

Case Nos. 2017-1118, -1202

**UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT**

ORACLE AMERICA, INC.,

Plaintiff-Appellant,

v.

GOOGLE INC.,

Defendant-Cross-Appellant.

Appeal from the United States District Court for the Northern District of
California in Case No. 10-cv-3561, Judge William H. Alsup

**BRIEF OF AMICI CURIAE
ELECTRONIC FRONTIER FOUNDATION
AND PUBLIC KNOWLEDGE
IN SUPPORT OF DEFENDANT-CROSS-APPELLANT
AND AFFIRMANCE**

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May 30, 2017

CERTIFICATE OF INTEREST

Pursuant to Federal Circuit Rules 29(a) and 47.4, counsel for Amici Curiae certifies that:

1. The full names of the amici I represent are:

Electronic Frontier Foundation and Public Knowledge

2. The name of the real party in interest (if the party named in the caption is not the real party in interest) I represent is:

N/A

3. All parent corporations and any publicly held companies that own 10 percent or more of the stock of the amici curiae I represent are:

None.

4. The names of all law firms and the partners or associates that appeared for amici I represent or are expected to appear in this Court are: Michael Barclay and Mitchell L. Stoltz, Electronic Frontier Foundation, San Francisco, California.

May 30, 2017

/s/ Michael Barclay

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IP Scholars Br.	Amicus Brief of Intellectual Property Scholars (Sandra Aistars et al.), dated February 17, 2017
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STATEMENT OF IDENTITY AND INTEREST OF AMICI CURIAE¹

The Electronic Frontier Foundation (“EFF”) is a non-profit civil liberties organization that has worked for 26 years to protect consumer interests, innovation, and free expression in the digital world. EFF and its more than 36,000 dues-paying members have a strong interest in helping the courts and policymakers strike the appropriate balance between intellectual property and the public interest, and ensuring that copyright law serves the interests of creators, innovators, and the general public.

Public Knowledge (“PK”) is a nonprofit organization dedicated to preserving an open Internet and the public’s access to knowledge, promoting creativity through balanced intellectual property rights, and upholding and protecting the rights of consumers to use innovative technology lawfully. As

¹ No party’s counsel authored this brief in whole or in part. Neither any party nor any party’s counsel contributed money that was intended to fund preparing or submitting this brief. No person other than amici, their members, or their counsel contributed money that was intended to fund preparing or submitting this brief. At one point, the district court ordered the parties to disclose any financial relationships with commentators about this case. Dkt. No. 1229 (Order dated August 7, 2012). In response, Google identified EFF and PK as organizations to which it has contributed, and specifically identified one of EFF’s lawyers who is counsel on this brief. Dkt. No. 1240 (Google’s Response to Order to Supplement at 7-8 (August 24, 2012)). The district court took no further action. Dkt. No. 1242 (Order dated September 4, 2012). To make it clear, under Fed. R. App. P. 29(a)(4)(E), Google’s general contributions to EFF and PK were not intended to fund preparing or submitting this brief. Finally, EFF notes that one of its staff attorneys worked on this case prior to joining EFF three years ago. She has played no role in the preparation of this brief.

Web sites cited in this brief were last visited on May 23, 2017.

part of this mission, Public Knowledge advocates on behalf of the public interest for a balanced copyright system, particularly with respect to new, emerging technologies.

Pursuant to Fed. R. App. P. 29(a), all parties have consented to the filing of this brief.

INTRODUCTION AND SUMMARY OF ARGUMENT

In the previous appeal of this case, this Court held that the Java application programming interfaces (APIs) were copyrightable subject matter. The Court did so because “the author had multiple ways to express the underlying idea,” *Oracle Am. v. Google Inc.*, 750 F.3d 1339, 1367 (Fed. Cir. 2014) (“*Oracle*”). Because of a subsequent Ninth Circuit opinion, the Court’s holding is no longer good law. The Ninth Circuit has now confirmed that “the possibility of attaining a particular end through multiple different methods does not render the uncopyrightable a proper subject of copyright.” *Bikram’s Yoga College of India, L.P. v. Evolution Yoga, LLC*, 803 F.3d 1032, 1042 (9th Cir. 2015).

Because of this change in what the Court believed Ninth Circuit law to be, the Court should revisit its previous opinion and hold that the Java APIs are uncopyrightable under 17 U.S.C. § 102(b). The law of the case doctrine permits the Court to revisit its previous ruling where, as here, there has been a change in

intervening law by a controlling authority (here, the Ninth Circuit). Applying the correct Ninth Circuit law avoids a split with the First Circuit, and fends off the “appellate forum shopping” caused by the Court’s prior opinion.

While the Court should affirm the judgment below on uncopyrightability grounds, it may also do so because the fair use verdict was correct. This brief focuses on factors two and three, which take on particular importance given the facts of this case. As to fair use factor two, this Court and the Ninth Circuit both hold that functional elements of a computer program are entitled to “a lower degree of protection than more traditional literary works.” *Oracle*, 750 F.3d at 1375, quoting *Sega Enters. v. Accolade, Inc.*, 977 F.2d 1510 (9th Cir. 1992). Fair use creates space for copying of functional elements and their expression for purposes of efficiency, compatibility, or industry demands. There was ample evidence in this record to support the jury’s finding of the functional nature of the Java APIs for such purposes. Factor three also favors fair use where, as here, the Java APIs at issue were only a tiny portion of the copyrighted work.

