

CALDARELLI HEJMANOWSKI PAGE & LEER LLP

William J. Caldarelli (SBN #149573)

Ben West (SBN #251018)

12340 El Camino Real, Suite 430

San Diego, CA 92130

Telephone: (858) 720-8080

wjc@chpllaw.com; dbw@chpllaw.com

Attorneys for Plaintiff Ameranth, Inc.

Additional counsel for Plaintiff listed below.

**UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF CALIFORNIA**

IN RE: AMERANTH PATENT
LITIGATION

Lead Case No. 11cv1810 DMS (WVG)

**EXPERT DECLARATION OF
MICHAEL I. SHAMOS, PH.D. IN
SUPPORT OF AMERANTH'S
OPPOSITION TO DEFENDANTS
MOTION FOR SUMMARY
JUDGMENT OF UNPATENTABILITY
UNDER 35 U.S.C. § 101**

Date: September 21, 2018

Time: 1:30 p.m.

Location: Courtroom 13A

Judge: Hon. Dana M. Sabraw

Complaint Filed: August 15, 2011

1 **Additional counsel for Plaintiff Ameranth, Inc.:**

2 **FABIANO LAW FIRM, P.C.**

3 Michael D. Fabiano (SBN #167058)
4 12526 High Bluff Drive, Suite 300
5 San Diego, CA 92130
6 Telephone: (619) 742-9631
7 mdfabiano@fabianolawfirm.com

7 **OSBORNE LAW LLC**

8 John W. Osborne (Appointed *Pro Hac Vice*)
9 33 Habitat Lane
10 Cortlandt Manor, NY 10567
11 Telephone: (914) 714-5936
12 josborne@osborneipl.com

12 **WATTS LAW OFFICES**

13 Ethan M. Watts (SBN #234441)
14 12340 El Camino Real, Suite 430
15 San Diego, CA 92130
16 Telephone: (858) 509-0808
17 Facsimile: (619) 878-5784
18 emw@ewattslaw.com

17 **WITKOW BASKIN**

18 Brandon Witkow (SBN 210443)
19 21031 Ventura Blvd., Suite 603
20 Woodland Hills, CA 91364
21 Tel: (818)296-9508
22 Fax: (818)296-9510
23 bw@witkowlaw.com

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EXPERT DECLARATION OF MICHAEL I. SHAMOS, PH.D.

I. BACKGROUND & QUALIFICATIONS

I, Michael I. Shamos, declare as follows:

1. I am over 21 years of age and competent to testify. I have personal knowledge of the facts set forth in this declaration. If called upon to testify, I would and could do so competently as set forth herein. I provide this declaration in support of Ameranth, Inc.’s (“Ameranth”) Opposition to Defendants Pizza Hut, Inc. and Pizza Hut of America, Inc.’s (collectively “Pizza Hut”) and Domino’s, Inc.’s (via joinder of Pizza Hut’s Motion) Motion for Summary Judgment of Unpatentability under 35 U.S.C. §101 (“MSJ”).

2. I hold the title of Distinguished Career Professor in the School of Computer Science at Carnegie Mellon University in Pittsburgh, Pennsylvania. A true and correct copy of my resume is attached hereto as **Exhibit A**.

3. I have been awarded the following degrees: A.B. degree in Physics from Princeton University, awarded in 1968; an M.A. degree in Physics from Vassar College, awarded in 1970; an M.S. degree in Technology of Management from American University, awarded in 1972; an M.S. degree in Computer Science from Yale University, awarded in 1973; an M.Phil. degree in Computer Science from Yale University, awarded in 1974; and a Ph.D. degree in Computer Science from Yale University, awarded in 1978; and a J.D. degree from Duquesne University, awarded in 1981.

4. 5. From 1998-2004, I was Co-Director of the Institute for Electronic Commerce at Carnegie Mellon. From 2004-2018 I was Director of eBusiness Programs in the School of Computer Science at Carnegie Mellon. I am the Director of the Master of Science in Artificial Intelligence and Innovation program at Carnegie Mellon and Director of the Master of Science in Biotechnology Innovation and Computation degree program. I am also a member of the core faculty of the Carnegie Mellon Privacy Engineering degree program. I

1 currently teach graduate courses at Carnegie Mellon in AI and Future Markets and
2 Law of Computer Technology.

3 5. I am also Visiting Professor at the University of Hong Kong. Since
4 2001, I have taught an annual course there entitled Electronic Payment Systems.

5 6. I am the author and lecturer in a 24-hour video course on Internet
6 protocols and have taught computer networking, wireless communication and
7 Internet architecture since 1999.

8 7. From 1979 to 1987, I was the founder and president of two computer
9 software development companies in Pittsburgh, Pennsylvania, Unilogic, Ltd. and
10 Lexeme Corporation.

11 8. I am a named inventor on five issued U.S. Patents in electronic
12 commerce, nos. 7,330,839, 7,421,278, 7,747,465, 8,195,197 and 8,280,773.

13 9. I am an attorney admitted to practice in Pennsylvania and have been
14 admitted to the Bar of the U.S. Patent and Trademark Office since 1981. I have
15 not been asked to offer any opinions of law in this action.

16 10. I have previously testified in a large number of cases concerning
17 computer software, electronic commerce, Internet technology and betting systems.
18 My résumé in Exhibit 1 contains a list of cases in which I have testified in the last
19 ten years.

20 11. I have been retained by Ameranth in the case captioned above,
21 through its counsel, as an expert witness in regard to claim construction and
22 issues, including validity, presented in the consolidated cases in which Ameranth
23 is Plaintiff against various alleged infringers. Counsel for Ameranth has asked me
24 to review various materials and to offer opinions regarding the patent eligibility of
25 the claims of Ameranth's '077 patent (U.S. Patent No. 8,146,077 (the "'077
26 Patent")). I understand that Ameranth has asserted claims 1, 6, 8, 13 and 17 of the
27 '077 patent against Pizza Hut and that only those claims are the subject of the
28 MSJ.

1 12. In connection with my analysis, I have reviewed the '077 Patent, its
2 prosecution history, the Court's Order Construing Claims (Dkt. No. 908), the
3 Court's Order (1) Granting Ameranth's Motion for Summary Judgment of
4 Invalidity Due To Inadequate Written Description And (2) Denying IPDEV's
5 Motion For Summary Judgment Re: Written Description Support And
6 Enablement (Dkt. No. 86 in Case No. 14cv1303 DMS (WVG)) (the "IPDEV MSJ
7 Order"), and all of the inventors' testimony from this case. I have also reviewed
8 and considered Pizza Hut's MSJ and cited materials.

9 13. The individuals involved in the prosecution of the '077 Patent and its
10 inventors are referred to collectively herein as the "Applicants."

11 14. Numbered Exhibits referenced herein are Exhibits to Ameranth's
12 Notice of Lodgment ("NOL") filed concurrently with and in support of
13 Ameranth's Opposition to the MSJ.

14 15. My analysis has been from the perspective of a person of ordinary
15 skill in the art of the '077 patent and at the time of the invention, which I discuss
16 below. I have utilized the claim constructions ordered by the Court in arriving at
17 my opinions. (Dkt. 908).

18 16. It may be necessary for me to supplement this declaration, and I
19 reserve the right to do so.

20 **II. LEGAL PRINCIPLES**

21 17. I have not been asked to offer an opinion on the law; however, as an
22 expert assisting the Court in determining the applicability of 35 U.S.C. § 101, I
23 understand that I am obliged to follow existing law. I have therefore been asked
24 to apply the legal principles provided to me by counsel, which I am told are
25 applicable to patent eligibility under Section 101, and I have done so. I am
26 following the legal principles provided by counsel, who inform me that the
27 applicable general law can be found in the Supreme Court's *Alice* decision and its
28

1 progeny, which I have knowledge of and have followed in coming to my
2 conclusions.

3 18. The person of ordinary skill in the art is a hypothetical person who is
4 presumed to be aware of all of the pertinent art. A person of skill in the art is
5 ordinary, not extraordinary, and is deemed to follow conventional wisdom.
6 *Standard Oil Co. v. American Cyanamid Co.*, 774 F.2d 448, 454 (Fed. Cir. 1985)
7 (“A person of ordinary skill in the art is also presumed to be one who thinks along
8 the line of conventional wisdom in the art and is not one who undertakes to
9 innovate, whether by patient, and often expensive, systematic research or by
10 extraordinary insights, it makes no difference which.”). What the actual alleged
11 inventor might have known at the time of the filing of the application, or what the
12 inventor might assert after the fact, is irrelevant. *Kimberly-Clark Corp. v.*
13 *Johnson & Johnson*, 745 F.2d 1437, 1454 (Fed. Cir. 1984) (“It should be clear
14 that that hypothetical person is not the inventor, but an imaginary being
15 possessing "ordinary skill in the art.”).

16 **III. THE PERSON OF ORDINARY SKILL IN THE ART**

17 19. The “Field of the Invention” section of the ’077 patent states:

18 This invention relates to an information management and
19 synchronous communications system and method for generation of
20 computerized menus for restaurants and other applications with
21 specialized display and synchronous communications requirements
22 related to, for example, the use of equipment or software with non-
23 PC-standard graphical formats, display sizes and/or applications for
24 use in remote data entry, information management and synchronous
25 communication between host computer, digital input device or
26 remote pager via standard hardwired connection, the internet, a
27 wireless link, smart phone or the like. [NOL, Exh. 7 (’077 Patent at
28 1:18-28)].

26 20. The inventions of the ’077 patent involve a unique and multi-faceted
27 combination and integration of multiple different technologies, including real-time
28 synchronous communications, wireless technology, client/server systems,

1 database technology, Internet technology, and rendering of content on multiple
2 types of devices with differing display capabilities and requirements. In my
3 opinion, a person of ordinary skill in the art would have at least a bachelor’s
4 degree in computer science, or equivalent experience, and at least five years’
5 experience in developing and coding real time, client/server-based
6 software/hardware systems in a wireless/Web environment and would have had at
7 least two years of exposure to hospitality systems and operations.

8
9 **IV. THE ’077 PATENT CLAIMS ARE NOT DIRECTED TO SUBJECT**
10 **MATTER WHICH WAS EITHER KNOWN, ROUTINE OR**
11 **CONVENTIONAL AT THE TIME OF THE INVENTION**

12 21. As stated above, I have reviewed the MSJ and I understand that
13 Ameranth opposes the MSJ. I provide the following in support of Ameranth’s
14 supplemental opposition. My previous Reports and Declarations, as may be cited
15 in Ameranth’s Supplemental Opposition, are also applicable and demonstrate that
16 the ’077 claims were not directed to conventional subject matter.

