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8 TELESIGN CORPORATION.

9 **UNITED STATES DISTRICT COURT**
10 **CENTRAL DISTRICT OF CALIFORNIA**

11 TELESIGN CORPORATION,) Case No. 15-3240-PSG-SS
12)
13 PLAINTIFF,) **FIRST AMENDED COMPLAINT**
14 v.) **FOR PATENT INFRINGEMENT**
15 TWILIO, INC.,)
16 DEFENDANT.) **JURY TRIAL DEMANDED**
17)

18
19 **TELESIGN CORPORATION’S**
20 **FIRST AMENDED COMPLAINT FOR PATENT INFRINGEMENT**

21 Plaintiff TeleSign Corporation (“TeleSign”) for this Complaint against
22 Defendant Twilio, Inc. (“Twilio”) and on information and belief alleges as follows:

23 **Introduction**

24 1. TeleSign is an industry leader in internet security and user authentication.
25 TeleSign is one of the fastest-growing technology companies in North America, sells
26 to some of the top websites in the world, and is a market leader in two-step-
27 verification technology.

1 2. TeleSign helps its customers secure billions of end-user accounts worldwide
2 and prevent registration fraud.

3 3. The technology offered by TeleSign gives businesses the ability to connect a
4 unique identity with every account to verify new registrations and authenticate users.
5 TeleSign helps businesses detect suspicious users and better protect their existing user
6 base from account compromise. TeleSign is trusted by some of the world's largest
7 companies to help prevent fraudulent accounts and stop account takeovers.

8 4. TeleSign owns United States Patent No. 7,945,034 (the "'034 Patent"), entitled
9 "Process for determining characteristics of a telephone number," and Nos. 8,462,920
10 (the "'920 Patent") and 8,687,038 (the "'038 Patent"), both entitled "Registration,
11 verification and notification system" (collectively, the "Asserted Patents").

12 5. Twilio competes directly with TeleSign.

13 6. Twilio has used, and continues to use, TeleSign's patented technology in
14 connection with products and services that Twilio makes, sells, offers for sell and/or
15 uses without TeleSign's permission, causing TeleSign irreparable harm.

16 7. In this suit, TeleSign asks the Court to enjoin Twilio from making, using,
17 selling or offering to sell products and services claimed by the Asserted Patents and to
18 award monetary relief for Twilio's past violations.

19 **Jurisdiction and Venue**

20 8. This is an action for patent infringement arising under the patent laws of the
21 United States, 35 U.S.C. § 1 et seq., including §§ 271 and 281. This Court has
22 original jurisdiction over this patent-infringement action under 28 U.S.C. § 1338(a).

23 9. Venue is proper in this Court at least because Twilio is responsible for acts of
24 infringement occurring in the Central District of California, as alleged in this
25 Complaint, and has delivered or caused to be delivered infringing products or services
26 in the Central District of California. Moreover, TeleSign is headquartered in the
27

1 Central District of California, where the harm from Twilio’s infringement has been
2 and is being felt.

3 **Plaintiff TeleSign**

4 10. Plaintiff TeleSign is a California corporation, duly authorized to do business in
5 the State of California, with its principal place of business in Marina Del Rey,
6 California.

7 **Defendant Twilio**

8 11. Defendant Twilio is a Delaware corporation with its principal place of business
9 in San Francisco, California. Twilio maintains its principal place of business at 645
10 Harrison Street, San Francisco, California 94107 and can be served at 548 Market
11 Street #14510, San Francisco, California 94104

12 **The Asserted Patents**

13 12. The United States Patent and Trademark Office issued the ’034 Patent
14 (attached as Exhibit A) on May 17, 2011, the ’920 Patent (attached as Exhibit B) on
15 June 11, 2013, and the ’038 Patent (attached as Exhibit C) on April 1, 2014.

16 13. TeleSign is the owner of all right, title and interest in the Asserted Patents,
17 including all rights to pursue and collect damages for past, present, and future
18 infringement of the Asserted Patents.

