

EXHIBIT C

Analysis of SAP TN's Collection and Use of
Oracle Software and Related Materials

November 16, 2009,
supplemented February 12, 2010

Proprietary and Highly Confidential



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2. I have been asked by Plaintiffs Oracle USA, Inc., *et al.* ("Oracle") to render my opinions regarding the means and methods by which SAP TN accessed and downloaded from Oracle's customer support websites, as well as the nature and extent of SAP TN's copying, modification, distribution, and use of Oracle intellectual property to support SAP TN's customers.

16. In summary, I have concluded that SAP TN's support of Oracle's products relied on the access to and copying of Oracle materials through:

- Mass downloading of and improper access to Oracle SSMs from Oracle's customer support websites
- Creation of copies of Oracle SSMs
- Creation of thousands of copies of Oracle Enterprise Application and Database Software
- Cross-Use of Oracle Enterprise Application Software and/or SSMs to develop and deliver virtually every Fix SAP TN provided to customers
- Continuing access, downloading, copying, modification, and distribution of Oracle Enterprise Application Software, SSMs, and support websites for over a year and a half after Oracle sued in this Action
- Oracle's copyrights asserted in this Action protect the Oracle Enterprise Application and Database Software and SSMs that SAP TN copied, downloaded, modified, distributed, and used to create Fixes and for other commercial purposes to support its business model.

IV. ASSUMPTIONS AND DEFINITIONS

35. The following represent my assumptions for Derivative Works:

- File-based Objects and Online Objects incorporate a substantial amount of Protected Expression.
- Modification of a File-based Object substantially transforms the File-based Object.
- A File-based Object applied to an Environment substantially transforms that Environment.
- A DAT file applied to an Environment substantially transforms that Environment.
- The Database Schema incorporates a substantial amount of Protected Expression.
- Modification to the Database Schema substantially transforms that Database.

2. Distribution

38. Use of existing Oracle Enterprise Application Software, Oracle Database Software, or Oracle SSMs provided by one customer to create instructions by which another customer can implement its own Fix to Oracle Enterprise Application Software or Oracle Database Software is improper.

39. Fixes developed and delivered to a customer should only be developed, tested, and produced using that customer's licensed Oracle software.

40. Even if an Environment assigned to a specific customer was used for all stages of Fix-delivery for that customer's Fix, the Fix is Contaminated if that Environment was also used to support other customers as part of the Fix-delivery process for that same Fix ID.

5. Install Media

41. Every successful installation of Oracle Enterprise Application Software or Database Software from Install Media³ listed creates a copy of the associated Oracle Enterprise

³ A complete list of Oracle software that embodies the Registered Works, by Bates number, can be found in the appendices to Plaintiffs' Responses to Defendants' Interrogatory 13, including amended and supplemental responses.

Application Software or Database Software, and the Protectable Expression contained in the Oracle Enterprise Application Software or Database Software.

42. Every copy of Install Media for Oracle Enterprise Application Software or Oracle Database Software is a copy of the associated Oracle Enterprise Application Software or Oracle Database Software, and the Protectable Expression contained in the Oracle Enterprise Application Software or Oracle Database Software.

6. PeopleSoft Environments

43. A PeopleSoft Environment typically consists of one or more of a PeopleSoft base application (such as HRMS), PeopleTools, and a PeopleSoft Database.

7. Protected Expression

44. Oracle Enterprise Application Software, Oracle Database Software, and certain SSMs contain a substantial amount of Protected Expression. In particular, File-based Objects and schema contain a substantial amount of Protected Expression and DAT files may contain a substantial amount of Protected Expression.
45. Any materials described by tables 35 or 36 in Section X embody one or more Registered Works identified in paragraph 158 of the Fourth Amended Complaint.

8. Terms of Use

46. Oracle's customer support website terms of use generally do not allow a customer, including a third party using that customer's log-in credential, to (1) download customer support materials after the customer's maintenance end date; (2) download customer support materials for a different customer; (3) subsequently use downloaded customer support materials for a different customer; or (4) use a customer login credential other than to download licensed customer support materials solely for the use of the customer whose login credentials were used for the download(s).

173. Certain of Oracle's support websites, including Customer Connection, and certain Oracle tools on those websites, were password-protected. The password protection and Terms of Use restricted access to a customer (or agent) with an active maintenance contract with Oracle.

To log onto Customer Connection, SAP TN accessed the log-in page, shown in a screenshot below.

