007); *Mackie v. Rieser*, 296 F.3d 909, 917 (9<sup>th</sup> Cir. 2002); *Frank Music Corp. v. Metro-Goldwyn-Mayer*, 772 F.2d 505, (9<sup>th</sup> Cir. 1985); and *Sid & Marty Krofft Television Prods., Inc. v. McDonald’s Corp.*, 562 F.2d 1157, (9<sup>th</sup> 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 2007 AICPA 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.

<sup>262</sup> 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.<sup>263</sup>

## **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.”<sup>263A</sup> The copyrighted materials in suit are set forth in Oracle’s Fourth Amended Complaint and are also summarized in Oracle’s technical expert reports.<sup>264</sup>

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,

---

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

<sup>263A</sup> January 28, 2010 Order of Judge Hamilton, Order Denying Defendants’ Motion for Partial Summary Judgment, pg. 4.

<sup>264</sup> 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.<sup>265</sup>

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

---

<sup>265</sup> *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.<sup>266</sup>

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.<sup>267</sup>

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.<sup>268</sup> 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.<sup>269</sup>

---

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

<sup>267</sup> *Intellectual Property, Valuation, Exploitation, and Infringement Damages*, by Gordon V. Smith and Russell L. Parr, 2005 Edition, pg. 169.

<sup>268</sup> *Intellectual Property, Valuation, Exploitation, and Infringement Damages*, by Gordon V. Smith and Russell L. Parr, 2005 Edition, pg. 185.

<sup>269</sup> *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.<sup>270</sup>
101. In the valuation of intellectual property, it is common to consider analysis of the fair market value under multiple valuation approaches.<sup>271</sup> 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.<sup>272</sup>
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

---

<sup>270</sup> *Intellectual Property, Valuation, Exploitation, and Infringement Damages*, by Gordon V. Smith and Russell L. Parr, 2005 Edition, pg. 156.

<sup>271</sup> *Intellectual Property, Valuation, Exploitation, and Infringement Damages*, by Gordon V. Smith and Russell L. Parr, 2005 Edition, pg. 155.

<sup>272</sup> 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.<sup>273</sup> For all licenses the term end date is October 31, 2008.<sup>274</sup>

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

---

<sup>273</sup> TN-OR07717977, Siebel\_Services.xls. On September 29, 2006, TomorrowNow entered into a Support Services Agreement with its first Siebel customer, MKS, Inc.

<sup>274</sup> 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.<sup>275</sup> 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

---

<sup>275</sup> E.g., *Wall Data v. Los Angeles County Sheriff's Dep't*, 447 F.3d 769, 786-787 (9<sup>th</sup> 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.<sup>276</sup>

TEXT REMOVED - NOT RELEVANT TO MOTION

---

<sup>276</sup> 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].

TEXT REMOVED - NOT RELEVANT TO MOTION

TEXT REMOVED - NOT RELEVANT TO MOTION

### **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

---

TEXT REMOVED - NOT RELEVANT TO MOTION

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.

TEXT REMOVED - NOT RELEVANT TO MOTION

TEXT REMOVED - NOT RELEVANT TO MOTION

**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.<sup>348</sup>

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.<sup>349</sup> 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

---

TEXT REMOVED - NOT RELEVANT TO MOTION

<sup>348</sup> 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).

<sup>349</sup> 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.<sup>350</sup>

TEXT REMOVED - NOT RELEVANT TO MOTION

---

<sup>350</sup> 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).

### 3. Cost Approach

282. In this circumstance, I have considered Oracle's cost to acquire subject intellectual property, as well as Oracle's investment in research and development of the intellectual property since the acquisition. In addition, I have considered an estimate of the costs SAP would have incurred to attempt to independently recreate the Siebel copyrighted materials in suit. As addressed above, the cost approach has limitations, and may understate the fair market value by not reflecting the full potential future benefits of the resulting intellectual property. However, it may serve to assess the reasonableness of the valuations derived from the other approaches.

283. As discussed above, Oracle acquired Siebel for \$6.1 billion in 2006.<sup>579</sup> Since 2006, Oracle has continued to incur development expenses related to Siebel products, including development efforts primarily related to support of existing products, and development efforts primarily related to new product development.

284. For the period March 2006 through August 2008 (2.5 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 Siebel products. Over this period, Oracle spent \$260 million on Siebel product applications development.<sup>580</sup> On average, Oracle spent approximately \$104 million per year developing Siebel Software and Support Materials.<sup>581</sup>

---

<sup>579</sup> Oracle Corporation Form 10-K for the fiscal year ended May 31, 2006, pgs. 75-77.

<sup>580</sup> See SCHEDULE 10.

<sup>581</sup> \$260 million / 2.5 years = \$104 million per year.

