No. 21-12835

IN THE

United States Court of Appeals for the Eleventh Circuit

APPLE INC.,

Plaintiff-Appellant,

v.

CORELLIUM, LLC,

Defendant-Appellee.

On Appeal from the U.S. District Court for the Southern District of Florida, Case No. 9:19-cv-81160-RS (Hon. Rodney Smith)

BRIEF OF ANTITRUST AND INTELLECTUAL PROPERTY LAW SCHOLARS AND THE AMERICAN ANTITRUST INSTITUTE AS *AMICI CURIAE* IN SUPPORT OF DEFENDANT-APPELLEE AND AFFIRMANCE

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CERTIFICATE OF INTERESTED PERSONS AND CORPORATE DISCLOSURE STATEMENT

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The following list of interested persons is provided pursuant to 11th Circuit Rule 26.1-1.

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IDENTITY AND INTEREST OF THE AMICI CURIAE

Amici are professors of antitrust and intellectual property law at universities throughout the United States.[1] *Amici* include professors who regularly write and teach about antitrust, copyright, and the intersection of the two.[2] Three of the *amici* are co-authors of the leading treatise on that intersection, *IP and Antitrust: An Analysis of Antitrust Principles Applied to Intellectual Property Law*.

Amicus the American Antitrust Institute (AAI) is an independent nonprofit organization devoted to promoting competition that protects consumers, businesses, and society. It serves the public through research, education, and advocacy on the benefits of competition and the use of antitrust enforcement as a vital component of national and international competition policy. AAI enjoys the input of an Advisory Board that consists of over 130 prominent antitrust lawyers, law professors, economists, and business leaders. *See* American Antitrust Institute, http://www.antitrustinstitute.org.[3]

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[1] The parties have consented to the filing of this brief. Neither the parties nor their counsel have authored this brief in whole or in part, and neither they nor any other person or entity other than *amici curiae* and their counsel contributed money that was intended to fund preparing or submitting this brief.

[2] A list of *amici curiae* law professors and their institutional affiliations, for identification purposes only, is provided in the Appendix.

[3] Individual views of members of AAI's Board of Directors or Advisory Board may differ from AAI's positions.

Amici have no personal or financial interest in the outcome of this case. They share a professional interest in ensuring that antitrust law develops in a way that serves the public interest by promoting competition and that this interest is not undermined by overbroad application of copyright law.[4]

STATEMENT OF ISSUES

1. Whether the district court's finding of fair use is an appropriate means of safeguarding antitrust interests against overbroad copyright assertions.
2. Whether the district court correctly limited the scope of Apple's copyright assertions to prevent unwarranted restraints on competition in other markets.

SUMMARY OF ARGUMENT

Antitrust and copyright law serve different goals, though each serves to foster creation and innovation. Copyright law grants creators limited exclusive rights over their works to encourage development and dissemination of creative works. Antitrust law prohibits unreasonable restraints on competition in order to foster robust markets that generate lower prices, higher quality, and greater innovation.

The fair use doctrine in copyright law threads the needle between antitrust and copyright by ensuring that copyright provides creators with necessary but limited

[4] *Amici* wish to thank Stanford Law School Juelsgaard Intellectual Property and Innovation Clinic Certified Law Students Bridget Amoako and Brendan Saunders for their substantial assistance in drafting this brief.

incentives to create without unduly restraining competition. Consideration of fair use includes, among other factors, the public interest in using a copyrighted work. In assessing that public interest, courts should consider how a copyright assertion may be abused to illegitimately expand exclusive rights beyond their proper scope and into other markets. This expansion would impermissibly restrain the competition that antitrust aims to preserve.

In this case, Apple's assertion of copyright over its iOS software should not be permitted to interfere with competition in the separate markets in which Corellium operates. First, Corellium's CORSEC iOS virtualization product furthers the public interest in facilitating independent security research. Permitting an overbroad assertion of copyright would restrain competition in the distinct security research tools market and inhibit independent researchers from conducting valuable research. Second, Corellium's product facilitates jailbreaking, which makes it easier for iPhone application ("app") developers to test and users to access apps outside of Apple's controlled environment. Permitting an overbroad assertion of Apple's copyright for iOS software would block this tool from expanding competition in app testing and distribution.

