

**UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA**

FACTOR2 MULTIMEDIA SYSTEMS, LLC
5802 ORCHARD HILL LANE
CLIFTON, VIRGINIA 20124
Plaintiff

v.

TIKTOK INC.
1255 UNION STREET NE
WASHINGTON, DC 20002
Defendant

Civil Action No. 1:24-cv-133-RC

SECOND AMENDED COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Factor2 Multimedia Systems, LLC (“Factor2” or “Plaintiff”), by its undersigned counsel, alleges as follows for its Complaint against Defendant TikTok Inc. (“TikTok”).

THE NATURE OF THIS ACTION

1. Factor2 brings this action against TikTok pursuant to 35 U.S.C. §101 et. seq. and §§271, 281, 283, 284, & 285 inclusive, for infringement of one or more claims of the following six patents, U.S. Patent Nos.

8,281,129 “Direct Authentication System and Method Via Trusted Authenticators,”
9,703,938 “Direct Authentication System and Method Via Trusted Authenticators,”
8,727,864 “Centralized identification and Authentication System and Method,”
9,870,453 “Direct Authentication System and Method Via Trusted Authenticators,”
10,083,285 “Direct Authentication System and Method Via Trusted Authenticators,” and
10,769,297 “Centralized Identification and Authentication System and Method.”

Collectively the Patents-in-Suit. Defendant has infringed the Patents-in-Suit.

2. Defendant has made, used, developed, offered to sell, and sold and charged access to the accused TikTok Apparatus throughout the United States. The TikTok Apparatus includes

authentication that directly infringed the system and method claims of the Patents-in-Suit. The TikTok Apparatus includes a system that includes all of the elements of the system and apparatus claims and that performs all of the steps of the method claims, and or utilizes a separate system for authentication that includes all of the elements of the system and apparatus claims and that performs all of the method claims. Defendant's "use" of a built in or separate systems has directly infringed the claims of the Patents-in-Suit. Defendant's inducing the use and contribution of system components to others has indirectly infringed system claims of the Patents-in-Suit.

THE PARTIES

3. Plaintiff is a Virginia corporation having an address located at 5802 Orchard Hill Ln, Clifton, Virginia 20124-1061. Plaintiff is the owner of the Patents-in-Suit by assignment.

4. Defendant TikTok is a California corporation with an office in this District, located at 1255 Union St. NE, Washington, DC 20002. TikTok makes, uses, develops, offers to sell, and sells the accused products and sells access to the accused products and profits from its use of the accused products through advertisement revenue and the like, throughout the United States. TikTok designs and provides distribution of the TikTok Apparatus.

5. ByteDance is a Chinese multinational technology company with a headquarters in Beijing China. ByteDance is the parent corporation and owner of TikTok.

6. Defendant, vendors of Defendant and customers of Defendant, have used the Accused Apparatus to practice the claimed system and methods of the Patents-in-Suit.

JURISDICTION AND VENUE

7. This is an action for patent infringement arising under the laws of the United States, 35 U.S.C. §271 et seq.

8. This Court has subject matter jurisdiction over this action pursuant to 35 U.S.C. §§271, 281 and 28 U.S.C. §§1331 and 1338(a), federal question.

9. This Court has personal jurisdiction over Defendant TikTok because TikTok has a regular and established place of business in this district at 1255 Union St. NE, Washington, DC 20002.

10. Venue is proper in this District for Defendant TikTok pursuant to 28 U.S.C. § 1400(a), 1400(b) and because Defendant TikTok maintains a regular and established place of business in this District and has committed acts of infringement, including, development, support, use, sale, and offers to sell infringing products.

BACKGROUND AND GENERAL ALLEGATIONS

11. Factor2 is the current assignee of the Patents-in-Suit.

12. Defendant has used, has provided and sold access to the TikTok Apparatus.

13. The TikTok Apparatus uses a system and method for authentication that has infringed claims of each of the Patents-in-Suit.