19 **COUNT I**

20 **Direct Infringement of the ’034 Patent**

21 14. TeleSign repeats and realleges each of the allegations contained in the
22 paragraphs above.

23 15. On May 17, 2011, United States Patent No. 7,945,034, entitled “Process for
24 determining characteristics of a telephone number,” was duly and legally issued by the
25 United States Patent and Trademark Office.

1 16. Plaintiff TeleSign is the owner of the '034 Patent with full rights to pursue
2 recovery of royalties or damages for infringement of the '034 Patent, including full
3 rights to recover past and future damages.

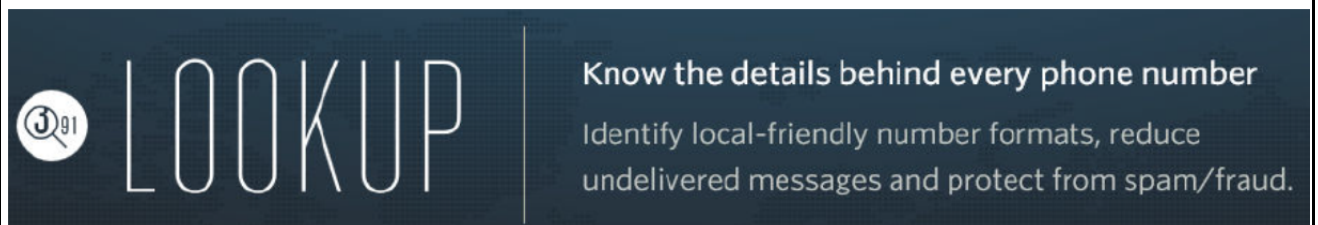
4 17. Each claim of the '034 Patent is valid and enforceable.

5 18. On March 31, 2015, Twilio posted a blog entry stating “Today we’re happy to
6 introduce you to a new product called Lookup, an API that will retrieve detailed
7 information about a phone number.”

8 <https://www.twilio.com/blog/2015/03/introducing-twilio-lookup.html>.

9 19. Defendant Twilio has infringed the '034 Patent and, unless enjoined, will
10 continue to do so, by using, offering for sale and selling services claimed by the '034
11 Patent.

12 20. Twilio makes, sells, offers for sale and/or uses, in the United States its “lookup”
13 technology, including through its website at www.twilio.com¹, as indicated by, for
14 example, <https://www.twilio.com/lookup>² and as shown below (hereafter referred as
15 “Twilio Lookup”).



20 21. The '034 patent relates to, among other things, using “characteristics of a
21 telephone number” in a registration process. These characteristics could include for
22 example, whether a telephone number is a landline (claim 4), the phone carrier (claim
23 1), and geographic characteristics such as a country (claim 6).

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27 ¹ Attached as Exhibit D, last-accessed on July 13, 2015.

28 ² Attached as Exhibit E, last-accessed on July 13, 2015.

1 22. By way of example only, the screen capture below from
2 <https://www.twilio.com/lookup>³ indicates that Twilio Lookup technology determines
3 at least these characteristics.

```

4 curl -X GET https://lookups.twilio.com/v1/PhoneNumbers/55-11-5525-6325\
5 -d "Type=carrier"
6 -u "{AccountSid}:{AuthToken}"
7
8 {
9   "country_code": "BR",
10  "phone_number": "+551155256325",
11  "national_format": "(11) 5525-6325",
12  "url": "https://lookups.twilio.com/v1/PhoneNumber/+551155256325",
13  "carrier": {
14    "type": "landline",
15    "error_code": null,
16    "mobile_network_code": null,
17    "mobile_country_code": null,
18    "name": "Vivo"
19  }
20 }

```

12 23. On information and belief, Twilio Lookup includes the performance of each
13 step of the methods claimed by the '034 Patent.

14 24. TeleSign has been damaged by Twilio's infringement of the '034 Patent and
15 will suffer additional irreparable damage unless Twilio is enjoined from continuing to
16 infringe the '034 Patent.

17 25. TeleSign demands trial by jury for all issues relating to this claim.

