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### Oracle v. Google

Deba Alam

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## ORACLE V. GOOGLE

### INTRODUCTION

For more than four years, Silicon Valley has witnessed an ongoing legal battle between two of its largest tech companies, Google and Oracle. In *Oracle America, Inc. v. Google, Inc.*, Oracle America (“Oracle”) brought suit for patent and copyright infringement against Google over Google’s use of Java Application Programming Interfaces (“APIs”) in its Android Operating System.<sup>1</sup> Java, a popular programming language, was originally developed by Sun Microsystems, Inc. in 1996.<sup>2</sup> In 2010, Oracle purchased Sun Microsystems and acquired its interest in Java and Java APIs.<sup>3</sup> Prior to the acquisition, in 2005, Google negotiated with Sun Microsystems to obtain a license to use its Java platform for mobile devices.<sup>4</sup> Those negotiations, however, failed and Google designed its own system using its own source code.<sup>5</sup> The dispute between Oracle and Google arose when Oracle alleged that Google committed copyright and patent infringement by copying thirty-seven of the one-hundred sixty-six packages found in Oracle’s JAVA APIs.<sup>6</sup>

The central issues of the case involve whether Oracle’s Java APIs are subject to copyright and/or patent protection, and if so, whether Google’s Android Operating System infringed those protections.<sup>7</sup> The Java platform seeks to make programming less burdensome for computer programmers by eliminating the process of “writing [new] versions of computer programs for [each] operating syste[m] or devic[e].”<sup>8</sup> Accordingly, Java APIs are commonly used throughout the computer industry to make

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<sup>1</sup> *Oracle Am., Inc. v. Google, Inc.*, 872 F. Supp. 2d 974 (N.D. Cal. 2012).

<sup>2</sup> *Oracle*, 872 F. Supp. 2d at 977.

<sup>3</sup> *Id.* at 975.

<sup>4</sup> *Id.* at 978.

<sup>5</sup> *Id.*

<sup>6</sup> *Id.*

<sup>7</sup> *Id.*

<sup>8</sup> *Oracle Am., Inc. v. Google Inc.*, 750 F.3d 1339, 1347 (9th Cir. 2014).

applications operable across other systems and devices.<sup>9</sup> The Federal Circuit’s decision regarding whether Java APIs are copyrightable or patentable is crucial because it impacts standard industry practices, which has been to use JAVA APIs for the purposes of interoperability.<sup>10</sup> Thus, the Federal Circuit’s decision, as it stands now, has the effect of restricting programmers’ ability to develop software using Java APIs.<sup>11</sup>

In May 2012, the United States District Court for the Northern District of California held that Java APIs were not subject to copyright protection.<sup>12</sup> Moreover, the District Court noted that even if Java APIs were copyrightable, Google did not commit copyright infringement because Google did not “literally” copy Oracle’s software, but rather implemented its own source code.<sup>13</sup> The District Court considered the “structure, sequence, and organization” (SSO) of the APIs to be non-copyrightable because it was a method.<sup>14</sup> Furthermore, the District Court held that the copyright infringement claim was barred by the merger doctrine.<sup>15</sup> The United States Court of Appeals for the Federal Circuit disagreed and reversed the District Court’s decision, holding that Oracle’s APIs were copyrightable.<sup>16</sup> The claim for patent infringement of U.S. Patent 6,910,205 (the ‘205 patent) for the Java Virtual Machine patent was addressed in a separate court proceeding, in which the Federal Circuit held that certain aspects of Oracle’s software were patentable while others were not.<sup>17</sup>

The issue of whether software is copyrightable and/or patentable is established. Statutes and case law provide that software can and is subject to protection under both copyright and patent law.<sup>18</sup>

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<sup>9</sup> Oren J. Warshavsky, et. al, *With High Court Mum on Java Copyright, Is Innovation Safe?* LAW360 (July 1, 2015, 6:18 PM) <http://www.law360.com/articles/674082/with-high-court-mum-on-java-copyrights-is-innovation-safe->

<sup>10</sup> *Id.*

<sup>11</sup> *Id.*

<sup>12</sup> *Id.*

<sup>13</sup> *Id.*

<sup>14</sup> *Id.*

<sup>15</sup> *Id.*

<sup>16</sup> *Oracle*, 750 F.3d at 1367.