17 22. The claimed formatting of the “programmed handheld menu
18 configuration” (PHMC) and “programmed handheld configuration” (PHC) for
19 small wireless device handheld screens, while maintaining the screen linkages,
20 was integral to the problems confronted by the ’077 Patent’s inventors and the
21 unique and non-conventional solutions they conceived. I have seen no
22 contemporaneous evidence of this claimed functionality being known, routine or
23 conventional at the asserted time of the ’077 invention in Summer-Fall 1998.

24 23. ’077 claim 1 is a system claim and the system is clearly directed to
25 an “information management and synchronous communication system” (which I
26 understand was the term the inventors originally coined to best represent/explain
27 their inventive concepts). The claimed system functionality as recited in claim 1 is
28 achieved via the claimed “menu configuration software” (MCS) and its multi-
faceted interactivity, integration and synchronization with the other elements and

1 functions of the claim. The MCS is enabled to create, generate and wirelessly
2 transmit the claimed “programmed handheld menu configuration” (PHMC) based
3 on the “master menu” and its “master menu file structure” to two or more different
4 “wireless handheld computing devices.” Further, the “master menu” contains
5 categories/items/modifiers which are required to be synchronized with/in the
6 handheld PHMC as well. The PHMCs are also generated/formatted by the MCS
7 for the “size of the handheld display screens” while maintaining the “links”
8 between the cascading screens as those are initially included in the master menu
9 pursuant to its being displayable in the first GUI and reflected in the “parameters”
10 of the “master menu file structure.” The relationships between menu components
11 (e.g., items and modifiers) are maintained consistently between the master menu
12 and the PHMC, but the **links** between cascaded screens of the generated PHMCs
13 may be configured differently from the links between cascaded screens of the
14 master menu. To my knowledge, and based on all of the prior art and other
15 arguments relied on by the Defendants in this consolidated litigation, this
16 inventive concept had never been disclosed or used before, and surely not for real
17 time synchronization among multiple different handheld types and screen sizes.
18 Further, the generated PHMCs must also “be appropriate for the customized
19 display layout” of the “wireless handheld computing devices.” The claims also
20 require that there be a difference in the number of user interface screens between
21 at least two different handheld devices in the system. This systemic functionality
22 of the claimed system must be “synchronous,” i.e., “made, or configured to make,
23 consistent”--in accordance with the Court’s construction. These claims, properly
24 construed and giving meaning to all of their limitations as an ordered
25 combination, provide the consistency required by the Court’s construction. Also,
26 individually these were new inventive concepts. For example, to my knowledge,
27 no one prior to the inventors had even recognized the problem of “maintaining the
28 linkages” that exist between the user/GUI screens on the back end and handheld

1 devices on the user end. These linkages were initially created, e.g., in back end
2 POS systems yet there had never been a recognition or conception of extending
3 those same relationships/connections to handheld devices. Leveraging all of the
4 time-consuming creation of those linkages on the back end into handheld devices
5 and then also to “automatically format” multiple, different, PHMCs for different
6 sized screens of multiple different handheld computers that would synchronously
7 interoperate in the claimed system was clearly not conventional and no Defendant
8 has put forth any evidence showing otherwise.

9 24. Claim 13 is also a system claim and the system is also, as in claim 1,
10 directed to an ‘information management and synchronous communication system’
11 (a term coined by the inventors). The claimed system functionality as recited in
12 claim 13 is achieved via the claimed “communications control software” (CCS)
13 and its multi-faceted interactivity, integration and synchronization with the other
14 elements and functions recited in the claim. Unlike claim 1, there is no recitation
15 in claim 13 of a “master menu” or “categories/items/modifiers;” in fact the term
16 “menu” appears nowhere in this claim. Rather, what is “synchronized” between
17 the elements of the system is the claimed “hospitality application information.”
18 The CCS is enabled to create, generate the claimed “programmed handheld
19 configurations” (PHC) from the “master database” and its “master database file
20 structure and its “parameters” and wirelessly transmit it to two or more different
21 “wireless handheld computing devices.” The PHCs are generated/formatted by
22 the CCS for the “size of the handheld display screens” while “automatically
23 formatting” and maintaining the “links” between the cascading screens. Also
24 recited in claim 13, and not required in claims 1-12, Web pages and “Web
25 servers” are required and are an integral part of the systemic synchronized system
26 as claimed. Further, the generated PHCs must also “be appropriate for the
27 customized display layout” of the respective “wireless handheld computing
28 device.” Claim 13 also includes additional elements, not present in claim 1,

1 including “other display screens of the synchronized system” and “any applicable
2 communications protocol.” There are additional unconventional systemic
3 requirements in claim 13 as compared to claim 1. The unique and unconventional
4 elements of claim 13 include “simultaneous” synchronization between the claim
5 elements. The claims also require that there be a difference in the number of user
6 interface screens between at least two different handhelds in the system. This
7 systemic functionality of the claimed “system” must be “synchronous,” i.e.,
8 “made, or configured to make, consistent”--in accordance with the Court’s
9 construction. These claims, properly construed and giving meaning to all of their
10 limitations, provide the required consistency via their “ordered combination.”
11 Individually these elements were also unique and new inventive concepts. To my
12 knowledge, and based on all of the prior art and other arguments relied on by the
13 Defendants in this consolidated litigation, no one recognized prior to the inventors
14 the problem of “maintaining the linkages” and then to “automatically format”
15 multiple, different PHCs for different sized screens of multiple handheld
16 computing devices that would synchronously interoperate in the claimed system.
17 Nor had this inventive concept ever been done before, and surely not in real time
18 and/or for multiple/different handheld types/sizes. This was clearly not
19 conventional and no Defendant has put forth any evidence showing otherwise.

20 25. From the above analysis/explanation of the ’077 independent claims,
21 it is clear that these very detailed claims include the “how” of the
22 interrelationships of the various elements and that these elements, considered as
23 an “ordered combination,” were not known at the time of the invention, were not
24 routine and were unconventional.

25 26. I have reviewed and find highly compelling the August 31, 2018
26 Declaration of Douglas Dedo (Exh. 18), who was managing the Ameranth
27 relationship for Microsoft in 1999/2000, and who has stated under penalty of
28 perjury that the Ameranth 21CR product was novel, non-conventional and

1 revolutionary:

2 Microsoft partnered with Ameranth in approximately May of 1999
3 because *Ameranth had developed new products and systems* for use
4 in the hospitality industry that could be used with devices using
5 Microsoft's Windows CE platform *to create unprecedented*
6 *integrated hardware and software solutions which provided*
7 *functionality and benefits beyond anything that Microsoft had done*
8 *itself in this space and, as far as Microsoft was aware, beyond*
9 *anything anyone else was doing in the space at the time.*

8 Declaration of Douglas S. Dedo, August 31, 2018, ¶ 5 (emphasis added).

9 Microsoft[] endorsed *Ameranth's 21st Century Restaurant*
10 *technology and believed that its technology was both visionary and*
11 *groundbreaking. ... Microsoft believed that Ameranth's products*
12 *represented a significant step forward from existing technology ...*
13 *Ameranth had developed a way of integrating mobile device*
14 *operating platforms – like Windows CE — and mobile devices*
15 *running on such platforms into comprehensive software and*
16 *hardware systems in a way no one else had done and which yielded*
17 *results no one else was delivering.*

16 Declaration of Douglas S. Dedo, August 31, 2018, ¶ 6 (emphasis added).

17 *Microsoft believed that Ameranth's innovative software modules,*
18 *which created the "handheld user interfaces," were novel and non-*
19 *conventional both because they involved Ameranth's own software*
20 *solutions that provided functionality and delivered results no one*
21 *else was providing and because they integrated and used mobile*
22 *operating platforms—like Microsoft's Windows CE with other*
23 *software and hardware components of the 21st Century Restaurant*
24 *system to accomplish such unprecedented results.*

23 Declaration of Douglas S. Dedo, August 31, 2018, ¶ 7 (emphasis added).

24 *Ameranth's vision and unique integration technology enhanced*
25 *and expanded the potential of Windows CE and was available at*
26 *the time only from Ameranth.* Microsoft viewed a partnership with
27 Ameranth as an excellent opportunity to grow the usage and adoption
28 of its Windows CE platform and mobile devices into the hospitality
industry because *Ameranth was doing things in the restaurant*

1 *technology space no one else was doing at the time.*

2 *Id.* at ¶ 8 (emphasis added).

3
4 *Microsoft considered Ameranth's new systemic synchronization and integration technology to be innovative and ground-breaking in 1999-2000.* As I myself stated at the time: "Ameranth provides a total turnkey solution integrating Pocket PC's with wireless networks, and linking them to PC servers, and the internet."

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8 *Id.* at ¶ 10 (emphasis added).

9 *Microsoft believed that Ameranth's solutions represented a significant step forward in technology* and an opportunity to expand the usage and possibilities of Microsoft's mobile operating platform.

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12 *Id.* at ¶ 11 (emphasis added).

13 *Ameranth's technology was new, pioneering, unconventional and provided functionality and features beyond what was otherwise available in Windows CE.* This was one of the reasons driving Microsoft's decision to make a strategic multi-million investment into Ameranth in June 2000 in order to support and foster Ameranth's 21st Century Restaurant system technology and its integration with and use of Microsoft's Windows CE platform. . . . *Ameranth's technology solved important technical problems while reducing costs and increasing productivity.* In time other companies in this industry followed Ameranth's lead and incorporated wireless mobile devices into their businesses because they saw great business value in this technology.

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21 *Id.* at ¶ 12 (emphasis added).

22 27. My conclusion is that Mr. Dedo was referring in his Declaration to
23 attributes of the 21CR system which are covered by elements of the '077 claims,
24 as well as to the claimed invention as a whole and as an ordered combination. For
25 example, the configuration of "handheld user interfaces" referenced by Mr. Dedo
26 is directly found in '077 claim 1 element e, first wherein clause, third wherein
27 clause and fourth wherein clause, and is found in claim 13 element b, first wherein
28 clause, third wherein clause, fourth wherein clause and fifth wherein clause.