The district court’s judgment should be affirmed on either uncopyrightability or fair use grounds.

ARGUMENT

I. THE NINTH CIRCUIT HAS CLARIFIED ITS INTERPRETATION OF SECTION 102(B) AND REJECTED THE PRIOR OPINION’S APPROACH TO COPYRIGHTABILITY

A. Relevant Procedural History

Oracle sued Google in 2010, alleging that Google’s Android operating system infringed Oracle’s technologies in its Java platform. Oracle’s complaints asserted infringement of seven patents and certain copyrighted features in Java. Dkt. Nos. 1, 36. In May 2012, a Northern District of California jury found that Google did not infringe the then-remaining patent claims, and reached a split decision on the copyright claims. Dkt. Nos. 1089 (copyright verdict), 1190 (patent verdict). Judge William Alsup then resolved the copyright claims by ruling that the Java APIs at issue were ineligible for copyright protection under 17 U.S.C. § 102(b) (“§ 102(b)”). *Oracle Am., Inc. v. Google Inc.*, 872 F. Supp. 2d 974 (N.D. Cal. 2012).

Oracle did not appeal the adverse patent verdict, but appealed Judge Alsup’s copyrightability decision. Because Oracle’s complaints contained patent claims, the copyright appeal went to this Court instead of the Ninth Circuit. In May 2014, this Court reversed the district court. *Oracle Am., Inc. v. Google Inc.*, 750 F.3d 1339 (Fed. Cir. 2014). Purporting to apply Ninth Circuit law, the Court held that the Java APIs were copyrightable. The Court remanded for a new trial on fair use. In May 2016, the jury found that Google’s use was a

fair use. Oracle again appeals.

B. *Bikram's Yoga* Resolved an Issue this Court Believed the Ninth Circuit Had Not Decided

Between the time of this Court's 2014 *Oracle* opinion and this appeal, the Ninth Circuit decided an important opinion about the scope of § 102(b). *Bikram's Yoga College of India, L.P. v. Evolation Yoga, LLC*, 803 F.3d 1032 (9th Cir. 2015). *Bikram's Yoga* answered a question this Court believed was unresolved.

1. The Prior Opinion Assumed that the Ninth Circuit Had Not Addressed “the Precise Issue” in this Case

In order to decide the copyrightability issue, this Court had to determine whether the structure, sequence, and organization of the Java API packages was copyrightable under § 102(b). *Oracle*, 750 F.3d at 1364-65. The Court declined to follow *Lotus Dev. Corp. v. Borland Int'l, Inc.*, 49 F.3d 807 (1st Cir. 1995), *aff'd by an equally divided court*, 516 U.S. 233 (1996). The Court believed that *Lotus* was distinguishable and that the Ninth Circuit would not follow the *Lotus* court's reasoning. 750 F.3d at 1365-66. The Court said that the Ninth Circuit had not “addressed the precise issue” in this case. *Id.* at 1367. The Court stated:

We agree with Oracle that, under Ninth Circuit law, an original work—even one that serves a function—is entitled to copyright protection as long as the author had multiple ways to express the underlying idea.

Given the [district] court's findings that the SSO is original and

creative, and that the declaring code could have been written and organized in any number of ways and still have achieved the same functions, we conclude that Section 102(b) does not bar the packages from copyright protection just because they also perform functions.

Id. at 1367-68 (footnote omitted).

Thus, *Oracle's* key holding was that a functional computer method would be copyrightable if it could be expressed in multiple ways. Even assuming this was an accurate statement of Ninth Circuit law in 2014, it is not an accurate statement now.

2. *Bikram's Yoga Shows that this Court's "Different Ways to Express" Reasoning Is Not Good Law in the Ninth Circuit*

In October 2015, the Ninth Circuit considered a copyright claim in a sequence of yoga poses. Relying on § 102(b), the court concluded that a "Sequence" of 26 yoga poses and two breathing exercises, performed in a particular order, was not subject to copyright protection. Bikram Choudhury and his company, Bikram's Yoga, had sued a competitor who used the same Sequence. Simply put, Choudhury was claiming copyright in a process for improving one's health by practicing certain yoga poses in a specific order.

Writing for the court, Judge Wardlaw first observed that the purpose of copyright is to "promote the Progress of Science and useful Arts," so that "copyright assures authors the right to their original expression, but encourages

others to build freely upon the ideas and information conveyed by a work.” *Bikram’s Yoga*, 803 F.3d at 1037, quoting *Feist Publ’ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340 (1991). Copyright thus recognizes a “vital distinction” between ideas and expression, so “the copyright for a work describing how to perform a process does not extend to the process itself.” 803 F.3d at 1037-38.

In that case, Choudhury himself described his Sequence as a “system” or “method” to use yoga to optimize the body’s health and function. *Id.* at 1038-39. The “system” used 26 yoga poses in a particular arrangement as a healing art. Given that, Judge Wardlaw had little difficulty concluding that the idea/expression dichotomy, codified in § 102(b), precluded copyright protection of the Sequence. *Id.* at 1039-40.

