INTRODUCTION

In May of 2014, the United States Court of Appeals for the Federal Circuit incorrectly reversed the United States District Court for the Northern District of California’s decision in Oracle v. Google. By broadly extending copyright protection to Java Application Programming Interfaces (APIs), the Federal Circuit drastically shifted the landscape of coding and app development. On remand over copyright fair use questions, the district court creates a kind of shield against the consequences of a Federal Circuit reversal, but on very timid—and very expensive—grounds. When the smoke clears, this decision may result in hindered innovation and stalled technological advances that tend to harm consumers, a flood of intellectual property infringement litigation that will overburden courts, and a new standing precedent that deviates from legislative intent.¹
This comment seeks to address the decision made by the Federal Circuit’s reversal and provide an alternative approach that is in better keeping with the spirit of the Copyright Act. The comment analyzes the future of computer software copyright cases by exploring the decision on remand over Google’s fair use defense, and the likelihood of that defense succeeding in subsequent appeals via an explanation of the history of that defense.

APIs and Why Conformity Matters

Essentially, an API dictates what programming language developers must use in order for their applications to interact with preexisting programs. The role that APIs play in software development has been expressed through a variety of metaphors—ranging from books in a library to files in a filing cabinet. However, an API can perhaps be best thought of as the design of an electrical outlet. The plug on an appliance must fit the design of the outlet in order for the appliance to work. Similarly, an API functions as a standardized “plug” for software programs and applications. Oracle is effectively seeking to enforce a copyright on its outlets so that Google cannot create new software with the requisite corresponding plugs.

Allowing Oracle to copyright their APIs necessarily excludes other companies, like Google, from developing compatible applications without having to pay Oracle a licensing fee or face copyright infringement liability. Every time a technology company attempts to build a program with the capability of collaborating with an existing product made with another company’s API, they will be opening themselves up to liability. Ultimately, the licensing fees and possible litigation costs will likely deter technology companies to cease production of complementary programs all together.

https://www.eff.org/deeplinks/2014/05/dangerous-ruling-oracle-v-google-federal-circuit-reverses-sensible-lower-court.
4 Dennis Crouch, Are APIs Patent or Copyright Subject Matter?, PATENTLYO (May 12, 2014), http://patentlyo.com/patent/2014/05/copyright-subject-matter.html.
5 Id. (“[A] computer program designed to be compatible with another program must conform precisely to the API of the first program, which establishes rules about how other programs must send and receive information so that the two programs can work together to execute specific tasks.”).
In an indication of industry consensus regarding the importance of API design to technological innovation, a startup that “enables developers to find, test, and manage many of the APIs they want to integrate into their apps” recently attracted $3.5 million in venture capital.\(^6\) Clearly, there is a strong desire within the technology sector to be able to build off the ideas and inventions of their colleagues and improve one another’s products along the way.\(^7\)

A large part of the industry conformity towards certain APIs and its fears over the results in this case is rooted in the basic purpose of APIs, the Electronic Freedom Foundation points out, “They’re purely functional.”\(^8\) This means that the expressive nature of an API arguably does not rise to the level of copyright protection.\(^9\) In the past, this has left those in the industry comfortable using existing APIs instead of continually writing new source code.\(^10\) In fact, the law already holds that copyright does not extend to programming languages, but what may be created with such languages.\(^11\) Though APIs are not programming languages per se, their purpose and use is largely similar, and ought to be held to the same legal standard.

Applying copyright protection to APIs would limit such improvements in their tracks, and aspects of copyright law, such as merger doctrine, and a pragmatic understanding of fair use (and of good faith as a component of fair use), support limiting its protection for APIs.

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\(^9\) Id.

\(^10\) Id.

\(^11\) Id.
In other cases, where companies have attempted to copyright ubiquitous modes of expression, courts have applied the merger doctrine. The merger doctrine entails that “when there are limited ways to express an idea, using copyright to bar others from expressing that idea would be inappropriate.”\textsuperscript{12} For example, if a publishing company were to assert a copyright on its latest best-selling novel, it would protect itself against other publishing companies copying the work of its author and subsequently stealing its profits. This result seems wholly fair and optimal from a competition standpoint. However, if the same publishing company took its actions one step further, and were allowed to assert a copyright on the \textit{language} the best-selling novel is written in, it certainly would prevent other publishers from stealing its best-seller, but it would also exclude its competitors from publishing unique works of literature in that language and would cut them off from the entire market of readers who only read that language. This result is untenable as it would stymie competition and limit free expression.