<sup>17</sup> *Oracle Am., Inc. v. Google, Inc.*, 606 Fed. Appx. 990, 996 (Fed. Cir. 2015).

<sup>18</sup> See 17 U.S.C. § 101; 35 U.S.C. § 101.

However, the question of whether APIs fall within the scope of copyright and/or patent protection is novel. In fact, no court has directly addressed whether APIs are copyrightable.<sup>19</sup> Given this fact, the Ninth Circuit should have adopted a more comprehensive approach by considering all relevant case law in the area of copyright as it relates to computer software. Like the District Court, the Ninth Circuit should have also considered decisions outside the Ninth Circuit, including the precedential 1996 Supreme Court decision in *Lotus Development Corporation v. Borland International, Inc.* for better guidance.<sup>20</sup> This note will discuss how this approach would have led to a more well-informed decision, and how the Ninth Circuit's sound reasoning was well-supported by case law and industry concerns with regard to the patent infringement issue.

Part I of this note discusses the history of U.S. Copyright Law, more specifically the limitations placed on the exclusive rights of the copyright holder. Part II addresses Oracle's copyright infringement claim, offers explanation of both the structure and function of APIs, examines the Federal Circuit's holding, and analyzes this holding in context of contrary case law.

Part III of this note discusses the history of U.S. Patent Law. Part IV addresses Oracle's patent infringement claim against Google, examines the Federal Circuit's holding, and analyzes how this holding is well-supported by case law and industry concerns. Part V of this note will discuss the future implications of the Federal Circuit's decision, as it stands now.

#### I. U.S. COPYRIGHT LAW: LIMITATIONS PLACED ON THE EXCLUSIVE RIGHTS OF COPYRIGHT HOLDERS

The concept of intellectual property finds roots in the U.S. Constitution.<sup>21</sup> The Constitution provides that Congress has the power to "promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive

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<sup>19</sup> *Oracle*, 872 F. Supp. 2d at 987.

<sup>20</sup> See *Lotus Dev. Corp. v. Borland Int'l, Inc.*, 516 U.S. 233 (1996).

<sup>21</sup> U.S. Const. art. I, § 8, cl. 8.

right to their respective writings, and discoveries.”<sup>22</sup> Even though this clause of the Constitution does not specifically mention the protection of intellectual property through copyrights or patents, it enforces the idea that the “progress of science and useful arts” is important and should be protected by law.<sup>23</sup> Moreover, the clause also introduces the idea that an inventor or author has an “exclusive right” to his or her work.<sup>24</sup> Although the Constitution lays the foundation for the protection of intellectual property, it goes no further into addressing the extent to which exclusive rights apply to the owners of intellectual property.<sup>25</sup>

*Baker v. Selden* is often considered to be the first Supreme Court case that placed limits on the exclusive rights of intellectual property owners.<sup>26</sup> The dispute in *Baker* arose over a book that outlined a new system of accounting or double-entry bookkeeping.<sup>27</sup> To illustrate this new bookkeeping system, the book contained “blanks forms, ruled lines, and headings.”<sup>28</sup> The defendant used similar columns and headings in defendant’s own bookkeeping system but the arrangement was different.<sup>29</sup> The plaintiff alleged that although the defendant used a different form of accounting, he copied the plaintiff’s bookkeeping system method.<sup>30</sup> The Supreme Court held that defendant did not commit copyright infringement by using the same accounting system in a different form.<sup>31</sup> The Court reasoned that a copyright does not confer an exclusive right to a “method,” rather it is patent law that confers such right.<sup>32</sup>

Almost a century after the Supreme Court’s decision in *Baker*, Congress extended the scope of Copyright law by revising the

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<sup>22</sup> *Id.*

<sup>23</sup> *Id.*

<sup>24</sup> *Id.*

<sup>25</sup> *Id.*

<sup>26</sup> *Baker v. Selden*, 101 U.S. 99, 100 (1880).