Bikram’s Yoga also considered, and rejected, the argument that a system or method can be copyrightable if there were different ways to “express” that system. The Ninth Circuit held:

It makes no difference that similar results could be achieved through a different organization of yoga poses and breathing exercises. Choudhury argues that he could have chosen from “hundreds of postures” and “countless arrangements of these postures” in developing the Sequence. But the possibility of attaining a particular end through multiple different methods does not render the uncopyrightable a proper subject of copyright. [citations omitted] Though it may be one of many possible yoga sequences capable of attaining similar results, the Sequence is nevertheless a process and is therefore ineligible for copyright protection.

803 F.3d at 1042 (footnote omitted).

Bikram's Yoga subsequently filed a petition for rehearing and/or rehearing en banc. Case No. 13-55763, Docket No. 39 (December 7, 2015). The Ninth Circuit denied that petition outright. Case No. 13-55763, Docket No. 48 (January 25, 2016).² *Bikram's Yoga* remains good law in the Ninth Circuit.

C. *Bikram's Yoga* Clarifies that this Court's Prior Opinion on Copyrightability Was Incorrectly Decided

Under the "change in law" exception to law of the case doctrine, the Court can revisit its prior copyrightability ruling in light of the *Bikram's Yoga* decision. It should do so. A finding of copyrightability based on the fact that "the author had multiple ways to express the underlying idea," *Oracle*, 750 F.3d at 1367, cannot be reconciled with the Ninth Circuit's holding that "the possibility of attaining a particular end through multiple different methods does not render the uncopyrightable a proper subject of copyright," *Bikram's Yoga*, 803 F.3d at 1042.

1. This Case Falls Within the "Change in Law" Exception

Normally, the law of the case doctrine prevents revisiting a prior appellate decision in the same case. However, a well-recognized exception applies where, as here, there is an intervening and controlling legal authority.

² A copy of the order denying rehearing may be found at: https://www.eff.org/files/2017/03/02/bikrams-yoga_v_evolution_order-denying-rehearing-en-banc_01-25-16.pdf

In one recent long-running patent dispute, for example, this Court decided in one appeal that the patent claims at issue were not indefinite. The U.S. Supreme Court then decided *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120 (2014), altering the standard for indefiniteness. In a second appeal, from a supplemental damages proceeding, this Court concluded that the prior definiteness decision was not binding because *Nautilus* changed the applicable law, and held the patents-in-suit invalid. *Dow Chemical Co. v. Nova Chemicals Corp. (Canada)*, 803 F.3d 620, 625 (Fed. Cir. 2015).

The Court also stated that “[p]erhaps the most obvious justifications for departing . . . arise when there has been an intervening change of law outside the confines of the particular case,” *citing* 18B Charles Alan Wright, Arthur R. Miller & Edward H. Cooper, *Federal Practice and Procedure* § 4478. *Dow Chemical*, 803 F.3d at 628. This exception applies “even if the issue was resolved on appeal in an earlier stage of the proceeding.” *Id.* *See also Mendenhall v. Barber-Greene Co.*, 26 F.3d 1573, 1583 (Fed. Cir. 1994) (holding that this exception to law of the case applied and the asserted claims were invalid, revisiting a previous decision that the claims were not invalid). The Ninth Circuit also recognizes this exception. *United States v. Garcia*, 77 F.3d 274, 276–77 (9th Cir. 1996) (reversing previous affirmance of conviction for using a machine gun in furtherance of a drug trafficking crime in light of

intervening Supreme Court authority).

The exception analysis depends on three elements, all of which are satisfied here. First, there must be an alteration in the governing law. *Dow Chemical*, 803 F.3d at 629. Here, the Ninth Circuit altered what this Court believed was the applicable interpretation of § 102(b) where functional methods of operation could be expressed in different ways. *Compare Bikram's Yoga*, 803 F.3d at 1042, *with Oracle*, 750 F.3d at 1367-68. Because the Ninth Circuit altered this Court's view of the law, and since the Ninth Circuit is a "greater authority" on copyright issues than this Court (which does not usually handle copyright cases), under *Dow Chemical* that makes this is an "easier" case for departing from law of the case. 803 F.3d at 629.

Second, the decision to be revisited must have applied the old law. *Id.* That occurred here as well: this Court applied what it believed was the rule in the Ninth Circuit.

Third, the change in law must compel a different result under the facts of the particular case. *Id.* Here, the Java APIs (as written in the declaring code) are computer functions that perform methods of operation such as "max," which determines the larger of two numbers. *Oracle*, 750 F.3d at 1349-50. These are classic examples of things expressly excluded from copyright under § 102(b). The sole argument Oracle made for the copyrightability of the Java APIs (and

still makes today for the purpose of fair use factor two, *see* Section II below) is that the different design choices for the API names and SSOs preclude the application of § 102(b). *Oracle*, 750 F.3d at 1367-68. *Bikram's Yoga* holds that this is no longer the standard in the Ninth Circuit, if it ever was.