285. 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.<sup>582</sup> I understand that based on these analyses, Oracle has estimated that 60-65% of its research and development expense for its applications products related to support-related development efforts.<sup>583</sup> Therefore, for the period of January 2006 through September 2008, support-related research and development expense for Siebel products was approximately \$156 million to \$169 million.<sup>584</sup> However, given that TomorrowNow copied Oracle's Siebel support materials, as well as underlying applications, such apportioning of research and development expense between new product and support-related efforts is unnecessary.

286. For the nine months ending September 30, 2005, Siebel recorded product development expense of \$211.9 million.<sup>585</sup>

287. Assuming that SAP's improper actions allowed SAP to avoid development expenses from at least September 2006 through October 2008 (2.17 years), Oracle's development history would indicate a fair market value of no less than \$225.7 million. This calculation excludes the costs to develop the software and support materials as they existed prior to September 2006.

---

<sup>582</sup> Discussion with Houman Behazadi (Oracle Director of Business Planning and Operations).

<sup>583</sup> See, e.g., Oracle Presentation: "Applications Strategy – November 2007," ORCL00560527-566, at 533. Fusion research and development expenses are excluded from this analysis [Discussion with Houman Behazadi (Oracle Director of Business Planning and Operations)].

<sup>584</sup> \$260 million \* 60% = \$156 million; \$260 million \* 65% = \$169 million.

<sup>585</sup> Siebel Systems, Inc. Form 10-Q for the quarterly period ended September 30, 2005, p. 2.

288. Oracle's expert, Paul Pinto, estimated the costs that Defendants would have incurred to independently develop certain of the Siebel copyrighted materials in suit. I understand that one of Mr. Pinto's conclusions addresses avoided development costs of \$198 million to \$573 million. I understand that if completed in a 1 to 2 year period, this effort would take approximately 450 to 900 well trained resources.<sup>586</sup>

TEXT REMOVED - NOT RELEVANT TO MOTION

---

<sup>586</sup> 2.17 years \* \$104 million = \$225.7 million. November 16, 2009 Expert Report of Paul C. Pinto, pgs. 42-43. 10,890 person months ÷ 24 = 454 people; 10,890 person months ÷ 12 = 908.

TEXT REMOVED - NOT RELEVANT TO MOTION

## **IX. Quantification of SAP's Value of Use of Oracle's Copyrighted Property – Lost Profits**

### **A. Overview**

351. Oracle's<sup>655</sup> lost profits resulting from SAP's alleged infringement and use of Oracle's intellectual property include lost profits on lost support revenue related to Oracle's PeopleSoft, J.D. Edwards and Siebel products that would have been sold to customers that left to go to TomorrowNow.<sup>656</sup>

352. I understand that a quantification of actual damages as represented by Oracle's losses resulting from SAP's wrongful acts (i.e., Oracle's lost profits) is a remedy of damages available for certain of Oracle's causes of action in this

---

<sup>655</sup> In this section of the Report, "Oracle" refers to both the Plaintiff entities collectively, and their predecessors in interest.

<sup>656</sup> Pursuant to the September 17, 2009 Order of Magistrate Judge Laporte granting Defendants' Motion for Preclusion of Certain Damages Evidence, I understand that Oracle is precluded from seeking damages to which it believes it is entitled, including lost profits on lost up-sell or cross-sell opportunities related to the customers that cancelled their Oracle support contracts to go to TomorrowNow; lost profits related to discounts that Oracle provided to customers in order to compete with TomorrowNow; and lost profits associated with Oracle's adoption of its Lifetime Support and Applications Unlimited programs. Accordingly, I have not quantified those damages in this report. I understand that should Defendants take the position at trial that Oracle's claimed damages are excessive, the jury may be informed that Oracle is not seeking all of the damages to which it believes it is entitled [Magistrate Laporte's Order Granting Defendants' Motion for Preclusion of Certain Damages Evidence Pursuant to Federal Rules of Civil Procedure 37(c)(1) and 16(f), September 17, 2009; Judge Hamilton's November 2, 2009 Order].

suit.<sup>657</sup> The relevant Oracle plaintiff entities vary by cause of action. As explained below, I have calculated and offer opinions on Oracle's lost profits both in total, and by plaintiff entity.

353. As it relates to Oracle's copyright infringement claim, a measurement of Oracle's lost profits may be one alternative measure of Oracle's "actual damages." However, based on the facts of this case, a more appropriate measure of damages is SAP's "Value of Use" of the copyrighted materials in this suit, as determined in a hypothetical negotiation between Oracle and SAP at that time and under the circumstances of the actual infringement. At the time of my initial report, a motion was pending before Judge Hamilton in which Defendants had challenged Oracle's right to seek damages based on the Fair Market Value of Use. Therefore, I included the following lost profits analysis as an affirmative opinion. As referenced above in my discussion of the alternative Fair Market Value of Use analysis, Judge Hamilton has now recognized Oracle's right to seek such damages on its copyright infringement claim. In light of that ruling, I understand that it is Oracle's position that Oracle reserves the right to withdraw lost profits as an affirmative opinion of its copyright damages, thereby making Defendants' rebuttal of such an analysis with an alternative measure of lost profits unnecessary, inappropriate and time-consuming at trial.