<sup>27</sup> *Id.* at 100.

<sup>28</sup> *Id.*

<sup>29</sup> *Id.*

<sup>30</sup> *Id.*

<sup>31</sup> *Id.* at 107.

<sup>32</sup> *Id.* at 102.

Copyright Act in 1976.<sup>33</sup> The revision included a limitation on the scope of copyright law that was similar to the limitation set forth by *Baker*.<sup>34</sup> This limitation provided that “[i]n no case does copyright protection for an original work of authorship, extend to any idea, procedure, process, system, method of operation, concept, principle, or discovery, regardless of the form in which it is described, explained, illustrated, or embodied in such work.”<sup>35</sup> The Act also identified computer programs as “literary works.”<sup>36</sup>

In 1975, prior to the revision of the Copyright Act, Congress had attempted to address the status of computer software under Copyright Law by establishing the National Commission on New Technological Uses of the Copyrighted Works (“CONTU”) in 1974.<sup>37</sup> Four years after its creation, CONTU recommended a series of changes to Congress.<sup>38</sup> One of these changes extended the reach of copyright law to include computer programs or software.<sup>39</sup> Congress considered the recommendation and in 1980 passed an amendment to the Copyright Act of 1976 to include computer programs as literary works.<sup>40</sup>

## II. ORACLE’S COPYRIGHT INFRINGEMENT CLAIM

In the suit between Oracle and Google, the parties stipulate that no copyright issues arise from: (1) Google’s use of the Java language, (2) Google’s development of its virtual machine (“Android OS”), and (3) Google’s use of a different source code to

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<sup>33</sup> See 17 U.S.C. § 102.

<sup>34</sup> *Id.*

<sup>35</sup> 17 U.S.C. § 102(b). Commonly referred to as the “idea/expression dichotomy.”

<sup>36</sup> 17 U.S.C. § 102.

<sup>37</sup> *Oracle Am., Inc. v. Google, Inc.*, 872 F. Supp. 2d 974, 986 (Cal. Dist. Ct. App. 2012).

<sup>38</sup> Bruce Abramson, *Promoting Innovation in the Software Industry: A First Principles Approach to Intellectual Property Reform*, 8 B.U.J. SCI. & TECH. L. 75, 80 (2002).

<sup>39</sup> *Id.*

<sup>40</sup> *Id.* Computer programs are considered literary work to “the extent that they incorporate authorship in the programmer’s expression of original ideas, as distinguished from the ideas themselves.”

implement more than six-thousand method implementations.<sup>41</sup> Rather, Oracle alleges that Google infringed its copyright interest when Google copied the exact “names, organization of those names, and functionality” of thirty-seven of Oracle’s one-hundred sixty-six packages in the Java API.<sup>42</sup> Thus, the case turns to the issue of whether Google was free to replicate the “structure, sequence, and organization” of the thirty-seven packages.<sup>43</sup>

To better understand this issue, a closer examination of the structure and function of APIs is crucial. The Java language contains keywords, symbols, and sets of pre-written programs called APIs that carry out various commands.<sup>44</sup> APIs are a software that “an application uses to request and carry out lower-level services performed by the computer’s operating system.”<sup>45</sup> APIs not only ensure that all applications are compatible with the given operating system but also that they have a similar user system interface.<sup>46</sup> These interfaces contain instructions that are used to share information and functions between the programs.<sup>47</sup> For instance, APIs are used by almost all applications to communicate with the operating system to complete basic functions such as accessing computer files.<sup>48</sup>

The structure of an API can be easily understood through analogy. According to the District Court, an API is like a library containing packages, classes, and methods.<sup>49</sup> Packages are like bookshelves in the library, classes are like books on the bookshelves, and methods are like the “how-to-do it “or the

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<sup>41</sup> *Oracle*, 872 F. Supp. 2d at 978.