Director of the Patent Reform Project at Public Knowledge, Charles Duan, worries about the future of court-imposed restrictions on technology innovations post-\textit{Oracle v. Google} opining, “[t]hat the standardization of languages and protocols that are the foundation of the Internet could become balkanized by claims of ownership and intellectual property. That the mere speaking of a language, be it Klingon or code, could subject one to violation of federal law.”\textsuperscript{13} In light of the large potential for halting otherwise beneficial strides forward in programming, the merger doctrine should apply to Oracle’s APIs, because Oracle is not claiming infringement of their programs, only the language through which those programs are expressed. Google’s applications do not infringe upon Oracle’s applications: they merely use the same medium of expression in order for the products of the former to interact seamlessly with those of the latter.

However, the Federal Circuit opted instead to extend copyright protection to APIs. This will only serve to hinder the development of applications that could otherwise benefit the public. Since this decision was


\textsuperscript{13} Charles Duan, \textit{Can Copyright Protect a Language?}, SLATE (June 3, 2015), http://www.slate.com/articles/technology/future_tense/2015/06/oracle_v_google_klingon_and_copyrighting_language.html.
handed down, technology companies been treading lightly to avoid inviting infringement suits. Whether the claims of infringement will be merited or not, the heightened risk of liability in light of this decision is enough of a deterrent in and of itself to convince technology companies like Google that it would be wiser to abandon projects that require a competitor's API rather than risk an arduous and expensive litigation. Given that allowing different programs to work together requires use of the same APIs, and that this compatibility is an attractive—and sometimes crucial—component of any new application, coders will likely take a step back from creating their best possible work.

COPYRIGHTABILITY IN PRECEDENTIAL CASES

In addition to its technical and practical issues, the Ninth Circuit, in Oracle v. Google, also deviates from its own software intellectual property precedents. In Sega v. Accolade, the Ninth Circuit held that Accolade was allowed to reverse engineer Sega’s code to create their own games. A copyright is not enough to protect the type of rights that Sega sought to retain, otherwise Sega would have a “de facto monopoly” on the functionality of their products, which the legislature has specifically rejected. “In order to enjoy a lawful monopoly over the idea or functional principle underlying a work, the creator of the work must satisfy the more stringent standards imposed by the patent laws.”

Now, Oracle is seeking the similar de facto monopoly power over its APIs. Oracle is to Sega, as APIs are to videogames; the company is allowed copyright protection over its finished product, but is not afforded to same copyright protection over the type of code used to create that finished product. Just like Sega, Oracle should have to meet the stricter requirements of obtaining a patent from the USPTO. However, the Federal Circuit has moved away from the Sega precedent, and in so doing, sparked a surge of technology infringement suits. Their decision is likely to not only clutter the courts, but also burden the technology sector, and ultimately cost consumers.

14 Klint Finley, The Oracle–Google Case Will Decide the Future of Software, WIRED (May 23, 2016, 7:00 AM), https://www.wired.com/2016/05/oracle-google-case-will-decide-future-software/.
15 Id.
Oracle III and the Good Faith Defense in Fair Use

Though many open internet and digital rights organizations lambasted the 2014 Federal Circuit decision in Oracle II\textsuperscript{17} for overturning the district court’s finding that APIs are not eligible for copyright protection,\textsuperscript{18} the court recognized that the jury was hung on the fair use defense, and remanded the issue to the trial court resulting in Oracle III.\textsuperscript{19} If Oracle II opens the floodgates on infringement litigation, Oracle III’s holding on a fair-use defense may provide a backstop.