354. I understand that Oracle International Corporation (OIC), the claimant in Oracle's copyright infringement cause of action, is the owner or exclusive

---

<sup>657</sup> I understand that lost profits is an available damages remedy under Oracle's claims of copyright infringement (as an alternative measure of Oracle's actual damages to SAP's "Value of Use" discussed in section V above), breach of contract, interference, and Computer Fraud and Abuse Act, and Computer Data Access and Fraud Act claims. Oracle's quantified lost profits damages that result from these various claims are overlapping, as they relate to lost support sales, and appear to be for the same set of customers.

licensee of the copyrighted materials at issue, except that OIC is not an exclusive licensee of certain J.D. Edwards and Siebel intellectual property in the EMEA (Europe, the Middle East and Africa) region.<sup>658</sup> Specifically, I understand that ownership of PeopleSoft and J.D. Edwards intellectual property (with the exception of certain EnterpriseOne intellectual property owned by J.D. Edwards Europe Ltd.) was transferred to OIC on March 1, 2005.<sup>659</sup> I understand that OIC is the owner of PeopleSoft and J.D. Edwards intellectual property developed after March 1, 2005 pursuant to the Cost Sharing and License Agreement between Oracle Corporation and Oracle Technology Corporation (the "Cost Sharing Agreement").<sup>660</sup> I understand

---

<sup>658</sup> I understand that J.D. Edwards Europe, not OIC, is the exclusive licensee to J.D. Edwards EnterpriseOne copyrighted materials, versions 8.11 and earlier, sold in the EMEA region. In addition, I understand that Siebel Systems Irish Holdings Limited, not OIC, is the exclusive licensee to Siebel copyrighted materials developed prior to 2006 (related to Siebel software versions 7.8 and earlier) [Deposition of Ann Kishore (Oracle Director of Tax Department, Mergers and Acquisitions), April 14, 2009, pgs. 74-76; Deposition of Ann Kishore, September 25, 2009, pgs. 519-524; Discussion with Ann Kishore]. Therefore, as it relates to Oracle's copyright infringement claim, for which OIC is the named plaintiff, I understand that Oracle would not be entitled to recover lost profits for lost sales in the EMEA region of J.D. Edwards Enterprise One and Siebel versions 7.8 and earlier. However, I understand that Oracle can claim these lost support profits pursuant to Oracle's other claims. Based on information produced by Defendants, I understand that all of TomorrowNow's Siebel customers were receiving service on versions 7.8 and earlier [See TN-OR07717977, Siebel\_Services.xls].

<sup>659</sup> PeopleSoft/JDE LLC OIC Asset Transfer Agreement dated March 1, 2005, ORCL00043702-707, at 702; JDE Companies OIC Asset Transfer Agreement dated March 1, 2005, ORCL00043708-713, at 708; Oracle IP Rights Transfer Clarification Agreement dated March 1, 2005, ORCL00525139-143, at 139-140; Deposition of Ann Kishore (Oracle Director of Tax Department, Mergers and Acquisitions), April 14, 2009, pgs. 73-76.

<sup>660</sup> Cost Sharing and License Agreement between Oracle Corporation (OC) and Oracle Technology Company (OTC) [ORCL00160487-510, at 497], which was amended to add Oracle USA (OUSA) as a member to the agreement effective March 1, 2005 [Addition of a Participating Member in the Amended and Restated Cost Sharing and License Agreement, dated March 1, 2005, ORCL00182370-71]. I understand that the agreement that is currently in force is the Fourth Amended and Restated Cost Sharing Agreement made by and among OC, OIC, OUSA, OTC and OCAPAC Research Company (OCAPAC), effective January 5, 2009 [ORCL00578071-117]. According to Ann Kishore, Oracle Director of Tax Department, Mergers and Acquisitions, all relevant products are covered by the Cost Sharing Agreement, excluding J.D. Edwards World products sold in the EMEA region [Deposition of Ann Kishore, September 25, 2009, pgs. 265-266, 294-295 and 478-479]. While it is excluded from the Cost Sharing Agreement, copyrights related to J.D. Edwards World products developed after March 2005 are owned by OIC pursuant to the Oracle Master Services Agreement [Master Services Agreement Among the Members of the Oracle Group, dated June 1, 2003, ORCL 00585342-369, and subsequent amendments]. Todd Adler, Oracle Senior Corporate Counsel, also testified that all of the PeopleSoft and J.D. Edwards copyrighted works listed in Oracle's Third Amended Complaint are owned by OIC [Deposition of Todd Adler, October 9, 2008, pgs. 36-37].

