Oracle America, Inc. v. Google LLC: Federal Circuit Win for Content Owners May Steer Developers Away from Open-Source Software

I.   OVERVIEW

Sun Microsystems, Inc. (Sun) created the Java Platform in the 1990s with a vision that programs written in the Java programming language could run on a variety of platforms without having to be rewritten.[1] The platform evolved into the Java Application Programming Interface (API), which is a collection of pre-written source code programs that developers can use as shortcuts for certain functions instead of having to write individual Java codes.[2] Oracle America, Inc. (Oracle) acquired Sun in 2010 and continued to maintain the "write once, run anywhere" motto, as it commercialized the platform.[3] Although the platform was free to developers when building applications, Oracle charged a licensing fee for those who used the APIs in competing platforms or when embedding them into electronic devices, which made Java code compatible to each specific device.[4] In 2007, Google Inc., currently Google, LLC (Google), released its Android software platform to help developers build applications in Java for the Android.[5] The Android platform contains thirty-seven Java API packages from Oracle's code, along with Google's own implementing code.[6] Google released the Android platform for free to phone manufacturers.[7]

Oracle brought suit in the United States District Court for the Northern District of California, alleging patent and copyright infringement

1.   Oracle Am., Inc. v. Google LLC, 886 F.3d 1179, 1186 (Fed. Cir. 2018).
2.   *Id.*
3.   *Id.* at 1187.
4.   *Id.*
5.   *Id.*; *see also* Mark Sullivan, *Will Alphabet's New Structure Make Google's Business More Transparent, or Less?*, FAST COMPANY (Sept. 01, 2017), http://www.fastcompany.com/404 62340/alphabet-google-xxvi-holdings-restructuring-reorganization-transparency (explaining the organziation structure change from Google, Inc. to Google, LLC as a subsidiary of Alphabet, Inc.).
6.   *Oracle*, 886 F.3d at 1187.
7.   *Id.*

caused by Google's unauthorized use of thirty-seven API packages.[8] Google claimed fair use of the API packages as a matter of law.[9] A jury found that Google violated Oracle's copyright; however, the jury was unable to decide the issue of fair use.[10] The court ultimately ruled that API packages were not subject to copyright protection.[11] Oracle appealed the judgment to the United States Court of Appeals for the Federal Circuit, and the verdict was overturned with the court ruling in Oracle's favor.[12] The court found that the code used to access other functions or variables (i.e., the declaring code), and the structure, sequence, and organization of the API packages were entitled to copyright protection.[13]

The Federal Circuit remanded the case back to the United States District Court for the Northern District of California for further discussion on the issue of fair use.[14] Following a second jury trial, the jury found that Google's use of the API packages constituted a fair use.[15] Oracle appealed again to the Federal Circuit to rule on the matter of fair use.[16] The United States Court of Appeals for the Federal Circuit *held* Google's use of the declaring code did not constitute a fair use of the copyrighted material because when weighing the four factors of fair use in light of the goals of copyright law, only the second factor, the nature of the copyrighted work, favored Google's position.[17] *Oracle America, Inc. v. Google LLC*, 886 F.3d 1179 (Fed. Cir. 2018).

II.   BACKGROUND

Under the United States Constitution, Congress has the power to secure rights for authors and inventors for the purpose of "promot[ing] the Progress of Science and useful Arts."[18] Initially, Congress protected certain works popular at the time, including "maps, charts, and books."[19] However, technological advances in new industries expanded copyrightable mediums, which rendered original copyright laws

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8.   *Id.* at 1185.
9.   *Id.*
10.   *Id.*
11.   *Id.*
12.   *Id.*
13.   *Id.*
14.   *Id.*
15.   *Id.*
16.   *Id.*
17.   *Id.* at 1210.
18.   U.S. CONST. art. I, § 8, cl. 8.
19.   *See* Deborah F. Buckman, Annotation, *Copyright Protection of Computer Programs*, 180 A.L.R. Fed. 1 (2002).