1 Further, Mr. Dedo’s statement that Microsoft considered “Ameranth’s new
2 systemic synchronization and integration technology to be innovative and ground-
3 breaking in 1999-2000” directly corresponds to the recitations of system wide
4 synchronization in both claim 1 and claim 13. Mr. Dedo stated that “Microsoft
5 believed that Ameranth’s [system-wide mobile] solutions represented a significant
6 step forward in technology.” This statement also directly corresponds to the
7 “programmed handheld menu configuration” recitations of claim 1 and the
8 “programmed handheld configuration” recitations of claim 13. Mr. Dedo’s
9 statement that “Ameranth had developed a way of integrating mobile device
10 operating platforms – like Windows CE — and mobile devices running on such
11 platforms into comprehensive software and hardware systems in a way no one else
12 had done and which yielded results no one else was delivering” also corresponds
13 to the claimed synchronization elements of the claims as well as the handheld
14 device user interface limitations mentioned above. Mr. Dedo further stated in his
15 Declaration that “Ameranth’s technology was new, pioneering, unconventional
16 and provided functionality and features beyond what was otherwise available in
17 Windows CE.” I believe that all of these statements in Mr. Dedo’s Declaration
18 evidence that the Ameranth 21CR product of 1999 included features recited in
19 ’077 claims 1 and 13 which were not considered by Microsoft to have been
20 conventional at the time. Microsoft’s contemporaneous view that the Ameranth
21 claimed subject matter as embodied in the 21CR product was not conventional at
22 the time provides highly convincing evidence of unconventionality of the claimed
23 subject matter. Microsoft was at the forefront of computing, including handheld
24 device computing and network systems, in 1999. Microsoft, through its actions in
25 investing in and partnering with Ameranth at the time, as documented by Mr.
26 Dedo, is compelling evidence that the claimed Ameranth technology was not
27 known or available from any source other than Ameranth in 1998-99 and was thus
28 not known, routine or conventional.

1 28. The combination of all of the claim elements, linked together by the
2 claimed menu configuration software (claims 1, 9) and communications control
3 software (claim 13), makes the claimed invention as a whole non-conventional
4 and patentable under *Alice* and its progeny. It was highly unconventional to
5 effect the claimed use of the server side/back-end computer with the master
6 menu/database parameters to generate the PHMC/PHC that is formatted and
7 configured appropriately so that handheld devices can produce differently
8 configured/formatted displays for different handheld devices (and different screen
9 numbers between at least two different handheld devices), but with synchronized
10 menus (claims 1, 9) or hospitality application information (claim 13) such that a
11 change to the substantive data can be made, once, on the back-end and then have
12 it synchronized with the handheld devices such that they display the same
13 substantive information but in different display configurations/format (and
14 different screen numbers between at least two different handheld devices). The
15 recited menu configuration software and communications control software
16 allowed these novel and unconventional linkages that represented a significant
17 improvement over existing computerized systems and technology.

18 **V. CONCLUSION**

19 29. As discussed above, the MSJ, including its exhibits and supporting
20 declarations, does not establish the unpatentability of any claim of the '077 Patent.

21 I declare under penalty of perjury under the laws of the United States that
22 the foregoing is true and correct and that this declaration was executed by me on
23 September 7, 2018 at Pittsburgh, Pennsylvania.

24
25 
26 Michael Ian Shamos, Ph.D., J.D.
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EXHIBIT A

Resume of Michael Ian Shamos

Current to August 13, 2018

Education

A.B. (1968) [Princeton University \(Physics\)](#). Thesis: "Gravitational Radiation Reaction." Advisor: [John A. Wheeler](#).

M.A. (1970) [Vassar College \(Physics\)](#). Thesis: "[An Absorber Theory of Acoustical Radiation](#)." Advisor: Morton A. Tavel.

M.S. (1972) [American University](#) (Technology of Management).

M.S. (1973) [Yale University \(Computer Science\)](#).

M.Phil. (1974) [Yale University \(Computer Science\)](#).

Ph.D. (1978) [Yale University \(Computer Science\)](#). Thesis: "[Computational Geometry](#)". Thesis committee: [David Dobkin](#), [Martin H. Schultz](#), [Stanley C. Eisenstat](#).

J.D. (1981) [Duquesne University](#), *cum laude*.

Foreign Languages

French, Russian (good reading and technical translation skills, fair conversational ability).

Academic Experience

Distinguished Career Professor, [Institute for Software Research](#) and [Language Technologies Institute](#), [School of Computer Science, Carnegie Mellon University](#) (2001-)

Principal Systems Scientist (1998-2001)

Principal Lecturer (2002-2003). Teaching Professor (2003-)

Faculty, [Tepper School of Business](#), Carnegie Mellon University (1999-2004).

Co-Director, Carnegie Mellon Institute for eCommerce (1998-)

Vice-Chair, University Research Council (2000-2002)

Director, [eBusiness Technology](#) degree program (2003-)

Core faculty, [Privacy Engineering](#) degree program (2013-)

Director, [Universal Library](#), Carnegie Mellon University (1998-)

Visiting Professor, [Faculty of Engineering, The University of Hong Kong](#) (2001-) Adjunct Faculty, Carnegie Mellon University, Department of Computer Science (1981-1998)

Assistant Professor, Carnegie Mellon University, Departments of Computer Science and [Mathematics](#) (1975-81), Dept. of [Statistics](#) (1978-81).

Courses taught (Carnegie Mellon):

Algorithm Design and Analysis 15-451 (Comp. Sci.)
Intellectual Capital and its Protection 45-886 (MBA)
[Ecommerce Technology](#) 20-751 (MSEC program)
[Electronic Payment Systems](#) 20-753 (MSEC program), 96-774 (MSIT program)
[Ecommerce Law and Regulation](#) 46-840 (MSEC program)
[Electronic Voting](#) 17-803
Ubiquitous Computing, 96-761 (MSIT Program)
Electronic Payment Systems (MSIT Program)
[Law of Computer Technology](#), 08-732/08-632/08-532

Honors and Awards

Fellow, [Society of the Sigma Xi](#) (1974-83).

IBM Fellowship, Yale University (1974–75).

[SIAM](#) National Lecturer (1977–78).

Distinguished Lecturer (computer science), [University of Rochester](#) (1978); [McGill University](#) (1979).

[Duquesne University Law Review](#) (1980–81).

Black & White Scotch Achiever's Award (first annual, 1991, for contributions to bagpipe musicography).

[Industry Service Award](#) of the [Billiard and Bowling Institute of America](#), 1996 (for contributions to billiard history).

Billiard Worldcup Association official referee (2001-)

Editorships

Editor-in-Chief, *Journal of Privacy Technology* (2003- 2006).

Member of Editorial Board, [Electronic Commerce Research Journal](#) (2000-).

Member of Editorial Board, [Pittsburgh Journal of Technology Law and Policy](#) (1999-2003).

Dr. Shamos has reviewed scientific papers for [Communications of the ACM](#), [Mathematical Reviews](#), [IEEE Computer](#), [IEEE Transactions on Computers](#), [Information Processing Letters](#), [Journal of the ACM](#) and the [Journal of Computational Physics](#).

Contributing Editor, [Billiards Digest](#) magazine (1990-).

Patents

Co-inventor with K. Srinivasan, U.S. Patent [7,330,839](#), "Method and System for Dynamic Pricing," issued February 12, 2008.

Co-inventor with K. Srinivasan, U.S. Patent [7,421,278](#), "Method and Apparatus for Time-Aware and Location-Aware Marketing," issued September 2, 2008.

Co-inventor with K. Srinivasan, U.S. Patent [7,747,465](#), "Determining the Effectiveness of Internet Advertising," issued June 29, 2010.

Co-inventor with K. Srinivasan, U.S. Patent [8,195,197](#), "Method and Apparatus for Time-Aware and Location-Aware Marketing," issued June 5, 2012.

Co-inventor with K. Srinivasan, U.S. Patent [8,280,773](#), "Method and Apparatus for Internet Customer Retention," issued October 2, 2012.

Legal Experience

Special Counsel, [Reed Smith LLP](#) (2000-2003), electronic commerce law.

Shareholder, [The Webb Law Firm](#) (1996-2000), intellectual property law. Associate (1990-95).

Private practice of law (1987-90), intellectual property

Associate, law firm of [Buchanan, Ingersoll, P. C.](#) (1985-87) (now Buchanan Ingersoll & Rooney, PC), Emerging Companies Department.

General Counsel, Carnegie Group, Inc. (1983-85), artificial intelligence company.

Private practice of law (1981-83), computer law.

Bar Admissions

[Supreme Court of Pennsylvania](#) (1981–).

[United States District Court for the Western District of Pennsylvania](#) (1981–).

[United States Patent and Trademark Office](#) (1981–).

[United States Tax Court](#) (1982–).

[United States Court of Appeals for the Armed Forces](#) (1982–).

[United States Court of Appeals for the Third Circuit](#) (1982–).

[United States Supreme Court](#) (1985–).

[United States Court of Appeals for the Federal Circuit](#) (1985–).

Expert Witness

Dr. Shamos has served as an expert witness in multiple computer software and electronic voting cases. He has participated in the cases listed below. "D" indicates deposition testimony; "R" indicates report, declaration or affidavit; "T" indicates trial testimony.

Total: 255 cases: 200 patent, 13 electronic voting, 12 trade secret, 11 copyright, 20 other.

Affidavits, reports or declarations submitted in 178 cases.

Deposed in 104 cases.

Testified at trial or hearing in 42 cases.

Participated in 3 reexams, 53 IPRs and 23 CBMs.