Siebel Systems, Inc. provided OIC with an exclusive license to its intellectual property, including rights to enforce intellectual property rights, effective March 1, 2006.<sup>661</sup> I understand that OIC is the owner of all Siebel intellectual property developed after March 1, 2006 pursuant to the incorporation of the terms of the Siebel Cost Sharing Agreement into the Amended and Restated Cost Sharing and License Agreement between Oracle Corporation and Oracle Technology Corporation.<sup>662</sup> As the holder of rights and interest in Oracle's PeopleSoft, J.D. Edwards and Siebel copyrighted materials in suit, I understand OIC has rights to enforce those copyrights against an alleged infringer such as SAP.

355. For purposes of my analysis, I have calculated Oracle's lost profit damages under two scenarios. In the first scenario, I have calculated lost profits of the Oracle organization as a whole. Under the second scenario, I have calculated Oracle's lost profits specific to the Oracle plaintiff entities in this case (i.e., Oracle's lost profits if it is found that its recovery of lost profits damages is limited by the structure of its corporate entities as a result of its various inter-entity license, cost sharing and other agreements).<sup>663</sup>

---

<sup>661</sup> Interim Siebel License Agreement (Siebel Intellectual Property), dated March 1, 2006, ORCL00524948-955, at 950; Acknowledgement to the Interim Siebel License Agreement and Interim Oracle License Agreement, dated July 10, 2009, ORCL00525144-145.

<sup>662</sup> Amendment to Agreement for Sharing Intangible Development Costs (Siebel Systems, Inc.), dated March 1, 2006, ORCL00524980-981; Deposition of Ann Kishore (Oracle Director of Tax Department, Mergers and Acquisitions), September 25, 2009, pgs. 523-524; Discussion with Ann Kishore.

<sup>663</sup> I understand that Oracle corporate entities, including the plaintiffs in this case, maintain inter-entity license, distribution, cost sharing and other agreements whereby various Oracle legal entities are provided rights to sublicense and distribute the intellectual property owned by OIC or licensed to OIC through an exclusive license, in exchange for royalty payments. In addition, various Oracle entities share in the research and development costs incurred to develop Oracle's software products and related intellectual property [Deposition of Ann Kishore (Oracle Director of Tax Department, Mergers and Acquisitions), September 25, 2009, pgs. 311-312]. *See, e.g.*, Amendment Two to the Distribution Agreement between Oracle International Corporation and Oracle Corporation, dated June 1, 2004, ORCL00385437-438; Acknowledgement to the Amended and Restated Distribution Agreement, dated March 1,

TEXT REMOVED - NOT RELEVANT TO MOTION

---

2005, ORCL00043740-41 (acknowledging the assignment of Oracle Corporation's rights to Oracle USA); Fourth Amended and Restated Cost Sharing Agreement, dated January 5, 2009, ORCL00578071-117, at 087-092.

TEXT REMOVED - NOT RELEVANT TO MOTION

TEXT REMOVED - NOT RELEVANT TO MOTION

**ii. OEMEA Lost Support Revenue**

402. I understand that OEMEA is a principal in various commissionaire, undisclosed agency and distributor agreements with other Oracle entities that sell and service Oracle products in the territory of EMEA.<sup>746</sup> In addition, OEMEA sells Oracle products and services to customers in Ireland.<sup>747</sup> The relevant cancelled contracts of Lost Customers in the EMEA region resided in countries where OEMEA operates through commissionaire and undisclosed agent relationships.

403. The OEMEA commissionaires and undisclosed agents sell Oracle products within the country(ies) of their designated territory on behalf of, and for the account of, OEMEA (i.e., the revenue received from Oracle customers

---

TEXT REMOVED - NOT RELEVANT TO MOTION

<sup>746</sup> Deposition of Ann Kishore (Oracle Director of Tax Department, Mergers and Acquisitions), April 14, 2009, pg. 139; Discussion with Claire Sebti (Oracle Senior Director of Corporate Accounting).