obsolete.[20]   As a result, Congress was forced to revise the law to encompass a broader scope of copyrightable materials.[21] The Copyright Act of 1976 (the Act) updated U.S. copyright law for a new technological age by creating a flexible framework to replace the past "rigid and outmoded concepts" of copyrightable subject matter.[22]   Congress acknowledged that "it is impossible to foresee the forms that. . . new expressive methods will take" and emphasized that the purpose of the Act was not "to freeze the scope of copyrightable subject matter at the present stage of communications technology [n]or to allow unlimited expansion into areas completely outside the present congressional intent."[23] The Act lists seven categories of copyrightable works to serve as a non-exhaustive guideline for courts to use in disputes involving copyright ownership.[24] Under the literary works category, computer databases and computer programs are protected works of authorship.[25]

Expanding the scope of copyright protection for works of authorship like computer programs creates unique issues due to the nature of the technology.[26] While copyright laws are intended to protect an author's original, expressive work, they are also designed so that some ideas and functional concepts of a work remain unprotected and available for public use.[27] Section 102(b) of the Act states that "in 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."[28] This provision poses an issue for computer programs, which by their nature have many functional and structural elements that are intertwined with expressive elements designed by a programmer.[29] The 1976 Congressional Report on the newly passed Act specifically addresses this issue, clarifying that only the "expression adopted by the programmer" is protected material, whereas all other "actual processes and methods" are unprotected.[30]

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20.   H.R. REP. NO. 94-1476, at 47, 48 (1976), *as reprinted in* 1976 U.S.C.C.A.N. 5659, 5660.
21.   *Id.*
22.   *Id.* at 51.
23.   *Id.*
24.   *Id.* at 53.
25.   *Id.* at 54; *see* 17 U.S.C. § 101 (2012).
26.   *See generally* Buckman, *supra* note 19.
27.   *See* Feist Publ'ns, Inc. v. Rural Tel. Servs. Co., 499 U.S. 340 (1991).
28.   17 U.S.C. § 102(b).
29.   *See generally* Buckman, *supra* note 19.
30.   H.R. REP. NO. 94-1476, at 57.

Separating protectable components of computer programs from unprotectable, functional components is difficult.[31] One method that is used to resolve the idea-expression dichotomy in copyright infringement cases is the fair use doctrine, codified in § 107 of the Act.[32] The doctrine of fair use serves as a limited exception to copyright law.[33] It provides authors an opportunity to use elements of copyright protected works, so long as the information is fundamental to the free flow of ideas "for purposes such as criticism, comment, . . . teaching, . . . scholarship, or research."[34] If such a purpose is found, a court will find the use to be an exception to a copyright owner's exclusive rights.[35] Since the doctrine is essentially a "rule of reason," courts will conduct an inquiry using specific facts of a case.[36] However, applying the doctrine of fair use is not always straightforward and courts have long considered its application to be "the most troublesome in the whole law of copyright."[37]

In the Copyright Act of 1976, Congress codified the following four factors to serve as a framework for courts to determine whether a use was fair. The factors include:[38]

(1)   the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes;
(2)   the nature of the copyrighted work;
(3)   the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and
(4)   the effect of the use upon the potential market for or value of the copyrighted work.[39]

Generally, when a court is faced with a question of fact, it will instruct the jury to apply the above factors to decide the question.[40] The Supreme Court states that the fair use doctrine is a "mixed question of law and fact."[41] In *Fisher v. Dees*, the United States Court of Appeals for the Ninth Circuit (the Ninth Circuit) addressed the question of whether a jury should