ARGUMENT

I. Overbroad Assertions of Copyright Should Not Be Permitted to Undermine the Procompetitive Aims of Antitrust Law.

Copyright incentivizes creative expression by providing creators limited exclusive rights over their works. At the same time, antitrust ensures robust competition by prohibiting unreasonable anticompetitive restraints. While these goals can appear to conflict, intellectual property and antitrust laws may be seen as "complementary efforts to promote an efficient marketplace and long-run, dynamic competition through innovation." 1 Herbert Hovenkamp, Mark D. Janis, Mark A. Lemley, Christopher R. Leslie & Michael A. Carrier, *IP and Antitrust: An Analysis of Antitrust Principles Applied to Intellectual Property Law* § 1.03(A) (3d ed. Supp. 2020).

Copyright's fair use doctrine is a bridge between the two bodies of law. It reconciles copyright's limited exclusive rights with antitrust's prohibition of unreasonable restraints on competition. To do so, fair use allows creators to build upon existing works when developing new ones that are transformative and that serve different markets. But it also prevents rightsholders from expanding their limited exclusive rights beyond the legitimate scope of copyright and, in the process, unduly restraining competition, limiting innovation, and harming consumers.

A. Copyright law and antitrust law serve important but competing interests.

The primary goal of copyright is "to expand public knowledge and understanding." *Authors Guild v. Google, Inc.*, 804 F.3d 202, 212 (2d Cir. 2015). Copyright thus provides creators with "*limited* exclusive rights" over their works to incentivize creation. *See Suntrust Bank v. Houghton Mifflin Co.*, 268 F.3d 1257, 1262 (11th Cir. 2001) (emphasis added). The need for these limits is clear; the Supreme Court has recognized that copyright can impede others' creativity and impose costs on consumers in the form of higher prices. *Google LLC v. Oracle Am., Inc.*, 141 S. Ct. 1183, 1195 (2021). For these reasons, copyright must be kept within its proper scope.

The antitrust laws, on the other hand, are intended to protect competition from unreasonable restraints. *See Leegin Creative Leather Prod., Inc. v. PSKS, Inc.*, 551 U.S. 877, 890 (2007) (stating the "'primary purpose'" of antitrust law is to "'protect interbrand competition'" (quoting *State Oil Co. v. Khan*, 522 U.S. 3, 15 (1997)); *Nat'l Soc'y Pro. Eng'rs v. United States*, 435 U.S. 679, 695 (1978) ("The Sherman Act reflects a legislative judgment that ultimately competition will produce not only lower prices, but also better goods and services."); *N. Pac. Ry. Co. v. United States*, 356 U.S. 1, 4 (1958) (explaining that the Sherman Act "rests on the premise that the unrestrained interaction of competitive forces will yield the best allocation of our economic resources, the lowest prices, the highest quality and the greatest material

progress"); Hovenkamp et al., *supra*, at § 1.02 (explaining that "[a]ntitrust law protects competition and the competitive process" by regulating monopolization and restraints on competition).

When assertions of copyright threaten to exceed the proper scope of the creator's exclusive rights, courts must ensure that copyright's limited goal of incentivizing creativity does not undermine antitrust's parallel goal of protecting unrestrained competition. In particular, "antitrust will be concerned not with the legitimate exercise of an intellectual property right granted by the government, but with efforts to *expand* the scope of that right . . . ." Hovenkamp et al., *supra*, at §1.03(B). Thus, "copyright should not grant anyone more economic power than is necessary to achieve the incentive to create." *Google LLC*, 141 S. Ct. at 1198 (quoting the CONTU report) (internal quotations omitted); *see also United States v. Broad. Music, Inc.*, 275 F.3d 168, 172-73 (2d Cir. 2001) (discussing support for a provision in a licensing consent decree to "establish a check on anticompetitive behavior," such as "threats of copyright infringement litigation").

