IN THE UNITED STATES DISTRICT COURT FOR THE WESTERN DISTRICT OF TEXAS AUSTIN DIVISION

PACID TECHNOLOGIES, LLC,	§
Plaintiff,	§ §
	§ CIVIL ACTION NO. 1:23-cv-251
v.	§
	§ JURY TRIAL DEMANDED
BANK OF AMERICA CORPORATION and	§
BANK OF AMERICA, N.A.,	§
	§
Defendants.	§

COMPLAINT

Plaintiff PACid Technologies, LLC ("Plaintiff" or "PACid"), by and through its attorneys, for its Original Complaint against Bank of America Corp. ("BA Corp.") and Bank of America, N.A. ("BANA," collectively, "Defendants"), and demanding trial by jury, hereby alleges as follows:

I. NATURE OF THE ACTION

- 1. This is an action for patent infringement arising under the patent laws of the United States, 35 U.S.C. §§ 271, *et seq.*, to enjoin and obtain damages resulting from Defendants' unauthorized use, sale, and offer to sell in the United States of products, methods, processes, services and/or systems that infringe PACid's United States patents, as described herein.
- 2. PACid is the owner of all right, title and interest in and to U.S. Patent No. 9,577,993 (the "'993 Patent"), entitled "System and Method for Authenticating Users," issued on February 21, 2017.
- 3. PACid is the owner of all right, title and interest in and to U.S. Patent No. 9,876,771 (the "'771 Patent"), entitled "System and Method for Authenticating Users," issued on January 23, 2018.

- 4. PACid is the owner of all right, title and interest in and to U.S. Patent No. 10,044,689 (the "'689 Patent"), entitled "System and Method for Authenticating Users," issued on August 7, 2018.
- 5. PACid is the owner of all right, title and interest in and to U.S. Patent No. 10,171,433 (the "'433 Patent"), entitled "System and Method for Authenticating Users," issued on January 1, 2019.
- 6. PACid is the owner of all right, title and interest in and to U.S. Patent No. 10,484,344 (the "'344 Patent"), entitled "System and Method for Authenticating Users," issued on November 19, 2019.
- 7. PACid is the owner of all right, title and interest in and to U.S. Patent No. 11,070,530 (the "'530 Patent"), entitled "System and Method for Authenticating Users," issued on July 20, 2021.
- 8. Together, the foregoing patents are referred to herein as the "Patents." PACid is the assignee of the Patents, and has all rights to sue for infringement and collect past and future damages for the infringement thereof.
- 9. Defendants manufacture, provide, use, sell, offer for sale, import, and/or distribute infringing products and services; and encourage others to use their products and services in an infringing manner, including their customers, as set forth herein.
- 10. PACid seeks past and future damages and prejudgment and post judgment interest for Defendants' infringement of the Patents.

II. PARTIES

- 11. Plaintiff PACid is a limited liability company organized and existing under the laws of the State of Texas.
 - 12. Upon information and belief, Bank of America Corporation is a corporation

organized under the laws of Delaware, with its principal place of business located at Bank of America Corporate Center, 100 North Tryon Street, Charlotte, North Carolina 28255. BA Corp. can be served with process through its registered agent, CT Corporation System, 1999 Bryan Street, Suite 900, Dallas, Texas 75201-3136. Upon information and belief, BA Corp. is authorized to do business in the state of Texas.

- 13. Upon information and belief, BA Corp. maintains regular and established places of business in this District at, among others, 2501 S. Congress Ave., Austin, TX 78704 and 701 E. Stassney Ln., Building F, Austin, TX 78745.
- 14. Upon information and belief, Bank of America, N.A. is a corporation organized under the laws of the United States of America, with its principal place of business located at Bank of America Corporate Center, 100 North Tryon Street, Charlotte, North Carolina 28255. On information and belief, BANA is a wholly owned subsidiary of BA Corp. BANA can be served with process through its registered agent, CT Corporation System, 1999 Bryan Street, Suite 900, Dallas, Texas 75201-3136. Upon information and belief, BANA is authorized to do business in the state of Texas.
- 15. Upon information and belief, BANA maintains regular and established places of business in this District at, among others, 2501 S. Congress Ave., Austin, TX 78704 and 701 E. Stassney Ln., Building F, Austin, TX 78745.
- 16. On information and belief, the Defendants operate as agents of one another, and work in concert as a business group to practice, make, use, sell, and/or offer to sell patented inventions, individually and/or jointly with others, within the United States, including in Texas and this judicial district. On information and belief, each of the above locations are regular, continuous, and established physical places of business of Defendants, being established, ratified,

and/or controlled by Defendants.

III. JURISDICTION AND VENUE

- 17. This is an action for patent infringement which arises under the Patent Laws of the United States, in particular, 35 U.S.C. §§ 271, 281, 283, 284 and 285.
- 18. This Court has exclusive jurisdiction over the subject matter of this action under 28 U.S.C. §§ 1331 and 1338(a).
- 19. On information and belief, venue is proper in this District pursuant to 28 U.S.C. §§ 1391(b), 1391(c), and 1400(b) because Defendants have regular and established places of business in this District, transacted business in this District, and have committed, induced, and/or contributed to acts of patent infringement in this District.
- 20. On information and belief, Defendants are subject to this Court's specific and general personal jurisdiction pursuant to due process and/or the Texas Long Arm Statute, due at least to their substantial business in this forum, including: (i) at least a portion of the infringements alleged herein; and (ii) regularly doing or soliciting business, engaging in other persistent courses of conduct, and/or deriving substantial revenue from goods and services provided to individuals in Texas and in this District.