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31.   *See generally* Buckman, *supra* note 19.
32.   Campbell v. Acuff-Rose Music, Inc., 510 U.S. 569, 576 (1994).
33.   17 U.S.C. § 107; H.R. Rep. No. 94-1476, at 65.
34.   17 U.S.C. § 107; H.R. Rep. No. 94-1476, at 66.
35.   H.R. Rep. No. 94-1476, at 65.
36.   *Id.* at 65.
37.   Monge v. Maya Magazines, Inc., 688 F.3d 1164, 1170 (9th Cir. 2012) (quoting Dellar v. Samuel Goldwyn, Inc., 104 F.2d 661, 662 (2d Cir. 1939)).
38.   17 U.S.C. § 107.
39.   *Id.*
40.   DC Comics, Inc. v. Reel Fantasy, Inc., 696 F.2d 24, 28 (2d Cir. 1982).
41.   Harper & Row Publishers, Inc. v. Nation Enters., 471 U.S. 539, 560 (1985).

resolve any issues of fact under the fair use doctrine.[42]   The court concluded that appellate courts could decide the question of fair use with the facts from a jury verdict, using the four-factor analysis, provided that no "material historical facts" were at issue in the case.[43]

Under the doctrine of fair use, a court's conclusion often turns on whether the use is transformative under the first factor, "the purpose and character of the use."[44] A transformative work "adds something new, with a further purpose or different character, altering the first with new expression, meaning, or message." [45] Some examples of possible transformative uses include "criticism, comment . . . or teaching."[46] If a use is found to be transformative, this finding will sway the analysis towards a finding of fair use and decrease the significance of the other factors.[47] In *Sony Computer Entertainment, Inc. v. Connectix Corp.*, the Ninth Circuit applied the doctrine of fair use to computer software.[48] In this case, Sony created a new gaming platform from reverse engineered software.[49] The platform was a novel product, on which games designed for another console could be played on a personal computer.[50] The court noted that for computer software the structure of code is as much a part of the expression as the end result of the program; therefore, although the new platform functioned to run games the same way as the original console, the new code was original and thus somewhat transformative in nature. [51] The court held that Sony's use of the code to create a new platform was at least "modestly transformative," constituting a fair use.[52]

Significant weight is afforded to a work's transformative nature. However, in analyzing the purpose and character of the use, a court will also consider the commercial intent of the use, and whether the user acted in good faith.[53] In *Harper & Row Publishers, Inc. v. Nation Enterprises*, the Supreme Court held that a use created for commercial purposes is less likely to constitute fair use because such a use exploits the protections

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42.   Fisher v. Dees, 794 F.2d 432, 436 (9th Cir. 1986).
43.   *Id.*
44.   Campbell v. Acuff-Rose Music, Inc., 510 U.S. 569, 576 (1994).
45.   *Id.*
46.   17 U.S.C. § 107 (2012).
47.   *Campbell*, 510 U.S. at 579.
48.   *See* Sony Computer Entm't, Inc. v. Connectix Corp., 203 F.3d 596 (9th Cir. 2000).
49.   *Id.*
50.   *Id.* at 606.
51.   *Id.* at 606-07.
52.   *Id.* at 606-08.
53.   *See generally* Campbell v. Acuff-Rose Music, Inc., 510 U.S. 569, 576 (1994).

granted to a copyright owner.[54] In this case, a magazine published a leaked manuscript concerning historical information about a public figure.[55] The Court found that although copyright law is not designed to protect historical information, the author's intention was to sell issues of the magazine; therefore, the Court concluded the company acted in bad faith by releasing the unlicensed manuscript for commercial purposes.[56] In doing so, the defendant "knowing[ly] exploit[ed]" the copyright owner's ability to profit from its right of first publication and thus did not constitute a fair use.[57]

In comparison, under the Ninth Circuit, a use may be considered by the court to be a "commercial use" if users "get for free something they would ordinarily have to buy."[58] For example, in *A&M Records, Inc. v. Napster, Inc.*, a commercial record company brought a copyright infringement claim against an online music sharing software company, which facilitated the free download and transfer of songs between users.[59] The Ninth Circuit found that the use of file-sharing software to distribute music to the public for free was a commercial use, because the users were obtaining something they would otherwise have to purchase.[60] Therefore, even if a user chooses not to sell a copyrighted work and does not gain an economic benefit, a court may still find such a use to be commercial.[61] A court will also consider whether a user acted in good faith.[62] The Ninth Circuit holds that a finding of bad faith may bar a party from bringing an affirmative defense of fair use entirely.[63]