2. Amicus BSA Misinterprets *Bikram's Yoga*

Oracle's opening brief does not address *Bikram's Yoga* at all. Instead, the task of explaining why *Bikram's Yoga* should not resolve this case falls to one of Oracle's amici, the Business Software Alliance ("BSA"), which incorrectly claims that *Bikram's Yoga* is distinguishable.

First, BSA argues that Google, unlike the yoga defendants in *Bikram's Yoga*, "copied expression in Oracle's program." BSA Br. At 14. But the Ninth Circuit's key holding is that "the possibility of attaining a particular end through multiple different methods does not render the uncopyrightable a proper subject of copyright." *Bikram's Yoga*, 803 F.3d at 1042. Thus, Ninth Circuit law expressly rejected any contention that allegedly different ways to "express" the Java API packages makes those functional components copyrightable.

Second, BSA incorrectly claims that the yoga defendants only copied "the underlying functionality" of Bikram's Sequence. BSA Br. At 14. The yoga defendants did far more: they copied the entire Sequence of "26 postures and two breathing exercises," in order. 803 F.3d at 1036. That activity is not

meaningfully distinct from what Oracle claims Google did: copying the “structure, sequence, and organization” of the API packages.

Further, it appears from the district court record that the yoga defendants also copied “almost exact verbatim dialogue,” which includes the names for the yoga postures and their accompanying instructions.³ Those posture names correspond to the Java API method names. An API is an abstraction. In order for a computer and human to communicate with each other, a name has to be applied to that abstraction—a name is necessary for the computer to understand what abstraction the human wants, and vice versa. Once that name is chosen, it *becomes* the API. The existence of “creative choices” in choosing that name, or “multiple ways to express” that name, doesn’t mean that the name is copyrightable. Just the opposite. To a computer, the names *themselves* are methods of operation under § 102(b) because they serve as unique identifiers that are used to invoke functions; using a different name invokes a different function—just as a yoga instructor calling out a different posture name will lead students to use a different posture.

Bikram's Yoga is on point and presents a clearly distinct analysis from the

³ See Declaration of Andrea Hatton Filed In Support of Plaintiffs’ Opposition to Defendants’ Motion for Partial Summary Judgment, ¶¶ 3, 11-15, C.D. Cal. Case No. 2:11-cv-05506 (Dkt. No. 32-2, filed November 19, 2012), *available at* https://www.eff.org/files/2017/03/02/bikrams-yoga-college-of-india_v_evolution-yoga_cdc-al-andrea-hatton-decl-opp-to-sj_11-19-12.pdf.

one this Court applied in the first appeal.

3. Holding the Java APIs Uncopyrightable Avoids a Circuit Split and Benefits the Public Interest

Since all three *Dow Chemical* factors are met, the Court should revisit its initial legal conclusions. But there are several additional reasons to apply the change of law exception here.

First, revisiting the decision avoids a circuit split with *Lotus*, 49 F.3d 807. This Court’s prior decision was based in part on the mistaken premise that *Lotus* did not comport with Ninth Circuit law, *see Oracle*, 750 F.3d at 1365-66. After *Bikram’s Yoga*, that perceived split no longer exists. Using language quite similar to *Bikram’s Yoga*, *Lotus* also rejected Oracle’s “design differently” and “expressive choices” argument:

The fact that Lotus developers could have designed the Lotus menu command hierarchy differently is immaterial to the question of whether it is a “method of operation.” . . . The “expressive” choices of what to name the command terms and how to arrange them do not magically change the uncopyrightable menu command hierarchy into copyrightable subject matter.

49 F.3d at 816. Thus, following *Bikram’s Yoga* reconciles the circuits.

Second, correcting *Oracle* avoids the many technological problems that arise if APIs are copyrightable, which were outlined in detail in an amicus brief filed by 32 prominent computer scientists. *See* Corrected Brief of Amici Curiae Computer Scientists, filed May 30, 2013 in the first appeal in this case (Fed. Cir.

Case No. 2013-1021, Docket No. 118).⁴ In that brief, the computer scientists explained that the pervasive belief and expectation that APIs were uncopyrightable was essential to the development of modern computers and the Internet, and led to the creation of software that otherwise wouldn't have been written. If APIs had been subject to copyright, by contrast, the burden of licensing would have stymied the extraordinary growth of modern computing. (We understand that many of the same computer scientists will be filing a similar brief in this appeal.)

Third, *Oracle* has led to “a new wave of litigation concerning copyright and interoperability.” Jonathan Band, *Software Copyright Litigation After Oracle v. Google*, Disco (January 9, 2017)⁵. *Oracle* has fostered a form of “appellate forum shopping,” where a plaintiff bringing an API-related case that properly sounds in copyright nonetheless tacks on a patent claim—perhaps even knowing that the claim wouldn't survive trial—to ensure that any appeal will go to this Court. Such plaintiffs want to avoid regional circuits, such as the Ninth and First Circuits, that would make short shrift of API copyright claims. See Peter Menell, *API Copyrightability Bleak House: Unraveling the Oracle v.*

⁴ available at

https://www.eff.org/files/filenode/2013.1021.1022.corrected.computer.scientists.amici_brief_.pdf.

⁵ available at <http://www.project-disco.org/intellectual-property/010917-software-copyright-litigation-oracle-v-google/>.