IV. NOTICE

- 21. On information and belief, Defendants have received actual and/or constructive knowledge of the Patents and the infringing conduct by way of Defendants' own prosecution activities.
- 22. Specifically, BA Corp.'s Patent No. 10,326,588 cites to PACid's Publ. No. US 2011/0307705 ('705 Publication''), which issued as US Patent No. 8,726,032 and is a parent application of the Patents.

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- 23. BA Corp.'s Patent No. 10,613,777 cites to PACid's '705 Publication, which issued as US Patent No. 8,726,032 and is a parent application of the Patents.
- 24. In the prosecution of the applications that issued as Patent Nos. 10,326,588 and 10,613,777, BA Corp. identified PACid's '705 Publication as material prior art to its subsequent claimed inventions.
- 25. In one or more of the foregoing instances, the Examiner identified PACid's '705 Publication as material prior art to BA Corp.'s subsequent claimed inventions.
 - 26. BA Corp. learned of the '705 Publication no later than February 2019.
 - 27. BANA learned of the '705 Publication no later than February 2019.
- 28. On information and belief, while investigating PACid's '705 Publication for the purpose of BA Corp.'s patent applications, Defendants also learned of the '993 Patent, the '771 Patent, the '689 Patent, the '443 Patent, US Appl. Nos. 16/213,025 (which issued as the '344 Patent), and US Appl. No. 16/547,459 (which issued as the '530 Patent) no later than February 2019. On information and belief, as a result of investigating PACid's '705 Publication for the purpose of BA Corp.'s patent applications, Defendants also learned of the '433 Patent and the '530 Patent shortly after their issuance in November 2019 and July 2021, respectively.
- 29. In the alternative, Defendants learned of the Patents no later than the date PACid filed this Complaint.

V. FACTUAL ALLEGATIONS

A. PATENTS

30. The PACid Patents are directed to technical advancements arising within the fields of user authentication and security of communications among computing devices. The claims of the Patents are directed to systems and methods that were not well-understood, routine, or conventional at the time of the application for the Patents. The various claims of the Patents

describe inventive features and combinations of features that improved upon prior art systems and methods for communication between and among computing devices and the authentication of users of the devices. Each of the claims is focused on a specific asserted improvement in computer systems—new systems and methods that provide, among other things: (1) the ability to authenticate a user of a computing device and to transmit encoded communications without the need for the user to input a conventional user ID and password when the user requests access; (2) increased protection for users of the claimed inventions from malicious actors that may attempt to create and exploit additional entry points into a confidential computer system; and (3) enhanced security of secret files due to their indistinguishability from other decoy files. The claim language of the Patents and their accompanying specifications and prosecution histories evidence these improvements.

31. All claims of the Patents include specific claim limitations directed to new, novel, and non-conventional approaches to authentication of users and security of communications among computing devices that were not well-understood or routine. For example, claims of the Patents claim methods and systems that play an integral role in achieving the goals of the inventions and the corresponding improvements over the prior art by, among other things, (1) receiving a unique user input; (2) generating a secret; (3) storing the secret with an identifier on the computing device such that the secret may be retrieved by applying the unique user input to the device; (4) prompting the user to apply the unique input to the device when the device receives a communication from a remote station with the identifier; (5) verifying the unique user input to the computing device; (6) transmitting a communication that is encoded with the secret from the device to the remote station. The unconventional nature of the claimed inventions is apparent when the claims are read in light of the specification and prosecution histories of the Patents.

B. DEFENDANTS' ACTS

32. Defendants provide software applications designed to direct customers in accessing their bank accounts and conducting transactions via Defendants' servers. Defendants' software applications provide for the generation of a secret after receiving biometrics such as fingerprints or facial physiological characteristics, which are used for authentication (e.g., logging into an application or website and/or approval of financial transactions). Through their actions, Defendants, individually and/or jointly with others, have infringed the Patents, actively induced others to infringe the Patents, and contributed to the infringement of the Patents by others, throughout the United States.

33. Defendants offer software applications that are compliant with and support the authentication protocol adopted by the FIDO (Fast IDentity Online) Alliance, employing the FIDO standard including FIDO Universal Authentication Framework (UAF) ("FIDO Security Standard"). These software applications ("FIDO-Ready Software") and at least Defendants' servers (collectively, "FIDO-Ready System") enable users to log into their bank accounts with fingerprints and/or facial recognition.

Bank of America

Product Category: Commercial Deployment

Product Company: Bank of America

Product Specification: UAF

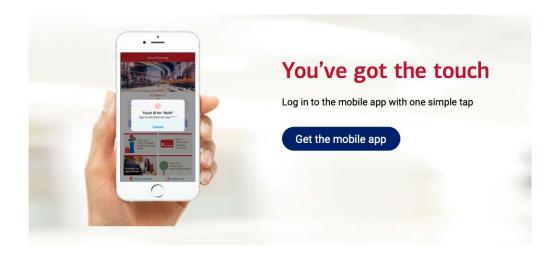
Bank of America's iOS and Android apps support FIDO Authentication, which enables users to log into their accounts with their fingerprint.



https://fidoalliance.org/showcase/bank-of-america/. Defendants are also certified under the FIDO2 standard. https://fidoalliance.org/certification-making-the-ecosystem-tick/. Defendants directly and indirectly infringe the Patents by providing and using—and encouraging, directing, and/or controlling their customers' use of—the FIDO-Ready Software and FIDO-Ready System in compliance with the FIDO Security Standard and/or based upon the allegations set forth in Section V.B. Examples of Defendants' FIDO-Ready Software include mobile applications for both Android and Apple iOS, such as, among others, Bank of America Mobile Banking, BofA Point of Sale-Mobile, CashPro, MyHealth BofA, and BofA Global Card Access.

