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## A Bitter Cup of Java: The Oracle-Google Percolation

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Java means one thing in a Starbucks and another in online and content companies. A tasty mocha latte kick starts. A bitter cup of Java in the Oracle-Google legal matter may trigger indigestion. Unpleasant indeed.

Oracle provides the data management system for most of the Fortune 500. In order to grow, Oracle has acquired companies. Triple Hop, PeopleSoft, Siebel Systems, and now Sun Microsystems are part of Larry Ellison's \$30 billion empire. After Oracle purchased ailing Sun Microsystems in early 2010 for \$7.4 billion, the logic of the deal was fuzzy. Why would a database-centric company want Sun's proprietary hardware and its open source software heritage?

The answer to the question is only now becoming more clear. Oracle is selling Sun hardware as purpose-built high-speed database servers. The benefits of the Oracle Sun hardware underscores weaknesses in commodity hardware and software solutions. Oracle emphasizes stability, security, performance, and support. When a company embraces commodity or low-cost servers, service can be a headache without a carrier-class support program. Open source software poses other risks, including dependence on a community of unpaid volunteers to fix bugs and the erratic nature of upgrades.

Not surprisingly, the competitive pressure that Oracle and other vendors of proprietary information management solutions is increasing. The commoditization of hardware is making cloud solutions economically attractive. Amazon and Rackspace offer industrial-strength number crunching and storage at bargain basement prices. Amazon recently announced a free cloud service. InformationWeek reported:

*new customers will be able to run one micro instance in the Elastic Compute Cloud for a year at no charge. The virtual server can be combined with free use of Amazon S3 permanent storage and EC2's Elastic Block Store, which supplies disk space for running systems. Elastic Load Balancing and AWS data transfer will also be thrown in at no charge. AWS calls the package its "free usage tier."*  
(Source:  
[http://www.informationweek.com/news/infrastructure/WAN\\_file\\_services/showArticle.jhtml?articleID=227900533&subSection=All+Stories](http://www.informationweek.com/news/infrastructure/WAN_file_services/showArticle.jhtml?articleID=227900533&subSection=All+Stories))

Open source software represents another threat. Oracle's core technology makes it possible for two thirds of the Fortune 500 and many well-known publishing and information companies to manage large amounts of data. However, the license fees can be onerous. Support costs often hit 15 to 20 percent of the annual license fees. The Oracle system, like IBM's DB2 and Microsoft's SQL Server, are sufficiently complex to require dedicated engineers to manage the data management system. The certified professionals resist change because considerable time and effort have been invested to master what is a very complex enterprise software system.

But in the present economic environment, chief financial officers need to at a minimum hold down costs for information technology. The appeal of open source software like Linux (operating system), Lucene/Solr (search), and Hadoop (distributed data management), among others, is that the software is available without charge via a download. For organizations wanting support, companies like RedHat, Lucid Imagination, and Cloudera plus troops of other commercial companies and consultants are within easy reach.

Adding to Oracle's challenges in open source is Google. Android is magnetizing developers, mobile device manufacturers, and telecommunication companies to stick to Google. Android depends in part on technology based on Java, a programming language developed at Sun Microsystems in the 1990s. Today, Java is used widely throughout the consumer and enterprise software ecosystem as a way to "write once, run anywhere." The catchphrase simplifies what is a complicated programming method, but compared to other options, Java – despite its faults – has become a workhorse. Even junior college computer science majors get their jolt of Java, often in their first programming class.

Oracle has kicked off a legal action over Google's use of Java technology. Remember, Oracle now owns Java as a consequence of its acquisition of Sun Microsystems. Unlike Sun, Oracle seems to be less open source friendly than Sun was.