18 26. On information and belief, Twilio's infringement has been willful and continues
19 to be, at least since notice of this Complaint.

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21 **COUNT II**

22 **Active Inducement of Infringement of the '034 Patent**

23 27. TeleSign repeats and realleges each of the allegations contained in the
24 paragraphs above.

25 28. On information and belief, Defendant Twilio has actively induced infringement
26 of the '034 patent and is liable as an infringer under 35 U.S.C. § 271(b).

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28 ³ Attached as Exhibit E.

1 29. On or about April 30, 2015, Twilio received a copy of TeleSign’s Original
2 Complaint, which provided notice of Twilio’s infringement. At least since then,
3 Twilio knew of the ’034 Patent and knew it would be causing at least its customers
4 (including customers in the Central District of California) to infringe the ’034 Patent.

5 30. Twilio’s customers use services and/or they direct or control Twilio’s use of
6 services that are claimed by the ’034 Patent.

7 31. For example, Twilio’s customers make use of the Twilio application-
8 programming interface (API) in an infringing manner, while Twilio has agreed in a
9 “Service Commitment” to make the Twilio API available 99.95% of the time, as
10 shown in Twilio’s API Service Level Agreement at
11 <https://www.twilio.com/legal/service-level-agreement>⁴.

12 32. By way of further example, Twilio’s customers agree to indemnify Twilio in
13 any action in connection with intellectual-property claims, as shown in Twilio’s
14 Terms of Service at <https://www.twilio.com/legal/tos>⁵.

15 33. Twilio advertises and instructs its customers to use Twilio Lookup as claimed
16 by the ’034 Patent.

17 34. By way of example, the screen capture below from
18 <https://www.twilio.com/docs/api/rest/lookups>⁶ shows that Twilio instructs its
19 customers to use Twilio Lookup to “[f]ind carrier information,” as claimed by the
20 ’034 Patent.

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⁴ Attached as Exhibit F, last-accessed July 13, 2015.

27 ⁵ Attached as Exhibit G, last-accessed July 13, 2015.

28 ⁶ Attached as Exhibit H, last-accessed July 13, 2015.

1 Example 1

2 Find carrier information for an E.164 formatted phone number.



5

```
6 1 // Download the Node helper Library from twilio.com/docs/node/install  
7 2 // These vars are your accountSid and authToken from twilio.com/user/account  
8 3  
9 4 var accountSid = 'AC3094732a3c49700934481addd5ce1659';  
10 5 var authToken = '{{ auth_token }}';  
11 6 var LookupsClient = require('twilio').LookupsClient;  
12 7 var client = new LookupsClient(accountSid, authToken);
```

13 35. By way of further example, the screen capture below from
14 <https://www.twilio.com/blog/2015/03/introducing-twilio-lookup.html>⁷ shows that
15 Twilio markets Twilio Lookup and instructs customers to use Twilio Lookup.

16 However, some seek to misuse those powers, and use phone
17 numbers from free online providers to create fake profiles to
18 defraud or spam businesses. Carrier & Type Lookup helps
19 businesses identify the carrier behind the phone number to learn
20 which users are more likely to be fraudulent.
21 Additionally, you can improve deliverability by looking up number
22 types that don't accept all communications. For example, most
23 landline numbers and many VoIP numbers do not accept SMS
24 messages. With Lookup, you can better identify which kind of
25 communications users can accept, based on their number type.
26 This allows businesses to recognize when an alternative delivery
27 method may be needed to successfully send voice and messaging
28 communications.

⁷ Attached as Exhibit I, last-accessed July 13, 2015.

1 36. TeleSign has been damaged by Twilio’s inducement of infringement of the ’034
2 Patent and will suffer additional irreparable damage unless Twilio is enjoined from
3 continuing to induce infringement the ’034 Patent.

4 37. TeleSign demands trial by jury for all issues relating to this claim.

5 **COUNT III**

6 **Direct Infringement of the ’920 Patent**

7 38. TeleSign repeats and realleges each of the allegations contained in the
8 paragraphs above.