TEXT REMOVED - NOT RELEVANT TO MOTION

belongs to OEMEA).<sup>748</sup> For purposes of my calculation of OEMEA's lost profits, OEMEA's lost support revenue is equivalent to the lost support revenue on Lost Customers for which the Oracle Organization is located within the territory of OEMEA.<sup>749</sup>

404. I understand that in accordance with a License Agreement effective June 1, 2005 between OEMEA and Oracle Finance S.A.R.L. (another Oracle entity, "OFS"), OEMEA pays OFS a sublicense fee of 39% of its net support revenue and, in turn, OFS pays a sublicense fee to Oracle Technology Company (OTC).<sup>750</sup> I understand that effective August 1, 2008, the sublicense fee rate paid by OEMEA to OFS increased to 56%.<sup>751</sup> I understand that OFS retains 0.15%-0.5% (an immaterial portion) of the amount received from OEMEA, and pays the remaining amount to OTC.<sup>752</sup> In calculating OEMEA's lost revenue, I have not deducted the sublicense fees paid to OFS/OTC. However, I understand the amounts received by OTC could alternatively be claimed as revenue by OIC, because OTC receives the sublicense fee revenue pursuant to

---

<sup>748</sup> Deposition of Ann Kishore (Oracle Director of Tax Department, Mergers and Acquisitions), September 25, 2009, pgs. 366-370. Ms. Kishore answers questions with respect to OEMEA's agreement with Oracle Corporation UK Limited. Ms. Kishore explains that OEMEA's commissionaire agreements with other entities are very similar, with possibly the exception of the Oracle commissionaire entity in Italy [Deposition of Ann Kishore (Oracle Director of Tax Department, Mergers and Acquisitions), September 25, 2009, pgs. 362-363].

<sup>749</sup> Discussion with Claire Sebtì (Oracle Senior Director of Corporate Accounting).

<sup>750</sup> License Agreement between Oracle Finance S.A.R.L. (Luxembourg) and Oracle EMEA Limited, dated June 1, 2005, ORCL00182248-270 (Kishore Exhibit 272), at 269; License Agreement between Oracle Technology Company and Oracle Finance S.A.R.L., dated June 1, 2005, ORCL00182271-292 (Kishore Exhibit 271), at 282 and 292; Deposition of Ann Kishore (Oracle Director of Tax Department, Mergers and Acquisitions), September 25, 2009, pgs. 418-419 and 431-434.

<sup>751</sup> Addendum No. 2 to the License Agreement OFS/OEMEA, dated August 1, 2008, ORCL00583894-897 (Kishore Exhibit 670), at 895; Deposition of Ann Kishore, September 25, 2009, pgs. 428-429.

<sup>752</sup> License Agreement between Oracle Technology Company and Oracle Finance S.a.r.L. (Luxembourg), dated June 1, 2005, ORCL00182271-292; Deposition of Ann Kishore (Oracle Director of Tax Department, Mergers and Acquisitions), April 14, 2009, pgs. 141-146 and 234-235; Discussion with Ann Kishore.

a license from OIC and the economic rights are controlled by OIC as owner of the relevant copyrights.

405. As shown on **SCHEDULE 35.SU**, OEMEA would have received \$56.8 million in support revenue through May 2015 related to Oracle's Lost Customers. OEMEA would have received \$11.2 million in support revenue during the period in which the Lost Customers received support services from TomorrowNow.<sup>753</sup> Excluding lost revenue on sales of J.D. Edwards EnterpriseOne and Siebel products, OEMEA would have received \$18.9 million in support revenue through 2015, \$3.5 of which relates to the period during which the lost customers received support services from TomorrowNow.<sup>754</sup>

TEXT REMOVED - NOT RELEVANT TO MOTION

---

<sup>753</sup> **SCHEDULE 35.1.SU**.

<sup>754</sup> **SCHEDULES 35.SU and 35.1.SU**.

TEXT REMOVED - NOT RELEVANT TO MOTION

TEXT REMOVED - NOT RELEVANT TO MOTION

**X. Quantification of Damages Related to Infringer's Profits / Defendants' Unjust Enrichment**

**A. Overview**

434. Defendants' have benefited financially from being able to market and sell TomorrowNow support services using a business model that relied upon the alleged infringement and misuse of Oracle's intellectual property.<sup>803</sup> As a result of the alleged bad acts, Defendants have been unjustly enriched as a result of being able to sell support service for PeopleSoft, J.D. Edwards and Siebel products, as well as obtain and enhance customer relationships that

---

<sup>803</sup> In this section, unless specified otherwise, I use the terms "unjust enrichment" and "infringer's profits" synonymously.

facilitated sales of additional SAP software applications and associated support and other services. An alternative measure of Defendants' unjust enrichment is the cost that SAP would have incurred to develop the alleged misappropriated Software and Support Materials internally and license Oracle database software, as opposed to acquiring the technology improperly.<sup>804</sup> Other experts for Oracle have quantified SAP's avoided development cost and I have summarized these amounts in an earlier section of this report.