In applying the second factor, "the nature of the work," a court will evaluate a user's level of creativity in an expressive work.[64] A court may find that "some works are closer to the core of the intended copyright protection than others," namely more creative works.[65] While courts have acknowledged that computer software products are not purely creative in

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54.   Harper & Row Publishers, Inc. v. Nation Enters., 471 U.S. 562 (1985).
55.   *Id.*
56   *See id.*
57.   *Id.* at 562-63.
58.   A&M Records, Inc. v. Napster, Inc., 239 F.3d 1004, 1015 (9th Cir. 2001).
59.   *See generally id.*
60.   *Id.*
61.   *See generally id.*
62.   Fisher v. Dees, 794 F.2d 432, 436 (9th Cir. 1986).
63.   *Id.*
64.   17 U.S.C. § 107 (2012).
65.   Campbell v. Acuff-Rose Music, Inc., 510 U.S. 586 (1994); *see also* Dr. Seuss Enters., L.P. v. Penguin Books USA, Inc.*,* 109 F.3d 1394, 1402 (9th Cir. 1997) (stating that a parody of the book, *The Cat in the Hat*, was not protected by fair use because the character of the Cat in the original *The Cat in the Hat* was creative, imaginative, and original).

nature, it is well established that copyright protection can extend to software.[66] For example, in *Wall Data Inc. v. Los Angeles County Sheriff's Department*, the Ninth Circuit concluded that computer terminal emulation software is protected by copyright law.[67] While the court found that a use of this software was not a fair use because the user simply copied the program rather than advanced the art, it reiterated that the Copyright Act extends protection to software and noted that the software required a large investment and development over several years to create.[68] While the "nature of the work" can be persuasive in the overall finding of fair use, it is not dispositive, and the Ninth Circuit has not found it to carry much weight in a fair use inquiry.[69]

Courts consider the third factor, "the amount and substantiality" of the portion used, in light of whether the use was transformative.[70] The Ninth Circuit finds that the question of whether the amount used is significant is not a determination that can be calculated from the total percentage of the original work used.[71] If the amount of a work copied is significant, but its value is not, the use may still be protected under the doctrine of fair use.[72] Additionally, if a work embodies a new expression of the original, and if the user only took the amount necessary to create the transformative work, the use might be fair.[73] For example, in *Kelly v. Arriba Soft Corp.*, the Ninth Circuit found that the amount and substantiality of a work used did not weigh against a finding of fair use when the amount copied was necessary for a user to recognize an original work.[74] In this case, a user copied whole images by a photographer and displayed them on a visual search engine.[75] The use of the photos was for them to be searchable rather than for artistic display; therefore, the court

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66.   Wall Data Inc. v. L.A. Cty. Sheriff's Dep't, 447 F.3d 769, 780 (9th Cir. 2006) (finding that computer terminal emulation software was protected by copyright law, despite it not being an entirely creative work, because the Copyright Act explicitly provides copyright protection to computer programs); *see also* Sega Enters. Ltd. v. Accolade, Inc., 977 F.2d 1510, 1519 (9th Cir. 1992).

67.   *Wall Data Inc.*, 447 F.3d at 780 (noting that computer terminal emulation software products allow personal computers that use an operating system to access data stored on computers that use a different operating system).