B. Fair use preserves the balance between copyright and antitrust.

Fair use threads the needle between copyright and antitrust law by ensuring that copyright provides creators with appropriately limited incentives without unduly restraining competition. In this case, the district court's finding that the

development and distribution of Corellium's CORSEC product ("Corellium's product") constitutes fair use properly maintains this balance.[5]

Courts recognize fair use as a crucial means of ensuring that copyright does not exceed its legitimate scope and impermissibly restrain competition.[6] In its recent *Google v. Oracle* decision, the Supreme Court reiterated the importance of fair use as a tool to "keep a copyright monopoly within its lawful bounds." *Google LLC*, 141 S. Ct. at 1198. On the one hand, fair use recognizes exclusive rights when there is a "legitimate need" to incentivize the production of copyrighted material; on the other hand, it considers "the extent to which yet further protection creates unrelated or illegitimate harms in other markets or to the development of other products." *Id.*

The Court in *Google* also explained that "[a]n attempt to monopolize the market by making it impossible for others to compete runs counter to the statutory purpose of promoting creative expression." *Id.* (quoting *Sega Enters. Ltd. v. Accolade, Inc.*, 977 F.2d 1510, 1523-24 (9th Cir. 1992)). And as this Court previously recognized, to meet copyright's ultimate goal, courts "must be careful not

[5] Corellium's product "permits users to create tailored, virtual models of iPhones, using iOS files loaded by the user." *Apple Inc. v. Corellium, LLC*, 510 F. Supp. 3d 1269, 1275 (S.D. Fla. 2020).

[6] In addition to fair use, other copyright limitations including the first sale doctrine similarly limit the scope of copyright's exclusive right to avoid conflict with antitrust laws. *See Kirtsaeng v. John Wiley & Sons, Inc.*, 568 U.S. 519, 523, 552-53 (2013).

to place overbroad restrictions on the use of copyrighted works," otherwise they risk "prevent[ing] would-be authors from effectively building on the ideas of others." *Cambridge Univ. Press v. Patton*, 769 F.3d 1232, 1238 (11th Cir. 2014).

Courts assess fair use claims by considering the specific four fair use factors and by analyzing whether the use of the copyrighted material furthers the public interest. *See Google LLC*, 141 S. Ct. at 1201, 1206 ("[W]e must take into account the public benefits the copying will likely produce."). A sufficiently strong public interest means the use of a copyrighted work is more likely to be considered fair use. *Hustler Mag., Inc. v. Moral Majority, Inc.*, 796 F.2d 1148, 1151-52 (9th Cir. 1986) ("Courts balance these factors to determine whether the public interest in the free flow of information outweighs the copyright holder's interest in exclusive control over the work.").

In the context of fair use of computer software, the Supreme Court has found an examination of the public interest to include hurdles to future innovation caused by overbroad copyright claims. *Google LLC*, 141 S. Ct. at 1208 (recognizing that enforcement of Oracle's copyright over Java would "limit[] the future creativity of new programs"). The consideration of the public interest thus necessarily requires examining the scope of the competition-restraining effects of particular copyright claims.

In this case, there is a significant public interest in encouraging innovative security research unburdened by anticompetitive restraints. There is also a significant public interest in an app ecosystem that is unrestrained by illegitimate copyright limits on app developers' ability to distribute and test the security of their products. *See infra* Parts II, III. Apple's claims would allow its copyright over smartphone software to improperly thwart competition in separate markets for security research tools and app distribution and testing. These overbroad assertions of copyright thus undermine public interest goals.

II. Apple's Overbroad Assertion of Copyright Would Harm Competition in the Security Research Market by Depriving Researchers of Important Independent Tools.