435. I understand that disgorgement of Defendants' profits obtained as a result of its alleged infringement and misuse of Oracle's Software and Support Materials is a remedy of damages available to Oracle for certain of its causes of action in this litigation. I understand that under its copyright infringement claim, Oracle is entitled to claim infringer's profits to the extent they are not duplicative of its actual damages claim. If Oracle is awarded actual damages on the basis of its lost support profits (as opposed to based on the fair market value of SAP's use of the infringed copyrighted materials in suit), I understand Oracle would be entitled to an award of infringer's profits as it relates to any Relevant TomorrowNow Customers who also purchased applications or other services from SAP, or were otherwise excluded from the calculation of lost support profits.<sup>805</sup> I have quantified Defendants' total revenues related to its alleged infringement and misuse of Oracle's Software and Support Materials.

---

<sup>804</sup> SAP's unjust enrichment as measured by its avoided costs is an alternative to, rather than additive to the amount of SAP's unjust enrichment based on its ill-gotten support, license and other services revenue. I do not, however, use SAP's avoided costs as a measure of Defendants' infringers' profits for its copyright infringement, as I understand that Defendants' avoided cost is not an appropriate measure of copyright damages on the basis of disgorgement of infringer's profits.

<sup>805</sup> For this reason, TomorrowNow's support revenue received from customers that are excluded from the calculation of Oracle's lost support profits is separately presented on SCHEDULE 41.U.

I understand in these circumstances it is the Defendants' burden to identify and address any appropriate apportionment issues and/or cost deductions.

TEXT REMOVED - NOT RELEVANT TO MOTION

TEXT REMOVED - NOT RELEVANT TO MOTION

**D. Opinion: Defendants' Unjust Enrichment – Avoided Costs**

447. Through its alleged systematic misappropriation of Oracle's PeopleSoft, J.D. Edwards, Siebel and Oracle database Software and Support Materials, it is my opinion, SAP was able to provide support services to PeopleSoft, J.D. Edwards and Siebel customers without incurring the significant research and development costs, risks and time associated with creating those software applications and support materials themselves. I understand that Oracle's expert, Paul Pinto, was retained to estimate the costs that Defendants would have had to incur to independently develop certain of the Oracle copyrighted materials in suit that it allegedly accessed, copied and misused. Mr. Pinto submitted a report of his findings and analysis November 16, 2009, and for the purpose of quantifying Defendants' unjust enrichment on the basis of its avoided development costs, I defer to Mr. Pinto's conclusions. I have referenced Mr. Pinto's opinions on development costs in the cost approach of the valuation section.

TEXT REMOVED - NOT RELEVANT TO MOTION

448. I understand that based on his analysis, Mr. Pinto has concluded that it would have cost Defendants significant amounts to develop 8 specific PeopleSoft, J.D. Edwards and Siebel software applications.

449. In addition, I understand that Mr. Pinto has concluded that it would take Defendants 2,828 well-trained resources to complete development of the 8 PeopleSoft, J.D. Edwards and Siebel applications that he analyzed within a 2 year period.<sup>836</sup> As explained in Section IV.B.2 above, 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 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 2 year development timeframe, SAP may have determined that offering support services to Oracle products as an integral part of its Safe Passage program was not an attractive business decision, in which case Oracle's PeopleSoft, J.D. Edwards and Siebel customer base would not have been at such risk of leaving Oracle to go to TomorrowNow and SAP. I have referenced Mr. Pinto's results related to avoided development costs in Sections VI.A.3 and VIII.B.3 of this report.

**E. Opinion: Defendants Unjust Enrichment – Avoided Costs of Licensing Oracle Database Copyrighted Materials**

450. In Section VII. of this report, I calculated and summarize Defendants' gains related to not paying licensing and support fees to use Oracle's database in the servicing of its application support customers. The Defendants have

---

<sup>836</sup> Discussion with Paul Pinto (Sylvan VI, Inc.); November 16, 2009 Expert Report of Paul Pinto, pgs. 2, 6-7 and 44. 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].

avoided licensing and support fees of \$55.6 million related to the unlicensed use of Oracle's database software. More details of this analysis are included in Section VII (Tables 9, 10 and 10A) and **Schedule 44.SU**. This amount would represent unjust enrichment.

## **XI. Other Damage Amounts**

### **A. Opinion: Oracle Costs Incurred to Investigate SAP's Improper Actions**

451. I understand that the damages remedies available to Oracle on its Computer Fraud and Abuse Act claim include a recovery of its lost profits (See Section IX, footnote 567) and the costs incurred to investigate the Defendants' alleged violations of the Act. I further understand that the investigation cost damages need not be incremental costs, but rather can be calculated based on the time spent investigating the actions rather than on normal day-to-day responsibilities.<sup>837</sup>

452. I understand Oracle began investigating unusual downloading activity related to its Customer Connection website (the "download investigation") in November 2006, and the investigation remained open as of December 2008.<sup>838</sup> The download investigation consisted of review of the reverse proxy logs on the Sun machines in search of "the IP address of the external third party who [was] making these requests, including these strange phone numbers, email addresses, et cetera."<sup>839</sup> The investigation identified that the IP address was

---

<sup>837</sup> See, for example, *SuccessFactors, Inc. v. Softscape, Inc.*, 544 F. Supp. 2d 975 (N.D. Cal 2008).