THE PATENTS-IN-SUIT

14. On October 2nd, 2012, United States Patent No. 8,281,129 titled “Direct Authentication System and Method Via Trusted Authenticators,” was duly and legally issued by the United States Patent and Trademark Office (“USPTO”). The ‘129 Patent claims patent-

eligible subject matter and was valid and enforceable prior to expiration. Factor2 is the exclusive owner by assignment of all rights, title, and interest in the '129 Patent, including the right to bring this suit for injunction and damages, and including the right to sue and recover all past, present, and future damages for infringement of the '129 Patent. Defendant is not licensed to the '129 Patent, either expressly or implicitly, nor do they enjoy or benefit from any rights in or to the '129 patent whatsoever. A true and correct copy of the '129 Patent is attached hereto as

Exhibit A.

15. On July 11th, 2017, United States Patent No. 9,703,938 titled “Direct Authentication System and Method Via Trusted Authenticators” was duly and legally issued by the United States Patent and Trademark Office (“USPTO”). The '938 Patent claims patent-eligible subject matter and was valid and enforceable prior to expiration. Factor2 is the exclusive owner by assignment of all rights, title, and interest in the '938 Patent, including the right to bring this suit for injunction and damages, and including the right to sue and recover all past, present, and future damages for infringement of the '938 Patent. Defendant is not licensed to the '938 Patent, either expressly or implicitly, nor do they enjoy or benefit from any rights in or to the '938 patent whatsoever. A true and correct copy of the '938 Patent is attached hereto as

Exhibit B.

16. On July 19, 2017, United States Patent No. 9,727,864 (“the '864 Patent”) titled “Centralized Identification and Authentication System and Method” was duly and legally issued by the United States Patent and Trademark Office (“USPTO”). The '864 Patent claims patent-eligible subject matter and is valid and enforceable. Factor2 is the exclusive owner by assignment of all rights, title, and interest in the '864 Patent, including the right to bring this suit for damages, and including the right to sue and recover all past, present, and future damages for

infringement of the '864 Patent. Defendant is not licensed to the '864 Patent, either expressly or implicitly, nor do they enjoy or benefit from any rights in or to the '864 Patent whatsoever. A true and correct copy of the '864 Patent is attached hereto as **Exhibit C**.

17. On December 27th, 2017, United States Patent No. 9,870,453 titled "Direct Authentication System and Method Via Trusted Authenticators," was duly and legally issued by the United States Patent and Trademark Office ("USPTO"). The '453 Patent claims patent-eligible subject matter and was valid and enforceable prior to expiration. Factor2 is the exclusive owner by assignment of all rights, title, and interest in the '453 Patent, including the right to bring this suit for injunction and damages, and including the right to sue and recover all past, present, and future damages for infringement of the '453 Patent. Defendant is not licensed to the '453 Patent, either expressly or implicitly, nor do they enjoy or benefit from any rights in or to the '453 patent whatsoever. A true and correct copy of the '453 Patent is attached hereto as **Exhibit D**.

18. On September 5th, 2018, United States Patent No. 10,083,285 titled "Direct Authentication System and Method Via Trusted Authenticators," was duly and legally issued by the United States Patent and Trademark Office ("USPTO"). The '285 Patent claims patent-eligible subject matter and was valid and enforceable prior to expiration. Factor2 is the exclusive owner by assignment of all rights, title, and interest in the '285 Patent, including the right to bring this suit for injunction and damages, and including the right to sue and recover all past, present, and future damages for infringement of the '285 Patent. Defendant is not licensed to the '285 Patent, either expressly or implicitly, nor do they enjoy or benefit from any rights in or to the '285 patent whatsoever. A true and correct copy of the '285 Patent is attached hereto as **Exhibit E**.

19. On August 19th, 2020, United States Patent No. 10,769,297 titled “Centralized Identification and Authentication System and Method.” was duly and legally issued by the United States Patent and Trademark Office (“USPTO”). The ‘297 Patent claims patent-eligible subject matter and was valid and enforceable prior to expiration. Factor2 is the exclusive owner by assignment of all rights, title, and interest in the ‘297 Patent, including the right to bring this suit for injunction and damages, and including the right to sue and recover all past, present, and future damages for infringement of the ‘297 Patent. Defendant is not licensed to the ‘297 Patent, either expressly or implicitly, nor do they enjoy or benefit from any rights in or to the ‘297 patent whatsoever. A true and correct copy of the ‘297 Patent is attached hereto as **Exhibit F**.