<sup>42</sup> *Id.*

<sup>43</sup> *Id.*

<sup>44</sup> *Id.* at 11.

<sup>45</sup> *Microsoft Dynamics AX Glossary*, MICROSOFT TECHNET, <https://technet.microsoft.com/en-us/library/hh208626.aspx>. (last visited Nov. 23, 2015).

<sup>46</sup> Jonathan Ambrose, *Oracle America, Inc. v. Google, Inc.: The Only Nonliteral Aspects of Java APIS Protected under Copyright Law Are The Ones Nobody Wants to Copy*, 14 N.C. J.L. & TECH. ON. 1, 10-11 (2012).

<sup>47</sup> *Id.*

<sup>48</sup> *Id.*

<sup>49</sup> *Oracle*, 872 F. Supp. 2d at 977.

instruction chapters in the books.<sup>50</sup> Applying this analogy to the case, Oracle's Java and Google's Android have their own libraries that are organized in the same manner but all the methods or the instruction chapters in Android have been written with different implementations to perform the same functions.<sup>51</sup>

Oracle alleges that although the Android platform has its own API and source code, thirty-seven of Oracle's JAVA APIs packages have been replicated.<sup>52</sup> The District Court found that when comparing the thirty-seven JAVA packages to Android, only three percent of the lines of coding were found to be identical.<sup>53</sup> These lines specified the "names, parameters and functionality of the methods and classes."<sup>54</sup> The District Court held these lines not copyrightable because the organization of the lines is a method of operation under 17 U.S.C. § 102(b).<sup>55</sup>

On appeal, the United States Court of Appeals for the Federal Circuit held that the District Court erred in finding that Google did not infringe Oracle's copyright as to the thirty-seven JAVA APIs packages.<sup>56</sup> The Court reasoned that the District Court had misapplied the "merger doctrine."<sup>57</sup> According to the Court, the District Court misapplied the merger doctrine in two ways: (1) the merger doctrine was used in analyzing whether the material at issue is copyrightable rather than viewed as an affirmative defense, and (2) even if the doctrine was used in the copyright analysis, the merger doctrine still cannot bar the claim for copyright infringement.<sup>58</sup>

The merger doctrine provides that "when there are a limited number of ways to express an idea, the idea is said to 'merge' with

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<sup>50</sup> *Id.*

<sup>51</sup> *Id.* at 978.

<sup>52</sup> *Id.* at 975.

<sup>53</sup> *Id.* at 979.

<sup>54</sup> *Id.*

<sup>55</sup> *Id.* at 997.

<sup>56</sup> *Oracle*, 750 F.3d at 1354.

<sup>57</sup> *Id.* at 1359. The merger doctrine provides that when there are limited means of expressing an idea, that idea merges with expression and becomes unprotected as a matter of copyright law.

<sup>58</sup> *Id.*



its expression, and the expression becomes unprotected.”<sup>59</sup> According to the Court, District Courts within the Ninth Circuit have always applied the merger doctrine as an affirmative defense to copyright infringement.<sup>60</sup> Even if the District Court’s use of the merger doctrine in analyzing copyright eligibility were applicable, the Ninth Circuit found that Google had “unlimited options” when it came to writing the declaring code.<sup>61</sup> Furthermore, the court found that Oracle’s APIs were copyrightable because “Oracle ‘exercised creativity in the election and arrangement’ of method declarations when it created API packages and wrote the relevant declaring code.”<sup>62</sup>

