UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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TELESIGN CORPORATION,
Petitioner,

v.

TWILIO INC.,
Patent Owner.

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Case IPR2017-01977
Patent 8,755,376 B2

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Before ROBERT J. WEINSCHENK, KIMBERLY MCGRAW, and
SCOTT C. MOORE, *Administrative Patent Judges*.

WEINSCHENK, *Administrative Patent Judge*.

FINAL WRITTEN DECISION
35 U.S.C. § 318(a)

I. INTRODUCTION

TeleSign Corporation ("Petitioner") filed a Petition (Paper 1, "Pet.") requesting an *inter partes* review of claims 1–3, 5, 14, 16, 17, and 19 of U.S. Patent No. 8,755,376 B2 (Ex. 1001, "the '376 patent"). Twilio Inc. ("Patent Owner") filed a Preliminary Response (Paper 10, "Prelim. Resp.") to the Petition. On March 9, 2018, an *inter partes* review of the challenged claims was instituted on the following grounds:

Claim(s)	Statutory Basis	Applied References
1–3, 14, 16, and 19	35 U.S.C. § 103(a)[1]	Maes et al., U.S. Patent No. 6,801,604 B2 (filed June 25, 2002, issued Oct. 5, 2004) (Ex. 1003, "Maes") and Ransom et al., U.S. Patent Application Publication No. 2003/0204756 A1 (filed Jan. 9, 2003, published Oct. 30, 2003) (Ex. 1004, "Ransom")
5 and 17	35 U.S.C. § 103(a)	Maes, Ransom, and Jiang et al., U.S. Patent No. 7,092,370 B2 (filed Aug. 16, 2001, issued Aug. 15, 2006) (Ex. 1005, "Jiang")
1–3, 5, 14, and 16	35 U.S.C. § 103(a)	European Telecommunications Standards Institute, ETSI ES 202 391-4 V1.2.1 (2006) (Ex. 1006, "ETSI 391-4") and Ransom
17	35 U.S.C. § 103(a)	ETSI 391-4, Ransom, and European Telecommunications

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[1] The Leahy-Smith America Invents Act ("AIA"), Pub. L. No. 112-29, which was enacted on September 16, 2011, made amendments to 35 U.S.C. §§ 102, 103. AIA § 3(b), (c). Those amendments became effective on March 16, 2013. *Id.* at § 3(n). Because the challenged claims of the '376 patent have an effective filing date before March 16, 2013, any citations herein to 35 U.S.C. §§ 102, 103 are to their pre-AIA versions.

Claim(s)	Statutory Basis	Applied References
		Standards Institute, ETSI ES 202 391-7 V1.2.1 (2006) (Ex. 1007, "ETSI 391-7")
19	35 U.S.C. § 103(a)	ETSI 391-4, Ransom, and European Telecommunications Standards Institute, ETSI ES 202 391-2 V1.2.1 (2006) (Ex. 1008, "ETSI 391-2")

Paper 12 ("Dec. on Inst."), 15.

After institution, Patent Owner filed a Response (Paper 26,[2] "PO Resp.") to the Petition, and Petitioner filed a Reply (Paper 30, "Pet. Reply") to the Response. Petitioner submitted a Declaration of Dr. Seth Nielson (Ex. 1009) with the Petition, and a Supplemental Declaration of Dr. Nielson (Ex. 1019) with the Reply. Patent Owner submitted a Declaration of Dr. Kevin Negus (Ex. 2010) with the Response. An oral hearing was held on November 15, 2018, and a transcript of the hearing is included in the record. Paper 50[3] ("Tr.").

For the reasons set forth below, Petitioner has shown by a preponderance of the evidence that claims 1–3, 5, 14, 16, 17, and 19 of the '376 patent are unpatentable.

A.   *Related Proceedings*

The parties indicate that the '376 patent is the subject of the following case in the United States District Court for the Northern District of California ("District Court"): *Twilio Inc. v. TeleSign Corporation*, No. 5:16-

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[2] Paper 26 is a public version of the Response. Paper 28 is a confidential version of the Response, which remains under seal.

[3] Paper 50 is a public version of the transcript. Paper 48 is a confidential version of the transcript, which remains under seal.

cv-06925 (N.D. Cal.). Pet. 66; Paper 4, 1. Patent Owner also indicates that the following petitions for *inter partes* review are related to this case:

Case No.	Involved U.S. Patent No.
IPR2017-01976	U.S. Patent No. 8,837,465
IPR2017-01978	U.S. Patent No. 8,306,021

Paper 4, 1.

B. *The '376 Patent*

The '376 patent relates to "making telephony application development as easy as web programming." Ex. 1001, 1:66–2:3. The '376 patent explains that deploying telephony services "requires developers to train in new languages, tools, and development environments," and, thus, involves "significant upfront and ongoing investment." *Id.* at 1:35–54. To address this problem, the '376 patent describes a method and system for processing telephony sessions that "enables web developers to use their existing skills and tools with the esoteric world of telephony." *Id.* at 1:61–2:3. For example, the method and system of the '376 patent "use the familiar web site visitor model to interact with a web developer's application, with each step of the phone call analogous to a traditional page view." *Id.* at 2:3–6.

C. *Illustrative Claim*

Of the challenged claims, claim 1 is independent and is reproduced below.

> 1. A method comprising:
>
> operating a telephony network and internet connected system cooperatively with a plurality of application programming Interface (API) resources, wherein operating the system comprises:
>
> initiating a telephony session,

> communicating with an application server to receive an application response,
>
> converting the application response into executable operations to process the telephony session,
>
> creating at least one informational API resource; and
>
> exposing the plurality of API resources through a representational state transfer (REST) API that comprises:
>
> receiving a REST API request that specifies an API resource URI,[4] and
>
> responding to the API request according to the request and the specified resource URI.

Ex. 1001, 18:29–45.

II.   ANALYSIS

A.   *Level of Ordinary Skill in the Art*

Petitioner argues that a person of ordinary skill in the art would have had "a bachelor's degree in computer science with at least two years of experience in application development." Pet. 8 (citing Ex. 1009 ¶¶ 49–50). Patent Owner argues that a person of ordinary skill in the art would have had "the equivalent of a four-year degree from an accredited institution in computer science, computer engineering, electrical engineering, software engineering, or the equivalent, and approximately 1–2 years of professional experience with or exposure to computer networking, telephony networking protocols, and various APIs," but "[a]dditional graduate education could substitute for professional experience, while significant experience in the field might substitute for formal education." PO Resp. 10 (citing Ex. 2010 ¶ 32).

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[4] URI stands for Universal Resource Identifier. Ex. 1001, 2:61–62.

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