- 34. With Defendants' FIDO-Ready Software and/or FIDO-Ready System, users securely and privately communicate between their devices and Defendants' FIDO servers for authentication and/or payment authorization.
- 35. Combining FIDO authentication with a secure biometric feature means users no longer need to remember passwords or login details when viewing or managing their bank accounts.
- 36. Defendants and users of Defendants' bank accounts and services benefited and benefit from secure and seamless online and mobile and transactions as a consequence of Defendants' implementation of the FIDO Security Standard through Defendants' FIDO-Ready Software and/or FIDO-Ready System.
- 37. For example, beginning in 2015, Defendants rolled out security measures that allow customers to add biometric authentication factors to their accounts that use the FIDO Security Standard. Defendants support the functionality in at least their FIDO-Ready Software and FIDO-Ready System.
 - 38. With knowledge of their infringement of the Patents, Defendants advertise the

FIDO-based authentication functionality of their FIDO-Ready Software and FIDO-Ready System and intentionally encourage, direct, and/or control customers to use the infringing authentication functionality by providing services and instructions (including, by way of example, the resources and materials available on their website) for the installation of their FIDO-Ready Software and the infringing operation of their FIDO-Ready Software and FIDO-Ready System to their customers, who, like Defendants, directly infringe through the operation of those products. Defendants further instruct their customers in the proper operation of their FIDO-Ready Software in accordance with their implementation of the FIDO Security Standard.



Access your account securely with fingerprint sign-in

Enjoy the quickest, simplest way to log in to the Bank of America Mobile Banking app^[1] using the fingerprint feature^[2] on your mobile device.

One-time setup

- Using your Apple® and Android™ finger-enabled device, go to the Bank of America Mobile Banking app.
- Type or select your User ID, check the box to Set up Touch ID (Apple) or Set up fingerprint sign-in (Android).
- 3. Log in as usual.

Get the mobile app

https://www.bankofamerica.com/online-banking/mobile-and-online-banking-features/touch-id/.

39. Defendants further encourage, direct, and/or control their customers' use of the infringing FIDO-based authentication functionality in their FIDO-Ready Software and/or FIDO-Ready System as follows:



Fingerprint Sign-in

If your Apple or Android device has a built-in fingerprint scanner, you may choose to set up the fingerprint log in option. With fingerprint log in, you can quickly and securely log in without having to enter your Password. This lets you log in to Mobile Banking using your saved fingerprint and saved Bank of America User ID. With fingerprint log in, you'll enjoy quick and secure access to Mobile Banking without having to enter your Password.

You must have your fingerprint saved on your device before you can set up this option. If your need assistance, contact Apple support at apple.com/support or Android support at support.google.com/android, or your device manufacturer.

Set-up steps:

Open the Mobile Banking App and on the home page

- · Enter your User ID and Password
- Select Use Touch ID (for Apple) or Use fingerprint log in (for Android); your User ID will be saved automatically
- Tap the Log In button
- · Read and accept the Terms and Conditions
- · When prompted, verify your fingerprint



Face Id

If your Apple device has Face ID authentication, you may choose to set up Face ID. This lets you log in using your saved facial image and Bank of America User ID. With Face ID, you can quickly and securely log in without having to enter your Password.

You must have your Face ID saved on your device before you can set up this option. If you need assistance, contact Apple Support at apple.com/ support.

Please note that due to security and device-specific limitations, you can only link your FaceID to one User ID. However, you can still save multiple IDs on your mobile device.

Set-up steps:

- Open the Mobile Banking app
- Enter your User ID and Password
- Select Set up Face ID
- Tap Log In
- · Read and accept the Terms and Conditions
- Verify your Face ID
- 40. On information and belief, Defendants also implement contractual protections in the form of license and use restrictions with their customers to preclude the unauthorized reproduction, distribution, and modification of their FIDO-Ready Software.
- 41. Moreover, on information and belief, Defendants implement technical precautions to thwart their customers from circumventing the intended operation of Defendants' FIDO-Ready Software and/or FIDO-Ready System.
- 42. For the reasons stated above, Defendants directly and indirectly infringe the Patents by practicing, providing, and using—and encouraging, directing, and/or controlling their customers' use of—the infringing FIDO-based authentication functionality provided through

Defendants' FIDO-Ready Software and/or FIDO-Ready System. Further, Defendants induce their customers to infringe and contribute to such infringement by instructing or specifying that their customers engage and use the FIDO-based authentication functionality in the Defendants' FIDO-Ready Software and/or FIDO-Ready System in an infringing manner.

- 43. The normal, intended operation of Defendants' FIDO-Ready Software and FIDO-Ready System is to provide authentication functionality, as described herein, in support and practice of and in compliance with the FIDO Security Standard, that infringes the Patents. Defendants' FIDO-Ready Software and FIDO-Ready System therefore have no substantial non-infringing uses.
- 44. Defendants, therefore, induce their customers to directly infringe the Patents or contribute to the direct infringement of the Patents by their customers.
- 45. PACid has been and will continue to suffer damages as a result of Defendants' infringing acts.

VI. COUNTS OF PATENT INFRINGEMENT

COUNT ONE INFRINGEMENT OF U.S. PATENT NO. 9,577,993, CLAIMS 1-4, 6, 8-12

- 46. PACid incorporates by reference its allegations in Paragraphs 1-45 as if fully restated in this paragraph.
- 47. PACid is the assignee and owner of all right, title and interest to the '993 Patent.

 PACid has the legal right to enforce the patent, sue for infringement, and seek equitable relief and damages.
- 48. On information and belief, Defendants, without authorization or license from PACid, have been and are presently directly infringing, individually and/or jointly with others, claims 1-4, 6, and 8-12 of the '993 Patent, as infringement is defined by 35 U.S.C. § 271(a),

including through making, using (including for testing purposes), selling, and offering for sale methods and products that infringe claims 1-4, 6, and 8-12 of the '993 Patent, including Defendants' FIDO-Ready Software and FIDO-Ready System. Defendants are thus liable for direct infringement of the '993 Patent pursuant to 35 U.S.C. § 271(a).

