

Nos. 21-16506 & 21-16695

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**IN THE UNITED STATES COURT OF APPEALS  
FOR THE NINTH CIRCUIT**

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EPIC GAMES, INC.,

*Plaintiff/counter-defendant,  
Appellant/cross-appellee*

v.

APPLE INC.,

*Defendant/counter-claimant,  
Appellee/cross-appellant.*

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On Appeal from the United States District Court  
for the Northern District of California (Hon. Yvonne Gonzalez Rogers)  
No. 4:20-cv-05640-YGR

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**BRIEF FOR INFORMATION TECHNOLOGY & INNOVATION  
FOUNDATION AS *AMICUS CURIAE* SUPPORTING  
APPELLEE/CROSS-APPELLANT APPLE INC.**

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## **CORPORATE DISCLOSURE STATEMENT**

Pursuant to Rule 26.1 of the Federal Rules of Appellate Procedure, undersigned counsel of record certifies that Information Technology & Innovation Foundation (ITIF), a nonprofit corporation, has no parent companies, subsidiaries, or affiliates that have issued shares to the public.

Dated: March 31, 2022

*s/ Lori Alvino McGill*  
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## **IDENTITY AND INTEREST OF *AMICUS CURIAE*<sup>1</sup>**

The Information Technology and Innovation Foundation (ITIF) is an independent non-profit, non-partisan think tank. ITIF's mission is to formulate, evaluate, and promote policy solutions that accelerate innovation and boost productivity to spur growth, opportunity, and progress. To that end, ITIF strives to provide policymakers around the world with high-quality information, analysis, and recommendations they can trust. ITIF adheres to the highest standards of research integrity, guided by an internal code of ethics grounded in analytical rigor, policy pragmatism, and independence from external direction or bias. The University of Pennsylvania has recognized ITIF as setting the global standard for excellence in science and technology policy, and as one of the top 40 U.S. think tanks overall.<sup>2</sup>

ITIF's core focus lies at the intersection of technological innovation and public policy—including economic issues related to innovation, productivity, and competitiveness; technology issues in the areas of information technology and data, broadband telecommunications, advanced manufacturing, life sciences, agricultural

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<sup>1</sup> In accordance with Fed. R. App. P. 29(c)(5), *Amicus Curiae* affirms that no counsel for any party authored this brief in whole or in part, no counsel or party made a monetary contribution intended to fund the preparation or submission of this brief, and no person other than *Amicus*, its members, or its counsel have made a monetary contribution to this brief's preparation or submission. All parties have consented to the filing of this brief.

<sup>2</sup> James G. McGann, Univ. of Pa., *2020 Global Go To Think Tank Index Report*, at [https://repository.upenn.edu/think\\_tanks/18/](https://repository.upenn.edu/think_tanks/18/) (last visited Mar. 31, 2022).

biotechnology, and clean energy; and overarching policy tools related to public investment, regulation, taxes, and trade.

ITIF's mission is to advance public policies that accelerate the progress of technological innovation. ITIF believes that innovation can almost always be a force for good. It is the major driver of human advancement and the essential means for improving societal welfare. A robust rate of innovation makes it possible to achieve many other goals—including increases in median per-capita income, improved health, transportation mobility, and a cleaner environment. In pursuing this goal, ITIF does not hew to a fixed set of ideas; rather, ITIF strives for objective and rational analysis that is guided by critical thinking and a set of core values. ITIF engages in policy and legal debates, both directly and indirectly, by presenting policymakers, courts, and other policy influencers with compelling data, analysis, arguments, and proposals to advance effective innovation policies and oppose counterproductive ones.

As relevant here, ITIF has studied the mobile ecosystems at the heart of this appeal and has concluded that the arguments pressed by Epic in the name of fostering competition and consumer choice would have precisely the opposite effect—by forcing Apple to abandon its closed mobile ecosystem, thereby eliminating an

important competitive alternative to open mobile ecosystems. ITIF submits that its substantial expertise in this area will aid the court in resolving this appeal.

## **ARGUMENT**

### **I. Epic’s Arguments, if Accepted, Would Hurt Consumer Choice and Competition.**

Accepting Epic’s arguments and preventing Apple from continuing to operate its closed mobile ecosystem would eliminate a signature attractive feature of Apple’s products, to the detriment of consumer welfare, competition, and innovation.

#### **A. The App Economy Sparked by Apple’s Innovation Is Robust and Competitive.**

After launching the first iPhone in 2007 without any third-party apps, Apple sparked the creation of the “app economy” on July 10, 2008, when it opened the App Store, allowing app developers to tap into its revolutionary innovation and proprietary assets. The App Store was launched with 500 apps. Today, Apple’s App Store has more than 2 million apps available, thereby demonstrating the incredible growth of the app economy. And yet, Google’s app store—Google Play—dwarfs Apple’s app store with almost 3.5 million apps.

These two leading app stores also compete with other app stores, such as Windows (600,000 apps), Amazon (460,000 apps), and countless other app stores

operated by Chinese behemoths such as Tencent App Store, Huawei App Store, and Alibaba App Store, each with hundreds of millions of users.<sup>3</sup>

These numbers illustrate the vibrancy of the app economy and the competitive opportunities it offers. The app economy has already created millions of jobs, led to unprecedented app entrepreneurship, and provided consumers with innovative services and products. App developers can easily create apps using multiple stores, and it is widely predicted that alternative app stores will continue to emerge and experience exponential growth.<sup>4</sup>

**B. “Closed” and “Open” Mobile Ecosystems Compete With Each Other and Offer Different Benefits and Tradeoffs to Consumers.**

Apple and Google have developed two very different types of mobile ecosystems that appeal to consumers. Apple has created a closed ecosystem where the company controls both the hardware (*i.e.*, the iPhone) and the software (*i.e.*, the operating system and the apps), whereas Google has created an open ecosystem where its Android operating system can be run on any mobile device and users can

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<sup>3</sup> Elad Natanson, *The ‘Other’ Android App Stores—A New Frontier for App Discovery*, Forbes (Sept. 3, 2019).