20. Each patent is a member of the same patent family.

21. The claims of the ‘297 patent are representative of the family of patents and are directed to “An authentication system for enhancing computer network security.” Claim 1 of the ‘297 patent recites:

Claim 1: An authentication system for enhancing computer network security by authenticating a user in an electronic communication between a computing device of the user and an online computer system, the authentication system comprising one or more computing devices configured to perform operations comprising:

while the online computer system is connected to the computing device of the user via a communication network, electronically receiving a request for a SecureCode;

generating the SecureCode;

while the online computer system is connected to the computing device of the user via the communication network, electronically providing to the user the SecureCode in response to the request for the SecureCode, wherein:

the SecureCode is invalid after a predetermined time passes,

the SecureCode is invalid after one use of the SecureCode for authentication, and

the SecureCode is only valid for authenticating the user; and

while the online computer system is connected to the computing device of the user via the communication network, electronically receiving from the online computer system a digital authentication request for authenticating the user, wherein:

the digital authentication request comprises a digital identity of the user, and

the digital identity includes the SecureCode; and

while the online computer system is connected to the computing device of the user via the communication network, authenticating the user by evaluating a validity of the SecureCode included in the digital authentication request.

22. Method claims of the '129 Patent are also representative of the method claims of the Patents-in-suit. Claim 1 of the '129 patent recites:

Claim 1: A computer implemented method to authenticate an individual in communication with an entity over a communication network during a communication between the entity and the individual, the computer implemented method comprising:

receiving electronically a request for a dynamic code for the individual, which request is received from the individual by a trusted-authenticators computer during an authentication of the individual by the entity:

calculating by the trusted-authenticators computer the dynamic code for the individual in response to the request during the authentication of the individual by the entity, wherein the dynamic code is valid for a predefined time and becomes invalid after being used;

sending by the trusted-authenticator's computer electronically the dynamic code to the individual during the authentication of the individual by the entity:

receiving by the trusted-authenticator's computer electronically an authentication request from the entity to authenticate the individual based on a user information and the dynamic code included in the authentication request, wherein the entity receives the user information and the dynamic code from the individual; and

authenticating by the trusted-authenticator's computer an identity of the individual based on the user information and the dynamic code included in the authentication request, wherein the result of the authentication is provided to the entity.

INFRINGEMENT

23. Defendant engineered and provided the TikTok Apparatus, (the Accused Product) which as referenced herein includes not only the phone app portion of the TikTok Apparatus, but also the backend systems and backbone which provides access and functionality to TikTok and distributes content and authenticates users on TikTok, the Accused Product infringed at least one claim of each of the Patents-in-Suit.

24. Defendant has, under 35 U.S.C. §271(a), directly infringed literally and/or under the doctrine of equivalents, one or more claims of the patents-in-suit, by making, using, testing, selling, offering for sale and/or importing into the United States Defendant's Accused Products.

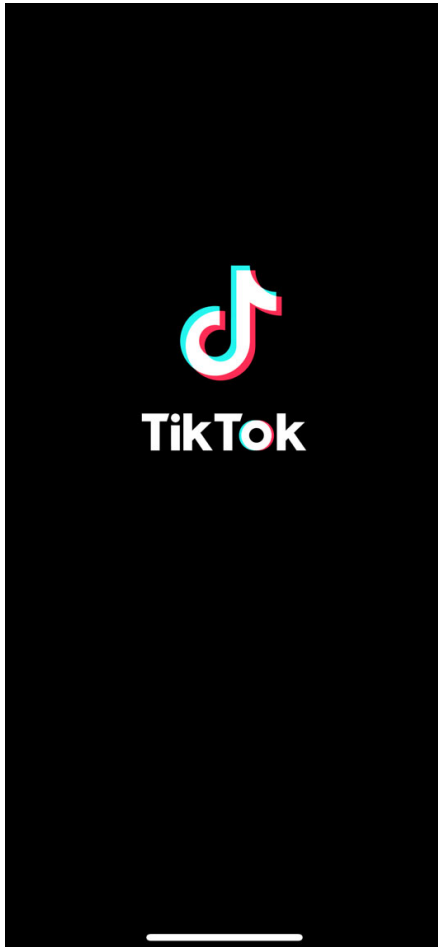
25. Defendant also indirectly infringed the patents-in-suit by providing infringing systems used by their customers, including TikTok users throughout the United States. Defendant contributorily infringed under 35 U.S.C. §271(c) because they supply a material part of an infringing method and/or system, where the material part is not a staple article of commerce, and is incapable of substantial noninfringing use. Defendant contribute to infringement because Defendant supplies the technology that allows infringement of the patent, including supplying the system that allows utilization of the invention and practicing of the method claims.