The Federal Circuit’s decision greatly departs from case law created outside of the Ninth Circuit.<sup>63</sup> Although these decisions are not binding, the Ninth Circuit should have applied or considered such cases given the limited application of copyright law to APIs based claims. For instance *Wheelan Associates*, the first appellate decision on the issue, involved the question of whether the Dentalab program structure was copyrightable.<sup>64</sup> Dentalab is a program that is designed to handle administrative as well as bookkeeping tasks for dental businesses.<sup>65</sup> The Third Circuit held that if other methods or alternatives exist and perform the same function, Dentalab was protected by copyright law.<sup>66</sup> However, if only one method exists in performing the function, then Dentalab was not protected under copyright law.<sup>67</sup>

The court in *Wheelan* also emphasized that anything that is not crucial to the “purpose or function” of a work is an “expression”

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<sup>59</sup> *Id.* (quoting *Computer Assoc. Int’l v. Altai*, 982 F.2d 639 (2d Cir. 1992)).

<sup>60</sup> *Id.* at 1359-60 (citing *Ets-Hokin v. Skyy Spirits*, 225 F.3d 1068, 1082 (9th Cir. 2000)).

<sup>61</sup> *Oracle*, 750 F.3d at 1361.

<sup>62</sup> *Id.*

<sup>63</sup> The Ninth Circuit’s decision departs from persuasive case law outside the circuit. See *Wheelan Assocs. v. Jaslow Dental Lab.*, 797 F.2d 1222 (3rd Cir. 1986); *Computer Assocs. Int’l Inc. v. Altai*, 982 F.2d 639 (2d Cir. 1992); *Lotus Dev. Corp. v. Borland Int’l*, 49 F.3d 807 (1st Cir. 1995).

<sup>64</sup> *Wheelan.*, 797 F.2d 1222, 1224 (3rd Cir. 1986).

<sup>65</sup> *Id.* at 1226.

<sup>66</sup> *Id.*

<sup>67</sup> *Id.*

and therefore protected as copyright.<sup>68</sup> Applying the Third Circuit’s reasoning in *Wheelan* to this case would suggest the possibility that Oracle’s APIs are non-copyrightable because the structure and sequence of Oracle’s Java APIs is the most commonly used method by software engineers and thus the only method of performing the function.<sup>69</sup> Furthermore, it can be argued that because the declaring code in the JAVA packages are crucial to the “purpose or function” of carrying out or calling upon other applications, they are not an “expression.” Thus, APIs may not be subject to protection under copyright laws.

In *Computer Associates*, the Second Circuit held that copyright infringement did not occur when the defendant developed a program with the same programming language but different source code.<sup>70</sup> The plaintiff’s claim in *Computer Associates* closely resembles that of Oracle in that both defendants used a different source code, but a similar programming language to that found in the JAVA APIs packages.<sup>71</sup> Thus, by referring to a case outside the Ninth Circuit, such as *Computer Associates*, the Federal Circuit would have had better guidance and support to make its decision.

Lastly, the Federal Circuit failed to consider precedential cases such as *Lotus Development Corporation v. Borland International, Inc.*, which is used by many courts when analyzing copyright claims.<sup>72</sup> In *Lotus*, the Supreme Court held that simple commands that control a program’s functions are not protected by copyright.<sup>73</sup> In *Oracle*, APIs are used to carry out simple commands which complete basic computer functions.<sup>74</sup> If the Federal Circuit had given more weight to the Supreme Court’s binding precedent, it may have reached a different conclusion, finding Oracle’s Java APIs not eligible for copyright protection. Instead, the Federal

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<sup>68</sup> *Id.* at 1238.

<sup>69</sup> *Id.*

<sup>70</sup> *Computer Assocs. Int’l Inc.*, 982 F.2d 639, 704-705 (2d Cir. 1992).

<sup>71</sup> *Id.*

<sup>72</sup> *See generally Lotus Dev. Corp. v. Borland Int’l, Inc.*, 515 U.S. 1191 (1995).