- 49. Defendants jointly infringe claims 1-4, 6, and 8-12 of the '993 Patent to the extent that the acts necessary to give rise to liability for direct infringement are shared between Defendants and a third party because the acts of the third party can be legally attributed to Defendants. In such case, Defendants condition participation in an activity or receipt of a benefit upon performance of a step or steps of a patented method and establish the manner or timing of that performance.
- 50. Specifically, Defendants provide third parties, including customers and/or endusers, with the FIDO-Ready Software. Through their design and implementation of the FIDOReady Software and/or FIDO-Ready System, among other things, Defendants condition the ability
 of their customers and end-users to access confidential information using the enhanced security
 provided by the biometric authentication functionality on the performance of one or more steps of
 the patented methods by the customers or end-users. Defendants direct and control their customers
 and end-users to use the biometric authentication functionality in an infringing manner by
 providing user instructions and software-implemented prompts for setting-up, activating, and
 engaging the infringing biometric authentication functionality provided by the FIDO-Ready
 Software and/or FIDO-Ready System. When Defendants' FIDO-Ready Software and/or FIDOReady System is engaged to use FIDO functionality in the manner designed and established by
 Defendants, the performance of the infringing functionality occurs. Defendants dictate when and

how infringement occurs by virtue of providing code in the FIDO-Ready Software and/or FIDO-Ready System that dictates when and how the performance of the infringing functionality occurs.

- 51. On information and belief, at least since the filing of the Complaint, Defendants, without authorization or license from PACid, have been and are presently indirectly infringing claims 1-4, 6, and 8-12 of the '993 Patent, including actively inducing infringement of the '993 Patent under 35 U.S.C. § 271(b). Such inducements include without limitation, with specific intent to encourage the infringement, knowingly inducing third parties, including Defendants' customers and end-users, to use FIDO-Ready Software and/or the FIDO-Ready System in a manner that Defendants know or should know infringe one or more claims of the '993 Patent. Defendants instruct their customers and end-users to make and use the patented inventions of the '993 Patent by operating Defendants' products in accordance with Defendants' specifications. Defendants specifically intend their customers and end-users to infringe by implementing their FIDO-Ready Software and/or the FIDO-Ready System in accordance with the FIDO Security Standard and establishing an authentication framework and architecture that utilizes a unique user input and corresponding secret to authenticate a user. Direct infringement is the result of activities performed by third parties in relation to Defendants' FIDO-Ready Software and/or the FIDO-Ready System, including without limitation by third parties enabled and encouraged by Defendants to use the FIDO-Ready Software and/or the FIDO-Ready System in its normal, customary way to infringe the '993 Patent.
- 52. On information and belief, at least since the filing of the Complaint, Defendants, without authorization or license from PACid, have been and are presently indirectly infringing claims 1-4, 6, and 8-12 of the '993 Patent, including contributing to the infringement of the '993 Patent under 35 U.S.C. § 271(c) and/or 271(f).

- 53. Defendants' FIDO-Ready Software and FIDO-Ready System uses the functionality in the FIDO Security Standard. Defendants know that the FIDO-Ready Software and/or FIDO-Ready System (i) constitutes a material part of the inventions claimed in the '993 Patent; (ii) is especially made or adapted to infringe the '993 Patent; (iii) is not a staple article or commodity of commerce suitable for non-infringing use; and (iv) is a component used for or in systems that use the functionality of the FIDO Security Standard.
- 54. As a result of Defendants' infringement of claims 1-4, 6, and 8-12 of the '993 Patent, PACid has suffered and continues to suffer monetary damages, and is entitled to an award of damages adequate to compensate it for such infringement under 35 U.S.C. § 284, but in no event, less than a reasonable royalty.

COUNT TWO INFRINGEMENT OF U.S. PATENT No. 9,876,771

- 55. PACid incorporates by reference its allegations in Paragraphs 1-54 as if fully restated in this paragraph.
- 56. PACid is the assignee and owner of all right, title and interest to the '771 Patent. PACid has the legal right to enforce the patent, sue for infringement, and seek equitable relief and damages.
- 57. On information and belief, Defendants, without authorization or license from PACid, have been and are presently directly infringing, individually and/or jointly with others, at least claim 9 of the '771 Patent, as infringement is defined by 35 U.S.C. § 271(a), including through making, using (including for testing purposes), selling, and offering for sale methods and products that infringe at least claim 9 of the '771 Patent, including Defendants' FIDO-Ready Software and FIDO-Ready System. Defendants are thus liable for direct infringement of the '771 Patent pursuant to 35 U.S.C. § 271(a).

- 58. Defendants jointly infringe the '771 Patent to the extent that the acts necessary to give rise to liability for direct infringement are shared between Defendants and a third party because the acts of the third party can be legally attributed to Defendants. In such case, Defendants condition participation in an activity or receipt of a benefit upon performance of a step or steps of a patented method and establish the manner or timing of that performance.
- 59. Specifically, Defendants provide third parties, including customers and/or endusers, with the FIDO-Ready Software. Through their design and implementation of the FIDOReady Software and/or FIDO-Ready System, among other things, Defendants condition the ability
 of their customers and end-users to access confidential information using the enhanced security
 provided by the biometric authentication functionality on the performance of one or more steps of
 the patented methods by the customers or end-users. Defendants direct and control their customers
 and end-users to use the biometric authentication functionality in an infringing manner by
 providing user instructions and software-implemented prompts for setting-up, activating, and
 engaging the infringing biometric authentication functionality provided by the FIDO-Ready
 Software and/or FIDO-Ready System. When Defendants' FIDO-Ready Software and/or FIDOReady System is engaged to use FIDO functionality in the manner designed and established by
 Defendants, the performance of the infringing functionality occurs. Defendants dictate when and
 how infringement occurs by virtue of providing code in the FIDO-Ready Software and/or FIDOReady System that dictates when and how the performance of the infringing functionality occurs.
- 60. On information and belief, at least since the filing of the Complaint, Defendants, without authorization or license from PACid, have been and are presently indirectly infringing at least claim 9 of the '771 Patent, including actively inducing infringement of the '771 Patent under 35 U.S.C. § 271(b). Such inducements include without limitation, with specific intent to encourage