1. *C.W. Communications, Inc. v. International Research Service, Inc.*, Civil Action No. 84-890, (W.D. Pa. 1984), aff'd. Case No. 88-3331 (3d Cir., Oct. 31, 1988). Served as an expert for plaintiff publisher as to the fame of its "Computerworld" trademark. Result: permanent injunction entered against defendant. Judge McCune's Memorandum and Order states. "We accept the conclusion drawn by Dr. Shamos." Firm: Webb, Burden Robinson & Webb (now the [Webb Law Firm](#)). (D,T)

2. *E.F. Hutton, Inc. v. Gipson* (W.D. Pa. 1985). Served as an expert for defendant-counterclaimant physician as to fraud in the inducement by a computer hardware supplier. Plaintiff had provided capital financing for the purchase. Result: defendant was awarded compensatory damages + \$250,000 punitive damages. (D,T)

3. *In re Comprehensive Business Systems*, [119 B.R. 573 \(S.D. Ohio 1990\)](#). Served as an expert for a secured creditor in a bankruptcy case in which the creditor sought to obtain software still in development for which it had advanced over \$2 million in funding. Dr. Shamos opined as to the value of the incomplete software. Result: the creditor was able to purchase the software from the Trustee for \$67,500. The Court referred in its [opinion](#) to "the testimony of the eminent and impressive Dr. Shamos." (D,R,T)

4. *Levinson Steel Co. v. American Software, Inc. et al.*, Civil Action No. 96-282, W.D. Pa. (1996). Served as an expert for plaintiff in a case involving bad faith estimates of computer processing capacity resulting in delivery of an inadequate system. Result: settlement in favor of plaintiff in an undisclosed amount. Contact: [Reed Smith LLP](#), 225 Fifth Ave., Pittsburgh, PA 15222. (D,R)

5. *ASE Limited v. INCO Alloys International, Inc.*, Civil Action No. 98-1266, (W.D. Pa. 1998). Served as an expert for defendant concerning breach of computer services contract by declaratory judgment plaintiff. Result: determination that defendant was free to seek services from a different vendor. Firm: [Reed Smith LLP](#), 225 Sixth Ave., Pittsburgh, PA 15222. Attorney: Anthony Basinski, Esq. (D,T)
6. *Twentieth Century Fox Film Corp. v. iCraveTV.*, 53 U.S.P.Q. 2d 1831 (W.D. Pa. 2000). Served as an expert for Plaintiffs concerning Internet technology used to stream video from U.S. TV stations through web sites in Canada. Result: TRO and preliminary injunction issued against defendants prohibiting continued infringement in the U.S. Firm: [Reed Smith LLP](#). Attorney: Gregory Jordan, Esq. (T)
7. Invited testimony before the British House of Lords, Subcommittee B of the European Union Committee, April 20, 2000. Subject: European regulation of eCommerce. View [testimony](#).
8. *Universal Studios, Inc. v. Reimerdes*, 111 F. Supp. 2d 294 (S.D.N.Y. 2000), *aff'd* 273 F.3d 429 (2d Cir. 2001). Served as an expert for plaintiff movie studios concerning accused software for decrypting DVDs in the first case interpreting the Digital Millennium Copyright Act. Result: permanent injunction issued in favor of plaintiffs on August 17, 2000. Contact: [William Hart, Esq.](#), [Proskauer Rose LLP](#). View [testimony](#). View [opinion](#). View [appellate opinion](#). (D,T)
9. *MercExchange, L.L.C. v. eBay, Inc. et al.*, Case No. 2:01-CV-736 (E.D. Va. 2001). Served as an expert for defendant [eBay](#) in an infringement case concerning U.S. Patent [6,202,051](#) for Internet auctions. Following Dr. Shamos' reports, Defendants obtained a summary judgment of noninfringement of the subject patent. On the other patents, the case went to the U.S. Supreme Court, which ruled that injunctions are not automatic in patent cases. Contact: [Tim Teter, Esq.](#), [Cooley LLP](#). (D,R)
10. *Powerquest Corp. v. Quarterdeck Corp. et al.*, Case No. 2:97-CV-0783 (D. Utah 1997). Served as an expert for plaintiff [PowerQuest](#) in an infringement case concerning U. S. Patents [5,675,769](#) and [5,706,472](#) for a method of resizing hard disk partitions. Dr. Shamos testified at the Markman hearing. Case settled when one of the defendants acquired plaintiff. Attorney: [Gregg I. Anderson](#), Esq., formerly at Merchant & Gould, now an Administrative Patent Judge at the Patent Trial and Appeal Board. (R,T)
11. *Sightsound.Com Inc. v. N2K Inc. et al.*, C.A. 98-118 (W.D. Pa. 1998). Served as an expert for defendants, including a subsidiary of Bertelsmann AG, concerning validity of U.S. Patents [5,191,573](#) and [5,966,440](#) for distribution of digital audio via telecommunications lines. Case settled. Firm: Parcher, Hayes & Snyder, (no longer in existence). Contact: [Steven M. Hayes, Esq.](#), [Simmons Hanley Conroy, LLC](#), 112 Madison Ave., New York, NY 10016. (D,R)
12. *Freemarkets, Inc. v. B2eMarkets, Inc.*, C.A. 02-162-SLR (D. Del. 2002). Served as an expert witness for plaintiff concerning infringement of U.S. patents [6,216,114](#) and [6,223,167](#), concerning methods of conducting electronic auctions. Case settled two weeks after expert

attended a demonstration of the accused product. Contact: [D. Michael Underhill, Esq., Boies, Schiller & Flexner, LLP](#), Washington, DC.

13. *Lifecast.com, Inc. v. ClubCorp, Inc.*, AAA Case No. 71Y1170076301 (Dallas, TX). Served as an expert witness for respondent in a case alleging copyright infringement of Internet websites. Testified at arbitration. Result: Complainant's claims denied; award for respondent on counterclaims and for attorney's fees. Contact: [Bill Whitehill, Esq., Gardere Wynne Sewell LLP](#), 1601 Elm St., Dallas, TX 75201. (T)

14. *IP Innovation LLC v. Thomson Learning, Inc. et al.*, Case H-02-2031 (S.D. Tex. 2002). Served as a expert for defendant The Princeton Review, Inc. concerning alleged infringement of U.S. Patent [4,877,404](#) relating to online delivery of educational courses. Summary judgment of non-infringement obtained for defendant after favorable Markman proceeding. Contact: [Peter Vogel, Esq., Gardere Wynne Sewell LLP](#), 1601 Elm St., Dallas, TX 75201. (R)

15. *Starpay.com LLC et al. v. Visa International Service Association et al.*, Case 3-03-CV-976-L (N.D. Tex. 2003). Served as an expert for defendant Visa concerning alleged infringement of U.S. Patent [5,903,878](#) relating to online authentication of credit card customers. Dr. Shamos provided the court with a Markman tutorial in 2004 and a non-infringement and invalidity declaration in 2008. Case settled in February 2008. Contact: [Stanley Young, Esq., Covington & Burling LLP](#), 333 Twin Dolphin Drive, Suite 700, Redwood Shores, CA 94065. (D,R,T)

16. *Safelick LLC v. Visa International Service Association et al.*, Case C-03-5865 (N.D. Cal. 2003). Served as an expert for defendant Visa concerning alleged infringement of U.S. Patent [5,793,028](#) relating to online authentication of credit card customers. Summary judgment of noninfringement granted for Visa based on expert reports, affirmed after appeal to the Federal Circuit. Contact: [Stanley Young, Esq., Covington & Burling LLP](#), 333 Twin Dolphin Drive, Suite 700, Redwood Shores, CA 94065. (D,R)

17. *Wells Fargo Bank Minnesota, NA et al. v. UBS Warburg Real Estate Securities, Inc.*, Case 02-2849 (192d Judicial District, Dallas Cty., Tex, 2002) and *LaSalle Bank, NA et al. v. UBS Warburg Real Estate Securities, Inc.*, Case 02-2899-G (134th Judicial District, Dallas Cty., Tex, 2002). Served as an expert for defendant UBS Warburg in an electronic discovery matter involving a case of first impression regarding Texas Discovery Rule 196.4 allocating costs of discovery of electronic records. Firm: [Gardere Wynne Sewell LLP](#), 1601 Elm St., Dallas, TX 75201. Contact: [Dawn Estes, Esq., Taber, Estes Okon Thorne & Carr PLLC](#), 3811 Turtle Creek Blvd., Suite 2000, Dallas, TX 75219. (D, R)

18. *American Association of People with Disabilities et al. v. Shelley et al.*, Case No. CV04-1526 FMC (PJWx) (C. D. Calif., 2004). Served as an expert for plaintiff AAPD, which has brought a claim against the California Secretary of State that requiring DRE voting machines to be equipped with audit trails violates the rights of disabled persons. Plaintiffs' application for TRO and preliminary injunction denied. Firm: Howrey LLP, (no longer in existence). Attorney John E. McDermott is now a Magistrate Judge in the Central District of California. (R)

19. *Paul Ware v. Target Corp.*, CA 4:03-CV-0243-HLM (N.D. Ga., 2003). Served as an expert for defendant Target Corp., a large retailer, in a case involving U.S. patent [4,707,592](#), claiming a method of conducting credit card sales. Case settled during Markman preparations. Contact: [Thomas P. Burke, Esq.](#), [Ropes & Gray LLP](#), 1211 Ave. of the Americas, New York, NY 10036.
20. *Viad Corp., v. C. Alan Cordial et al.*, No. 03-1408 (W.D. Pa., filed 2003). Served as an expert for defendants in an action alleging misappropriation of trade secrets relating to software for automating certain aspects of the exhibit booth and trade show industries. Status: case settled immediately before trial, after plaintiff's unsuccessful Daubert challenge of Dr. Shamos. Contact: [Barbara Scheib, Esq.](#), [Cohen & Grigsby, P.C.](#), 11 Stanwix Street, Pittsburgh, PA 15222. (D,R,T)
21. *Schade et al. v. Maryland State Bd. of Elections et al.*, Case No. C0497297 (Cir. Ct. Anne Arundel Cty. Md., 2004). Served as an expert for defendants in a case challenging the decision of the Board of Elections not to decertify Diebold AccuVote system. Result: Plaintiff's motion for preliminary injunction denied, upheld on appeal. Judge Manck's [opinion](#) cites Dr. Shamos' testimony as follows: "the court finds Dr. Shamos, Defendants' expert, to be the true voice of reason and the most credible expert in this matter." The denial of preliminary injunction was upheld by the Maryland Court of Appeals, which commented extensively on Dr. Shamos' testimony in its [opinion](#). Contact: [Michael Berman, Esq.](#), (formerly Maryland Deputy Attorney General), [Rifkin, Weiner, Livingston, Levitan & Silver, LLC](#). (R,T)
22. *Wexler et al. v. Lepore et al.*, Case No. 04-80216 (CIV-COHN) (S.D. Fla. 2004) . Served as an expert for defendants, various Florida election supervisors against claim by U.S. Congressman Robert Wexler that use of DRE voting machines without paper audit trails violates the equal protection clause of the U.S. Constitution. Dr. Shamos testified on Oct. 19, 2004. The trial judge rendered [judgment](#) in favor of defendants on Oct. 25. Contact: [Jason Vail, Esq.](#), then Assistant Attorney General, Department of Legal Affairs, The Capitol, Tallahassee, FL, now at [Allen Norton & Blue, PA](#). [Opinion](#). (T)
23. *Siemens Information and Communication Networks, Inc. v. Inter-Commercial Business Systems, Inc.*, Civil Action 3-03CV2171-L (N.D. Tex. 2004). Served as an expert for defendant against claim of copyright infringement based on reverse-engineered firmware resident in telephone switching systems. Status: case settled shortly after the submission of Dr. Shamos' rebuttal report on non-infringement. Contact: [Bill Whitehill, Esq.](#), [Gardere Wynne Sewell LLP](#), 1601 Elm St., Dallas, TX 75201. (R)
24. *Soverain Software LLC v. Amazon.com, Inc.*, C.A. No. 6:04-CV-14 (E.D. Tex. 2004). Served as an expert for plaintiff regarding asserted patents [5,708,780](#), [5,715,314](#) and [5,909,492](#), relating to the shopping cart paradigm of electronic commerce. Status: settled in Sept. 2005 with Amazon paying \$40 million to Soverain and taking a license under the patents in suit. Contact: [Ognian Shentov, Esq.](#), [Jones Day](#), 222 E. 41st St., New York, NY 10017. (D,R)
25. *CollegeNET, Inc. v. The Princeton Review, Inc.*, Case '051205KI (D. Ore. 2005). Served as an expert for defendant The Princeton Review, Inc. concerning alleged infringement of U.S. Patent [6,460,042](#) relating to online delivery of educational courses. Case settled in December