26. Plaintiff has conducted a detailed analysis, establishing and confirming that Defendant's Accused Products directly infringed, and indirectly infringed claims of the Patents-in-Suit.

27. Attached as **Exhibits G-K** to the Complaint are exemplary claim charts demonstrating the correspondence of the operation of the accused products with elements of exemplary claims of representative patents-in-suit.

28. Defendant and its customers have continued infringement.

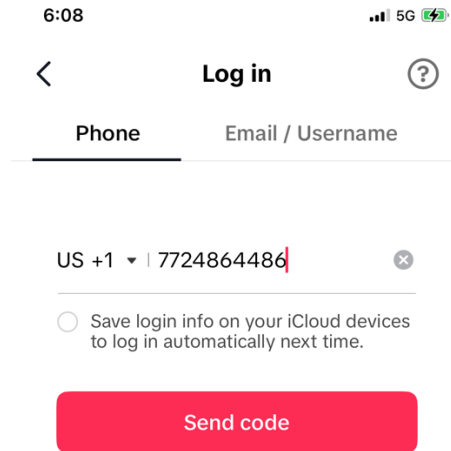
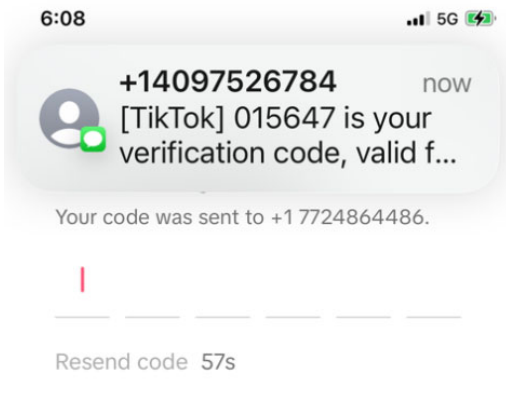
29. The accused products satisfy the elements of the asserted claims, shown below is an example of the authentication system of TikTok which infringes claim 1 of the '297 patent:



1. An authentication system for enhancing computer network security by authenticating a user in an electronic communication between a computing device of the user and an online computer system, the authentication system comprising one or more computing devices configured to perform operations comprising:

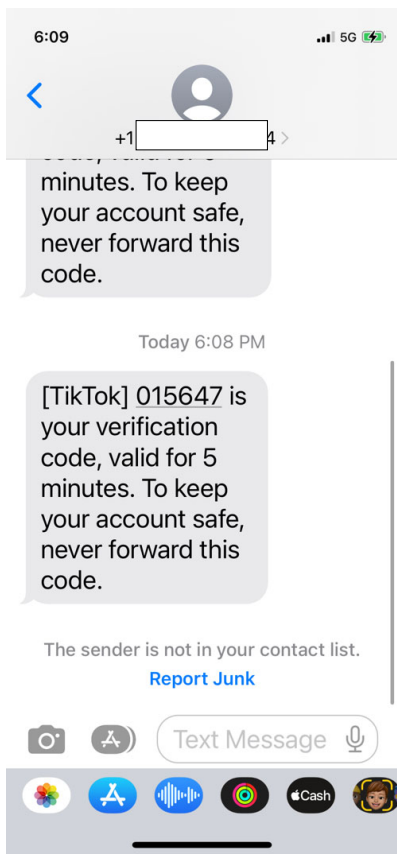
while the online computer system is connected to the computing device of the user via a communication network, electronically receiving a request for a SecureCode;

generating the SecureCode;