<sup>838</sup> Deposition of Uwe Koehler (Oracle Senior Director, Global Information Security Compliance and Risk), December 4, 2008, pgs. 19 and 56. The log files for Oracle's Customer Connection system show the IP address of the client or requester. [Deposition of Uwe Koehler (Oracle Senior Director, Global Information Security Compliance and Risk), December 4, 2008, pg. 75].

<sup>839</sup> Deposition of Uwe Koehler (Oracle Senior Director, Global Information Security Compliance and Risk), December 4, 2008, pgs. 92-93.

registered to a company called Managed Network Solutions, an apparent internet service provider headquartered in Bryan, Texas.<sup>840</sup> The next step in the download investigation was to review the reverse proxy logs for that IP address and review the associated activity.<sup>841</sup> Based on the analysis of the reverse proxy logs, Oracle personnel confirmed “that something strange [was] going on.”<sup>842</sup> The IP address was blocked on December 12, 2006, but similar patterns in the log files began about two days later.<sup>843</sup>

453. I understand, Oracle conducted a second investigation (the “click investigation”) beginning in January 2007, which was later combined with the download investigation once Oracle determined that the activity was related.<sup>844</sup> I understand, the click investigation began when an Oracle employee noticed two unusual items in a report created to summarize customer feedback: 1) a “high number of the ‘no’ click, saying the customer answered, did that solution help you, did that download help you, no” and 2) the timing of these “no” clicks was only a few milliseconds after the download occurred, and therefore “cannot have been done by a human being.”<sup>845</sup> Dr. Uwe Koehler, Oracle Senior Director of Global Information Security and Risk, testified that “[o]nce we realized the IP address and the patterns, we realized

---

<sup>840</sup> Deposition of Uwe Koehler (Oracle Senior Director, Global Information Security Compliance and Risk), December 4, 2008, pgs. 93-94.

<sup>841</sup> Deposition of Uwe Koehler (Oracle Senior Director, Global Information Security Compliance and Risk), December 4, 2008, pgs. 98-99.

<sup>842</sup> Deposition of Uwe Koehler (Oracle Senior Director, Global Information Security Compliance and Risk), December 4, 2008, pgs. 100-101.

<sup>843</sup> Deposition of Uwe Koehler (Oracle Senior Director, Global Information Security Compliance and Risk), December 4, 2008, pg. 107.

<sup>844</sup> Deposition of Uwe Koehler (Oracle Senior Director, Global Information Security Compliance and Risk), December 4, 2008, pgs. 19, 59-60 and 127.

<sup>845</sup> Deposition of Uwe Koehler (Oracle Senior Director, Global Information Security Compliance and Risk), December 4, 2008, pgs. 23-24.

that this is actually the same pattern, or even the same investigation as the download investigation, and that's why we turned on – you can also say, we stopped the click investigation and continued with the download investigation.”<sup>846</sup> The primary conclusion made in February 2007, as a result of the investigative process, was that TomorrowNow had “excessive downloads from the site” that were “unusually high, compared to the other customers.”<sup>847</sup>

454. I understand that in conducting the download and click investigations, Oracle incurred costs related to personnel time and labor, hardware and software, travel and telecommunications.<sup>848</sup> At his deposition Dr. Koehler, provided a list of 19 individuals involved in the investigations and the amount of time that each of them were involved. Dr. Koehler's list also identifies the number of hard drives and laptops that were used in efforts to preserve the Customer Connection log files.<sup>849</sup>

455. I have quantified the total personnel expense incurred by Oracle to investigate SAP's alleged misconduct based on Dr. Koehler's estimations of the amount of time spent by the individuals on the investigations, and salary information for those individuals obtained from Oracle's Human Resources

---

<sup>846</sup> Deposition of Uwe Koehler (Oracle Senior Director, Global Information Security Compliance and Risk), December 4, 2008, pg. 127.

<sup>847</sup> Deposition of Uwe Koehler (Oracle Senior Director, Global Information Security Compliance and Risk), December 4, 2008, pgs. 128-129.

<sup>848</sup> Deposition of Uwe Koehler (Oracle Senior Director, Global Information Security Compliance and Risk), December 5, 2008, pgs. 75-76; Notes of Uwe Koehler on the “Nature of Harm/Damage,” (Koehler Exhibit 167).