2007. Contact: [Peter Vogel, Esq.](#), [Gardere Wynne Sewell LLP](#), 1601 Elm St., Dallas, TX 75201. (R)

26. *CombineNet, Inc. v. Verticalnet, Inc.*, GD 05-018911 (Ct. Common Pleas, Allegheny Cty., PA). Served as an expert for plaintiff in an action for trade secret misappropriation relating to a system for conducting electronic auctions. Plaintiff won in arbitration. Contact: [Mark Knedeisen, Esq.](#), [K&L Gates LLP](#), 210 Sixth Avenue, Pittsburgh, PA 15222-2613. (T)

27. *RealSource, Inc. v. Best Buy Co., Inc. et al.*, No. A04-CA-771-LY (W.D. Tex.). Served as an expert for defendant Lowe's Companies, Inc., against a claim of infringement of U.S. patent [5,732,136](#) relating to validation of point-of-sale debit card transactions. Provided a tutorial to the Court during Markman proceedings concerning debit card technology. Defendants won summary judgment of non-infringement, affirmed by the Federal Circuit. Defendants Lowe's settled and was not involved in the appeal. Contact: [Michael S. Connor, Esq.](#), [Alston & Bird LLP](#), Bank of America Plaza, 101 South Tryon St, Suite 4000, Charlotte, NC 28280-4000. (R,T)

28. *DE Technologies, Inc. v. Dell, Inc. et al.*, No. 7:04-CV-00628 (W.D. Va.). Served as an expert for plaintiff DE Technologies, Inc., asserting a claim of infringement of U.S. patents [6,460,020](#) and [6,845,364](#), relating to a system for implementing international sales transactions. Case settled after and adverse summary judgment. However, the Court used Dr. Shamos' testimony in its [opinion](#). Contact: [David Marder, Esq.](#), [Robins Kaplan Miller & Ciresi LLP](#), 800 Boylston Street, 25th Floor, Boston, MA 02199. (D,R,T)

29. *Eaton Power Quality Corp. v. J.T. Packard & Associates*, No. 05 C 3545 (N.D. Ill. 2005). Served as expert for plaintiff in a claim of software copyright infringement involving a system for configuring industrial uninterruptible power supplies. Case settled in early 2007. Firm: [Dewey & LeBoeuf](#). Contact: [Keith P. Schoeneberger, Esq.](#), [Pasulka & Associates PC](#). (D,R)

30. *Taylor et al. v. Onorato et al.*, CA 06-481 (W.D. Pa 2006). Served as an expert for Commonwealth of Pennsylvania defendants in an action seeking to enjoin the use of electronic voting machines in Allegheny County, PA. Dr. Shamos testified at length in a preliminary injunction hearing held April 25-27, 2006 before Judge Lancaster. The injunction was denied on April 28. Suit was subsequently dropped by plaintiffs. Contact: [Mark Aronchick, Esq.](#), [Hangley Aronchick Segal Pudlin & Schiller](#), One Logan Square, 18th & Cherry Streets, 27th Floor, Philadelphia, PA 19103. (T)

31. *FedEx Ground Package System, Inc. v. Applications International Corp.*, CA No. 03-1512 (W.D. Pa.). Served as an expert for defendant counterclaiming for copyright infringement and trade secret misappropriation relating to software for maintaining occupational health and safety records. Dr. Shamos's testimony was [excluded](#) because he was unable to perform a side-by-side comparison of the original and accused works. Case has settled. Contact: [Ronald Hicks, Esq.](#), [Meyer, Unkovic & Scott LLP](#), 1300 Oliver Bldg., Pittsburgh, PA 15222. (D,R)

32. *NetMoneyIN, Inc. v. Verisign, Inc. et al.*, Cv-01-441-TUC-RCC (D. Ariz.). Served as an expert for defendants Bank of America Merchant Services, Inc. and Wells Fargo Bank, N.A., who

are accused of infringing claim 23 of U.S. patent [5,822,737](#), relating to an electronic payment system. Wells Fargo and Bank of America have settled. Contact: [K&L Gates LLP](#), State Street Financial Center, One Lincoln Street, Boston, Massachusetts 02111-2950. (D,R)

33. *Contois Music Technology, LLC v. Apple Computer, Inc.*, 2:05-CV-163 (D. Vermont, filed Feb. 13, 2006). Served as an expert for plaintiff in an action alleging that the Apple iTunes software infringed U.S. patent [5,864,868](#), relating to a method for selecting music from an electronic catalog. Case settled after a favorable Markman order. Contact: [John Rabena, Esq.](#), [Sughrue Mion PLLC](#), 2100 Pennsylvania Avenue, NW, Suite 800, Washington, DC 20037-3213.

34. *Banfield et al. v. Cortés*, 442 MD 2006 (PA Cmwlth. Ct.). Served as an expert for defendant Secretary of the Commonwealth of Pennsylvania in an action to compel the decertification of all electronic voting machines in Pennsylvania. In February 2008 Defendant successfully repelled an emergency motion for preliminary injunction. In August 2012, the [Court denied Petitioners' motion](#) for summary judgment, citing Dr. Shamos's expert report extensively. In October 2013, the Commonwealth Court granted summary judgment for the Secretary. The Pennsylvania Supreme Court [affirmed](#) on February 18, 2015. Contact: [Steven E. Bizar, Esq.](#), [Buchanan Ingersoll & Rooney PC](#), Two Liberty Place, 50 S. 16th St., Philadelphia, PA 19102-2555. (D,R)

35. *Remote Inventory Systems, Inc. v. WESCO Distribution, Inc.*, AAA Case No. 55 171 00493 05 (Pittsburgh, PA). Served as an expert for respondent in a case alleging misappropriation of trade secrets in a computerized inventory system. Contact: [Kirsten Rydstrom, Esq.](#), [Reed Smith LLP](#), 225 Fifth Ave., Pittsburgh, PA 15222. (D,R)

36. *SyncSort, Inc. v. Innovative Routines International, Inc.*, Civil Action No. 04-3623 (WHW) (D. New Jersey). Served as an expert witness for defendant in an action alleging misappropriation of trade secrets embodied in plaintiff's Unix sorting software. Dr. Shamos testified at a bench trial in January 2011. Case settled after an appeal to the Third Circuit was filed. Contact: [David R. Fine, Esq.](#), [K&L Gates LLP](#), 17 N. Second Street, 18th Floor, Harrisburg, PA 17101-1507. (D,R,T)

37. *Digital Impact, Inc. v. Bigfoot Interactive, Inc.*, Civil Action C05 00636 (CW) (N.D. Cal.). Served as an expert witness for defendant in an action alleging infringement of U.S. Patent [6,449,634](#), relating to determining which file formats can be processed by an email client. Result: defendant obtained summary judgment of non-infringement, upheld by the Federal Circuit. Contact: [Arthur Dresner, Esq.](#), [Duane Morris LLP](#), 1540 Broadway, New York, NY 10036. (D,R)

38. *Prism Technologies LLC v. Verisign, Inc. et al.*, CA 05-214-JJF (D. Del.). Served as an expert for plaintiff in an action alleging infringement of U.S. Patent [6,516,416](#), relating to use of a hardware key for authentication over networks. Defendants prevailed on summary judgment of non-infringement, which was upheld on appeal. Firm: [Robins Kaplan Miller & Ciresi LLP](#). Contact: [Dirk D. Thomas, Esq.](#), [McKool Smith](#), 1999 K Street, N.W., Suite 600, Washington, DC 20006. (R)

39. *AdvanceMe, Inc. v. Rapidpay LLC et al.*, Civil Action 6:05-cv-424 LED (E.D. Tex., Tyler Division). Served as an expert witness for plaintiff in an action alleging infringement of U.S. Patent [6,941,281](#), relating to an automated payment system for dividing credit card proceeds between a merchant and another party. Testified at a bench trial in July 2007 before Judge Davis, who held the patent infringed but invalid for obviousness. Firm: [Paul, Hastings LLP](#), Five Palo Alto Sq., Palo Alto, CA 94306. Contact: [Ronald S. Lemieux, Esq., Singularity LLP](#), 275 Shoreline Drive, Redwood Shores, CA 94065. (D,R,T)

40. *IBM Corp. v. Amazon.com, Inc.*, CA 9:06-CV-242-RHC (E.D. Tex., Lufkin Div.) and *IBM Corp. v. Amazon.com, Inc.*, CA 6:06-CV-452-LED (E.D. Tex., Marshall Div.). Served as an expert for IBM in related actions alleging infringement of U.S. Patents [5,319,542](#), [5,442,771](#), [5,446,891](#), [5,796,967](#) and 7,072,849, all concerning methods of conducting electronic transactions, and a counterclaim for infringement of U.S. Patent [5,826,258](#), concerning a method for querying semistructured data. Case settled early in discovery when the parties cross-licensed each other's patents. Contact: [Mark J. Ziegelbein, Esq., Dentons US LLP](#), 2000 McKinney Ave., Suite 1900, Dallas, TX 75201-1858.

41. *The MathWorks, Inc. v. COMSOL AB et al.*, CA 6:06-CV-334 (E.D. Tex., Tyler Division). Served as an expert for plaintiff The MathWorks, providers of the mathematical software system MATLAB, in an action alleging copyright infringement and infringement of U.S. Patents [7,051,338](#) and [7,181,745](#) concerning methods for invoking object methods from external environments. After trial, the case settled with defendant admitting infringement, paying \$12,000,000 in damages and waiving appeal rights. Contact: [Krista Schwartz, Esq., Jones Day](#), 77 W. Wacker Dr., Chicago, IL 60601-1692.