To minimize the tension between antitrust and copyright law, the limited exclusive rights granted by copyright should not be permitted to restrain competition in markets other than the market for the copyrighted expression. *Cf. Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417, 421 (1984) (concluding that "an expansion of the copyright privilege" that "would enlarge the scope of respondents' statutory monopolies to encompass control over an article of commerce that is not the subject of copyright protection" is beyond copyright's proper scope). Here, Corellium's product benefits security research. *See Apple Inc. v. Corellium, LLC*, 510 F. Supp. 3d 1269, 1287 (S.D. Fla. 2020); Corellium Home Page, https://perma.cc/MKH9-6YDY (last visited Feb. 10, 2022) (listing security research

first in defining the uses for Corellium's product). It competes with Apple's own proprietary research tools and thus enables security researchers to independently examine iOS. Permitting Apple to assert its iOS copyright to block fair use of iOS in Corellium's product would therefore expand Apple's limited exclusive rights beyond their legitimate scope, restrain competition in the separate security research tools market, and chill participation by independent researchers who rely on that competition.

A. A competitive security research industry with independent security products and researchers is essential for the public interest.

The security research industry consists of individuals and organizations who discover and report flaws in software in order to fix these vulnerabilities. *See* U.S. Copyright Off., *Software-Enabled Consumer Products* 42 (2016), https://perma.cc/UXA4-E2GS. These researchers provide a crucial service by identifying software risks "*before* the vulnerabilities lead to massive breaches or exploitations." Nat'l Telecomm. & Info. Admin., *Sixth Triennial Section 1201 Rulemaking: Recommendations of the National Telecommunications and Information Administration to the Register of Copyrights* 73 (2015), https://perma.cc/5JUA-AMLC. This research thus "benefits the public by making complex technologies more transparent and teaches the technology community how to design better, safer products in the future." Prof. Ed Felten & Prof. J. Alex

Halderman, Long Comment Regarding a Proposed Exemption Under 17 U.S.C. § 1201, at 6 (Oct. 2017), https://perma.cc/J4D9-BA6N.

In fact, by fixing software issues spanning industries from vehicles to voting systems, security research protects national security, economic stability, and individual user safety. *See* U.S. Ass'n for Computing Mach. (USACM), Short Comment Regarding a Proposed Exemption Under 17 U.S.C. 1201 (Dec. 19, 2017), https://perma.cc/8HYK-4KQL; Ctr. for Democracy & Tech., Long Comment Regarding a Proposed Exemption Under 17 U.S.C. § 1201, at 2-3 (Oct. 2017), https://perma.cc/2M6R-YNZT; Br. of Amici Curiae Computer Security Researchers, Electronic Frontier Foundation, and Public Knowledge in Support of Appellee and Affirmance 5-10.

A competitive market for tools that enable independent security research is vital. It is not sufficient to rely only on the companies that produce software to identify and fix their own security vulnerabilities or to provide the only tool that can be used by others to find vulnerabilities. If a company maintains unilateral control over the process of researching its own product, it may fail to identify or respond to certain security risks. *See, e.g.*, Br. of Amici Curiae Computer Security Researchers at 9 (providing an example of independent researchers, rather than Apple, identifying a security breach targeting iPhone users). As further explained by *amici* computer security researchers, such a company also may lack the incentive to

publicize and fix these vulnerabilities. *See id.* at 14-17. Moreover, even when they purport to include independent researchers in the research process, these companies ultimately maintain control over whether and when to implement changes. *Id.* (explaining that Apple has failed to respond quickly to needed bug fixes identified by researchers). Independent researchers thus serve as an "essential check" on the companies by publicizing vulnerabilities and pressuring companies to address them. *See id.* at 17. These researchers are better able to perform these essential functions effectively when they have access to a competitive market for the tools they need to do so.

B. Copyright should not prevent the fair use of Apple's software in the separate security research market.

Allowing overbroad assertions of software copyright to exclude products like Corellium's from the security research tools market would undermine the important public interest in competition for security research.