68.   *Id.* at 778

69.   Dr. Seuss Enters., L.P. v. Penguin Books USA, Inc., 109 F.3d 1402 (9th Cir. 1997).

70.   Campbell v. Acuff-Rose Music, Inc., 510 U.S. 586 (1994); 17 U.S.C. § 107 (2012).

71.   Monge v. Maya Magazines, Inc., 688 F.3d 1179 (9th Cir. 2012).

72.   Harper & Row Publishers, Inc. v. Nation Enters., 471 U.S. 566 (1985).

73.   Kelly v. Arriba Soft Corp., 336 F.3d 811, 821 (9th Cir. 2003).

74.   *Id.*

75.   *Id.*

found the use of the whole image to be permissive because the amount was necessary for an individual to view the image.[76]

After assessing the first three factors, a court will weigh the analysis by considering the effect of the use of the work on the original work's overall market.[77] In *Harper*, the Supreme Court referred to the market harm as the primary consideration under fair use, by stating that only a defendant's use of a work that does not negatively affect the marketability of another's work is protected under fair use.[78] Although this factor has often been central for a determination of fair use, the Supreme Court has cautioned against making a presumption based on one factor without balancing all four factors.[79] In addition, the Ninth Circuit has found that oftentimes when a use is commercial, damage to an established market can be presumed.[80] The court stated that it is necessary to consider the harmful impact of derivative works and other methods on potential markets that the original owner may decide to enter, as well as the rights of a copyright holder to control the material's release into the market.[81] For example, in *A&M Records*, the Ninth Circuit found that digitally downloading and freely transferring music harmed a record company's market, because the company had already spent money towards moving into online song licensing and sales.[82] The court found that the free music software was not protected under the doctrine of fair use, because the software harmed the future market of the company.[83] Thus, having free downloads already available online would impair their ability to be successful in the digital market.[84]

The four-factor analysis under the doctrine of fair use provides courts with guidance in complex copyright infringement claims, especially claims relating to computer software, in which protectable expressions are often intertwined with functional elements.[85] Although the application of each factor typically varies depending on a claim, courts consistently have

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76.   *See id.* at 822 (finding that displaying small thumbnail pictures of photographs, owned by a professional photographer, on an Internet search engine that displays results in picture form, instead of text, was a fair use of the images, because if the whole images were not displayed, they would not be identifiable and the engine would decrease in usefulness).

77.   17 U.S.C. § 107 (2012).

78.   Harper & Row Publishers, Inc. v. Nation Enters., 471 U.S. 566-67 (1985).

79.   Campbell v. Acuff-Rose Music, Inc., 510 U.S. 578 (1994).

80.   Disney Enters., Inc. v. VidAngel, Inc., 869 F.3d 848, 861 (9th Cir. 2017).

81.   A&M Records, Inc. v. Napster, Inc., 239 F.3d 1017 (9th Cir. 2001).

82.   *Id.*

83.   *Id.*

84.   *Id.*

85.   *See* Buckman, *supra* note 19.

found that a use of a protected work must be transformative and must not harm the current or future market of an original in order to be protected as a fair use.[86] The fair use doctrine is both a factual and legal inquiry; however, the modern view allows appellate courts to conduct this analysis, which is a shift away from jury verdicts that were favored in the past.[87]

III. COURT'S DECISION

In the noted case, the Court of Appeals for the Federal Circuit revisited technological fair use, *de novo*, to determine whether Google's use of Oracle's 37 API packages satisfied the fair use standard.[88] After applying all four factors, the court found that only the second factor, the nature of the copyrighted work, weighed in favor of Google, because the API packages were substantially functional and minimally creative in nature.[89] The court then reversed the jury's finding of the effect of Google's use of the packages on the overall market, finding that conduct similar to Google's would eventually cause market harm.[90] Ultimately, the court balanced the four factors in light of the original purpose of the Copyright Act and found that a fair use exception was not applicable to Google's use of Oracle's code in light of the facts of the case.[91]

The court analyzed the purpose and character of Google's use of the thirty-seven API packages.[92] The Federal Circuit first considered the factor's two components: (1) whether the use was for commercial purposes as a matter of fact, and (2) whether the new work was transformative as a matter of law.[93] Even though the packages were given to customers for free, the court concluded that Google's use of the API packages was commercial, because an economic benefit is not required to prove commercial intent.[94] The court found that there was no evidence to support Google's argument that the use was anything other than commercial because the Android platform could be sold.[95]