9 39. On June 11, 2013, United States Patent No. 8,462,920, entitled “Registration,
10 verification and notification system,” was duly and legally issued by the United States
11 Patent and Trademark Office.

12 40. Plaintiff TeleSign is the owner of the ’920 Patent with full rights to pursue
13 recovery of royalties or damages for infringement of the ’920 Patent, including full
14 rights to recover past and future damages.

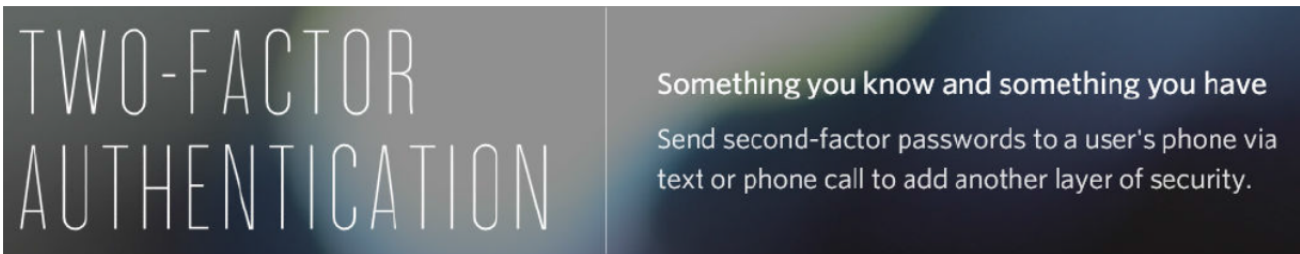
15 41. Each claim of the ’920 Patent is valid and enforceable.

16 42. Defendant Twilio has infringed the ’920 Patent and, unless enjoined, will
17 continue to do so, by making, using, offering for sale and/or selling services claimed
18 by the ’920 Patent.

19 43. Twilio makes, sells, offers for sale and/or uses, in the United States its “two-
20 factor authentication” technology, including through its website at www.twilio.com,⁸
21 (via <http://www.twilio.com/use-cases/two-factor-authentication>,⁹ for example, as
22 illustratively shown below) (hereafter referred as “Twilio Two-Factor
23 Authentication”).

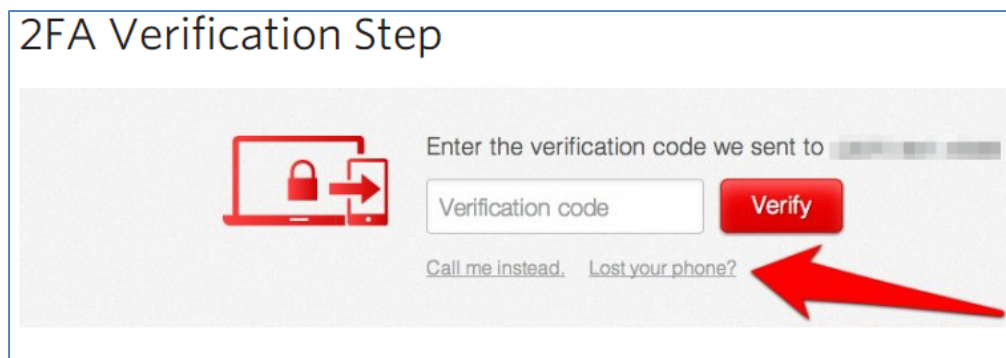
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27 ⁸ Attached as Exhibit D.

28 ⁹ Attached as Exhibit J, last-accessed on July 13, 2015.



44. TeleSign’s ’920 patent is directed to, among other things, verifying a contact by using a “verification code.”

45. As illustratively shown at http://www.twilio.com/help/faq/twilio-basics/what-do-i-do-if-i-lose-my-phone-or-cant-sign-in-with-two-factor-authentication-enabled-on-my-account/screenshot_6_26_13_2_08_pm-2,¹⁰ Twilio’s Two-Factor Authentication uses such a “verification code.”