Oracle II’s Fair Use Analysis

In Oracle II, Judge O’Malley notes that the trial jury had hung on the fair use question, and Oracle’s point that to remand on the fair use question is “pointless”\textsuperscript{20} because “[the federal appellate] court should find, as a matter of law, that ‘Google’s commercial use of Oracle’s work in a market where Oracle already competed was not fair use.’”\textsuperscript{21} Google countered that the issue was one still subject to questions of material fact in dispute, evidenced in part by the hung jury.\textsuperscript{22}

Fair use hinges, in part, on “whether and to what extent the new work is transformative,” meaning the new work must either furthers the purpose of or adds a distinct characterization to the original work as opposed to simply supplanting the original creation.\textsuperscript{23} Consistent with prior federal decisions, the Court determined that a product is not considered transformative if the user “makes no alteration to the expressive content or message of the original work.”\textsuperscript{24} But the Court also recognized that analyzing the degree of

\textsuperscript{17}Parker Higgins, Stakes Are High in Oracle v. Google, But the Public Has Already Lost Big, ELEC. FRONTIER FOUND. (May 11, 2016), https://www.eff.org/deeplinks/2016/05/stakes-are-high-oracle-v-google-public-has-already-lost-big.

\textsuperscript{18}Id.


\textsuperscript{20}Oracle, 750 F.3d at 1352.


\textsuperscript{22}Oracle, 750 F.3d at 1373–74.

\textsuperscript{23}Id. at 1374.

\textsuperscript{24}Id. (quoting Seltzer v. Green Day, Inc., 725 F.3d 1170, 1177 (9th Cir. 2013)); \textit{see also} Wall Data, Inc. v. L.A. Sheriff’s Dept., 447 F.3d 769, 778 (2006) (copying software then using copies as intended was not transformative); Monge v. Maya Magazines, Inc., 688 F.3d 1164,
transformation requires an analysis of the commercial nature of the use, meaning that the more transformative a new product is, the less factors like commercialization “weigh against a finding of fair use.”

Oracle argued that the facts do not support a fair use defense as Google knowingly and illicitly copied verbatim Oracle’s expressive work for a commercial interest. Google admitted that it did copy portions of the API packages and that this was done for “purely commercial purposes,” but that its use of the API packages was sufficiently transformative to meet the first sub-factor of a fair use assessment. Ultimately, the Court decided that resolving the fair use issue is beyond “the limit of [this court’s] appellate function” relying mostly on material questions regarding whether Google’s use of the API packages is transformative in a sense required under the first factor from Section 107(1): “the purpose and character of the use.”

Jury Instructions in Oracle III and the Parties’ Arguments

On May 26, 2016, the jury in the District Court for the Northern District of California answered in a special verdict that Google had proven fair use. The jury instructions included four factors from 17 U.S.C. Section 107. The judge also stressed that these factors are neither dispositive nor exclusive. On remand in Oracle III, the jury instructions closely followed those provided in Oracle II with some modifications requested by the parties. The court noted...
that Oracle’s most “emphatic” argument was that Google acted knowingly with impropriety and in bad faith.\textsuperscript{34} The Federal Circuit opinion did not consider whether Google had acted in good faith or bad faith in its review of the fair use factors, yet, on remand, this point received more attention than any other. Oracle pushed to prove bad faith from Google, which opened the door for Google to argue that it acted in good faith.\textsuperscript{35}

\textit{Google’s Good Faith Argument}

Google conceded that its actions served a commercial purpose as characterized by the first factor of a fair use analysis; however, it maintained that its decision to use Oracle’s APIs was also informed by a good faith, non-commercial purpose: to enable Android to operate as an open-source software consistent with the purposes of the Copyright Act.\textsuperscript{36} To illuminate this point, the court likened the structure, sequence, and organization (SSO) of the API to a traditional QWERTY keyboard and explained that, although Google could have escaped infringement charges had it scrambled the keys, to do so would have required users to become familiar with new keyboard layouts and “fomented confusion and error to the detriment of both Java-based systems and to the detriment of Java programmers at large.”\textsuperscript{37}

The court ultimately found that Google copied only as much code as necessary to maintain intersystem continuity for the benefit of all Java users.\textsuperscript{38} Though commercialization weighs heavily against a finding of fair use,\textsuperscript{39} the benefit that Google attempted to maintain here was considered enough to convince the jury that the non-commercial aspect was fair use.\textsuperscript{40}

\textbf{THE HISTORY OF GOOD FAITH AND BAD FAITH IN INFRINGEMENT CASES}

Although a critical point in \textit{Oracle III}, the intentions of defendants is rarely determinative in copyright decisions, though it has been taken into