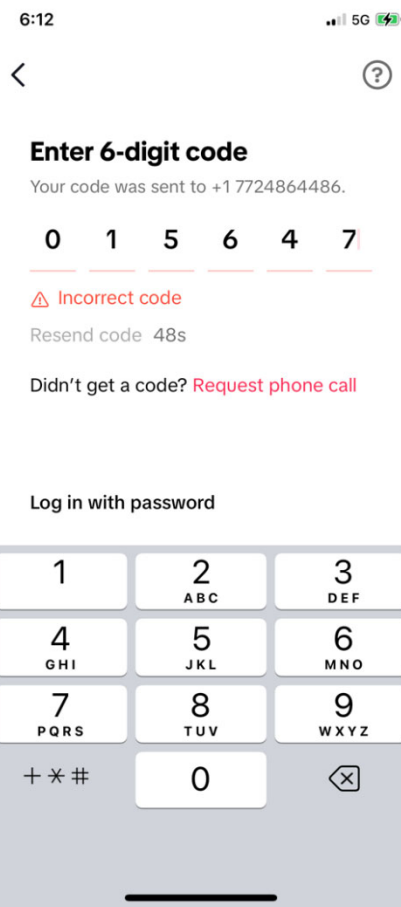


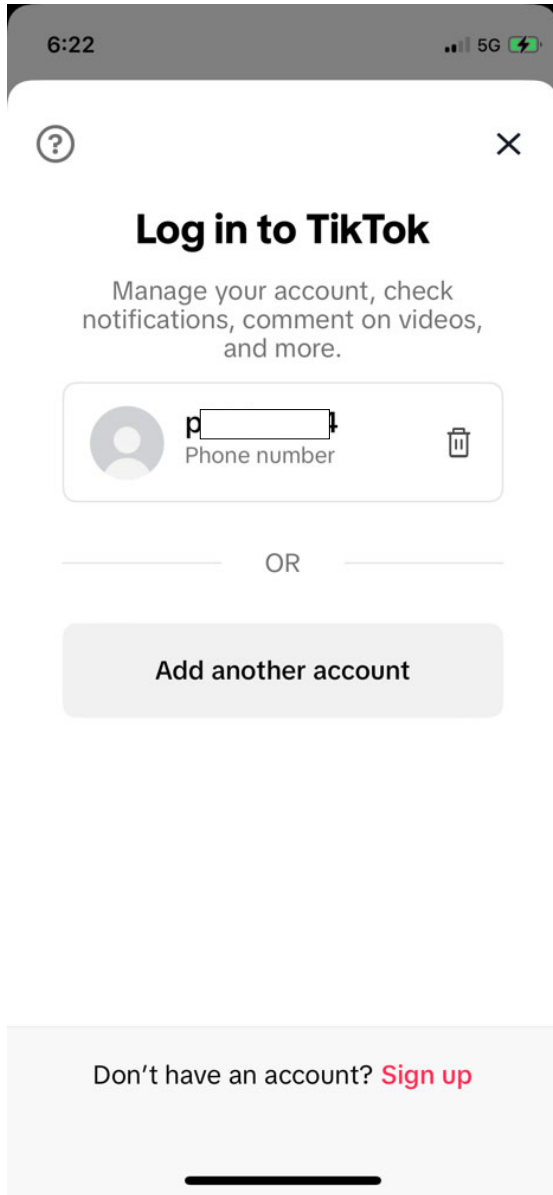
while the online computer system is connected to the computing device of the user via the communication network, electronically providing to the user the SecureCode in response to the request for the SecureCode, wherein:

the SecureCode is invalid after a predetermined time passes,



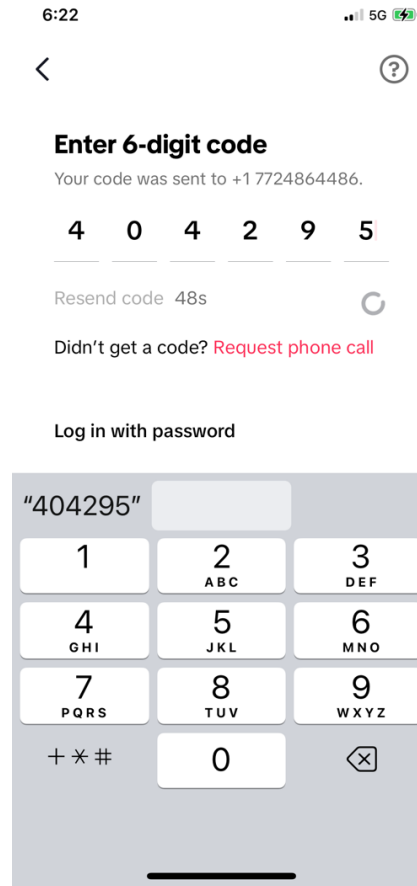
the SecureCode is invalid after one use of the SecureCode for authentication, and the SecureCode is only valid for authenticating the user; and





while the online computer system is connected to the computing device of the user via the communication network, electronically receiving from the online computer system a digital authentication request for authenticating the user, wherein: the digital authentication request comprises a digital identity of the user, and

the digital identity includes the SecureCode; and



while the online computer system is connected to the computing device of the user via the communication network, authenticating the user by evaluating a validity of the SecureCode included in the digital authentication request.

30. Defendant has infringed, and continues to infringe under 35 U.S.C. § 271(a)(b) and/or (c), by (a) making, using, distributing offering to sell, selling and/or importing into the United States, systems, and methods that infringe the asserted claims and by performing the claimed methods in the United States, (b) by inducing others to use the accused products and/or sell the accused products and to perform the claimed methods in the United States, (c) by contributing to the infringement of others and by selling components of the patented systems and (b & c) by selling a product for performing the patented process. Defendant continues to manufacture, use, offer to sell, sell and import accused products. The accused products are also being used to infringe. Defendant continues to sell accused products inducing and contributing to infringement by others and also continues to perform infringing activity by performing the claimed method in the United States.

31. Upon information and belief, Defendant has directly infringed one or more of claims of the patents-in-suit under 35 USC §271(a):

"(a) Except as otherwise provided in this title, whoever without authority makes, uses, offers to sell, or sells any patented invention, within the United States or imports into the United States any patented invention during the term of the patent therefor, infringes the patent.

by engaging in accused activity including making, using, distributing, offering to sell, selling and importing accused products in the United States. Defendant continues to infringe claims of the '038 Patent.

32. Upon information and belief, Defendant has indirectly infringed one or more of the claims of the Patents-in-suit under 35 USC §271(b):

(b) Whoever actively induces infringement of a patent shall be liable as an infringer.

by providing accused products, with instructions, which are used and/or combined to create a infringing system and/or used to practice the patented methods according to the instructions and thereby inducing others to use the products in an infringing manner.

33. Upon information and belief, Defendant has indirectly infringed one or more of the claims of the '038 Patent under 35 USC §271(c):

(c) Whoever offers to sell or sells within the United States or imports into the United States . . . or apparatus for use in practicing a patented process, constituting a material part of the invention, knowing the same to be especially made or especially adapted for use in an infringement of such patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use, shall be liable as a contributory infringer.

by providing accused products, and other components and supplies, which are combined, such as with other e-mail software and/or as an add-on to email systems or programs or otherwise combine to form an infringing system and/or used in practicing methods which infringe the claims of the '038 Patent, thus contributing to the infringement of the '038 Patent.

34. Upon information and belief, Defendants have no good faith defense to Plaintiff's infringement allegations.

35. As a result of Defendants' infringement of the Patents-in-Suit, Plaintiff has suffered and will continue to suffer damages in an amount not yet determined, of at least a reasonable royalty.

COUNT I – TIKTOK INFRINGEMENT OF U.S. PATENT NO. 8,281,129

36. The allegations of each of the above paragraphs are hereby re-alleged and incorporated herein by reference.

37. Defendant TikTok has directly infringed at least claims 1-52 of the '129 Patent,

under 35 U.S.C. § 271(a), by making, using, offering to sell, selling and importing the Accused Products in the United States.