the infringement, knowingly inducing third parties, including Defendants' customers and endusers, to use FIDO-Ready Software and/or the FIDO-Ready System in a manner that Defendants know or should know infringe one or more claims of the '771 Patent. Defendants instruct their customers and end-users to make and use the patented inventions of the '771 Patent by operating Defendants' products in accordance with Defendants' specifications. Defendants specifically intend their customers and end-users to infringe by implementing their FIDO-Ready Software and/or the FIDO-Ready System in accordance with the FIDO Security Standard and establishing an authentication framework and architecture that utilizes a unique user input and corresponding secret to authenticate a user. Direct infringement is the result of activities performed by third parties in relation to Defendants' FIDO-Ready Software, and/or the FIDO-Ready System including without limitation by third parties enabled and encouraged by Defendants to use the FIDO-Ready Software and/or the FIDO-Ready System in its normal, customary way to infringe the '771 Patent.

- 61. On information and belief, at least since the filing of the Complaint, Defendants, without authorization or license from PACid, have been and are presently indirectly infringing at least claim 9 of the '771 Patent, including contributing to the infringement of the '771 Patent under 35 U.S.C. § 271(c) and/or 271(f).
- 62. Defendants' FIDO-Ready Software and FIDO-Ready System uses the functionality in the FIDO Security Standard. Defendants know that the FIDO-Ready Software and/or FIDO-Ready System (i) constitutes a material part of the inventions claimed in the '771 Patent; (ii) is especially made or adapted to infringe the '771 Patent; (iii) is not a staple article or commodity of commerce suitable for non-infringing use; and (iv) is a component used for or in systems that use the functionality of the FIDO Security Standard.

63. As a result of Defendants' infringement of the '771 Patent, PACid has suffered and continues to suffer monetary damages, and is entitled to an award of damages adequate to compensate it for such infringement under 35 U.S.C. § 284, but in no event, less than a reasonable royalty.

COUNT THREE INFRINGEMENT OF U.S. PATENT NO. 10,044,689, CLAIMS 1-2, 4-8

- 64. PACid incorporates by reference its allegations in Paragraphs 1-63 as if fully restated in this paragraph.
- 65. PACid is the assignee and owner of all right, title and interest to the '689 Patent.

 PACid has the legal right to enforce the patent, sue for infringement, and seek equitable relief and damages.
- 66. On information and belief, Defendants, without authorization or license from PACid, have been and are presently directly infringing, individually and/or jointly with others, claims 1-2 and 4-8 of the '689 Patent, as infringement is defined by 35 U.S.C. § 271(a), including through making, using (including for testing purposes), selling, and offering for sale methods and products that infringe claims 1-2 and 4-8 of the '689 Patent, including Defendants' FIDO-Ready Software and FIDO-Ready System. Defendants are thus liable for direct infringement of the '689 Patent pursuant to 35 U.S.C. § 271(a).
- 67. Defendants jointly infringe claims 1-2 and 4-8 of the '689 Patent to the extent that the acts necessary to give rise to liability for direct infringement are shared between Defendants and a third party because the acts of the third party can be legally attributed to Defendants. In such case, Defendants condition participation in an activity or receipt of a benefit upon performance of a step or steps of a patented method and establish the manner or timing of that performance.

- 68. Specifically, Defendants provide third parties, including customers and/or endusers, with the FIDO-Ready Software. Through their design and implementation of the FIDOReady Software and/or FIDO-Ready System, among other things, Defendants condition the ability
 of their customers and end-users to access confidential information using the enhanced security
 provided by the biometric authentication functionality on the performance of one or more steps of
 the patented methods by the customers or end-users. Defendants direct and control their customers
 and end-users to use the biometric authentication functionality in an infringing manner by
 providing user instructions and software-implemented prompts for setting-up, activating, and
 engaging the infringing biometric authentication functionality provided by the FIDO-Ready
 Software and/or FIDO-Ready System. When Defendants' FIDO-Ready Software and/or FIDOReady System is engaged to use FIDO functionality in the manner designed and established by
 Defendants, the performance of the infringing functionality occurs. Defendants dictate when and
 how infringement occurs by virtue of providing code in the FIDO-Ready Software and/or FIDOReady System that dictates when and how the performance of the infringing functionality occurs.
- 69. On information and belief, at least since the filing of the Complaint, Defendants, without authorization or license from PACid, have been and are presently indirectly infringing claims 1-2 and 4-8 of the '689 Patent, including actively inducing infringement of the '689 Patent under 35 U.S.C. § 271(b). Such inducements include without limitation, with specific intent to encourage the infringement, knowingly inducing third parties, including Defendants' customers and end-users, to use FIDO-Ready Software and/or the FIDO-Ready System in a manner that Defendants know or should know infringe one or more claims of the '689 Patent. Defendants instruct their customers and end-users to make and use the patented inventions of the '689 Patent by operating Defendants' products in accordance with Defendants' specifications. Defendants

specifically intend their customers and end-users to infringe by implementing their FIDO-Ready Software and/or the FIDO-Ready System in accordance with the FIDO Security Standard and establishing an authentication framework and architecture that utilizes a unique user input and corresponding secret to authenticate a user. Direct infringement is the result of activities performed by third parties in relation to Defendants' FIDO-Ready Software and/or the FIDO-Ready System, including without limitation by third parties enabled and encouraged by Defendants to use the FIDO-Ready Software and/or the FIDO-Ready System in its normal, customary way to infringe the '689 Patent.