Independent researchers have only limited options for how they may examine a copyright owner's software. Apple's Security Research Device Program grants devices to select researchers for them to examine its iOS software, but the program imposes "many rules on what [researchers] can say or do." Patrick Howell O'Neill, *Apple Says Researchers Can Vet its Child Safety Features. But It's Suing a Startup That Does Just That.*, MIT Tech. Rev. (Aug. 17, 2021), https://perma.cc/J9JM-YWFW (quoting an expert as arguing that Apple "exaggerat[es] a researcher's

ability to examine the system as a whole"); *see also* Br. of Amici Curiae Computer Security Researchers at 24 (explaining this program only serves "researchers who are willing to comply with Apple's demands"). Given these limitations, iOS researchers need access to competitive, non-Apple controlled tools to conduct their essential security research.[7]

But allowing overbroad copyright claims over iOS to block tools like Corellium's product would eliminate critical competition in the research market.[8] First, a finding that Corellium's development and offering of its product is not fair use would disrupt the antitrust-copyright balance by permitting copyright to exceed its legitimate bounds and restrain competition in unrelated markets. The market for software security research is separate from the market for iOS. "[I]t is important to focus on the market *for the relevant copyrighted work*" when assessing fair use in the security research context. U.S. Copyright Off., *Software-Enabled*, *supra*, at 51.

[7] Aside from the Security Research Device Program, Apple will not provide its own code for review, and researchers who reverse engineer Apple's code would still not be able to see how it works in a live environment. O'Neill, *supra.* The company has additionally made jailbreaking increasingly difficult, thus diminishing the ability of researchers to conduct this research on their own physical devices without independent support. *Id.*; *see infra* Part III.

[8] Apple already tried to restrain competition in the research market when it attempted to acquire Corellium and incorporate it into its own internal operations. *Apple Inc.*, 510 F. Supp. 3d at 1281-82. It failed to do so, *id.* at 1282, and now ought not be permitted to achieve the same anticompetitive result through overbroad copyright claims.

In such instances, "the relevant work is the embedded program itself, rather than discrete 'bug fixes' that may be needed to correct the errors within that program." *Id.*

Courts have rejected attempts by companies to abuse their copyright to prevent competition in separate markets. The Supreme Court expressly recognized that fair use can protect against "illegitimate harms in other markets" resulting from copyright assertion. *Google LLC*, 141 S.Ct. at 1198; *cf. Sony Corp.*, 464 U.S. at 421 (concluding copyright's scope must be limited to the work protected). In *Lexmark*, the Sixth Circuit distinguished a printing company's copyright over software related to its "Toner Loading Program" from the market for the toner cartridges themselves in the context of a fair use analysis. *Lexmark Int'l, Inc. v. Static Control Components, Inc.*, 387 F.3d 522, 545 (6th Cir. 2004) ("Lexmark's market for its toner cartridges and the profitability of its Prebate program may well be diminished by the SMARTEK chip, but that is not the sort of market or value that copyright law protects."). Similarly, the court in *Connectix* refused to allow Sony to use its copyright over video games to exercise "control over the market for devices that play games Sony produces or licenses," reasoning that "the copyright law . . . does not confer such a monopoly." *Sony Comput. Ent., Inc. v. Connectix Corp.*, 203 F.3d 596, 607 (9th Cir. 2000). Here, Apple's attempt to extend its copyright assertion to restrict competition in the separate security research market should similarly fail.

Second, permitting an extension of copyright beyond its legitimate bounds to restrain competition in security research would further chill activity in a market where Apple already imposes significant non-copyright restrictions. As discussed above, Apple's Security Research Device Program restricts the ability of researchers to perform their analysis. Meanwhile, this very litigation has deterred security researchers from using or even discussing Corellium's product for fear of retribution from Apple. *See* Lorenzo Franceschi-Bicchierai, *Apple's Copyright Lawsuit Has Created a 'Chilling Effect' on Security Research*, Vice (May 5, 2020, 6:46 AM), https://perma.cc/FZ6R-QS2C (citing several researchers who noted a "chilling effect").