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86.   *See generally* Campbell v. Acuff-Rose Music, Inc., 510 U.S. 569 (1994).
87.   *See* Fisher v. Dees, 794 F.2d 432, 436 (9th Cir. 1986).
88.   Oracle Am., Inc. v. Google LLC, 886 F.3d 1179 (Fed Cir. 2018).
89.   *Id.* at 1205.
90.   *Id.* at 1210.
91.   *Id.*
92.   *Id.* at 1196.
93.   *Id.*
94.   *Id.* at 1197-98; *see also* A&M Records, Inc. v. Napster, Inc., 239 F.3d 1015 (9th Cir. 2001).
95.   *Oracle*, 886 F.3d at 1197-98.

The court then evaluated whether Google's use of the API packages was transformative as a matter of law.[96] To start, the use of API packages does not fit within one of the statutory examples of a transformative use found under the Copyright Act.[97] Looking beyond the statutory list, the court reasoned that Google's use of the API packages was not transformative because the code of the program was merely transferred to a new medium (a smartphone).[98] The code served the same purpose as before, a shortcut for various functions, without undergoing any fundamental creative changes.[99] Essentially, Google did not substantially alter the packages so as to give them a new expression or meaning from that of the original work.[100] However, the court found no evidence of bad faith on the part of Google.[101] The court deferred to the jury on the issue of bad faith and chose not to revisit the issue here.[102] Since Google's use of the packages was highly commercial in nature and the court did not find a transformative use, the court concluded that Google did not successfully prove the first factor to establish a fair use ruling in favor of Oracle.[103]

The court then considered the nature of the API packages.[104] The court acknowledged that a certain level of creativity is necessary to create original API's; however, it found the API's to have many important functional components that were difficult to distinguish from the creative aspects of the packages.[105] Because the substantiality of the functional components could not be ignored, the court determined that this factor weighed in favor of Google's argument for fair use.[106] Despite this finding, the court has explained that while the second factor can be persuasive, courts have found it to be easily outweighed in balancing the other fair use considerations. [107] The court also took into account the policy considerations of allowing a single factor to sway courts towards a fair use determination; however, it found that ruling on that policy could challenge the well-established assertion by Congress that computer software is

96.   *Id.* at 1198; *see also* Campbell v. Acuff-Rose Music, Inc., 510 U.S. 579 (1994).

97.   *Oracle*, 886 F.3d at 1198; *see also* 17 U.S.C. § 107 (2012).

98.   *Oracle*, 886 F.3d at 1201-02.

99.   *Id.*

100.   *Oracle*, 886 F.3d at 1201-02; *see also Campbell*, 510 U.S. at 579.

101.   *Oracle*, 886 F.3d at 1204.

102   *Id.* at 1202-03.

103.   *Id.* at 1204.

104.   *Id.*

105.   *Id.*

106.   *Id.* at 1205.

107.   *Id.* at 1204. *See generally* Dr. Seuss Enters., L.P. v. Penguin Books USA, Inc., 109 F.3d 1394, 1402 (9th Cir. 1997).

copyrightable.[108]   For the above reasons, the court limited Google's success under the second factor in the overall balancing test for fair use.[109]

Under the third factor, the Federal Circuit considered the amount and substantiality of the portion of the API packages used by Google.[110] The court noted that of the 11,500 lines of code copied by Google, only 170 lines of Oracle's code were required to code in Java, to create new APIs for the Android platform.[111] Thus, Google took more lines of code than necessary to successfully produce the Android platform, so the court concluded that this weighed against a finding of fair use.[112] The amount of code copied constituted a relatively small percentage of Oracle's total API library, but the material that was copied was significant for the creation of the Android platform.[113] If that amount were necessary to transform the overall use of the platform, then the significance of the amount taken would not weigh against Google.[114] However, the court found that the transformative use logic did not apply, so it found it unnecessary to conclusively decide the third factor and declared it "neutral" at best in a fair use determination.[115]