<sup>849</sup> Deposition of Uwe Koehler (Oracle Senior Director, Global Information Security Compliance and Risk), December 5, 2008, pgs. 81-86. In his summary of costs, Dr. Koehler specifically does not include the costs of preservation of laptops, hard drives or web pages except for the preservation of the data related to the log files (efforts referred to by Dr. Koehler as “eDiscovery”), or travel and telecommunications expense [Deposition of Uwe Koehler (Oracle Senior Director, Global Information Security Compliance and Risk), December 5, 2008, pgs. 77-81; Notes of Uwe Koehler on the “Nature of Harm/Damage,” (Koehler Exhibit 167)].

department. Based on that information, it is my opinion that Oracle incurred approximately \$300,000 of personnel expense related to the investigation of SAP's alleged activity.<sup>850</sup> I have not quantified the cost to Oracle from the use of the 12 hard drives and 5 laptops identified by Dr. Koehler.

**B. Opinion: Damage to Oracle's Databases as a Result of SAP's Improper Actions**

456. I understand that one of the causes of actions in this matter relates to Defendants' alleged violation of the Computer Data Access and Fraud Act.<sup>851</sup> I understand that the damages remedies available to Oracle for this claim include a recovery of its lost profits (See Section IX, footnote 567). I have not quantified other damages suffered by Oracle from these improper actions, but I have included a description of the types of harm caused below.

457. I understand that Oracle alleges that in at least one instance the massive amounts of downloads by TomorrowNow crashed Oracle's Siebel-related customer support website.<sup>852</sup> Jason Kees, Oracle Senior Manager of Global Information Security, testified that based on his review of emails, TomorrowNow caused a crash of the Siebel Support Web system.<sup>853</sup>

---

<sup>850</sup> SCHEDULE 43.SU.

<sup>851</sup> Oracle USA, Inc. et al v SAP AG et al, Fourth Amended Complaint In Case No. 07-CV-01658 dated August 18, 2009, pgs. 59-60.

<sup>852</sup> Oracle USA, Inc. et al v SAP AG et al, Fourth Amended Complaint In Case No. 07-CV-01658 dated August 18, 2009, pgs. 35-36. Former TomorrowNow employee, John Ritchie, testified that he "knew for a fact that Titan was actually crashing their servers," and explained that during the times that it crashed Oracle's servers, other customers would not have been able to log in [Deposition of John Ritchie (former TomorrowNow employee responsible for development of the Titan tool), December 2, 2009, pgs. 21, 34, 51-52 and 56-57] Oracle technical expert Kevin Mandia (Mandiant) also concluded that it is "more likely than not" that SAP TN's Titan activity "caused Customer Connection to be unavailable for authentication for other customers logging in through the standard web portal when SAP TN was performing mass downloads using Titan." [February 12, 2010 Supplemental Expert Report of Kevin Mandia, pg. 43].

<sup>853</sup> Deposition of Jason Kees (Oracle Senior Manager of Global Information Security), October 15, 2009, pgs. 236-237.

458. Oracle 30(b)(6) witnesses also testified to other types of harm suffered by Oracle as a result of TomorrowNow's alleged downloading activity. Mr. Kees, testified that multiple downloads could potentially skew the data related to the website and result in false reports.<sup>854</sup> These skewed metrics may affect customer search results and the scheduled deletion of certain documents.<sup>855</sup> Dr. Koehler believes that at least on certain days there was a slowdown of the system based on his analysis of the log files and the number of bytes downloaded by TomorrowNow.<sup>856</sup> In addition to the usage of bandwidth that likely caused a slowdown of the system, the number of requests to the system for the TomorrowNow downloads also consumed "certain computing resources in terms of CPU power, disk input/output, et cetera."<sup>857</sup>

TEXT REMOVED - NOT RELEVANT TO MOTION

---

<sup>854</sup> Deposition of Jason Kees (Oracle Senior Manager of Global Information Security), October 15, 2009, pg. 224.

<sup>855</sup> Deposition of Jason Kees (Oracle Senior Manager of Global Information Security), October 15, 2009, pgs. 224-227.

<sup>856</sup> Deposition of Uwe Koehler (Oracle Senior Director, Global Information Security Compliance and Risk), December 5, 2008, pgs. 55-56; Notes of Uwe Koehler on the "Nature of Harm/Damage," (Koehler Exhibit 167).

<sup>857</sup> Deposition of Uwe Koehler (Oracle Senior Director, Global Information Security Compliance and Risk), December 5, 2008, pg. 62; Notes of Uwe Koehler on the "Nature of Harm/Damage," (Koehler Exhibit 167). Former TomorrowNow employee, John Ritchie, testified in deposition that he observed a decrease in the performance of the Oracle website while Titan was running [Deposition of John Ritchie (former TomorrowNow employee responsible for development of the Titan tool), December 2, 2009, pg. 63].