Allowing Apple to overassert its copyright would thwart security research. It would impose anticompetitive restrictions on Corellium's product that facilitates that research and thereby restrain researchers from examining Apple's software. *See Google LLC*, 141 S. Ct. at 1195 (warning that copyright "can sometimes stand in the way of others exercising their own creative powers"). Apple's illegitimate copyright assertions would undermine the public interest in promoting essential research into vulnerabilities that threaten national and individual security. *See* Felten & Halderman, *supra*, at 4 ("[I]t is critical that security researchers can work without fear of substantial legal liability to find and fix vulnerabilities in the software and devices on which we rely."). As a result, affirming the district court's finding of fair

use in this case is essential to "keep [the] copyright monopoly within its lawful bounds," *Google LLC*, 141 S. Ct. at 1198, and to thereby protect competition in the security research market.

III. Apple's Overbroad Assertion of Copyright Would Harm Competition by Hindering Developers' Ability to Test and Users' Ability to Install Other Apps.

In addition to facilitating critical iOS security research, Corellium's product may be used by developers to test their own apps. *See Apple Inc.*, 510 F. Supp. 3d at 1280 (discussing Corellium's product as a tool for app security testing and noting Corellium "may engage with iOS app developers"); Corellium Home Page, *supra* (Corellium's website homepage listing app testing as a use of its product); *A Statement from Amanda Gorton, CEO of Corellium, Regarding Apple DMCA Filing*, Corellium (Dec. 29, 2019), https://perma.cc/E9CN-G3P9 ("[D]evelopers and researchers rely on jailbreaks to test the security of both their own apps and third-party apps – testing which cannot be done without a jailbroken device."). Corellium's product also facilitates competition in apps and app distribution by offering tools that enable jailbreaking capabilities.[9] Jailbreaking furthers the

[9] The term "jailbreaking" refers to the "process of gaining access to the operating system of a computing device, such as a smartphone or tablet, to install and execute software that could not otherwise be installed or run on that device, or to remove pre-installed software that could not otherwise be uninstalled." U.S. Copyright Off., *Section 1201 Rulemaking: Sixth Triennial Proceeding to Determine Exemptions to the Prohibition on Circumvention* 172 (2015), https://perma.cc/5T85-MB69.

procompetitive goals of antitrust by allowing developers to provide—and consumers to access—apps that are not subject to Apple's App Store restrictions. Apple's copyright over iOS software should not be allowed to exceed its proper scope and exclude tools that facilitate competition in the market for app testing and distribution.

A. Competition that provides access to more, cheaper, and safer apps furthers the public interest.

Consumers and developers benefit from greater choice among app distributors. Competition among sources from which to download apps helps ensure that no single provider can control or restrict the range of apps that are offered. Lack of competition at the app store level, on the other hand, means consumers may be forced to choose from a smaller selection of more expensive and less secure apps.

First, lack of competition among app distributors is likely to reduce the quantity of apps available. Jailbreaking provides a means to access apps from providers other than the Apple App Store. For example, iPhone owners have jailbroken their devices in order to download apps that are more accessible to people with disabilities than those offered in the Apple App Store. *See* Timothy B. Lee, *Here's Why Disabled Users Are Excited About a Campaign to Jailbreak the iPhone*, Wash. Post (Dec. 13, 2013), https://perma.cc/HS57-ZVXU (discussing a jailbroken iPhone owner's ability to download apps designed for those with vision impairment).

Second, lack of competition in app stores can result in lower revenues for developers and, subsequently, higher prices for consumers. For example, Apple's control over the App Store has raised significant antitrust concerns about Apple's restrictive conduct that allows it to charge excessive app commissions.[10] *See Epic Games, Inc. v. Apple Inc.*, No. 20-cv-05640, 2021 WL 4128925 (N.D. Cal. Sept. 10, 2021)[11]; Majority Staff of H.R. Subcomm. on Antitrust, Com. & Admin. L., 116th Cong., *Investigation of Competition in Digital Markets* 339-51 (2020), https://perma.cc/XM2K-YATJ (highlighting the effects of the App Store commission structure). Store commissions are also the subject of recent proposed legislation in Congress. Press Release, Sen. Richard Blumenthal, Blumenthal, Blackburn & Klobuchar Introduce Bipartisan Antitrust Legislation to Promote App Store Competition (Aug. 11, 2021), https://perma.cc/QGA5-5E4K (describing a

[10] *Amici* take no position here on whether Apple's technical or non-copyright restrictions on the App Store or the premiums it charges app developers might or might not violate the antitrust laws. But *amici* do submit that permitting Apple to assert *copyright* beyond its proper scope as a means of preventing jailbreaking is improper and would disrupt the careful copyright-antitrust balance.