46. Twilio Two-Factor Authentication comprises the performance of each element of the methods claimed by the ’920 Patent.

47. TeleSign has been damaged by Twilio’s infringement of the ’920 Patent and will suffer additional irreparable damage unless Twilio is enjoined from continuing to infringe the ’920 Patent.

48. TeleSign demands trial by jury for all issues relating to this claim.

49. On information and belief, Twilio’s infringement has been willful and continues to be, at least since notice of this Complaint.

¹⁰ Attached as Exhibit K, last-accessed on July 13, 2015.

1 **COUNT IV**

2 **Active Inducement of Infringement of the '920 Patent**

3 50. TeleSign repeats and realleges each of the allegations contained in the
4 paragraphs above.

5 51. On information and belief, Defendant Twilio has actively induced infringement
6 of the '920 patent and is liable as an infringer under 35 U.S.C. § 271(b).

7 52. On or about April 30, 2015, Twilio received a copy of TeleSign's Original
8 Complaint, which provided notice of Twilio's infringement. At least since then,
9 Twilio knew of the '920 Patent and knew it would be causing customers (including
10 customers in the Central District of California) to infringe the '920 Patent.

11 53. Twilio's customers use services and/or they direct or control Twilio's use of
12 services that are claimed by the '920 Patent.

13 54. For example, Twilio's customers make use of the Twilio application-
14 programming interface (API) in an infringing manner, while Twilio has agreed in a
15 "Service Commitment" to make the Twilio API available 99.95% of the time, as
16 shown in Twilio's API Service Level Agreement at
17 <https://www.twilio.com/legal/service-level-agreement>¹¹.

18 55. By way of further example, Twilio's customers agree to indemnify Twilio in
19 any action in connection with intellectual-property claims, as shown in Twilio's
20 Terms of Service at <https://www.twilio.com/legal/tos>¹².

21 56. Twilio advertises and instructs its customers to use Twilio Two-Factor
22 Authentication as claimed by the '920 Patent.

23 57. By way of example only, Twilio instructs its customers to use Twilio Two-
24 Factor Authentication by stating, as described at
25 <https://www.twilio.com/docs/howto/two-factor-authentication>,¹³ "[w]ith Twilio you

26 ¹¹ Attached as Exhibit F, last-accessed July 13, 2015.

27 ¹² Attached as Exhibit G, last-accessed July 13, 2015.

28 ¹³ Attached as Exhibit L, last-accessed on July 13, 2015.

1 can set up your two-factor authentication system to run on a devices [sic] all of your
2 employees already carry with them.”

3 58. TeleSign has been damaged by Twilio’s inducement of infringement of the ’920
4 Patent and will suffer additional irreparable damage unless Twilio is enjoined from
5 continuing to induce infringement the ’920 Patent.

6 59. TeleSign demands trial by jury for all issues relating to this claim.

7 **COUNT V**

8 **Direct Infringement of the ’038 Patent**

9 60. TeleSign repeats and realleges each of the allegations contained in the
10 paragraphs above.

11 61. On April 1, 2014, United States Patent No. 8,687,038, entitled “Registration,
12 verification and notification system,” was duly and legally issued by the United States
13 Patent and Trademark Office.

14 62. Plaintiff TeleSign is the owner of the ’038 Patent with full rights to pursue
15 recovery of royalties or damages for infringement of the ’038 Patent, including full
16 rights to recover past and future damages.

17 63. Each claim of the ’038 Patent is valid and enforceable.

