UNITED STATES PATENT AND TRADEMARK OFFICE
——————————

BEFORE THE PATENT TRIAL AND APPEAL BOARD
——————————

TWILIO INC.,
Petitioner,

v.

TELESIGN CORPORATION,
Patent Owner.
——————————

Case IPR2016-00360
Patent 7,945,034 B2
——————————

Before SALLY C. MEDLEY, JUSTIN T. ARBES, and
KIMBERLY McGRAW, *Administrative Patent Judges*.

McGRAW, *Administrative Patent Judge*.

FINAL WRITTEN DECISION
35 U.S.C § 318 and 37 C.F.R. § 42.73

I. INTRODUCTION

Petitioner, Twilio Inc., filed a Petition requesting an *inter partes* review of claims 1–4, 6, 7, 9, and 11–14 of U.S. Patent No. 7,945,034 B2 (Ex. 1001, "the '034 patent"), which was supported by the declaration of Michael Shamos, Ph.D. (Ex. 1002). Paper 2. Following a Motion to Correct the Petition, which was granted, Petitioner filed a Corrected Petition. Paper 11 ("Corrected Pet."). Patent Owner, TeleSign Corporation, filed a

Preliminary Response. Paper 10 ("Prelim. Resp."). On June 28, 2016, we instituted an *inter partes* review of claims 1–4, 6, 7, 9, and 11–14. Paper 18 ("Dec. on Inst.").

After institution, Patent Owner filed a Patent Owner Response (Paper 27, "PO Resp.") and a Contingent Motion to Amend (Paper 28, "Mot. to Amend"), both supported by the declaration of Seth Nielson, Ph.D. (Ex. 2027).

Petitioner filed a Reply (Paper 45, "Reply") and an Opposition to Patent Owner's Contingent Motion to Amend (Paper 38), supported by a declaration of David H. Williams (Ex. 1039). Patent Owner filed a Reply to Petitioner's Opposition to Patent Owner's Contingent Motion to Amend. (Paper 45).

Objections to Evidence were filed by both Petitioner (Papers 29, 46) and Patent Owner (Papers 21, 39, 40). Transcripts of the depositions of Dr. Shamos (Ex. 2025), Dr. Nielson (Ex. 1040), and Mr. Williams (Ex. 2036) also were filed. Patent Owner filed a Motion for Observation on the cross-examination testimony of Mr. Williams. Paper 49. Petitioner filed an Opposition to Patent Owner's Motion for Observation. Paper 51. Patent Owner also filed a Motion to Exclude certain evidence (Paper 50), to which Petitioner filed an Opposition (Paper 52), and Patent Owner filed a Reply (Paper 53).

An oral hearing was held on March 27, 2017, and a transcript of the hearing has been entered into the record of the proceeding as Paper 56.

We have jurisdiction under 35 U.S.C. § 6. This Final Written Decision is issued pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73. For the reasons that follow, we determine that Petitioner has failed to show

by a preponderance of the evidence that claims 1–4, 6, 7, 9, and 11–14 are unpatentable. We also dismiss Patent Owner's Motion to Exclude and Patent Owner's Contingent Motion to Amend as moot.

II. BACKGROUND

A. Related Proceedings

The parties state that the '034 patent is asserted in *TeleSign Corp. v. Twilio Inc.*, No. 2:15-cv-03240, filed on April 30, 2015, currently pending in the United States District Court for the Central District of California. Corrected Pet. 2, 10; Prelim. Resp. 3.

Patent Owner states that copending petitions for *inter partes* review in IPR2016-00450, involving U.S. Patent No. 8,462,920 B2, and IPR2016-00451, involving U.S. Patent No. 8,687,038 B2, also filed by Petitioner, identified this proceeding as a related matter. Prelim. Resp. 3. The Board did not institute review in these cases. Petitioner also challenged related U.S. Patent No. 9,300,792 B2 in Case CBM2016-00099, in which the Board denied institution of a covered business method patent review, and Case IPR2016-01688, which is pending.

