

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Twilio, Inc.
Petitioner

v.

Telesign Corporation
Patent Owner

Patent No. 9,300,792 B2
Filing Date: April 3, 2015
Issue Date: March 26, 2016

TITLE: REGISTRATION, VERIFICATION AND NOTIFICATION SYSTEM

DECLARATION OF MICHAEL SHAMOS, PH.D.

Covered Business Method Patent Review No. _____

Declaration of Michael Shamos, Ph.D.

I, Michael Shamos, declare as follows:

I. INTRODUCTION AND QUALIFICATIONS

1. I have been engaged by Petitioner Twilio Inc. (“Twilio”) to opine on certain matters regarding U.S. Patent No. 9,300,792 (the “’792 patent”). Specifically, this declaration addresses the validity of claims 1-18 (the “Petitioned Claims”), that is, all the claims, of the ’792 patent. I receive \$600 per hour for my services. No part of my compensation is dependent on my opinions or on the outcome of this proceeding. I have no financial interest, beneficial or otherwise, in any of the parties to this review.

A. Education

2. I have an A.B. degree from Princeton University in Physics, an M.A. degree from Vassar College in Physics, an M.S. degree from American University in Technology of Management, an M.S. degree from Yale University in Computer Science, an M. Phil from Yale University in Computer Science, a Ph.D. from Yale University in Computer Science, and a J.D. degree from Duquesne University. My C.V. is attached as Exhibit 1029.

B. Career

3. From 1979-1987, I was the founder and president of two computer software development companies in Pittsburgh, Pennsylvania: Unilogic, Ltd. and Lexeme Corporation.

4. I currently teach graduate courses at Carnegie Mellon in Electronic

Declaration of Michael Shamos, Ph.D.

Commerce, including Ubiquitous Computing, Electronic Payment Systems, and Law of Computer Technology. Since 2001, I have been a Visiting Professor at the University of Hong Kong, where I also teach an annual course in Electronic Payment Systems.

5. I hold the title of Distinguished Career Professor in the School of Computer Science at Carnegie Mellon University in Pittsburgh, Pennsylvania. I was a Founder and Co-Director of the Institute for eCommerce at Carnegie Mellon, and I am now Director of the Master of Science in Information Technology degree program in eBusiness Technology.

6. I am an attorney admitted to practice in Pennsylvania and have been admitted to the Bar of the U.S. Patent and Trademark Office (“USPTO” or “Patent Office”) since 1981. I have been asked to render opinions in this declaration as a technical expert. I have not been asked to offer any opinions about the law.

7. I am a named co-inventor on the following five issued patents relating to electronic commerce: U.S. Patent Nos. 7,330,839, 7,421,278, 7,747,465, 8,195,197, and 8,280,773.

8. I have been engaged as a technical expert in over 200 computer cases and have previously testified in a number of cases concerning computer systems, including patent, copyright, and trade secret cases. My C.V. contains a list of cases in which I have testified in at least the past ten years. My C.V. also lists the

Declaration of Michael Shamos, Ph.D.

relevant publications I have authored during the past ten years.

C. Materials Considered

9. The analysis that I provide in this Declaration is based on my experience, as well as the documents I have considered, including the '792 patent [Ex. 1001]. I have also reviewed the prosecution history of the '792 patent and the materials listed below. Specifically, I have reviewed the following:

LIST OF EXHIBITS

Exhibit Number	Document
1001	U.S. Patent No. 9,300,792 B2 (“ ’792 patent”)
1003	U.S. Patent Application Publication No. 2005/0273442 to Bennett
1004	U.S. Patent Application Publication No. 2006/0020816 to Campbell
1005	U.S. Patent No. 6,934,858 to Woodhill
1006	Webster’s Third New International Dictionary (1993)
1007	U.S. Patent No. 8,302,175 to Thoursie
1008	U.S. Patent Application No. 2004/0203595 to Singhal (“Singhal”)
1009	U.S. Patent Application No. 2007/0042755 to Singhal (“Singhal II”)
1010	Roget’s 21 st Century Thesaurus in Dictionary Form (1992)
1011	U.S. Patent Application No. 2003/0221125 to Rolfe
1012	U.S. Patent Application No. 2001/0032192 to Putta
1013	U.S. Patent No. 7,577,847 to Nguyen
1014	U.S. Patent Application Publication No. 2001/0007983 to Lee
1015	U.S. Patent No. 8,024,567 to Han
1016	U.S. Patent Application Publication No. 2002/0032874 to Hagen
1017	U.S. Patent Application Publication No. 2004/0219904 to De Petris
1018	UK Patent Application No. 011673.1 to Chang <i>et. al</i>
1019	The American Heritage Dictionary (2 nd College Ed.) (1991)
1020	U.S. Patent No. 8,462,920 to Gonen (“ ’920 patent”)
1021	U.S. Patent Application No. 11/538,989
1022	Prosecution History of U.S. Patent Application No. 11/538,989 (excerpted)

1023	Prosecution History of U.S. Patent Application No. 11/538,989 (excerpted)
1024	Prosecution History of U.S. App. No. 14/678,815 (excerpted) (Information Disclosure Statement)
1025	Prosecution History of U.S. App. No. 11/538,989 (excerpted) (Request for Continued Examination)
1026	U.S. Patent Application No. 11/034,421
1027	J. Kotanchik, <i>Kerberos and Two-Factor Authentication</i> (March 1994)
1028	U.S. Patent No. 7,142,840 to Geddes, <i>et al.</i>
1029	Curriculum Vitae of Michael Shamos, Ph. D.
1030	U.S. Patent Application Publication No. 2004/0024682 to Popovitch
1031	U.S. Patent Application Publication No. 2003/0193413 to Jones
1032	U.S. Patent Application Publication No. 2008/0032703 to Krumm

II. LEGAL PRINCIPLES USED IN THE ANALYSIS

10. Attorneys for the Petitioner have explained certain legal principles to me that I have relied upon in forming my opinions set forth in this report. I have also relied on my personal knowledge gained through experiences and exposure to the field of patent law.

A. Person Having Ordinary Skill in the Art

11. I understand that my assessment of claims of the '792 patent must be undertaken from the perspective of what would have been known or understood by a person having ordinary skill in the art, reading the '792 patent on its relevant filing date and in light of the specification and prosecution history of the '792 patent. I will refer to such a person as a "POSA."

12. I understand that, to determine the appropriate level of one of ordinary

Explore Litigation Insights

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.