<sup>73</sup> *Id.*

<sup>74</sup> *Oracle Am., Inc. v. Google Inc.*, 750 F.3d 1339, 1354 (Fed. Cir. 2014) *cert. denied*, 135 S. Ct. 2887 (2015).

Circuit noted that the facts of *Lotus* were distinguishable from this case and inconsistent with Ninth Circuit law.<sup>75</sup>

### III. HISTORY OF U.S. PATENT LAW

The goal of patent law is to protect “new, obvious, and useful inventions.”<sup>76</sup> Patentable inventions include anything from devices and machines, to manufacturing processes and chemical compositions.<sup>77</sup> Similar to copyrights, patents “confer the right to exclude others from making, using, or selling the claimed invention.”<sup>78</sup> Also similar to copyright law, the power of Congress to protect patents derives from Article I, Section 8, and Clause 8 of the United States Constitution.

The first patent statute was introduced by Congress in 1790.<sup>79</sup> The original statute provided patent protection for “any useful art, manufacture, engine, machine, or device, or any improvement therein not before known or used” as long as the invention was deemed to be “useful and important” by a designated group.<sup>80</sup> In 1793, Congress removed the “useful and important” requirement of the statute.<sup>81</sup> Thus, allowing inventions that were not consensually viewed as important to obtain patent protection. The original patent system afforded protection to inventors under the “first to invent” rule.<sup>82</sup> This rule is evident in language of the 1790 and 1793 Act which provide that the inventor of the patent must be the “first and true inventor.”<sup>83</sup>

An exception to the “first to invent” rule was later established in the 1893 Act, which provided that the inventor’s patent would be held invalid if it was “invented or discovered by another, who was using reasonable diligence in adapting and perfecting the same,”

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<sup>75</sup> *Id.*

<sup>76</sup> DONALD S. CHISUM, CHISUM ON PATENTS: A TREATISE ON THE LAW OF PATENTABILITY, VALIDITY, AND INFRINGEMENT § 1.01 (2015).

<sup>77</sup> *Id.*

<sup>78</sup> *Id.*

<sup>79</sup> *Id.*

<sup>80</sup> *Id.*; See also Act of Apr. 10, 1790, ch. 7, 1 Stat. 109.

<sup>81</sup> CHISUM, *supra* note 76, § 1.01.

<sup>82</sup> *Id.*

<sup>83</sup> *Id.*

regardless of whether the inventor was the first one to develop the invention.<sup>84</sup> This exception came in light of the overwhelming number of patent infringement cases in the late 19<sup>th</sup> century.<sup>85</sup> According to Chisum, court decisions began to illustrate the underlying problem of the abuse of the patent system.<sup>86</sup> The abuse was addressed in cases such as *Atlantic Works v. Brady*.<sup>87</sup> Thus, as a matter of practicality, obvious inventions were excluded from patent protections.

#### IV. ORACLE'S PATENT INFRINGEMENT CLAIM

In addition to copyright infringement, Oracle also alleges that Google infringed U.S. Patent No. 6,910,205 (“the ‘205 patent”).<sup>88</sup> On February 17, 2011, Google responded to Oracle’s claim of patent infringement by filing a petition for *inter partes* review of Oracle’s ‘205 patent, which focused on the Java computer language, arguing that Oracle’s patent is invalid under 35 U.S.C. § 102(b).<sup>89</sup> After examination, Oracle’s ‘205 patent was rejected by the patent office, and the Patent Trial and Appeal Board (PTAB) affirmed decision.<sup>90</sup>

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<sup>84</sup> *Id.*; See also Act of July 4, 1836, ch. 357, § 15, 117.

<sup>85</sup> CHISUM, *supra* note 76, § 1.01.

<sup>86</sup> *Id.*

<sup>87</sup> *Id.*; See also *Atlantic Works v. Brady*, 107 U.S. 192, 199 (1883) (Justice Bradley pointing out that the goal of patent law was never to grant monopolies over “every trifling device, every shadow of a shade of an idea, which would naturally and spontaneously occur to any skilled mechanic or operator in the ordinary progress of manufactures”).