42. *Avante Int'l. Technology Corp. v. Diebold Election Systems et al.*, Case 4:06-CV-0978 TCM (E.D. Mo., Eastern Division). Served as an expert for defendants Sequoia Voting Systems and Premier Election Systems in an action alleging infringement of U.S. Patents [6,892,944](#), [7,036,730](#) and [7,077,313](#) concerning electronic voting technology. Dr. Shamos testified at a 5-day trial in February 2009. Result: The jury found Plaintiff's asserted claims invalid as anticipated and obvious. Contact: [Peter T. Ewald, Esq., Oliff & Berridge, PLC](#), 277 South Washington Street, Suite 500, Alexandria, VA 22314. (D,R,T)

43. *Netcraft Corp. v. eBay, Inc. and PayPal, Inc.*, Case 3:07-cv:00254-bbc (W.D. Wisc. 2007). Served as an expert for defendants in an action alleging infringement of U.S. Patents [6,351,739](#) and [6,976,008](#) concerning methods of billing for ecommerce transactions over the Internet. Defendants were granted summary judgment of non-infringement on Dec. 10, 2007, upheld on appeal. Firm: [Irell & Manella LLP](#), 180 Avenue of the Stars, Los Angeles, CA 90067. Contact: [Kenneth Weatherwax, Esq., Goldberg, Lowenstein & Weatherwax LLP](#), 1925 Century Park East, Suite 2120, Los Angeles, CA 90067.

44. *ACLU of Ohio et al. v. Brunner et al.*, Case 1:09 CV 0145 (N.D. Ohio 2008). Served as an expert witness in an action alleging that the use of central count optical scan voting should not be permitted in Cuyahoga County, as had been ordered by the county board of elections. A preliminary injunction was denied in February 2008. The case became moot and was dismissed in May 2008 when the Ohio Legislature granted by statute the relief requested by plaintiff,

prohibiting the use of central count opscan in Cuyahoga County. Contact: Meredith Bell-Platts, Esq., [ACLU Voting Rights Project](#), 2600 Marquis One Tower, Atlanta, GA 30303. (R)

45. *Ariba, Inc. v. Emptoris, Inc.*, Civil Action 9:07-CV-90-RHC (E.D. Tex. 2007). Served as an expert for Ariba in an action alleging infringement of U.S. Patents [6,216,114](#) and [6,499,018](#), relating to the conduct of electronic auctions. Dr. Shamos testified in a jury trial on infringement and validity. Result: verdict finding all asserted claims valid and willfully infringed. Contact: [Robert Fram, Esq.](#), [Covington & Burling LLP](#), One Front St., San Francisco, CA 94111. (D,R,T)

46. *EpicRealm Licensing, LP v. Autoflex Leasing Inc. et al.*, CA 5:07-CV-125 (E.D. Tex. 2005). Served as an expert for defendant Herbalife International of America, Inc. in an action alleging infringement of U.S. patents [5,894,554](#) and [6,415,335](#), relating to a system for managing generation of dynamic Internet web pages. All original defendants settled. See also the Oracle case below. Contact: [Ognian Shentov, Esq.](#), [Jones Day](#), 222 E. 41st St., New York, NY 10017. Also served as an expert for defendant FriendFinder in a separate trial in this action. After a jury trial before Judge Folsom, the patents were found valid and infringed, but the jury awarded only \$1.1M, the smallest amount testified to by defendant's damages expert. Contact: [Michael J. Sacksteder, Esq.](#), [Fenwick & West LLP](#), 555 California St., San Francisco, CA 94104. (D,R,T)

47. *Oracle Corporation v. EpicRealm Licensing, LP*, CA 2-06-414 (D. Del. 2006), later *Oracle Corporation v. Parallel Networks, LLC*. Served as an expert for Oracle in a declaratory judgment alleging invalidity of U.S. patents [5,894,554](#) and [6,415,335](#), relating to a system for managing generation of dynamic Internet web pages. The patents are the same as those in the EpicRealm case, above. Oracle obtained summary judgment of non-infringement, reversed on appeal to the Federal Circuit. Case settled in May 2011 on the eve of trial. Firm: [Kilpatrick Townsend & Stockton, LLP](#), 379 Lytton Ave., Palo Alto, CA 94301. Contact: [Theodore T. Herhold, Singularity LLP](#), 275 Shoreline Drive, Redwood Shores, CA 94065. (D,R)

48. *Saulic v. Symantec Corporation et al.*, Case No. SA CV 07-610 AHS (C.D. Cal., Santa Ana Division, 2007). Served as an expert for defendant Symantec in a removal action alleging violation of California Civil Code §1747.8, relating to the collection of personal identification information in connection with credit card transactions. Case settled. Original firm: Heller Ehrman. Contact: [Chad R. Fuller, Esq.](#), [Troutman Sanders LLP](#), 11682 El Camino Real, Suite 400, San Diego, CA 92121. (R)

49. *Gusciora et al. v. McGreevey et al.* (now *Gusciora v. Christie*), Docket No. MER-L-2691-04 (N.J. Super., Mercer County). Served as an expert for defendants, including the Governor and Attorney General of New Jersey, in a case alleging that the state's AVC Advantage voting machines are unconstitutionally insecure. A bench trial was held from January-May, 2009 before Judge Linda Feinberg. The Court's [opinion](#) adopts Dr. Shamos' testimony and comments on it extensively. Affirmed on appeal in October 2013. Contact: Leslie Gore, Esq., Asst. Atty. Gen'l., 25 Market Street, P.O. Box 112, Trenton, NJ 08625. (D,R,T)

50. *R.R. Donnelley & Sons Company v. Quark, Inc. et al.*, C.A. No. 06-00032-JJF (D. Del.). Served as an expert for plaintiff R.R. Donnelley in a case alleging infringement of U.S. Patents [6,205,452](#), [6,327,599](#), [6,844,940](#) and [6,952,801](#), relating to book assembly, imposition of graphics and control of electronic presses. Case has settled. Contact: [Stuart W. Yothers, Esq.](#), [Ropes & Gray LLP](#), 1251 Avenue of the Americas, New York, NY 10020.
51. *MOAEC, Inc. v. Pandora Media, Inc. et al.*, Case No. 07-cv-654-bbc (W.D. Wisc.). Served as an expert for plaintiff in a case alleging infringement of U.S. Patents [5,969,283](#), [6,232,539](#), [6,953,886](#) and [7,205,471](#), relating to systems for organizing and retrieving digital music. Two defendants obtained summary judgment of noninfringement; the remaining defendant settled. Contact: [Joshua Krumholz, Esq.](#), [Holland & Knight, LLP](#), 10 St. James Avenue, 11th Floor, Boston, MA 02116. (D,R)
52. *Web.com, Inc. v. The Go Daddy Group, Inc.*, Case No. CV07-01552-PHX-MHM (D. Ariz.). Served as an expert for defendant in a case alleging infringement of U.S. Patents [6,654,804](#), [6,789,103](#), [6,842,769](#) and [6,868,444](#), relating to methods for managing configuration of web servers and provision of Internet services. Case has settled. Firm: [Wilson Sonsini Goodrich & Rosati](#), 650 Page Mill Road, Palo Alto, CA 94304. Contact: [Richard G. Frenkel, Esq.](#), [Latham & Watkins LLP](#), 140 Scott Drive, Menlo Park, CA 94025.
53. *Hummel et al. v. Dynacraft BSC, Inc. et al.*, Case No. CV 052214 (Cal. Super. Marin Cty.). Served as an expert for defendants in an action alleging breach of contract for web hosting services. Dr. Shamos provided four hours of trial testimony. Result: verdict for the defense. Contact: [Joe B. Harrison, Esq.](#), [Gardere Wynne Sewell LLP](#), 1601 Elm St., Suite 3000, Dallas, TX 75201. (T)
54. *Tegg Corp. v. Beckstrom Electric Co. et al.*, Civil Action No. 2:08-CV-00435-NBF (W.D. Pa.). Served as an expert for defendants in a case alleging infringement of copyright in computer software for administering field maintenance of electrical equipment. Case has settled. Original firm: [Reed Smith LLP](#). Contact: [Richard D. Kelley, Esq.](#), [Bean Kinney & Korman](#), 2300 Wilson Blvd., Suite 700, Arlington, VA 22220.
55. *Cordance Corporation v. Amazon.com, Inc.*, Civil Action No. 06-491-MPT (D. Del.). Served as an expert for plaintiff in a case alleging infringement of U.S. Patents [5,862,525](#), [6,088,717](#) and [6,757,710](#), relating to an infrastructure for conducting online transactions. In August 2009 a jury found the '717 patent valid but not infringed and the '710 patent infringed but invalid. The finding of invalidity of the '710 patent was vacated by the Court on judgment as a matter of law. The Federal Circuit reversed and reinstated the jury's finding. Contact: [Robert M. Abrahamsen, Esq.](#), [Wolf, Greenfield & Sacks, P.C.](#), 600 Atlantic Avenue, Boston, MA 02210. (D,R, T)
56. *Anthurium Solutions, Inc. v. MedQuist, Inc. et al.*, Case No. 2:07-vcv-484 (DF/CE) (E.D. Tex.). Served as an expert for plaintiff in a case alleging infringement of U.S. Patent [7,031,998](#), relating to a distributed workflow system. Case settled ten days after responsive expert reports

were served. Contact: [Joshua Krumholz, Esq., Holland & Knight, LLP](#), 10 St. James Avenue, 11th Floor, Boston, MA 02116. (R)

57. *Performance Pricing, Inc. v. Google, Inc. et al.*, Case No. 2:07-cv-432(LED) (E.D. Tex.). Served as an expert for defendant Yahoo! in a case alleging infringement of U.S. Patent [6,978,253](#), relating to determining prices for items sold online. Case has settled as to defendant Yahoo!. Contact: [Michael A. Jacobs, Esq., Morrison & Foerster LLP](#), 425 Market Street, San Francisco, CA 94105. Also served as an expert for remaining defendants Google and AOL. In March 2010 the Court granted defendants' motion for summary judgment of noninfringement, affirmed by the Federal Circuit. Contact: [David A. Perlson, Esq., Quinn Emanuel Urquhart & Sullivan, LLP](#), 50 California Street, San Francisco, CA 94111. (D,R)

58. *Nationwide Power Solutions, Inc. et al., v. Eaton Electrical Inc.*, Case No. CV-8:07-0883-JVS (C.D. Cal.). Served as an expert for defendant/counterclaimant Eaton in a case alleging antitrust violations by Eaton arising out of proprietary servicing software in its uninterruptible power supplies. Case has settled. Contact: [James L. Day, Esq., Latham & Watkins LLP](#), 505 Montgomery Street, Suite 2000 San Francisco, CA 94111.