\textsuperscript{34} Oracle, 2016 WL 3181206 at *2.
\textsuperscript{35} \textit{Id.} at *2. Google took this good faith argument further, arguing that its use of the copyrighted APIs amounted to custom in the industry. The trial court found against Google on this argument, but found that good faith was sufficient. \textit{Id.} at *2-3.
\textsuperscript{36} \textit{Id.} at *3.
\textsuperscript{37} \textit{Id.} at *6.
\textsuperscript{38} \textit{Id.}
consideration.\textsuperscript{41} The strongest case in favor of such an analysis comes from \textit{Harper \& Row}, where the Supreme Court held that the defendant’s conduct informed the Court’s analysis of the character and purpose of fair use defense.\textsuperscript{42} Quoting a 1968 decision, the Court found that “fair use presupposes good faith and fair dealing,”\textsuperscript{43} so that when the defendant could offer no justification for its infringement, the Court considered this against a fair use defense.\textsuperscript{44} This presumption has been effectively subsumed into an analysis of fair use in copyright cases.\textsuperscript{45} Ultimately, a separate analysis of good faith is superfluous, but proving bad faith can undermine a fair use defense.

Courts maintained this view until the Supreme Court muddied the waters in another infringement case, \textit{Campbell v. Acuff-Rose Music, Inc.} There, in a four-sentence footnote, the Court contrasted the \textit{Harpers \& Row} good-faith presumption with two sources that dismiss an analysis of a defendant’s good-faith intentions in an infringement case:\textsuperscript{46} an 1841 decision by then-Circuit Judge Joseph Story, which found defendants guilty of infringement regardless of their lack of “bad intentions;”\textsuperscript{47} and a 1990 article by Judge Leval, which the Court read to argue that “good faith is irrelevant to a fair use analysis.”\textsuperscript{48} While this may be read as the Court’s endorsement of the latter position, the footnote begins “regardless of the weight one might place on an infringer’s state of mind . . .” before rejecting the defendants’ good-faith defense in \textit{Campbell} as not meeting the standard necessary for analysis.\textsuperscript{49} The precedential result of this paragraph is left somewhat open, meaning the use of good faith in an infringement defense is of questionable weight with the Court.

\textsuperscript{43} \textit{Id.} at 562 (quoting John Schulman, \textit{Fair Use and the Revision of the Copyright Act}, 53 Iowa L. Rev. 832 (1967-1968)).
\textsuperscript{44} \textit{Id.} 471 U.S. at 563; Wainwright Sec., Inc. v. Wall St. Transcript Corp., 558 F.2d 91, 94 (2d Cir. 1977).
\textsuperscript{46} Campbell v. Acuff-Rose Music, Inc., 510 U.S. 585, 585 n. 18 (1994) (Comparing Harper \& Row with Folsom v. Marsh, 9 F. Cas. 342 (C.C.D. Mass.1841), and finding that good faith is not central to fair use: if a use of copyrighted material is otherwise fair, no permission need be sought from or granted by the copyright holder.).
\textsuperscript{47} “In the present case, I have no doubt whatever[] that there is an invasion of the plaintiffs’ copyright: [however], I entertain no doubt[] that it was . . . a perfectly lawful and justifiable use of the plaintiffs’ work.” Folsom, 9 F. Cas. at 349.
\textsuperscript{48} Campbell, 510 U.S. at 585 n. 18 (interpreting Pierre N. Leval, \textit{Toward A Fair Use Standard}, 103 Harv. L. Rev. 1105, 1126-27 (1990)).
\textsuperscript{49} \textit{Id.}, at 585 n.18 (1994).
Google’s victory at this level presents a mixed future to copyright litigation in software licensing. Given the shaky history of good and bad faith in fair use cases, whether the trials court’s position will survive another round of appeals is uncertain at best. And even though the decision does give defendants a position from which to fight the *Oracle II* copyrightability decision, it is an expensive position. San Francisco-based copyright lawyer Cathy Gellis, in an opinion piece for Al Jazeera America, quoted copyright academic Lawrence Lessig: “Fair use is the right to hire a lawyer.”  

Inflated legal fees aside, this ongoing case will continue to impact software development as companies and individuals are forced to consider creating products that circumvent copyright issues at the cost of compatibility and ease of users’ experience, or continuing industry practice of using existing code infrastructure and roll the dice on a shaky fair use defense. For now, this uncertainty is may have a chilling effect on innovation, and certainly all interested parties are anxious to see what happens next.

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51 Higgins, *Stakes Are High*, supra note 17.