- 70. On information and belief, at least since the filing of the Complaint, Defendants, without authorization or license from PACid, have been and are presently indirectly infringing claims 1-2 and 4-8 of the '689 Patent, including contributing to the infringement of the '689 Patent under 35 U.S.C. § 271(c) and/or 271(f).
- 71. Defendants' FIDO-Ready Software and FIDO-Ready System uses the functionality in the FIDO Security Standard. Defendants know that the FIDO-Ready Software and/or FIDO-Ready System (i) constitutes a material part of the inventions claimed in the '689 Patent; (ii) is especially made or adapted to infringe the '689 Patent; (iii) is not a staple article or commodity of commerce suitable for non-infringing use; and (iv) is a component used for or in systems that use the functionality of the FIDO Security Standard.
- 72. As a result of Defendants' infringement of claims 1-2 and 4-8 of the '689 Patent, PACid has suffered and continues to suffer monetary damages, and is entitled to an award of damages adequate to compensate it for such infringement under 35 U.S.C. § 284, but in no event, less than a reasonable royalty.

COUNT FOUR INFRINGEMENT OF U.S. PATENT No. 10,171,433

- 73. PACid incorporates by reference its allegations in Paragraphs 1-72 as if fully restated in this paragraph.
- 74. PACid is the assignee and owner of all right, title and interest to the '433 Patent. PACid has the legal right to enforce the patent, sue for infringement, and seek equitable relief and damages.
- 75. On information and belief, Defendants, without authorization or license from PACid, have been and are presently directly infringing, individually and/or jointly with others, at least claim 1 of the '433 Patent, as infringement is defined by 35 U.S.C. § 271(a), including through making, using (including for testing purposes), selling, and offering for sale methods and products that infringe at least claim 1 of the '433 Patent, including Defendants' FIDO-Ready Software and FIDO-Ready System. Defendants are thus liable for direct infringement of the '433 Patent pursuant to 35 U.S.C. § 271(a).
- 76. Defendants jointly infringe the '433 Patent to the extent that the acts necessary to give rise to liability for direct infringement are shared between Defendants and a third party because the acts of the third party can be legally attributed to Defendants. In such case, Defendants condition participation in an activity or receipt of a benefit upon performance of a step or steps of a patented method and establish the manner or timing of that performance.
- 77. Specifically, Defendants provide third parties, including customers and/or end-users, with the FIDO-Ready Software. Through their design and implementation of the FIDO-Ready Software and/or FIDO-Ready System, among other things, Defendants condition the ability of their customers and end-users to access confidential information using the enhanced security provided by the biometric authentication functionality on the performance of one or more steps of

the patented methods by the customers or end-users. Defendants direct and control their customers and end-users to use the biometric authentication functionality in an infringing manner by providing user instructions and software-implemented prompts for setting-up, activating, and engaging the infringing biometric authentication functionality provided by Defendants' FIDO-Ready Software and/or FIDO-Ready System. When Defendants' FIDO-Ready Software and/or FIDO-Ready System are engaged to use FIDO functionality in the manner designed and established by Defendants, the performance of the infringing functionality occurs. Defendants dictate when and how infringement occurs by virtue of providing code in the FIDO-Ready Software and/or FIDO-Ready System that dictates when and how the performance of the infringing functionality occurs.

78. On information and belief, at least since the filing of the Complaint, Defendants, without authorization or license from PACid, have been and are presently indirectly infringing at least claim 1 of the '433 Patent, including actively inducing infringement of the '433 Patent under 35 U.S.C. § 271(b). Such inducements include without limitation, with specific intent to encourage the infringement, knowingly inducing third parties, including Defendants' customers and endusers, to use FIDO-Ready Software and/or the FIDO-Ready System in a manner that Defendants know or should know infringe one or more claims of the '433 Patent. Defendants instruct their customers and end-users to make and use the patented inventions of the '433 Patent by operating Defendants' products in accordance with Defendants' specifications. Defendants specifically intend their customers and end-users to infringe by implementing their FIDO-Ready Software and/or the FIDO-Ready System in accordance with the FIDO Security Standard and establishing an authentication framework and architecture that utilizes a unique user input and corresponding secret to authenticate a user. Direct infringement is the result of activities performed by third

parties in relation to Defendants' FIDO-Ready Software and/or the FIDO-Ready System, including without limitation by third parties enabled and encouraged by Defendants to use the FIDO-Ready Software and/or the FIDO-Ready System in its normal, customary way to infringe the '433 Patent.

- 79. On information and belief, at least since the filing of the Complaint, Defendants, without authorization or license from PACid, have been and are presently indirectly infringing at least claim 1 of the '433 Patent, including contributing to the infringement of the '433 Patent under 35 U.S.C. § 271(c) and/or 271(f).
- 80. Defendants' FIDO-Ready Software and FIDO-Ready System uses the functionality in the FIDO Security Standard. Defendants know that their FIDO-Ready Software and/or FIDO-Ready System (i) constitute a material part of the inventions claimed in the '433 Patent; (ii) are especially made or adapted to infringe the '433 Patent; (iii) are not staple articles or commodity of commerce suitable for non-infringing use; and (iv) are components used for or in systems that use the functionality of the FIDO Security Standard.
- 81. As a result of Defendants' infringement of the '433 Patent, PACid has suffered and continues to suffer monetary damages, and is entitled to an award of damages adequate to compensate it for such infringement under 35 U.S.C. § 284, but in no event, less than a reasonable royalty.