B. The '034 Patent (Ex. 1001)

The '034 patent, titled "Process for Determining Characteristics of a Telephone Number," issued on May 17, 2011, based on U.S. Patent Application No. 11/163,788, filed on October 31, 2005, which claims priority as a continuation-in-part-application to U.S. Patent Application No. 11/034,421, filed on January 11, 2005. Ex. 1001, [21], [22], [45], [54], [63]. The '034 patent is directed to methods of using a telephone connection to prevent fraudulent users from registering on an online website. *Id.*, Abstract,

1:7–11. One method includes, *inter alia*, registering a user for an online website by receiving a telephone number; electronically determining the type of phone, phone carrier, and geographic characteristics associated with the telephone number; communicating a verification message with the telephone number; and registering the user based on the type of phone, phone carrier, and geographic characteristics associated with the telephone number and the verification message. *Id.* at 2:6–3:3, 10:35–50.

The '034 patent explains that one problem with on-line registration is that fraudulent users may provide fake names, addresses, or phone numbers. *Id.* at 1:34–38. In order to verify the telephone number entered by the user during registration, the system can call the telephone number and provide a registration code to the user. *Id.* at 3:65–4:25. If the telephone number is valid and the user has access to the telephone number, the user is able to enter the registration code into the online registration form and complete the registration process. *Id.*

However, the '034 patent states that because certain telephones are not necessarily restricted to a particular geographic location (e.g., voice over internet protocol ("VOIP") phones or mobile phones), this verification process may not be enough to prevent fraudulent users who enter a false name or address from accessing a website. *Id.* at 1:39–63, 7:17–24, 8:40–44. For example, VOIP technology allows a person to have a "310" area code telephone number (traditionally associated with telephones in Los Angeles) but actually be located in Nigeria, where many fraudulent schemes are alleged to occur. *Id.* at 1:54–61, 7:20–24. Use of such a phone could enable a potential defrauder, who is located in a foreign country, to provide a valid telephone number along with a United States address that appears to

correspond with the user's telephone number, but which in fact is a false address. *Id.* at 7:17–41.

The '034 patent explains that knowing certain characteristics of the user's telephone number can help determine if the registration information provided by the user is fraudulent. *See, e.g.*, *id.* at 1:61–2:2, 2:11–14, 7:38–41, 9:14–16, 9:23–25, 9:42–49. These characteristics include the phone type, phone carrier, and geographic characteristics, as well as other phone characteristics, such as prepaid cellular phones that do not require any form of identification, phone numbers set to automatically forward, and Direct Inward Dialing (DID) numbers. *Id.* at 2:6–14, 8:55–59, 10:39–41. Examples of phone types include landline telephones, cellular phones, and VOIP phones. *Id.* at 2:15–18. Examples of phone carriers include Verizon, SBC, and Vonage. *Id.* at 8:17–20. Examples of geographic characteristics include the time zone, country, county, city, zip code, and metro area. *Id.* at 2:18–21.

The '034 patent describes various ways to determine phone characteristics. *Id.* at 3:37–40, Figs. 8–10. For example, in one embodiment, a database is queried to determine if the telephone number is within the database, and what characteristics are associated with the telephone number. *Id.* at 2:29–34. A "database may comprise one or more third party databases," or the database can be "compiled with telephone number characteristics as they are determined." *Id.* at 7:55–57. "If the database contains the exact telephone number, or certain numbers in common with the received telephone number, the database will be able to provide certain characteristics of the telephone number," such as phone type, phone carrier, and geographic characteristics. *Id.* at 8:1–4, 8:17–20, 8:38–

Explore Litigation Insights

DOCKET ALARM

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts

Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research

With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips

Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS
Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS
Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS
Sync your system to PACER to automate legal marketing.

fastcase ®
Smarter legal research.