[11] The district court in *Epic Games, Inc.*, a case alleging that Apple unlawfully maintained a monopoly in the iOS app distribution market, found that Apple's app distribution restrictions have anticompetitive effects. 2021 WL 4128925, at *101. Yet it also found that Epic failed to prove that Apple has a monopoly in that market. *Id.* at *106. Epic is appealing that decision and several prominent antitrust *amici* have weighed in arguing that the decision was in error. *See, e.g.*, Brief of Amici Curiae Law, Economics, and Business Professors in Support of Appellant/Cross-Appellee, *Epic Games, Inc. v. Apple Inc.*, No. 420-CV-05640 (9th Cir. filed Jan. 27, 2022), 2022 WL 332834.

proposed legislative measure—the Open App Markets Act—to mitigate Apple and Google's alleged "gatekeeper control" over their app stores). These commissions may cause developers to raise prices for consumers. *See, e.g.*, Jack Nicas, *How Apple's 30% App Store Cut Became a Boon and a Headache*, N.Y. Times (Nov. 18, 2020), https://perma.cc/J546-4SW5 (quoting a Spotify executive who opined that the company either "lose[s] because we have to pay them a 30 percent tax just to operate and raise our prices for consumers as a result, or we lose because it becomes much more expensive to convert users from free to premium").

Third, competition among app distributors can improve the security of the apps offered. Jailbreaking enables researchers and developers to bypass operating system restrictions that hinder research into app safety. Here, Corellium has noted that just as researchers benefit from jailbreaks to perform their security research, app developers employ jailbreaks to test the security of their apps. *See A Statement from Amanda Gorton*, *supra*. Therefore, tools that facilitate jailbreaking may ensure quality via enhanced safety.

Thus, competition in testing and distributing apps for the iPhone serves the public interest by ensuring access to additional lower-priced and better-secured apps.

B. Copyright should not prevent the fair use of iOS to develop tools that facilitate jailbreaking to create competition for app distribution.

Apple currently maintains unilateral control over the App Store, the app distribution marketplace that is preloaded on phones running iOS software. In the

highly concentrated U.S. smartphone market, more than forty-six percent of smartphone users use a device with Apple's iOS. *Share of Smartphone Users That Use an Apple iPhone in the United States from 2014 to 2021*, Statista (Feb. 2021), https://perma.cc/W2PB-9CSS. Apple's iOS configuration prevents iPhone users from downloading apps from any source other than the App Store. Thus, Apple is able to ensure that the vast majority of the apps on its phones come from the App Store.

To access more competitive app offerings despite Apple's technical restrictions, some users rely on jailbreaking their devices. In fact, "the whole point of jailbreaking is to permit the use of independently designed applications on the iPhone, and the activity of jailbreaking encourages the creation of such applications." Marybeth Peters, Register of Copyrights, U.S. Copyright Off., *Recommendation of the Register of Copyrights in RM-2008-8* (2010), at 94, https://perma.cc/U9D9-HCXC.

The Copyright Office first granted a smartphone jailbreaking exemption to the Digital Millennium Copyright Act (DMCA) in 2010 and has since renewed the exemption four times. *See id.* at 77-105 (evaluating and recommending for approval the initial exemption request for circumventing technological protection measures

for the purpose of enabling interoperability with certain applications).[12] In its initial exemption recommendation, the Office explained that jailbreaking for the purpose of making a phone's operating system interoperable with outside applications is likely to be a fair use. *Id.* at 100. The Office specifically noted that both case law and legislative history indicate interoperability is a preferred outcome. *Id.* Interoperability, of course, leads to greater competition by allowing non-App Store-distributed apps to operate on the iPhone.