In early October 2010, Oracle sued Google. The core of the legal dispute involves two very sticky tar balls: copyright and patent infringement. Google has emphasized its support of open source software for more than a decade. I learned several years ago that Google at one time had a large number of engineers who had worked at Sun Microsystems and embraced Google as "the next big thing." Sun alums include Eric Schmidt, the former chief technical officer of Sun Microsystems and now chief executive officer of Google, and Tim Lindholm, Joshua Bloch, Scott Violet, and Chet Haase. (Source: [http://news.cnet.com/8301-30685\\_3-20013549-264.html](http://news.cnet.com/8301-30685_3-20013549-264.html)). With former Sun technologists and Google's own cadre of world-class computer experts, Google had the knowledge required to accomplish almost any technical goal. Oracle alleged that Google used proprietary Sun Microsystems' information when creating portions of Android as well as failing to adhere to certain licensing terms. These terms concerned how Java code can be reused on mobile devices. Bubble, bubble, boil.

The legal process is in its preliminary stages, and it is too soon to know when the duelists will face one another in the Silicon Valley O.K. Corral. Both Oracle and Google have the money and legal resources to fight, if not to the death, to a financial resolution. Oracle may be motivated to get a percentage of the revenue generated by the allegedly offending Android operating system.

The potential for collateral damage, however, is high.

The core of the dispute involves complicated technology and specific technical methods. Lawyers, even specialists with deep technical expertise, can become mired in the nuances of software systems, methods, and algorithms. Patent litigation is complex and expensive with interpretation of evidence adding zest.

To complicate matters even more are Oracle's assertions of copyright infringement. Copyright is an equally contentious issue, maybe even more contentious than a patent infringement matter.

Wrapping patent infringement and copyright in one package may be a Pandora's box. Lawyers have to represent their clients and present arguments that support those clients' positions. I have been surprised at the direction many legal battles have taken. In my opinion, the focus on the client can succeed while setting a precedent that may have other, larger repercussions unrelated to the particular client. The current chatter about the Digital Millennium Copyright Act and the in development Anti-Counterfeiting Trade Agreement are two examples that come to mind as having both local and global implications.

But the *mis en scène* for the Oracle Google gun fight has an added dimension which kicks the matter into hyperspace. The foundation of the Oracle allegations pivot on open source software. Open source software has a colloquial meaning; namely, no one owns the code. Anyone can use the code without a fee. The more formal definitions of open source are often quite limiting. For example, open source code can be made available under different licensing terms. A programmer who creates a program, code, or software instance like Java can select from different licenses. These include the Apache License, the BSD license where "B" represents Berkeley as a nod to the University of California—Berkeley, the GNU or General Public License, GNU Lesser General Public License, MIT License (as a tip of the legal hat to the Massachusetts Institute of Technology), the Eclipse Public License, and the Mozilla Public License. Open source itself may become a focal point of the already high-stakes Oracle – Google duel.

Let's recap.

First, we have two large companies which face significant competitive pressures. Oracle has the problem of open source data management systems. Google has the Apple and Facebook problems. Both companies have quite specific business models that must generate substantial revenue and returns for their stakeholders. Both companies have a great deal to lose unless a compromise can be reached. Both companies are noted for their intransigence and aggressiveness. Oracle may be more actively aggressive than Google, but Google's passive aggressive approach has been disruptive in a number of business sectors. Both companies have cash, resources, and lawyers.

Second, with lawyers interpreting technology, the best possible outcome for Oracle and Google may be a negotiated deal. If the shoot out occurs in a court with a jury watching the action, the outcome is, for all practical purposes, up for grabs. In either of these scenarios, open source software could be affected. If Google pays Oracle to make the problem go away, will other commercial enterprises which "own" open source technology slap toll booths on the information superhighway? If the matter ends up in the hands of a jury, open source could be vindicated or marginalized. The possibility of either resolution exists.

Uncertainty, therefore, seems to be the watchword. With start ups like Lucid Imagination building a solid business on open source software, day-to-day operations are unlikely to be affected. IBM relies on open source software in its core WebSphere system. Aster Data and Palantir, two high profile Silicon Valley technology companies, use open source software. What happens if the Oracle – Google matter reworks the rules for open source? The problem is a what-if or tomorrow challenge.

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In my opinion, open source and commercial software vendors with proprietary systems are like balls in a Pachinko machine. With each iteration, forces beyond the control of the player determines winners and losers. Uncertainty is a permanent feature in our landscape. Java may keep me awake but the anxiety about the future of open source software lingers.

Stephen E Arnold, November 1, 2010 for December 2010

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