Google Jurisdictional Mess, Berkeley Technology Law Journal, Forthcoming; UC Berkeley Public Law Research Paper No. 2859740 at 59 (October 26, 2016) (*Oracle* “motivates software intellectual property owners to bundle patent and copyright claims so as to take advantage of the Federal Circuit’s expansive interpretation of software copyright protection.”).⁶

These and other harms can be avoided by revisiting *Oracle*, and conforming it to Ninth Circuit law.

II. THE NINTH CIRCUIT BROADLY APPLIES THE SECOND FAIR USE FACTOR WHERE, AS HERE, FUNCTIONAL ASPECTS OF COMPUTER PROGRAMS ARE INVOLVED

The district court’s judgment should be affirmed on copyrightability grounds. However, the judgment may also be affirmed based on the jury’s determination that Google’s use of the Java APIs was a fair use. In particular, the Court should give substantial weight to the second fair use factor: the nature of the work.

A. Fair Use Is Integral to the Purpose and Structure of Copyright

As an initial matter, we urge the Court to soundly reject the notion that fair use is merely a narrowly tailored “defense” or “excuse” (*see* IP Scholars Br. at 2-4). In reality, and as the Ninth Circuit has expressly concluded, the ability to make fair use of works without permission from the rightsholder is an

⁶ *available at* https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2859740.

affirmative right that is central to copyright law. *Lenz v. Universal Music Corp.*, 815 F.3d 1145, 1151-53 (9th Cir. 2015). “Fair use is not just excused by the law, it is *wholly authorized* by the law.” *Lenz*, 815 F.3d at 1151-52 (emphasis added). Accordingly, while it is indeed raised procedurally as a defense, the Ninth Circuit views it as a “right granted by the Copyright Act of 1976.” *Lenz*, 815 F.3d at 1152-53 (citation omitted; agreeing with the Eleventh Circuit).

Simply put, a robust fair use doctrine is “necessary to fulfill copyright’s very purpose.” *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 575 (1994). That role is particularly clear here, where the “work” at issue involves functional aspects of computer programs that, at best, lie at the very edge of copyrightability, the protection of which will do little to serve copyright’s purpose.

B. The *Sega* and *Sony* Decisions Illustrate the Ninth Circuit’s Application of the Second Factor in Software Cases

The second fair use factor looks to “the nature of the copyrighted work.” 17 U.S.C. § 107(2). If a work is at the edge of copyrightability, factor two is highly important. In an analysis done pursuant to rulemaking authority under the Digital Millennium Copyright Act, the U.S. Register of Copyrights concluded that “the second factor. . . is perhaps more important than usual in cases involving the interoperability of computer programs.” *Recommendation of the Register of Copyrights in RM-2008-8* at 95; Rulemaking on Exemptions

from Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies (June 11, 2010) (“Register’s 2010 Recommendation”).⁷ Moreover, given the “functional nature of computer programs,” this factor will tend to weigh in favor of fair use. As one commentator observed, “[a]lthough the API was found not to violate the limitations of 102(b) . . . this close-call should have a relevant impact on the scope of fair use.” Dennis Crouch, *Google v. Oracle: Fair Use of a Copyrighted API*, Patently-O Blog (February 20, 2017).⁸

Earlier Ninth Circuit precedent also supports special emphasis on the second factor in this case. In the first appeal in this case, this Court relied heavily on the leading Ninth Circuit case on fair use of functional aspects of computer programs, *Sega Enters. v. Accolade, Inc.*, 977 F.2d 1510 (9th Cir. 1992). *Accolade* used Sega’s interface specifications to make videogames that would be compatible with Sega’s videogame console. In its fair use analysis, the court observed that:

The second statutory factor, the nature of the copyrighted work, reflects the fact that not all copyrighted works are entitled to the same level of protection.

To the extent that there are many possible ways of accomplishing a

⁷ available at <https://www.copyright.gov/1201/2010/initialed-registers-recommendation-june-11-2010.pdf>.

⁸ available at <http://patentlyo.com/patent/2017/02/google-oracle-copyrighted.html>.

given task or fulfilling a particular market demand, the programmer's choice of program structure and design may be highly creative and idiosyncratic. However, computer programs are, in essence, utilitarian articles—articles that accomplish tasks. As such, they contain many logical, structural, and visual display elements that are dictated by the function to be performed, by considerations of efficiency, or by external factors such as compatibility requirements and industry demands.

977 F.2d at 1524 (citations omitted). The court concluded that “[u]nder the Copyright Act, if a work is largely functional, it receives only weak protection. This result is neither unfair nor unfortunate. It is the means by which copyright advances the progress of science and art.” *Id.* at 1527 (citation omitted).

Taking due account of the second fair use factor, in conjunction with the remaining factors, the Ninth Circuit found that Accolade's copying of Sega's functional requirements for compatibility was fair use as a matter of law, and reversed the district court's preliminary injunction. *Id.* at 1524-28. The Ninth Circuit confirmed that ruling eight years later, in *Sony Computer Ent'mt, Inc. v. Connectix Corp.*, 203 F.3d 596, 602–05 (9th Cir. 2000).