COUNT FIVE INFRINGEMENT OF U.S. PATENT NO. 10,484,344

- 82. PACid incorporates by reference its allegations in Paragraphs 1-81 as if fully restated in this paragraph.
- 83. PACid is the assignee and owner of all right, title and interest to the '344 Patent.

 PACid has the legal right to enforce the patent, sue for infringement, and seek equitable relief and

damages.

- 84. On information and belief, Defendants, without authorization or license from PACid, have been and are presently directly infringing, individually and/or jointly with others, at least claim 1 of the '344 Patent, as infringement is defined by 35 U.S.C. § 271(a), including through making, using (including for testing purposes), selling, and offering for sale products that infringe at least claim 1 of the '344 Patent, including Defendants' FIDO-Ready Software and FIDO-Ready System. Defendants are thus liable for direct infringement of the '344 Patent pursuant to 35 U.S.C. § 271(a).
- 85. Defendants jointly infringe the '344 Patent to the extent that the acts necessary to give rise to liability for direct infringement are shared between Defendants and a third party because the acts of the third party can be legally attributed to Defendants. In such case, Defendants place the patented invention into service, control the system as a whole and obtain benefit from it.
- 86. Specifically, Defendants place the patented invention into service at least by providing third parties, including customers and/or end-users, with the FIDO-Ready Software. Through their design and implementation of the FIDO-Ready Software and/or FIDO-Ready System, among other things, Defendants control the ability of their customers and end-users to access confidential information using the enhanced security provided by the biometric authentication functionality of the FIDO-Ready Software and/or servers. Defendants direct and control their customers and end-users to use the biometric authentication functionality in an infringing manner by providing user instructions and software-implemented prompts for setting-up, activating, and engaging the infringing biometric authentication functionality provided by the FIDO-Ready Software and/or FIDO-Ready System. When Defendants' FIDO-Ready Software and/or FIDO-Ready System are engaged to use FIDO functionality in the manner designed and

established by Defendants, the performance of the infringing functionality occurs in the system. Defendants dictate when and how infringement occurs by virtue of providing code in the FIDO-Ready Software and/or FIDO-Ready System that dictates when and how the performance of the infringing functionality occurs, thereby controlling the system as whole. Defendants benefit from secure and seamless online and mobile transactions as a consequence of Defendants' implementation of the FIDO-Ready Software and/or FIDO-Ready System. Therefore, through the functionality of the infringing products as designed and established by Defendants, Defendants place the infringing system into service, control the system as a whole and obtain benefit from it.

87. On information and belief, at least since the filing of the Complaint, Defendants, without authorization or license from PACid, have been and are presently indirectly infringing at least claim 1 of the '344 Patent, including actively inducing infringement of the '344 Patent under 35 U.S.C. § 271(b). Such inducements include without limitation, with specific intent to encourage the infringement, knowingly inducing third parties, including Defendants' customers and endusers, to use FIDO-Ready Software and/or the FIDO-Ready System in a manner that Defendants know or should know infringe one or more claims of the '344 Patent. Defendants instruct their customers and end-users to make and use the patented inventions of the '344 Patent by operating Defendants' products in accordance with Defendants' specifications. Defendants specifically intend their customers and end-users to infringe by implementing their FIDO-Ready Software and/or the FIDO-Ready System in accordance with the FIDO Security Standard and establishing an authentication framework and architecture that utilizes a unique user input and corresponding secret to authenticate a user. Direct infringement is the result of activities performed by third parties in relation to Defendants' FIDO-Ready Software and/or the FIDO-Ready System, including without limitation by third parties enabled and encouraged by Defendants to download,

activate, and put into use the FIDO-Ready Software and/or the FIDO-Ready System in its normal, customary way to infringe the '344 Patent.

- 88. On information and belief, at least since the filing of the Complaint, Defendants, without authorization or license from PACid, have been and are presently indirectly infringing at least claim 1 of the '344 Patent, including contributing to the infringement of the '344 Patent under 35 U.S.C. § 271(c) and/or 271(f).
- 89. Defendants' FIDO-Ready Software and FIDO-Ready System uses the functionality in the FIDO Security Standard. Defendants know that the FIDO-Ready Software and/or FIDO-Ready System (i) constitute a material part of the inventions claimed in the '344 Patent; (ii) are especially made or adapted to infringe the '344 Patent; (iii) are not staple articles or commodity of commerce suitable for non-infringing use; and (iv) are components used for or in systems that use the functionality of the FIDO Security Standard.
- 90. As a result of Defendants' infringement of the '344 Patent, PACid has suffered and continues to suffer monetary damages, and is entitled to an award of damages adequate to compensate it for such infringement under 35 U.S.C. § 284, but in no event, less than a reasonable royalty.

COUNT SIX INFRINGEMENT OF U.S. PATENT No. 11,070,530

- 91. PACid incorporates by reference its allegations in Paragraphs 1-90 as if fully restated in this paragraph.
- 92. PACid is the assignee and owner of all right, title and interest to the '530 Patent. PACid has the legal right to enforce the patent, sue for infringement, and seek equitable relief and damages.
 - 93. On information and belief, Defendants, without authorization or license from

PACid, have been and are presently directly infringing, individually and/or jointly with others, at least claim 1 of the '530 Patent, as infringement is defined by 35 U.S.C. § 271(a), including through making, using (including for testing purposes), selling, and offering for sale products that infringe at least claim 1 of the '530 Patent, including Defendants' FIDO-Ready Software and FIDO-Ready System. Defendants are thus liable for direct infringement of the '530 Patent pursuant to 35 U.S.C. § 271(a).