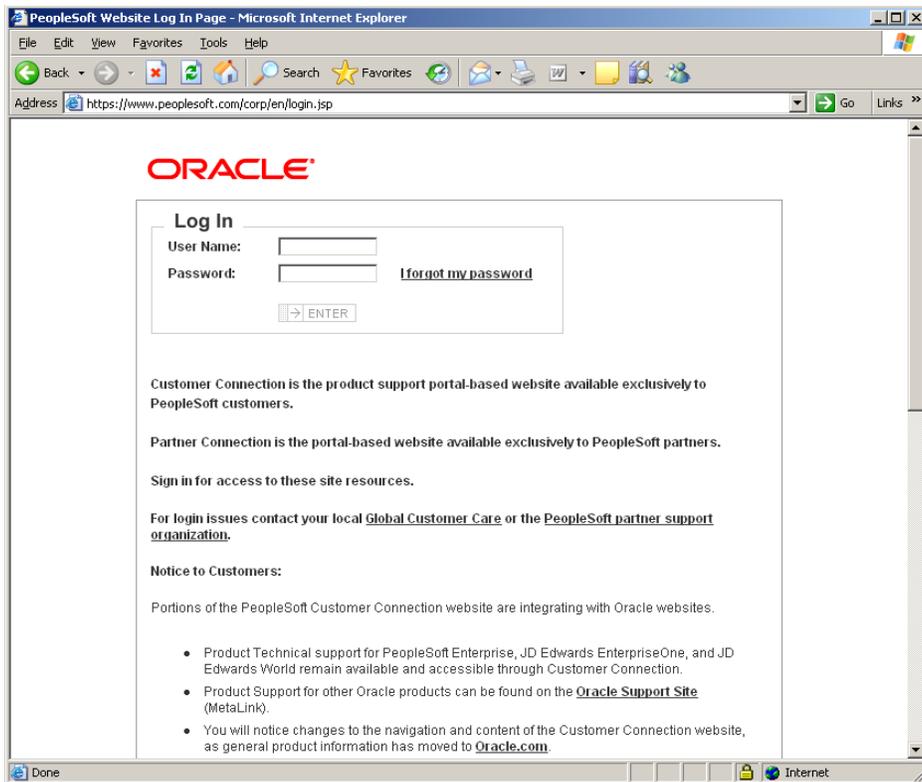


Figure 11: Customer Connection Log-In Page

Similarly, below is a screenshot of the log-in screen SAP TN accessed to use Oracle's Update Center:

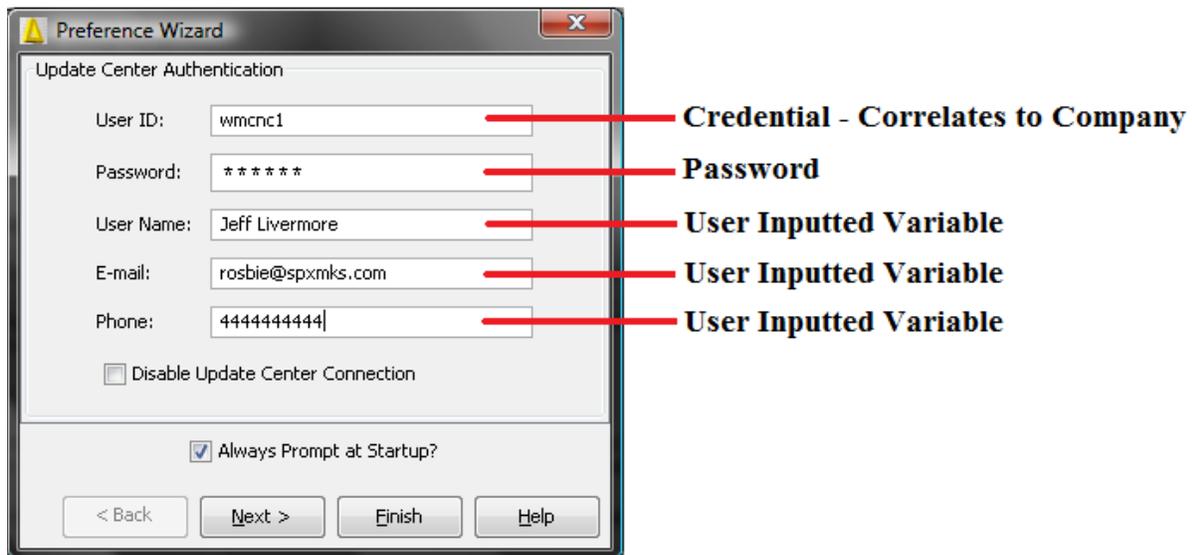


Figure 12: JD Edwards Change Assistant Tool Log-In

2. SAP TN's Use of Automated Downloading Tools

215. In summary, 97,871 files could be attributed to a company name, and of those files, 27% were downloaded for other customers than the customers in whose folders they appeared.⁹⁴ The following table provides a summary of HTML files that could be identified with a customer-specific credential in the inappropriate customer folder:

Customer Credential Used	Number of Other Customers With Files From This Customer	Size of Files Downloaded	Number of Files Downloaded
Bear, Stearns	3	468.13 MB	15,352
Trenwick Group	4	70.01 MB	1,120
Vanderbilt University	2	24.85 MB	6,211
Baxter International	6	20.06 MB	743
JB Hunt Transport	2	19.70 MB	538
Wendy's International	13	7.57 MB	294
Parkview Health System	8	6.62 MB	246
Kent County	16	6.00 MB	232
AO Smith Corporation	2	5.36 MB	153
Richmond Power & Light	2	5.35 MB	140
Cerebos Pacific Limited	1	5.28 MB	160
Hitachi Global	1	4.78 MB	127

⁹⁴ See ORCLX-MAN-000384.