<sup>88</sup> *Oracle*, 606 Fed. App’x At 996 (9th Cir. 2015). Oracle’s complaint originally cites seven patents that were infringed by Google. Those patents included U.S. Patent No.: 6,125,447, (“the ‘447 patent”); 6,192,476, (“the ‘476 patent”); 5,966,702, (“the ‘702 patent”); 7,426,720, (“the ‘720 patent”); RE38, 104 (“the ‘104 patent”); 6,910,205, (“the ‘205 patent”); and 6,061,520, (“the ‘520 patent”). The Court decided in favor of Google in regards to patents ‘104 and ‘520 patent due to Oracle’s failure to prove by a preponderance of the evidence that Google infringed upon those patents. However, the Court is yet to decide on the other patents at issue. This note will focus on the ‘205 patent as it deals more closely with the replication of the SSO of the APIs by Google.

<sup>89</sup> *Oracle*, 606 Fed. App’x at 991.

<sup>90</sup> *Id.* at 993.

Java is a popular computer language used by software developers in creating programs that can run on multiple devices.<sup>91</sup> In order to use the Java language, developers must first make sure that the device has a Java Virtual Machine (JVM) installed.<sup>92</sup> Developers must also compile the written Java into a series of virtual machine instructions called “bytecodes” so that these virtual machine instructions could be interpreted by JVM.<sup>93</sup> Oracle’s ‘205 patent provides a faster method by which selected parts of the virtual machine instructions are replaced with native machine instructions that are readable by the computer or device.<sup>94</sup> By allowing this replacement, the invention has the effect of increasing the execution speed of devices that use programs like Java.<sup>95</sup> The execution speed is increased in the sense that the JVM could skip the step of interpreting the virtual machine instructions or bytecodes.<sup>96</sup>

The patent issue in this case relate to Claims 1 and 2. Claim 1 relates to the invention’s method of increasing the execution speed of virtual machine by executing the new virtual machine instruction.<sup>97</sup> Claim 2 concerns the invention’s method of overwriting selected parts of some of the virtual machine instructions with native machine instructions.<sup>98</sup>

According to the Federal Circuit, the method of increasing execution of virtual machine through execution of new virtual machine instruction by Oracle’s patent was not patentable.<sup>99</sup> The court gave deference and affirmed the patent board’s finding with respect to Claim 1. The court agreed with the Board that any person of “ordinary skill would have known how to introduce the

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<sup>91</sup> *Id.* at 991.

<sup>92</sup> *Id.*

<sup>93</sup> *Id.* at 992

<sup>94</sup> *Id.* at 991.

<sup>95</sup> *Id.*

<sup>96</sup> *Id.* at 992.

<sup>97</sup> *Id.* The term “new virtual machine instruction” refers to the combination or replacement of selected parts of the virtual machine instruction with the native machine instructions.

<sup>98</sup> *Id.*

<sup>99</sup> *Id.* at 995.

‘translated’ instruction.”<sup>100</sup> The Federal Circuit also addressed Claim 2 of the patent, holding that the PTAB misconstrued the meaning of “overwriting” as used in Claim 2.<sup>101</sup> The court reasoned that that the board’s interpretation of “overwriting” was erroneous as it was interpreted to mean an act of “replacing some information in [a] computer with new information” instead of “replacing the information in a particular memory location with new information in that location.”<sup>102</sup> Thus, the Federal Circuit held that the Board’s decision was erroneous and remanded for further proceedings in respect to claim 2 of the patent issue.<sup>103</sup>