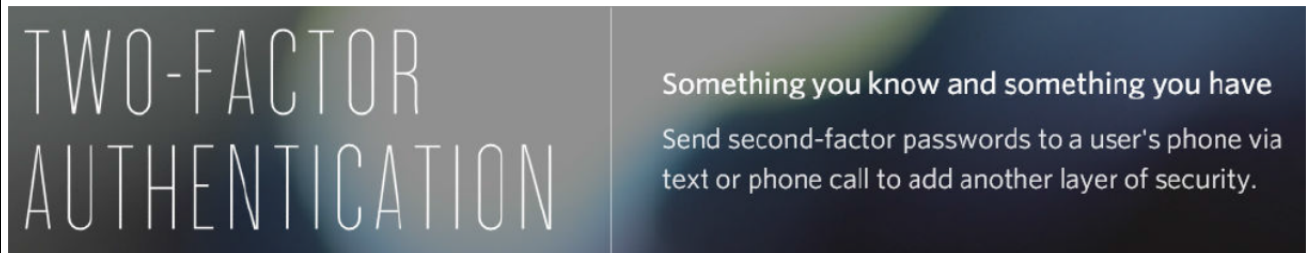
18 64. Defendant Twilio has infringed the ’038 Patent and, unless enjoined, will
19 continue to do so, by making, using, offering for sale and/or selling products and
20 services claimed by the ’038 Patent.

21 65. Defendant Twilio has infringed the ’038 Patent and, unless enjoined, will
22 continue to do so, by making, using, offering for sale and/or selling services claimed
23 by the ’038 Patent.

24 66. Twilio makes, sells, offers for sale and/or uses, in the United States its “two-
25 factor authentication” technology, including through its website at www.twilio.com¹⁴,

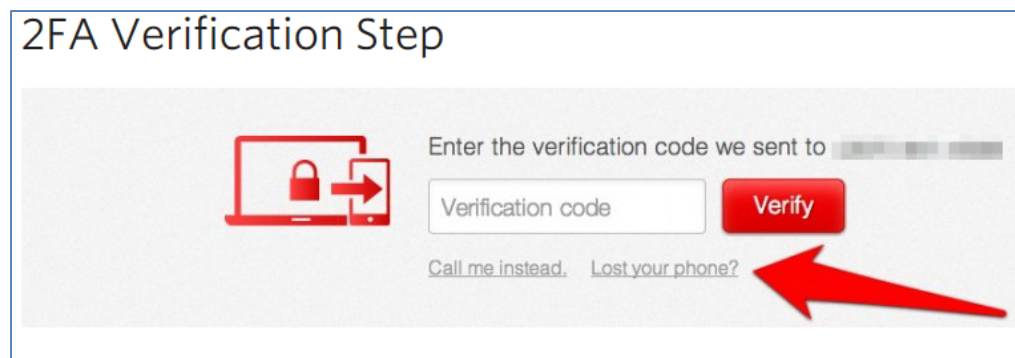
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27
28 ¹⁴ Attached as Exhibit D.

1 (via <http://www.twilio.com/use-cases/two-factor-authentication>¹⁵, for example, as
2 illustratively shown below) (hereafter referred as “Twilio Two-Factor
3 Authentication”).



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9 67. TeleSign’s ’038 patent is directed to, among other things, verifying a contact by
10 using a “verification code.”

11 68. As illustratively shown at http://www.twilio.com/help/faq/twilio-basics/what-do-i-do-if-i-lose-my-phone-or-cant-sign-in-with-two-factor-authentication-enabled-on-my-account/screenshot_6_26_13_2_08_pm-2¹⁶, Twilio’s Two-Factor
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15 Authentication uses such a “verification code.”



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22 69. Twilio Two-Factor Authentication comprises the performance of each element
23 of the methods claimed by the ’038 Patent.
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27 ¹⁵ Attached as Exhibit J.

28 ¹⁶ Attached as Exhibit K.

1 70. TeleSign has been damaged by Twilio’s infringement of the ’038 Patent and
2 will suffer additional irreparable damage unless Twilio is enjoined from continuing to
3 infringe the ’038 Patent.

4 71. TeleSign demands trial by jury for all issues relating to this claim.

5 72. On information and belief, Twilio’s infringement has been willful and continues
6 to be, at least since notice of this Complaint.

7 **COUNT VI**

8 **Active Inducement of the ’038 Patent**

9 73. TeleSign repeats and realleges each of the allegations contained in the
10 paragraphs above.

11 74. On information and belief, Defendant Twilio has actively induced infringement
12 of the ’038 patent and is liable as an infringer under 35 U.S.C. § 271(b).