38. Defendant TikTok has indirectly infringed claims 1-52 of the '129 patent under 35 USC §271(b) by inducing others to perform the method and use the system claimed in the '129 patent which infringes the claims of the '129 patent, thus contributing to the infringement of the '129 patent.

39. Defendant TikTok has indirectly infringed claims 1-52 of the '129 patent under 35 USC §271(c) by providing accused products, and components and supplies, which are used as components of infringing systems which infringe the claims of the '129 patent, thus contributing to the infringement of the '129 patent.

40. Neither Defendant TikTok nor its customers have a license or authority to use the '129 Patent.

41. As a result of Defendant TikTok's infringement of the '129 Patent, Plaintiff has suffered damages in an amount not yet determined, of at least a reasonable royalty.

COUNT II – TIKTOK INFRINGEMENT OF U.S. PATENT NO. 9,703,938

42. The allegations of each of the above paragraphs are hereby re-alleged and incorporated herein by reference.

43. Defendant TikTok has directly infringed, and continues to directly infringe, at least claims 1-26 of the '938 Patent, under 35 U.S.C. § 271(a), by making, using, offering to sell, selling and importing the Accused Products in the United States.

44. Defendant TikTok has indirectly infringed claims 1-26 of the '938 patent under 35 USC §271(b) by inducing others to perform the method and use the system claimed in the

'938 patent which infringes the claims of the '938 patent, thus contributing to the infringement of the '938 patent.

45. Defendant TikTok has indirectly infringed claims 1-26 of the '938 patent under 35 USC §271(c) by providing accused products, and components and supplies, which are used as components of infringing systems which infringe the claims of the '938 patent, thus contributing to the infringement of the '938 patent.

46. Neither Defendant TikTok nor its customers have a license or authority to use the '938 Patent.

47. As a result of Defendant TikTok's infringement of the '938 Patent, Plaintiff has suffered damages in an amount not yet determined, of at least a reasonable royalty.

COUNT III – TIKTOK INFRINGEMENT OF U.S. PATENT NO. 9,727,864

48. The allegations of each of the above paragraphs are hereby re-alleged and incorporated herein by reference.

49. Defendant TikTok has directly infringed at least claims 1-15 of the '864 Patent, under 35 U.S.C. § 271(a), by making, using, offering to sell, selling and importing the Accused Products in the United States.

50. Defendant TikTok has indirectly infringed claims 1-15 of the '864 patent under 35 USC §271(b) by inducing others to perform the method and use the system claimed in the '864 patent which infringes the claims of the '864 patent, thus inducing the infringement of the '864 patent.

51. Defendant TikTok has indirectly infringed claims 1-15 of the '864 patent under 35 USC §271(c) by providing accused products, and components and supplies, which are used as

components of infringing systems which infringe the claims of the '864 patent, thus contributing to the infringement of the '864 patent.

52. Neither Defendant TikTok nor its customers have a license or authority to use the '864 Patent.

53. As a result of Defendant TikTok's infringement of the '864 Patent, Plaintiff has suffered damages in an amount not yet determined, of at least a reasonable royalty.

COUNT IV – TIKTOK INFRINGEMENT OF U.S. PATENT NO. 9,870,453

54. The allegations of each of the above paragraphs are hereby re-alleged and incorporated herein by reference.

55. Defendant TikTok has directly infringed at least claims 1-26 of the '453 Patent, under 35 U.S.C. § 271(a), by making, using, offering to sell, selling and importing the Accused Products in the United States.

65. Defendant TikTok has indirectly infringed claims 1-26 of the '453 patent under 35 USC §271(b) by inducing others to perform the method and use the system claimed in the '453 patent which infringes the claims of the '453 patent, thus contributing to the infringement of the '453 patent.

57. Defendant TikTok has indirectly infringed claims 1-26 of the '453 patent under 35 USC §271(c) by providing accused products, and components and supplies, which are used as components of infringing systems which infringe the claims of the '453 patent, thus contributing to the infringement of the '453 patent.