The reasoning behind the Court’s decision is sound in light of recent cases and developments relating to the patent eligibility of software. For example, in *Alice Corporation v. CLS Bank International*, the Supreme Court held that the electronic escrow service at issue was not patentable.<sup>104</sup> The Court reasoned that the facilitation of the financial transactions by the electronic escrow service was an “abstract idea.”<sup>105</sup> In *Oracle*, although the newly announced “abstract idea concept” was not considered by the Court in determining the validity of Oracle’s ‘205 patent, the same public policy governed both cases. In *Alice*, the Supreme Court did not want to extend the reach of patentable subject matter to include abstract methods, deeming software to generally be such a method. Similarly, the Federal Circuit in this case did not want patentable subject matter to include methods that a person with “ordinary skills” could create independently. Both *Alice* and the Federal’s Circuit decision in regards to Oracle’s ‘205 patent are consistent with judicial attempts throughout history to eliminate the abuse of the patent system, a matter of great concern to both the tech industry and the general public that benefits from innovations made in the industry.

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<sup>100</sup> *Id.*

<sup>101</sup> *Id.*

<sup>102</sup> *Id.* (emphasis added)

<sup>103</sup> *Id.*

<sup>104</sup> *Alice Corp. Pty. v. CLS Bank Int’l*, 134 S. Ct. 2347 (2014).

<sup>105</sup> *Id.* at 2360

## V. FUTURE IMPLICATIONS

Although the Federal Circuit reversed the District Court's decision in regards to the copyright claim by finding that Oracle's declaring code, and the structure, sequence, and organization of the API packages were copyrightable, the Federal Circuit remanded the case to the District Court for further consideration on the grounds of fair use, given that the jury had previously deadlocked on the issue.<sup>106</sup> In response to the holding, Google petitioned the Supreme Court by filing a writ of certiorari.<sup>107</sup> In June 2015, the Supreme Court denied the petition.<sup>108</sup> The case is now before a jury, who will determine whether Google's use of Oracle's code is protected by the fair use doctrine.<sup>109</sup>

If the jury finds that the fair use doctrine applies, Google could avoid paying more than \$1 billion in damages, and the decision would mean that the computer programmers will be able to continue using JAVA APIs.<sup>110</sup> If the jury rejects the fair-use defense, however, the verdict has the potential to completely devastate the standard practices in the computer industry. Although the decision would ensure that creators have exclusive rights to their work, it hinders the "freedom to implement and extend existing APIs" for others, which has been key component in fostering "competition and progress in both hardware and software development."<sup>111</sup>

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<sup>106</sup> *Oracle Am., Inc. v. Google, Inc.*, 750 F.3d 1339.

<sup>107</sup> Bill Donahue, *Oracle Preps For Software Fair Use Fight Against Google*, LAW360, July 23, 2015, <http://www.law360.com/articles/682593/oracle-preps-for-software-fair-use-fight-against-google>.

<sup>108</sup> *Id.*

<sup>109</sup> Kat Greene, *Jury In Oracle's \$1B Copyright Fight to Hear Fair First Use*, LAW360 <http://www.law360.com/articles/704899/jury-in-oracle-s-1b-copyright-fight-to-hear-fair-use-first>

<sup>110</sup> *Id.*

<sup>111</sup> Corynne McSherry, *Dangerous Decision in Oracle v. Google: Federal Circuit Reverses Sensible Lower Court Ruling on APIs*, ELECTRONIC FRONTIER FOUNDATION, May 9, 2014, <https://www EFF.org/deeplinks/2014/05/dangerous-ruling-oracle-v-google-federal-circuit-reverses-sensible-lower-court>

## VI. CONCLUSION

The Ninth Circuit's decisions in *Oracle, Inc. v. Google, Inc.* should have adopted a more comprehensive approach by considering all relevant case law in the area of copyright relating to computer software, and more specifically, APIs. The court also erred by ignoring case law cited by the District Court, including the 1996 Supreme Court decision, *Lotus*, which remains precedential law. The Federal Circuit's reasoning, however, in its decision regarding Oracle's '205 patent was sound and well supported by case law and industry concerns in regards to the patent infringement issue.

*Deba Alam\**

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\* J.D. Candidate 2017, DePaul University College of Law.