59. *CBS Interactive, Inc. v. Etilize, Inc.*, Case No. C -6-05378 (MHP) (N.D. Cal.). Served as an expert for plaintiff in a case alleging infringement of U.S. Patents [6,714,933](#) and [7,082,426](#), relating to web crawling technology to aggregate product information. Defendant consented to an injunction against further infringement and the case settled. Firm: [Winston & Strawn, LLP](#), 101 California Street, San Francisco, CA 94111. Contact: [Glenn E. Westreich, Esq., Hayes and Boone, LLP](#), 2033 Gateway Place, San Jose, CA 95110.

60. *Geographic Services, Inc. v. Anthony Collelo*, Case 2008-9961 (Fairfax Cty., Va.) Served as an expert for plaintiff in a case alleging misappropriation of trade secrets involving determining and proofing geographic names as applied to maps and satellite imagery. Case was dismissed by Judge Ney on technical legal grounds at the close of Plaintiff's case. The Virginia Supreme Court [reversed](#) and remanded the case for further proceedings. Case has settled. Contact: [Mark W. Wasserman, Esq., Reed Smith LLP](#), 3110 Fairview Park Drive, Suite 1400, Falls Church, VA 22042. (D,R,T)

61. *ODS Technologies, LP v. Magna Entertainment Corp, et al.*, CV 07-03265 DDP (D. Del.). Served as an expert for defendants in a case alleging infringement of U.S. Patents [5,830,068](#), [6,004,211](#), [6,089,981](#), [6,554,709](#) and [7,229,354](#), relating to off-track wagering systems and methods for restricting wagering based on location. Dr. Shamos submitted a declaration in support of summary judgment. Case settled before expert reports were due. Contact: [Virginia DeMarchi, Esq., Fenwick & West, LLP](#), 801 California Street, Mountain View, CA 94041. (R)

62. *Gannett Satellite Information Network, Inc. v. Office Media Network, Inc.*, C.A. No. 08-96-GMS (D.Del.). Served as an expert for defendant in a case alleging infringement of U.S. Patents [6,288,688](#), [6,622,826](#), [6,981,576](#) and [7,270,219](#), relating to display of advertising information

on screens in elevators. Case settled shortly after Dr. Shamos's deposition. Contact: [Steven R. Trybus, Esq., Jenner & Block LLP](#), 353 N. Clark St., Chicago, IL 60654. (D,R)

63. *Avante Int'l. Technology Corp. v. Premier Election Solutions et al.*, Case 4:06-CV-091367-ERW (E.D. Mo., Eastern Division). Served as an expert for defendants Sequoia Voting Systems and Premier Election Systems in an action alleging infringement of U.S. Patents [7,422,150](#), and [7,431,209](#) concerning electronic voting technology. Case settled in December 2009. Contact: [Peter T. Ewald, Esq., Oliff & Berridge, PLC](#), 277 South Washington Street, Suite 500, Alexandria, VA 22314. (R)

64. *Accenture Global Services GmbH et al. v. Guidewire Software, Inc.*, Civ. No. 07-826-SLR (D. Del.). Served as an expert for Accenture in a case alleging misappropriation of trade secrets and infringement of U.S. Patents [7,013,284](#) and [7,017,111](#), relating to automated insurance claim handling. The District Court found the asserted system claims invalid under 35 U.S.C. §101, affirmed by the Federal Circuit at 2011-1486. Case settled in Oct. 2011. Original firm: Morrison & Foerster, LLP. Contact: [L. Scott Oliver, Esq., K&L Gates LLP](#), 630 Hansen Way, Palo Alto, CA 94304. (D,R)

65. *Alexsam, Inc. v. Evolution Benefits, Inc. et al.*, Case No. 2:07cv288-TJW (E.D. Tex.). Served as an expert for plaintiff in a case alleging infringement of U.S. Patent [6,000,608](#), relating to multifunction epayment cards. Case settled four weeks after Dr. Shamos's deposition. Original firm: Wolf, Greenfield & Sacks, P.C. Contact: [James Foster, Esq., Hayes Messina Gilman Hayes LLC](#), 200 State St., 6th Floor, Boston, MA 02109. (D,R)

66. *Motivation Innovations, LLC v. DSW Inc. et al.*, C.A. No. 08-334-SLR (D. Del.). Served as an expert for defendant DSW, Inc. in a case alleging infringement of U.S. Patent [5,612,527](#), relating to a system for redeeming discount offers at point of sale. Case has settled. Contact: [Drew Blatt, Ph.D., Esq., Wood, Heron & Evans LLP](#), 2700 Carew Tower 441 Vine Street Cincinnati, Ohio 45202.

67. *Discovery Communications, Inc. v. Amazon.com, Inc.*, C.A. No. 09-178-ER (D. Del.). Served as an expert for plaintiff Discovery Communications in a case alleging infringement of plaintiff's U.S. Patents [5,986,690](#), [6,657,173](#), [7,298,851](#), [7,299,501](#), [7,336,788](#) and [7,401,286](#), relating to electronic book viewers and electronic book selection and delivery systems, and defendant-counterclaimant's U.S. Patents [6,029,141](#) and [7,337,133](#), relating to Internet-based customer referral systems. Case has settled. Contact: [Brent P. Lorimer, Esq., Workman | Nydegger](#), 1000 Eagle Gate Tower, 60 East South Temple Salt Lake City, UT 84111.

68. *Amazon.com v. Discovery Communications, Inc.*, No. 2:09-cv-0681-RSL (W.D. Wash.). Served as an expert for defendant Discovery Communications in a case alleging infringement of U.S. Patents [6,006,225](#), [6,169,986](#), relating to refinement of online search queries, and U.S. Patents [6,266,649](#) and [6,317,722](#), relating to generation of online recommendations. Case has settled. Contact: [Brent P. Lorimer, Esq., Workman | Nydegger](#), 1000 Eagle Gate Tower, 60 East South Temple Salt Lake City, UT 84111.

69. *IMX, Inc. v. E-Loan, Inc. and Banco Popular North America, Inc.*, No. 09-cv-20965 (S.D. Fla.). Served as an expert for defendants in a case alleging infringement of U.S. Patent [5,995,947](#), relating to an interactive loan processing and mortgage trading system. Case was stayed pending reexamination. On appeal after reexamination, all but four of the asserted claims were cancelled. In CBM2015-00012, all asserted claims were found unpatentable under §101. Case has settled. Contact: [Samuel A. Lewis, Esq.](#), [Feldman Gale, PA](#), One Biscayne Tower, 30th Floor, 2 South Biscayne Blvd., Miami, FL 33131. (D,R)

70. *Soverain Software LLC v. CDW Corp. et al.*, C.A. No. 6:07-CV-511 (E.D. Tex.). Served as an expert for plaintiff in a case alleging infringement of U.S. Patents [5,715,314](#), [5,909,492](#), and [7,272,639](#), relating to methods of conducting electronic commerce. All defendants settled except Newegg, Inc. Dr. Shamos testified on validity at a jury trial in April 2010. Result: all claims valid; the '314 and '492 claims infringed, with a running royalty assessed against Newegg. After trial, the Court found the '639 patent infringed as a matter of law. In January 2013 the Federal Circuit found the asserted claims obvious as a matter of law, The Supreme Court declined review. Contact: [Ognian Shentov, Esq.](#), [Jones Day](#), 222 E. 41st St., New York, NY 10017. (D,R,T)

71. *Netcraft Corp. v. AT&T Mobility LLC et al.*, C.A. No. 07-651-GMS (D. Del.). Served as an expert for defendants in a case alleging infringement of U.S. Patents [5,974,221](#), [6,351,738](#) and [6,411,940](#), relating to electronic commerce billing methods. Case settled two months after Dr. Shamos's deposition. Contact: [H. Jonathan Redway, Esq.](#), [Dickinson Wright PLLC](#), 1875 Eye St., Washington, DC 20006. (D,R)

72. *ValueClick, Inc. v. Tacoda, Inc., AOL, LLC and Platform-A, Inc.*, Case No. 2:08-cv-04619 DSF (JCx) (C.D. Cal.). Served as an expert for defendants in a case alleging infringement of U.S. Patents [5,848,396](#) and [5,991,735](#), relating to software and methods for creating psychographic profiles of network users. Case settled in May 2010. Original firm: Orrick, Herrington & Sutcliffe, LLP. Contact: [Paul R. Gupta, Esq.](#), [DLA Piper](#), 1251 Avenue of the Americas, New York, NY 10020.

73. *SP Technologies, Inc. v. Garmin Limited et al.*, Civil Action No. 08-CV-3248 (N.D. Ill.). Served as an expert for defendant TomTom, Inc. in a case alleging infringement of U.S. Patent [6,784,873](#), relating to graphical keyboards on touchscreens. Defendants prevailed on summary judgment of invalidity. Contact: [Brian Pandya, Esq.](#), [Wiley Rein LLP](#), 1776 K Street NW, Washington DC 20006. (D,R)

74. *ePlus, Inc. v. Lawson Software, Inc.*, Civil Action No. 3:09-cv-620 (E.D. Va.). Served as an expert for defendant in a case alleging infringement of U.S. Patents [6,023,683](#), [6,055,516](#) and [6,505,172](#), relating to electronic procurement systems. Dr. Shamos testified at a jury trial in Richmond in January 2011. Result: No infringement as to most accused configurations; infringement as to others. Past damages were precluded by the Court. On appeal, the Federal Circuit found the system claims invalid as indefinite. Contact: [Daniel McDonald, Esq.](#), [Merchant & Gould PC](#), 3200 IDS Center, 80 South Eighth Street, Minneapolis, MN, 55402. (D,R,T)