58. Neither Defendant TikTok nor its customers have a license or authority to use the '453 Patent.

59. As a result of Defendant TikTok's infringement of the '453 Patent, Plaintiff has suffered damages in an amount not yet determined, of at least a reasonable royalty.

COUNT V – TIKTOK INFRINGEMENT OF U.S. PATENT NO. 10,083,285

60. The allegations of each of the above paragraphs are hereby re-alleged and incorporated herein by reference.

61. Defendant TikTok has directly infringed at least claims 1-30 of the '285 Patent, under 35 U.S.C. § 271(a), by making, using, offering to sell, selling and importing the Accused Products in the United States.

62. Defendant TikTok has indirectly infringed claims 1-30 of the '285 patent under 35 USC §271(b) by inducing others to perform the method and use the system claimed in the '285 patent which infringes the claims of the '285 patent, thus contributing to the infringement of the '285 patent.

63. Defendant TikTok has indirectly infringed claims 1-30 of the '285 patent under 35 USC §271(c) by providing accused products, and components and supplies, which are used as components of infringing systems which infringe the claims of the '285 patent, thus contributing to the infringement of the '285 patent.

64. Neither Defendant TikTok nor its customers have a license or authority to use the '285 Patent.

65. As a result of Defendant TikTok's infringement of the '285 Patent, Plaintiff has suffered damages in an amount not yet determined, of at least a reasonable royalty.

COUNT VI – TIKTOK INFRINGEMENT OF U.S. PATENT NO. 10,769,297

66. The allegations of each of the above paragraphs are hereby re-alleged and incorporated herein by reference.

67. Defendant TikTok has directly infringed at least claims 1-29 of the '297 Patent, under 35 U.S.C. § 271(a), by making, using, offering to sell, selling and importing the Accused Products in the United States.

68. Defendant TikTok has indirectly infringed claims 1-29 of the '297 patent under 35 USC §271(b) by inducing others to perform the method and use the system claimed in the '297 patent which infringes the claims of the '297 patent, thus contributing to the infringement of the '297 patent.

69. Defendant TikTok has indirectly infringed claims 1-29 of the '297 patent under 35 USC §271(c) by providing accused products, and components and supplies, which are used as components of infringing systems which infringe the claims of the '297 patent, thus contributing to the infringement of the '297 patent.

70. Neither Defendant TikTok nor its customers have a license or authority to use the '297 Patent.

71. As a result of Defendant TikTok's infringement of the '297 Patent, Plaintiff has suffered damages in an amount not yet determined, of at least a reasonable royalty.

PRAYER FOR RELIEF

72. For a judgement declaring that Defendant has infringed each of the Patents-in-Suit.

73. For a judgment declaring that Defendant's infringement of the Patents-in-Suit has

been willful and for enhancement of damages in accordance with 35 U.S.C. 284;

74. For a judgment awarding Plaintiff compensatory damages as a result of Defendant's infringement sufficient to reasonably and entirely compensate Plaintiff for infringement of the Patents-in-Suit in an amount to be determined at trial;

75. For a judgment declaring that this case is exceptional and awarding Plaintiff its expenses, costs and attorneys' fees in accordance with 35 U.S.C. § 285 and Rule 54(d) of the Federal Rules of Civil Procedure;

76. For a judgment awarding Plaintiff prejudgment interest pursuant to 35 U.S.C. § 284, and a further award of post judgment interest, pursuant to 28 U.S.C. §1961, continuing until such judgment is paid; and

77. For such other relief to which Plaintiff is entitled under the applicable United States laws and regulations or as this Court deems just and proper.

DEMAND FOR JURY TRIAL

Pursuant to the Federal Rules of Civil Procedure Rule 38(b), Plaintiff hereby demands trial by jury as to all claims in this litigation.

August 25, 2024

/s/ Joseph J. Zito
Joseph J. Zito
DNL ZITO
1250 Connecticut Avenue, NW, #700
Washington, DC 20035
202-466-3500
jzito@dnlzito.com
Atty for Plaintiff Factor 2