Notably, the Copyright Office anticipated and rejected the claim that copyright could legitimately be used to bar jailbreaking, finding that "[w]hile a copyright owner might try to restrict the programs that can be run on a particular operating system, copyright law is not the vehicle for imposition of such restrictions." Peters, *supra*, at 96. The Office made clear that "if Apple sought to restrict the computer programs that could be run on its computers, there would be no basis for copyright law to assist Apple in protecting its restrictive business model." *Id.* at 97. The same principle applies in this case. Whether one believes that

[12] The exemption was most recently renewed in 2021. U.S. Copyright Off., *Eighth Triennial Proceeding to Determine Exemptions to the Prohibition on Circumvention* 169 (2021), https://perma.cc/6CNA-YL7W. *See also Rulemaking Proceedings Under Section 1201 of Title 17*, U.S. Copyright Off., https://perma.cc/9ZW3-E6HJ (last visited Feb. 10, 2022) (providing access to recommendations renewing the exemption in 2018, 2015, and 2012).

jailbreaking is helpful or harmful in a particular instance, over-assertion of copyright is not a legitimate means to restrict such activity.

Corellium's software enables researchers to find ways to jailbreak devices running iOS software. *See Apple Inc.*, 510 F. Supp. 3d at 1279, 1279 n.5 (explaining that security researchers identify vulnerabilities that may be used for jailbreaks and noting that "[j]ailbreaking can be used for good") (citations omitted); *A Statement from Amanda Gorton*, *supra*. These jailbroken devices can in turn download apps that are distributed outside of Apple's App Store. Thus, Corellium's product fosters competition in app distribution by enabling users to bypass Apple's technical restrictions, furthering the public interest in antitrust law's fundamental goal of promoting procompetitive markets.

Overly broad assertion of copyright should not be allowed to exclude a tool that fosters competition in the app testing and distribution markets. Abusing copyright in this way would harm developers who would lose an important security testing and distribution capability, and consumers who would lose the benefits of competition in obtaining more, better, and less-expensive apps from other sources.

CONCLUSION

Proper application of the fair use doctrine harmonizes the goals of antitrust law and copyright law. Here, the district court correctly found that the public interest dictates that Apple not be permitted to improperly extend its copyright over iOS

software to restrain competition in the separate security research tools market and in app testing and distribution. This Court should vindicate this important public interest in protecting competition by affirming the district court's finding of fair use.

Dated: February 16, 2022

Respectfully submitted,

/s/Phillip R. Malone/

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CERTIFICATE OF COMPLIANCE

This brief complies with the type-volume limitation of Federal Rules of Appellate Procedure 32(a)(7)(B), 28.1(e)(2), and 29(a)(5) because, excluding the parts of the document exempted by Federal Rule of Appellate Procedure 32(f), this document contains 5,070 words.

This brief complies with the typeface requirements of Federal Rule of Appellate Procedure 32(a)(5) and the type-style requirements of Federal Rule of Appellate Procedure 32(a)(6) because it has been prepared in a proportionally spaced typeface using Microsoft Word in 14-point Times New Roman font.

Dated: February 16, 2022

/s/Phillip R. Malone/
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Counsel for *Amici Curiae*

CERTIFICATE OF SERVICE

I hereby certify that on February 16, 2022, I caused the foregoing Brief of Antitrust and Intellectual Property Law Scholars and the American Antitrust Institute as *Amici Curiae* in Support of Defendant-Appellee and Affirmance to be electronically filed with the Clerk of the Court for the U.S. Court of Appeals for the Eleventh Circuit using CM/ECF, which will automatically send email notification of such filing to all counsel of record.

Dated: February 16, 2022

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APPENDIX

Amici curiae law professors are listed below. Affiliation is provided for identification purposes only, and the brief does not reflect the views of the listed institutions.

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