The approach established in *Sega* and *Sony* is not limited to reverse engineering and “intermediate” copying. For example, the U.S. Copyright Office has applied *Sega* and *Sony* broadly when conducting rulemaking under the Digital Millennium Copyright Act. The Office has found factor two to weigh “strongly in favor” of fair use in situations such as unlocking a wireless device; jailbreaking smartphones and mobile computing devices; and modifying

abandoned software to restore its functionality. U.S. Copyright Office, *Section 1201 Rulemaking: Sixth Triennial Proceeding to Determine Exemptions to the Prohibition on Circumvention, Recommendation of the Register of Copyrights*, at 163, 178-79, 188-89, 326, 338 (October 2015).⁹ Like this case, all of these involve accusations of infringement in a final product, not an “intermediate” copy made for reverse engineering purposes.

Attempts by Oracle’s amici to distinguish *Sony* and *Sega* from the instant case fail. The Ninth Circuit did not limit its holding in *Sega* to noncommercial uses, as the “IP Scholars” brief claims. IP Scholars Br. at 18. *See Sega*, 977 F.2d at 1517, 1523-24. And this Court, along with the Ninth Circuit, has rejected the argument that “there is no different [fair use] test for software code.” IP Scholars Br. at 17. As noted, where functional elements of computer programs are “unprotected (because, e.g., they are dictated by considerations of efficiency or other external factors), those elements should be afforded ‘a lower degree of protection than more traditional literary works.’” *Oracle*, 750 F.3d at 1375 (*citing Sega*, 977 F.2d at 1526); *see also Sega*, 977 F.2d at 1527. Given that both the header files at issue in this appeal and their “structure, sequence, and organization” are unquestionably functional, the second factor clearly favors a fair use finding.

⁹ available at <http://www.copyright.gov/1201/2015/registers-recommendation.pdf>.

C. Oracle and Its Amici Distort Both the Law and the Facts

Faced with controlling Ninth Circuit precedent, one would assume that Oracle would try to distinguish *Sega* and *Sony*. But Oracle never mentions either decision. Instead, Oracle rests its Factor Two analysis on a misstatement of the law and the facts of this case.

1. *Wall Data* Is Not On Point

Aside from *Oracle*, Oracle's discussion of factor two cites only a single case: *Wall Data Inc. v. L.A. Cty. Sheriff's Dep't*, 447 F.3d 769 (9th Cir. 2006). See Oracle Br. at 39-43. But *Wall Data* does not help the analysis; indeed, other than involving a computer program, *Wall Data* has nothing to do with this case.

In *Wall Data*, the L.A. County Sheriff's Department purchased computer software from the plaintiff, *Wall Data*. Unlike the defendant in this case, the Sheriff's Department then made exact copies of *Wall Data*'s entire software program (the executable object code). 447 F.3d at 778. The court faulted the Sheriff's Department for not negotiating "for a less restrictive license." *Id.* at 779. As to factor two, however, the Sheriff's Department never made the arguments about functionality that Google offers here, so they were not addressed. *Id.* at 780. Moreover, *Wall Data* did not involve APIs, the role of functional elements of computer programs, interoperability, compatibility, efficiency, industry practices, or any of the other factors at issue both in this case

and in *Sega* and *Sony*.

2. The Java APIs Are Highly Functional

Lacking any legal authority to justify judgment as a matter of law, Oracle tries to turn to facts, arguing that the Java APIs are creative. Oracle Br. at 39. Even taking Oracle’s argument on faith, however, it is not enough to overturn the jury’s verdict. The Ninth Circuit in *Sega* acknowledged that the structure and design of computer programs can be “highly creative.” *Sega*, 977 F.2d at 1524. But as utilitarian articles, computer programs “contain many logical, structural, and visual display elements that are dictated by the function to be performed, by considerations of efficiency, or by external factors such as compatibility requirements and industry demands.” *Id.* *Sega* upheld a fair use on that basis. *See also Oracle*, 750 F.3d at 1375 (“purely functional elements” support a fair use finding), at 1376-77 (“reasonable jurors might find” those factors relevant to fair use factors two and three).

Oracle also ignores extensive trial testimony that the Java APIs are highly functional, implicate compatibility and efficiency concerns, and affect industry demands. Google used only the Java class and method labels, and wrote its own implementations. Appx at 51236 (Astrachan). Those labels “are very functional in nature” and “allow developers to use them more effectively.” *Id.* at 51241. The Java method names “are highly functionally descriptive of what their

purpose is.” *Id.* at 51243. The *names themselves* are functional: they serve the “function of connecting my software” with the implementing code. *Id.* at 51245.

As Google’s expert explained, no matter how “creative” the choice, changing a function name means changing the function, at least as far as the user is concerned. Dr. Astrachan gave the example of assigning “control P” or “command P” to the print function. If instead “control P” or “command P” meant paste, then “printing wouldn’t work anymore” and “users of that file menu and their software wouldn’t be able to accomplish their tasks.” *Id.* at 51222-23; *see also id.* at 51927-29 (Astrachan; the names give “a pretty good understanding of how” a method worked); 50963 (Bloch; Java used a certain function’s name “because programmers all knew it”); 51086-88 (Bornstein; the “max” function names and arrangements had little or no flexibility). It was “established industry practice” for a company such as Google to take the Java API headers and make its own reimplementations of them. *Id.* at 51849-51 (Page).