<sup>4</sup> Forbes Technology Council, *How To Move Beyond Google and Apple and Expand Into Alternative App Stores*, Forbes (Jan. 19, 2022).



install any apps. There are pros and cons to both closed and open ecosystems, which is why their co-existence is a net benefit to consumer choice and competition.

In a closed ecosystem, a single entity can control almost every element, and can thus ensure that products work perfectly out-of-the-box. Closed ecosystems can standardize the user experience—by, for example, setting default software settings, enforcing strong privacy and security features, and establishing minimum hardware requirements—in a way that open ecosystems cannot. In a closed ecosystem, new features can be added seamlessly as they are developed, without worrying about third-party compatibility, as Apple has done with iMessage for texting, Apple Handoff for switching between Apple devices, and AirDrop for sending files to other Apple devices. To enhance its iMessage service, for example, Apple leveraged its ability to deploy a proprietary communication protocol—Apple Push Notification Service—to offer consumers innovative and now-popular features such as encrypted messages, read receipts, and device syncing that were not possible using conventional SMS or MMS messaging.

Of course, there are potential downsides to the closed ecosystem, such as users facing limits on what they can do with their devices or available configurations. For example, iOS does not offer the same range of customization that is available on

Android devices, such as the ability to replace the operating system to remove or customize the default apps or to reconfigure the default home screen.

In contrast, an open ecosystem offers users virtually unlimited opportunities for customization. Sophisticated users can choose the exact hardware and software configuration that works best for them, creating a more optimal setup, such as by running on cheaper hardware or adding additional features suited to their specific needs. And price-sensitive consumers may be able to purchase an Android phone at a lower price than an iPhone, because some Android phones use lower-end hardware.

One significant potential downside of an open ecosystem is that these products may require more effort on the part of users to ensure they work as expected, and performance quality may vary widely from product to product or user to user. For example, manufacturers and carriers often preinstall apps—not based on user demand, but because they are paid to do so by the software maker—forcing users to spend more time removing unwanted apps. In addition, whereas Apple devices immediately receive iOS updates because they have standardized the hardware, Android users must typically wait for weeks or months to receive updates to the operating system because the various manufacturers must first integrate and test all their customizations before they can deploy those updates.

Another significant downside of the open ecosystem is the degree to which it exposes users to additional security risks—which, as explained below, makes the stakes here much higher than simply preserving consumer choice in the marketplace.

The bottom line is that some consumers will prefer open mobile ecosystems, and some will prefer closed ones. Competition between these different business models is good for consumers, both because it gives them more choices and because it encourages each model to address and compete with the benefits of its alternative.

**C. Forcing Apple To Abandon Its Closed Mobile Ecosystem Would Harm Consumer Privacy and Security.**

Forcing Apple to abandon its closed mobile ecosystem model would not be a minor detail, but a fundamental shift in the type of products and services Apple could deliver to its customers. For example, Apple is rightly concerned that such a shift would expose its users to a wave of privacy and security threats. Apple rigorously screens all apps for these types of risks before allowing them in its App Store, and that is a significant feature of the products it offers to consumers. *See* Apple Br. 9-12.

As the recent Nokia Threat Intelligence Report noted:

While Google has taken an open approach to app development and distribution, Apple has always maintained a proprietary approach, allowing downloads only through the official App Store. As a result, Apple products have generally been considered the most secure mobile computing platform.<sup>5</sup>

If Apple were compelled to allow unapproved third-party apps or app stores, it would create a security risk for all of its users. For example, users could be duped into installing malware from third-party sites, or tricked into downloading apps that pose a danger to users and the public more generally—including those that promote online piracy, endanger child welfare, allow hate speech or harassment, facilitate criminal or terrorist activity, or even pose a threat to national security. In other words, if Apple is forced to build the backdoor, it will not necessarily be able to control all that comes through it.

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<sup>5</sup> Nokia, *Threat Intelligence Report 2021*, at <https://pages.nokia.com/T006US/threat-intelligence-report-2021.html> (last visited Mar. 31, 2022).

## CONCLUSION

Accepting Epic's arguments and preventing Apple from continuing to operate its closed mobile ecosystem would eliminate a signature attractive feature of Apple's products, to the detriment of consumer welfare, competition, and innovation.

Dated: March 31, 2022

Respectfully submitted,

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### **CERTIFICATE OF COMPLIANCE**

I certify that this amicus brief contains 1,832 words, excluding the parts of the brief exempted by Federal Rule of Appellate Procedure 32(f). It thus complies with the word limit of Federal Rule of Appellate Procedure 29(a)(5).

I certify that 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 this brief has been prepared in a proportionately spaced 14-point Times New Roman typeface using Microsoft Word 2019.

Dated: March 31, 2022

*s/ Lori Alvino McGill*  
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Lori Alvino McGill

**CERTIFICATE OF SERVICE**

I hereby certify that I electronically filed the foregoing **BRIEF OF INFORMATION TECHNOLOGY & INNOVATION FOUNDATION AS AMICUS CURIAE SUPPORTING APPELLEE/CROSS-APPELLANT APPLE INC.** with the Clerk of the Court for the United States Court of Appeals for the Ninth Circuit by using the appellate CM/ECF system on March 31, 2022.

I certify that all participants in the case are registered CM/ECF users and that service will be accomplished by the appellate CM/ECF system.

Dated: March 31, 2022

*s/ Lori Alvino McGill*  
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