Customer Credential Used	Number of Other Customers With Files From This Customer	Size of Files Downloaded	Number of Files Downloaded
Ariba, Inc.	1	3.22 MB	48
StarHub Pte Ltd	1	3.06 MB	80
Wellbridge Club Management	2	2.88 MB	105
Allianz Global	3	2.69 MB	100
Interpublic Global Information	1	2.18 MB	52
Alterra Healthcare	1	2.14 MB	484
Wakefern Food Corporation	1	1.99 MB	64
Energy Northwest	1	1.67 MB	46
High Industries	13	983.79 KB	39
American Council on Education	7	939.57 KB	35
American Family Life Assurance	2	933.31 KB	20
Simon Property Group	44	899.04 KB	44
Engelhard Corporation	1	644.20 KB	24
Federated Investors	2	614.11 KB	22
CSK Auto Incorporated	1	345.02 KB	8
Ross Dress for Less	2	325.07 KB	8
Markel Corporation	1	264.72 KB	8
GKN Driveline	1	189.75 KB	6
University of Massachusetts	1	152.17 KB	73
Epiphanygen Inc	1	136.74 KB	5
Newport Corporation	1	134.23 KB	2
Mieco Incorporated	2	82.63 KB	4
Diamond Cluster International	3	60.70 KB	3
Pepsi Cola	1	38.25 KB	1
DataDirect Technologies Corp	1	29.97 KB	1
Toshiba American	1	23.49 KB	1
American Media Inc	1	20.41 KB	1
Tropical Shipping USA	1	17.14 KB	4
Robert Half International	1	14.54 KB	4
Norstan Incorporated	1	4.60 KB	1
Total:	160	670.22 MB	26,609

Table 19: Number of Downloads Using Inappropriate Customer Credentials

5. SAP TN Downloaded and Copied SSMs for Non-Customers

296. It is my opinion that SAP TN's support models both resulted in Fixes being Contaminated (in one or more ways) by improper Environment use. Specifically, Mandiant identified (via the DAT Contamination and Hash Contamination measures):
1. 94% of the CSM Fixes were generated from improperly used Environments.

2. 90% of the RSM Fixes were generated from improperly used Environments.

Adding Source Group Contamination as well as Cross-Use Contamination and Additional-Customer Contamination calculated for a sample of Fixes¹⁵² yielded:

3. Between 98.73% and 99.57% of the CSM Fixes were generated with improperly used Environments.
4. Between 74.64% and 99.74% of the RSM Fixes were generated with improperly used Environments.

2. 97.5% of DAT files in Fixes Were Developed Using Generic Environments or Incorrect Client-Labeled Environments

297. Many Fixes to PeopleSoft HRMS include a data change, meaning that application of the Fix to an Environment modifies the contents or the structure of the database in that Environment. For PeopleSoft HRMS, data changes commonly update an Environment to account for new or modified legislation or regulation. A Fix almost always effects a data change using a DAT File. A DAT File contains database modifications created in and exported from a PeopleSoft Environment using PeopleTools.

298. Mandiant was able to identify 6,508 data changes delivered to approximately 123 unique SAP TN clients. Out of the 123 SAP TN clients, approximately 120 clients received at least one data change from a Generic Environment. Additionally, 39 clients received at least one data change from the wrong client-labeled Environment. Overall, 121 clients received data changes from either a Generic or incorrect client-labeled Environment.

- At least 98% of the clients receiving a data change received at least one change created from a Generic or incorrect client labeled Environment.

299. The following represents the volume of data changes.

- 96.1% of all data changes were created from a Generic Environment. Overall, 6,256 DAT Files were identified as created on Generic Environments. An example would be the Environment "D831DATM" used to support 44 different clients.
- 1.4% of all data changes were created from incorrect client-labeled Environments. Overall, 92 DAT Files were identified as mismatches. An example would be the Environment H881COHM, created by SAP TN on the behalf of City of Huntsville. The H881COHM Environment was used to support 13 additional clients¹⁵³ besides City of Huntsville:
 - Baker Botts LLP ("BKB")
 - CompuCom ("CCO")
 - Children's Health System of Alabama ("CHS")
 - CSK Auto ("CSK")
 - Delta Dental Plan of Michigan ("DDM")
 - East Bay Municipal Utility District ("EBM")
 - GKN Driveline North America Inc. ("GKN")
 - Kent County Michigan ("KCM")

¹⁵² The sample of Fixes was selected by Dr. Levy. The statistics were provided to Mandiant by Dr. Levy based on sample data provided by Mandiant.

¹⁵³ For a sample listing of customers and contract dates, see Appendix J.

- Mutual of Omaha ("MOH")
- Oxford Global Resources, Inc. ("OXF")
- Philadelphia Corporation of Aging ("PCA")
- Remy International, Inc. ("RII")
- Waste Management Resources, LLP ("WMI")

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