Finally, the court analyzed the effect of Google's use of the API packages on the current and potential markets, which were the computer and smartphone industries, respectively.[116] At the district court level, the court found no market harm for Oracle's copyrighted works, since the original copyrights were for desktop computers and laptops.[117] On appeal, however, the Federal Circuit noted that Java has been included in many early smartphones, in which Google's Android was a direct competitor, indicating direct market harm.[118] Additionally, the court found the potential for market harm protects not only markets that Oracle had already entered, but also markets that the company may eventually enter into in the future.[119] Prior communications with Google regarding the licensing of Oracle's product demonstrated to the court that there was

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108.   *Oracle*, 886 F.3d at 1205.

109.   *Id.*

110.   *Id.*

111.   *Id.* at 1206.

112.   *Id.*; *see also* Kelly v. Arriba Soft Corp., 336 F.3d 811, 820-21 (9th Cir. 2003).

113.   *Oracle*, 886 F.3d at 1206-07.

114.   *Id.* at 1205-06; *see also Kelly*, 336 F.3d at 820-21.

115.   *Oracle*, 886 F.3d at 1206-07.

116.   *Id.* at 1207-08.

117.   *Id.* at 1208-09 (quoting Order Denying JMOL, Oracle Am., Inc. v. Google Inc., No. C 10-03561, 2016 WL 3181206, at *10 (N.D. Cal. June 8, 2016)).

118.   *Id.* at 1209.

119.   *Id.* (quoting Monge v. Maya Magazines, Inc., 688 F.3d 1181 (9th Cir. 2012)).

some interest by Oracle in the smartphone market.[120] Given these findings, the Federal Circuit concluded that Oracle may experience current as well as future market harm, thereby weighing the final factor in favor of Oracle.[121]

After applying the fair use doctrine, the Federal Circuit balanced each factor to determine whether Google's use of API packages violated Oracle's ownership in the work.[122] Of the four factors, the court found that factor two favored fair use, factor three was neutral, and factors one and four weighed against a finding of fair use.[123] As a result, the court concluded that Google's use of Oracle's work was not protected under the fair use doctrine as a matter of law.[124] The court elaborated that the verdict will not preclude other computer programs from applying a fair use defense in the future, but rather the specific facts in this case made Google's use of the API packages unprotected.[125]

IV. ANALYSIS

The Federal Circuit's decision in *Oracle America, Inc. v. Google LLC* has overarching implications for future copyright laws and fair use protection in the field of computer programs and software. Courts have struggled with applying established copyright laws to computer programs because the expression of ideas is often inextricably intertwined with the functionality of the program itself.[126] The Federal Circuit's decision rests on the balancing test of the four factors of fair use and how these factors align with Congress's goals for copyright law.[127] These ultimate goals are the promotion of scientific and artistic advancements.[128] The Federal Circuit claims that allowing Google to exploit Oracle's work does not promote this end.[129] It is undisputed in this case and in others that computer software in general is copyrightable.[130] However, by its nature

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120. *Id.*
121. *Id.* at 1209-10.
122. *Id.* at 1210.
123. *Id.*
124. *Id.*
125. *Id.*
126. Oracle Am., Inc., v. Google, Inc., 750 F.3d 1339, 1354 (Fed. Cir. 2014).
127. *Oracle*, 886 F.3d at 1210.
128. *See* H.R. REP. NO. 94-1476 (1976).
129. *Oracle*, 886 F.3d at 1210.
130. *See id.*; *see also* H.R. REP. NO. 94-1476.

software is built to be compatible with other programs.[131]   The ramifications of this decision may include software developers being much more cautious or altogether shying away from using packages created under an open-source mentality, for fear of a copyright infringement result such as this one.[132]