13 75. On or about April 30, 2015, Twilio received a copy of TeleSign’s Original
14 Complaint, which provided notice of Twilio’s infringement. At least since then,
15 Twilio knew of the ’038 Patent and knew it would be causing customers (including
16 customers in the Central District of California) to infringe the ’038 Patent.

17 76. Twilio’s customers make, sell, offer for sale, import or use services/products
18 and/or they direct or control Twilio’s making, selling, offering for sale, importing or
19 using services/products that are claimed by the ’038 Patent.

20 77. For example, Twilio’s customers makes use of the Twilio application-
21 programming interface (API) in an infringing manner, while Twilio has agreed in a
22 “Service Commitment” to make the Twilio API available 99.95% of the time, as
23 shown in Twilio’s API Service Level Agreement at
24 <https://www.twilio.com/legal/service-level-agreement>¹⁷.

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28 ¹⁷ Attached as Exhibit F, last-accessed July 13, 2015.

1 78. By way of further example, Twilio’s customers agree to indemnify Twilio in
2 any action in connection with intellectual-property claims, as shown in Twilio’s
3 Terms of Service at <https://www.twilio.com/legal/tos>¹⁸.

4 79. Twilio advertises and instructs its customers to use Twilio Two-Factor
5 Authentication as claimed by the ’038 Patent.

6 80. By way of example only, Twilio instructs its customers to use Twilio Two-
7 Factor Authentication by stating, as described at
8 <https://www.twilio.com/docs/howto/two-factor-authentication>,¹⁹ “[w]ith Twilio you
9 can set up your two-factor authentication system to run on a devices [sic] all of your
10 employees already carry with them.”

11 81. TeleSign has been damaged by Twilio’s inducement of infringement of the ’038
12 Patent and will suffer additional irreparable damage unless Twilio is enjoined from
13 continuing to induce infringement the ’038 Patent.

14 82. TeleSign has been damaged by Twilio’s inducement of infringement of the ’038
15 Patent and will suffer additional irreparable damage unless Twilio is enjoined from
16 continuing to induce infringement the ’038 Patent. TeleSign demands trial by jury for
17 all issues relating to this claim.

18 **PRAYER FOR RELIEF**

19 WHEREFORE, TeleSign respectfully requests this Court to:

- 20 A. Enter judgment for TeleSign that Twilio has infringed and is infringing
21 one or more claims of each of the Asserted Patents;
- 22 B. Enter judgment for TeleSign that Twilio has actively induced
23 infringement and is actively inducing infringement of one or more claims
24 of each of the Asserted Patents;
- 25 C. Enter judgment for TeleSign that Twilio has willfully infringed, and is
26 willfully infringing one or more claims of each of the Asserted Patents;

27 ¹⁸ Attached as Exhibit G.

28 ¹⁹ Attached as Exhibit L.

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- D. Issue a preliminarily injunction enjoining Twilio (including its officers, directors, employees, agents, customers and all persons acting in concert with them) from infringing any of the Asserted Patents;
- E. Issue a permanent injunction enjoining Twilio (including its officers, directors, employees, agents, customers and all persons acting in concert with them) from infringing any of the Asserted Patents;
- F. Order that Twilio pay compensatory damages to TeleSign for Twilio’s infringement of the Asserted Patents, including but not limited to, damages for lost profits and in no event less than a reasonable royalty, together with interest and costs under 35 U.S.C. § 284;
- G. Find this to be an exceptional case, award TeleSign treble damages due to Twilio’s deliberate and willful conduct, and order Twilio to pay TeleSign’s costs of suit and attorneys’ fees;
- H. Award TeleSign pre-judgment interest; and
- I. For such other relief as the Court deems appropriate.

Dated: July 15, 2015

Respectfully Submitted,

SHOOK, HARDY & BACON L.L.P.

By: /s/ Courtney A. Hasselberg
Courtney A. Hasselberg
Attorney for Plaintiff
TELESIGN CORPORATION