Several amici also gave examples of programming design alternatives that are choices about the program’s *function*. Spafford Br. at 12-15 (describing different functions and methods for drawing shapes on a screen); McNealy Br. at 25-28 (describing different functions to set time zones). One of those amici

also defines a “software API” using highly functional language, such as “behavior,” “interaction,” “variables,” and “routines.” Spafford Br. at 9. These examples and definitional language are more like potentially *patentable* subject matter than that of copyright. *Compare* 35 U.S.C. § 101 (allowing patents on a “new and useful process”) *with* 17 U.S.C. § 102(b) (disallowing copyright protection for processes or methods of operation). Patents, of course, also must be “creative,” but in patent law, unlike copyright law, “creative” merely means “novel and nonobvious” (*see* 35 U.S.C. §§ 102, 103).

Indeed, these examples actually suggest that the alleged “creativity” identified by Oracle is best addressed under patent law—which Oracle tried to do. For example, Oracle originally sued Google on U.S. Patent No. 5,966,702 (Dkt. Nos. 1, 36). The ‘702 patent extensively describes the Java package, class, and method structure, *see, e.g.*, ‘702 patent, col. 2:5-55, col. 9:15-col. 10:15. But all of Oracle’s patent claims failed, including those on its ‘702 patent. If Oracle could not obtain a 20-year patent on functional aspects of the Java APIs that it could enforce against Google’s use, it certainly should not be allowed to assert a 95-year copyright on the same functionality, against that same use, under the less demanding liability requirements of copyright. *See Sony*, 203 F.3d at 605 (“If Sony wishes to obtain a lawful monopoly on the functional concepts in its software, it must satisfy the more stringent standards of the patent

laws.”)

There was ample evidence to support the jury’s finding on this factor, and strikingly little evidence to the contrary.

D. Judge Boudin’s *Lotus* Concurrence Offers Persuasive Authority Supporting a Fair Use Finding

Judge Boudin’s concurring opinion in *Lotus v. Borland* is also instructive. As he observed, computer programs present a quandary, because they are fundamentally and necessarily useful, and while “[u]tility does not bar copyright . . . it alters the calculus.” 49 F.3d at 819. The value and widespread adoption of a computer program is likely to derive not from how creative it is, but from how useful it is. As a result, as with patentable inventions:

Requests for the protection of computer menus present the concern with fencing off access to the commons in an acute form. A new menu may be a creative work, but over time its importance may come to reside more in the investment that has been made by *users* in learning the menu and in building their own mini-programs—macros—in reliance upon the menu. Better typewriter keyboard board layouts may exist, but the familiar QWERTY keyboard dominates the market because that is what everyone has learned to use.

Id. at 819-20 (citation omitted; emphasis in original). Similarly, when a computer program has a selection of functional features (in *Lotus*, the menu commands; here, the Java APIs), the program’s users who learn those features become “locked in” to the “choices” made by those programs. Simply put, the more useful the functionality is, the more the users invest their own time to learn

the way the functionality is written and organized.

Strong copyright protections for such works may give rightholders far greater power than Congress intended. As Judge Boudin observed in *Lotus*:

If Lotus is granted a monopoly on this pattern, users who have learned the command structure of Lotus 1-2-3 or devised their own macros are locked into Lotus, just as a typist who has learned the QWERTY keyboard would be the captive of anyone who had a monopoly on the production of such a keyboard.

But if a better spreadsheet comes along, it is hard to see why customers who have learned the Lotus menu and devised macros for it should remain captives of Lotus because of an investment in learning made by the users and not by Lotus.

49 F.3d at 821.

In this case, the jury heard evidence of such “lock-in” from Oracle’s own expert, Dr. Jaffe. Dr. Jaffe described the “network effects” resulting from a large “network of developers” that have learned Java. Appx at 51747-49 (Jaffe). If enough users are locked into one program, the network can “tip” the market to that platform. *Id.* at 51750. With millions of Java users, Google “needed the community of developers and the device makers in order to launch and be successful” with the Android phone. *Id.* at 51757-58; *see also id.* at 51760-62 (noting need to leverage the “existing base of developers”). To Oracle, this lock-in is part and parcel of its copyright. As one of Oracle’s amici put it, Google used the same function names as the Java APIs in order to “steal the legions of developers already using the Java platform.” McNealy Br. at 14 (Mr.

McNealy is Sun's former CEO).

Judge Boudin suggested that fair use might be one way to address the dangers of lock-in, albeit one with "problems of its own." *Lotus*, 49 F.3d at 821-22. In particular, by focusing attention on the nature of the work, the factor two analysis calls attention not only the whether the work lies at the core of copyright's purpose, but also to the necessary line between subject matter that is primarily creative and strongly protected by copyright and subject matter that is primarily useful and therefore subject to weaker protections, if any. Strong copyright protections for the latter category are more likely to lead to lock-in, which in turns makes the fair use safety valve more necessary.