While the court's reasoning for the first and fourth factors seems reasonable, the court's application of the second and third factors is not as persuasive. Concerning the second factor, the court acknowledged the district court's conclusion, finding that "functional considerations predominated" in the design of the APIs, indicating thinner copyright protections on the APIs.[133] Despite the acknowledgement, the court went on to dismiss the factor altogether as insignificant in comparison to the other factors using the Ninth Circuit's decision in *Dr. Seuss Enterprises, L.P. v. Penguin Books USA, Inc.* as an example of a similar analysis.[134] In that case, however, the Ninth Circuit indicated that the second factor was actually significant to the analysis, as it tipped the balancing test away from a finding of fair use.[135] Further, the Federal Circuit uses the Supreme Court's decision in *Campbell v. Acuff-Rose Music, Inc.*, in which the Court found that the more "transformative" a work, the less significant other factors in the fair use analysis become.[136] Therefore, in *Oracle*, where the court finds the work inconclusively transformative, the dismissal of the second factor, which could tip the analysis towards a finding of fair use, may be premature.[137] The court fails to take into account all other factors swaying the analysis in the absence of a transformative element.[138]

In its analysis of the third factor, the amount and substantiality of the work used, the Federal Circuit held that Google's argument was "arguably . . . against" such a finding of fair use.[139] As previously stated,

131.   Rachel Kraus, *Everything You Need to Know About the Oracle Lawsuit Against Google*, MASHABLE (Oct. 11, 2018), http://mashable.com/article/google-vs-oracle-explainer/#Nq Qfn59dvPq9 (quoting Parker Higgins, a copyright expert and advocate).

132.   *Id.*

133.   *Oracle*, 886 F.3d at 1205 (quoting Order Denying JMOL, Oracle Am., Inc. v. Google Inc., No. C 10-03561, 2016 WL 3181206, at *10 (N.D. Cal. June 8, 2016)).

134.   *Id. See generally* Dr. Seuss Enters., L.P. v. Penguin Books USA, Inc., 109 F.3d 1402 (9th Cir. 1997).

135.   *See* Jie Lian, Oracle America v. Google, *Free Java: Fair or Unfair?*, IP WATCHDOG (Oct. 11, 2018), http://www.ipwatchdog.com/2018/07/09/oracle-america-v-google-free-java-fair-or-unfair/id=98763/; *see also* Dr. Seuss Enters., 109 F.3d at 1402.

136.   *Oracle*, 886 F.3d at 1206-07; Campbell v. Acuff-Rose Music, Inc., 510 U.S. 579 (1994).

137.   *Oracle*, 886 F.3d at 1207.

138.   *Id.*

139.   *Id.*

quantity alone is insufficient for this inquiry, rather it is the portion used that needs to be considered.[140] Oracle's copyright allows the company to prevent only the expressive portion of its work from being used.[141] When it is necessary to copy expressive elements in order to use functional elements of the work, however, a finding of fair use is supported.[142] Here, the court conceded that the material copied was necessary for the creation of the Android platform but dismissed this as irrelevant because no transformative use was found.[143] Therefore, although the court concluded a neutral finding on this factor, further inquiry seems necessary, particularly because a finding towards fair use would have leveled the four factors evenly for and against fair use.

Ultimately, in *Oracle*, the court's decision against a finding of fair use appears to be a clear decision with sufficient legal analysis supporting the result.[144] However, for several reasons, the court's decision does not seem clear-cut. The Federal Circuit should have considered the policy implications for future collaborations in the open-source software industry. This decision, while protecting copyright owners, may stifle the aspirations of programmers in the field and could actually hinder future revisions of copyright laws. Therefore, the court's holding may not stand and may be subject to review by courts in future infringement cases.

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140. *See id.* at 1207.
141. *See* Lian, *supra* note 135.
142. Oracle Am., Inc., v. Google, Inc., 750 F.3d 1375 (Fed. Cir. 2014).
143. *Id.* at 1207.
144. *See generally* Oracle, 866 F.3d at 1191.