- 94. Defendants jointly infringe the '530 Patent to the extent that the acts necessary to give rise to liability for direct infringement are shared between Defendants and a third party because the acts of the third party can be legally attributed to Defendants. In such case, Defendants place the patented invention into service, control the system as a whole and obtain benefit from it.
- 95. Specifically, Defendants place the patented invention into service at least by providing third parties, including customers and/or end-users, with the FIDO-Ready Software. Through their design and implementation of the FIDO-Ready Software and/or FIDO-Ready System, among other things, Defendants control the ability of their customers and end-users to access confidential information using the enhanced security provided by the biometric authentication functionality of the FIDO-Ready Software. Defendants direct and control their customers and end-users to use the biometric authentication functionality in an infringing manner by providing user instructions and software-implemented prompts for setting-up, activating, and engaging the infringing biometric authentication functionality provided by the FIDO-Ready Software and/or FIDO-Ready System. When Defendants' FIDO-Ready Software and/or FIDO-Ready System is engaged to use FIDO functionality in the manner designed and established by Defendants, the performance of the infringing functionality occurs in the system. Defendants dictate when and how infringement occurs by virtue of providing code in the FIDO-Ready

Software and/or FIDO-Ready System that dictates when and how the performance of the infringing functionality occurs, thereby controlling the system as a whole. Defendants benefit from secure and seamless online and mobile transactions as a consequence of Defendants' implementation of the FIDO-Ready Software and/or FIDO-Ready System. Therefore, through the functionality of the infringing products as designed and established by Defendants, Defendants place the infringing system into service, control the system as a whole and obtain benefit from it.

96. On information and belief, at least since the filing of the Complaint, Defendants, without authorization or license from PACid, have been and are presently indirectly infringing at least claim 1 of the '530 Patent, including actively inducing infringement of the '530 Patent under 35 U.S.C. § 271(b). Such inducements include without limitation, with specific intent to encourage the infringement, knowingly inducing third parties, including Defendants' customers and endusers, to use FIDO-Ready Software and/or the FIDO-Ready System in a manner that Defendants know or should know infringe one or more claims of the '530 Patent. Defendants instruct their customers and end-users to make and use the patented inventions of the '530 Patent by operating Defendants' products in accordance with Defendants' specifications. Defendants specifically intend their customers and end-users to infringe by implementing their FIDO-Ready Software and/or the FIDO-Ready System in accordance with the FIDO Security Standard and establishing an authentication framework and architecture that utilizes a unique user input and corresponding secret to authenticate a user. Direct infringement is the result of activities performed by third parties in relation to Defendants' FIDO-Ready Software and/or the FIDO-Ready System, including without limitation by third parties enabled and encouraged by Defendants to download, activate, and put into use the FIDO-Ready Software and/or the FIDO-Ready System in its normal, customary way to infringe the '530 Patent.

- 97. On information and belief, at least since the filing of the Complaint, Defendants, without authorization or license from PACid, have been and are presently indirectly infringing at least claim 1 of the '530 Patent, including contributing to the infringement of the '530 Patent under 35 U.S.C. § 271(c) and/or 271(f).
- 98. Defendants' FIDO-Ready Software and FIDO-Ready System uses the functionality in the FIDO Security Standard. Defendants know that the FIDO-Ready Software and/or FIDO-Ready System (i) constitutes a material part of the inventions claimed in the '530 Patent; (ii) is especially made or adapted to infringe the '530 Patent; (iii) is not a staple article or commodity of commerce suitable for non-infringing use; and (iv) is a component used for or in systems that use the functionality of the FIDO Security Standard.
- 99. As a result of Defendants' infringement of the '530 Patent, PACid has suffered and continues to suffer monetary damages, and is entitled to an award of damages adequate to compensate it for such infringement under 35 U.S.C. § 284, but in no event, less than a reasonable royalty.

VII. WILLFUL INFRINGEMENT

- 100. PACid incorporates by reference its allegations in Paragraphs 1-99 as if fully restated in this paragraph.
- 101. On information and belief, Plaintiff alleges that Defendants had knowledge of their infringement of the Patents during the prosecution of Patent Nos. 10,326,588 and 10,613,777. In the alternative, Plaintiff alleges that Defendants had knowledge of their infringement of the Patents since at least the filing of Plaintiff's Complaint.
- 102. Despite being notified of infringement of the Patents, Defendants nonetheless continued and continue to make, use, sell, and/or import infringing methods and products, to induce others to engage in such conduct, and/or to contribute to others engaging in such conduct

despite knowing that such actions constituted infringement of valid patents.

- 103. Accordingly, Defendants acted egregiously and/or knowingly or intentionally when they infringed the Patents.
 - 104. Accordingly, Plaintiff seeks enhanced damages pursuant to 35 U.S.C. § 284.

VIII. JURY DEMAND

105. Plaintiff PACid demands a trial by jury of all matters to which it is entitled to trial by jury, pursuant to FED. R. CIV. P. 38.

IX. PRAYER FOR RELIEF

WHEREFORE, Plaintiff PACid respectfully requests that the Court:

- A. Enter judgment that Defendants infringe one or more claims of the Patents literally and/or under the doctrine of equivalents;
- B. Award Plaintiff PACid past and future damages together with prejudgment and post-judgment interest to compensate for the infringement by Defendants of the Patents in accordance with 35 U.S.C. §284, and increase such award by up to three times the amount found or assessed in accordance with 35 U.S.C. §284;
- C. Award Plaintiff PACid its costs, disbursements, attorneys' fees, and such further and additional relief as is deemed appropriate by this Court.

DATED: March 7, 2023

Respectfully submitted,

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