Put another way, granting copyright protection to a book doesn't lock the reader into anything; the reader can read a second book without having to use any installed base of knowledge acquired from the first book. By contrast, where users have invested in learning a particular way of doing something functional and useful, a finding of copyright liability allows the copyright owner to control that acquired knowledge. That is not the purpose of copyright. Where, as here, the functional aspects of computer programs result in such lock-in, the "nature of the copyrighted work" should weigh heavily in favor of fair use.

The fundamental difference between software and traditional literary

works that guided Judge Boudin is reflected in the jury's finding of fair use. It should guide this Court on appeal.

III. THE THIRD FACTOR ALSO FAVORS FAIR USE

The third factor is “the amount and substantiality of the portion used in relation to the copyrighted work as a whole.” 17 U.S.C. § 107. The statutory language implies both a quantitative and qualitative analysis of the portion used.

Oracle concedes that the “amount” of the copyrighted work used is quantitatively insignificant. The copyrighted work is the entire program that Oracle registered: Java 2 Standard Edition versions 1.4 and 5.0. *See* Oracle's Amended Complaint, Exhibit H (copies of copyright registration certificates), Dkt. No. 36-8 (October 27, 2010). Google used about 11,500 lines of declaring code in Android, a miniscule 0.4% or less of the millions of lines of code in the entire program. Appx at 51246-47 (Astrachan); Google Br. at 54-55.

Oracle instead contends that Google's use of the Java APIs was substantial. Relying on *Harper & Row Publs, Inc. v. Nation Enters.*, 471 U.S. 539, 565-66 (1985), Oracle argues that Google copied the “heart” of Java. Oracle Br. at 43-44; *see also* IP Scholars Br. at 14 (same), McNealy Br. at 21 (referring to the “soul” of Java).

But *Harper & Row's* factor three discussion is easily distinguishable. *Harper & Row* involved a “scoop” by The Nation magazine, which obtained a

copy of Harper & Row's as-yet unpublished manuscript of President Gerald Ford's memoir and published key portions early. 471 U.S. at 543. This case involves Java APIs that had been published over a decade before Google's Android, unlike the "scoop" of Harper & Row's unpublished memoir.

Moreover, the book portions copied in *Harper & Row* were long and substantial enough to have been independently copyrightable on their own. Harper & Row could have registered just the copied portions as a literary work, resulting in The Nation having infringed *all* of the copyrighted work. By contrast, if Oracle had tried to fix its factor three problem by registering *only* the Java APIs as a separate work, then the Copyright Office would likely have rejected that registration as covering uncopyrightable subject matter. Its *Compendium of Copyright Office Practices* identifies elements such as algorithms, computer languages, functions, formats, layout, logic, menu screens, organization, protocols, and systems as "uncopyrightable features." U.S. Copyright Office, *Compendium of U.S. Copyright Office Practices*, Chapter 721.9(J) (3rd Ed. 2014).¹⁰ See also United States Copyright Office, *Copyright Registration for Computer Programs*, Circular 61, at 4 (2012) (improper for an applicant to try to register "structure, sequence and organization" of a computer

¹⁰ available at <https://www.copyright.gov/comp3/docs/compendium.pdf>.

program).¹¹

Factor three favors fair use where, as here, it is “doubtful” that the part of the work used “qualifies for copyright protection,” and the part used serves a functional purpose. *SOFA Entertainment, Inc. v. Dodger Productions, Inc.*, 709 F.3d 1273, 1279 (9th Cir. 2013). *See also Oracle*, 750 F.3d at 1376-77 (use of functional matters needed for interoperability is relevant to factor three). Thus, Google’s use of the Java APIs is not qualitatively significant. The third factor, like the second, strongly supports the jury’s verdict of fair use.

CONCLUSION

The Court should affirm the judgment below, either on the grounds of uncopyrightability or fair use.

May 30, 2017

Respectfully submitted,

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¹¹ available at <https://www.copyright.gov/circs/circ61.pdf>.

CERTIFICATE OF SERVICE

I hereby certify that on May 30, 2017, I caused the foregoing BRIEF OF AMICI CURIAE ELECTRONIC FRONTIER FOUNDATION AND PUBLIC KNOWLEDGE IN SUPPORT OF DEFENDANT-CROSS APPELLANT AND AFFIRMANCE to be served by electronic means via the Court's CM/ECF system on all counsel registered to receive electronic notices.

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**CERTIFICATE OF COMPLIANCE WITH TYPE-VOLUME
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I hereby certify as follows:

1. The foregoing Brief of Amici Curiae Electronic Frontier Foundation and Public Knowledge In Support of Defendant-Cross Appellant and Affirmance complies with the type-volume limitation of Fed. R. App. P. 32(a)(7)(B) and Fed. Cir. R. 32(a). The brief is printed in proportionally spaced 14-point type, and there are 6,676 words in the brief according to the word count of the word-processing system used to prepare the brief (excluding the parts of the brief exempted by Fed. R. App. P. 32(f) and by Fed. Cir. R. 32(b)).

2. The brief complies with the typeface requirements of Federal Rule of Appellate Procedure 32(a)(5), and with the type style requirements of Federal Rule of Appellate Procedure 32(a)(6). The brief has been prepared in a proportionally spaced typeface using Microsoft® Word for Mac 2011 in 14-point Times New Roman font.

May 30, 2017

/s/ Michael Barclay
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