75. *Bed Bath & Beyond, Inc. v. Sears Brands, LLC*, Civil Action 08 CV 5839-SDW-MCA (D. N.J.). Served as an expert for plaintiff in a declaratory judgment action regarding alleged infringement of U.S. Patent [5,970,474](#), relating to retail gift registry systems. Case has settled. Contact: [William Mentlik, Esq.](#), [Lerner David Littenberg, Krumholz & Mentlik LLP](#), 600 South Avenue West, Westfield, NJ 07090. (D,R)
76. *Transauction, LLC v. eBay, Inc.*, Case No. 3:09-cv-3705-SJ (N.D. Cal.). Served as an expert for defendant in a case alleging infringement of U.S. Patent [7,343,339](#), relating to guarantees in online auctions. Case settled after expert reports were submitted. Firm: [Irell & Manella LLP](#), 1800 Avenue of the Stars, Suite 900, Los Angeles, CA 90067. Contact: [Peter E. Gratzinger, Esq.](#), [Munger, Tolles & Olson LLP](#), 355 South Grand Avenue, Los Angeles, CA 90071. (R)
77. *SDG Corporation v. Patrizzi & Co. Auctioneers SA et al.*, ICDR Case No. 50 117 T 00313 09 (Int'l. Centre for Dispute Resolution). Served as an expert for claimant in an arbitration alleging breach of contract to produce software for operating online auctions. Dr. Shamos testified at arbitration in October 2010. Award for SDG on all claims and denial of all of Patrizzi's counterclaims. Contact: [Bruce Fox, Esq.](#), [Obermayer Rebmann Maxwell & Hippel LLP](#), One Mellon Center, Suite 5240, Pittsburgh, PA 15219. (D,R,T)
78. *Walker Digital, LLC v. Capital One Services, LLC et al.*, Civil Action 1:10cv212 (JFA) (E.D. Va.). Served as an expert for defendants in a case alleging infringement of U.S. Patents [5,970,478](#) and [6,374,230](#), relating to customizing and pricing credit card accounts. Defendants prevailed on summary judgment of non-infringement supported by a declaration from Dr. Shamos. Affirmed by the Federal Circuit on July 28, 2011. Contact: [Charles S. Barquist, Esq.](#), [Morrison & Foerster LLP](#), 555 West Fifth Street, Suite 3500, Los Angeles, CA 90013. (R)
79. *Voter Verified, Inc. v. Premier Election Solutions, Inc. et al.*, Case No. 6:09-cv-1968-19KRS (M.D. Fla.). Served as an expert for defendants, manufacturers of voting equipment, in a case alleging infringement of U.S. Patents [6,769,613](#) and [RE40,449](#), relating to paper trail verification of ballots. The Court [denied](#) a Daubert motion to exclude testimony by Dr. Shamos. Summary judgment of non-infringement granted July 28, 2011, affirmed by the Federal Circuit on November 5, 2012. All claims of the '449 patent were found non-statutory by the Federal Circuit in 2018. Contact: [Robert M. Evans, Jr., Esq.](#), [Senniger Powers LLP](#), 100 North Broadway, 17th Floor, St. Louis, MO 63102. (R)
80. *Elder et al. v. National Conference of Bar Examiners*, No. C 11-00199 SI (N.D. Cal.). Served as an expert for disabled plaintiffs in a case seeking an injunction to permit them to take the bar examination in electronic format. Preliminary injunction granted Feb. 16, 2011. Plaintiff took the bar exam, passed and was awarded \$224,000 in attorney's fees. Contact: [Daniel F. Goldstein, Esq.](#), [Brown, Goldstein & Levy, LLP](#), 120 E. Baltimore St., Suit 1700, Baltimore, MD 21202. (R)
81. *Ameranth, Inc. v. Menusoft Systems Corp., et al.*, Civil Action 2-07-CV-271 TJW/CE (E.D. Tex.). Served as an expert for plaintiff in a case alleging infringement of U.S. Patents [6,384,850](#), [6,871,325](#) and [6,982,733](#), relating to synchronous updating of restaurant menus on wireless devices. After trial, the jury found the patents not infringed. Case settled while an

appeal to the Federal Circuit was pending. Contact: John W. Osborne, Esq., Osborne Law LLC, 33 Habitat Lane, Cortlandt Manor, NY 10567. (D,R,T)

82. *BuyFigure.com, Inc. v. Autotrader.com et al.*, Case No. 06391 (Ct. of Common Pleas of Philadelphia County, PA, 2010). Served as an expert for defendants in a case alleging misappropriation of trade secrets concerning a method of selling automobiles over the Internet. Summary judgment was granted in Defendants' favor in August 2012. Contact: [Howard D. Scher, Esq.](#), [Buchanan Ingersoll & Rooney, P.C.](#), Two Liberty Place, 50 S. 16th Street, Philadelphia, PA 19102. (R)

83. *Soverain Software LLC v. J.C. Penney Corp., Inc. et al.*, C.A. No. 6:09-CV-274 (E.D. Tex.). Served as an expert for plaintiff on validity issues in a case alleging infringement of U.S. Patents [5,715,314](#), [5,909,492](#), and [7,272,639](#), relating to methods of conducting electronic commerce. The '639 patent was dropped before trial and all defendants settled except Avon Products and Victoria's Secret. After trial, the jury found all claims valid and infringed, and awarded damages of \$9.2 million against Victoria's Secret and \$8.7 million against Avon. Contact: [Robert B. Wilson, Esq.](#), [Quinn Emanuel Urquhart & Sullivan, LLP](#), 51 Madison Avenue, 22nd Floor, New York, NY 10010. (D,R,T)

84. *AOL, LLC, et al. v. Yahoo! Inc. et al.*, No. 09 Civ. 3774 (WHP) (S.D.N.Y.). Served as an expert for declaratory judgment plaintiff AOL in a case alleging infringement of U.S. Patents [6,078,866](#), [6,269,361](#), [6,546,386](#), [6,907,566](#), [7,043,483](#), [7,107,264](#), [7,373,599](#), and [7,702,541](#), relating to online advertising placement and targeted e-commerce. Case settled in Feb. 2011. Original firm: Orrick, Herrington & Sutcliffe LLP. Contact: William B. Tabler II, Esq., [Flextronics](#), 6201 America Center Drive, San Jose, CA 95002.

85. *Accenture Global Services GmbH et al. v. Guidewire Software, Inc.*, Civ. No. 09-848-SLR (D. Del.). Served as an expert for Accenture in a case alleging infringement of U.S. Patent [7,617,240](#), relating to automated insurance claim handling. Case settled in Oct. 2011. Original firm: Morrison & Foerster, LLP. Contact: [L. Scott Oliver, Esq.](#), [K&L Gates LLP](#), 630 Hansen Way, Palo Alto, CA 94304. (D,R)

86. *Amdocs (Israel) Limited v. Openet Telecom, Inc. et al.*, Case 1:10-cv-00910-LMB-TRJ (D. Del.). Served as an expert for Defendant Openet in a case alleging infringement of U.S. Patents [6,836,797](#) and [7,631,065](#), relating to aggregated billing for network services. Summary judgment of non-infringement granted in favor of Defendants in Sept. 2012. The Court's [opinion](#) cites Dr. Shamos' testimony. Judgment reversed on appeal in 2014, but on remand, all claims were invalidated as claiming non-statutory subject matter. After a second appeal, the §101 ruling was reversed. Case settled during trial in 2018. Contact: [Brian Pandya, Esq.](#), [Wiley Rein LLP](#), 1776 K Street NW, Washington DC 20006. (D,R)

87. *Cross-Atlantic Capital Partners, Inc. v. Facebook, Inc. et al.*, Case 07-CV-2768 JP (E.D. Pa.). Served as an expert for plaintiff in a case alleging infringement of U.S. Patent [6,519,629](#), relating to establishment of online communities. Asserted claims were cancelled upon reexamination. Case has been dismissed. Original firm: McShea/Tecce PC. Contact: [Frederick](#)

[Tecce, Esq.](#), [Panitch Schwarze Belisario & Nadel LLP](#), One Commerce Square, 2005 Market Street, Suite 2200, Philadelphia, PA 19103. (R)

88. *Chavez et al. v. Bennett et al.*, CV 2006-007000 (Ariz. Super., Maricopa Cty.). Served as an expert for defendant Secretary of State of Arizona and county defendants in a case alleging that the electronic voting systems used in Arizona violated the rights of voters. Case was voluntarily dismissed by plaintiffs in May 2011. Contact: Laurence G. Tinsley, Jr., Esq, Senior General Counsel, Maricopa County Office of General Litigation Services, 301 W. Jefferson St., Phoenix, AZ 85003.

89. *Bonnette v. District of Columbia Court of Appeals and National Conference of Bar Examiners*, No. 11-cv-01053-CKK (D. D.C.). Served as an expert for a disabled plaintiff in a case seeking a preliminary injunction permitting her to take the bar examination in electronic format. Injunction granted. Case subsequently settled with Plaintiff receiving \$141,000 in attorneys' fees and costs. Contact: [Daniel F. Goldstein, Esq.](#), [Brown, Goldstein & Levy, LLP](#), 120 E. Baltimore St., Suit 1700, Baltimore, MD 21202.

90. *Jones v. National Conference of Bar Examiners et al.*, No. 5:11-cv-00174-cr (D. Vermont). Served as an expert for a disabled plaintiff in a case seeking an injunction permitting to take the bar examination using assistive technology. The preliminary injunction was granted. Plaintiff was awarded \$275,000 in attorneys' fees and costs.. Contact: [Daniel F. Goldstein, Esq.](#), [Brown, Goldstein & Levy, LLP](#), 120 E. Baltimore St., Suit 1700, Baltimore, MD 21202. (R)

91. *AlmondNet, Inc. v. Microsoft Corporation*, Case 10-CV-298 (W.D. Wisc.). Served as an expert for plaintiff and counterclaim defendant AlmondNet in a case alleging infringement of U.S. Patents [6,973,436](#), [7,072,853](#), [7,454,364](#) and [7,822,637](#) by Microsoft, relating to bidding for Internet ad placement, and infringement of U.S. Patent [6,632,248](#) by AlmondNet, relating to customization of network documents via a unique user identifier. Microsoft obtained summary judgment of non-infringement. Contact: [Meredith Zinanni, Esq.](#), [Kirkland & Ellis LLP](#), 300 N. LaSalle, Chicago, IL 60604.

92. *Kelora Systems, LLC. v. Target Corporation et al.*, Case 10-CV-683 (W.D. Wisc.). Served as an expert for defendant Mason Companies, Inc. in a case alleging infringement of U.S. Patent [6,275,821](#), relating to guided parametric searching in online catalogs. Case settled as to this defendant in July 2011. The Court granted summary judgment of invalidity and non-infringement as to the other defendants, affirmed by the Federal Circuit. Contact: [Shane A. Brunner, Esq.](#), [Merchant & Gould](#), 10 East Doty St., Suite 600, Madison, WI 53703.

93. *TNS Media Research, LLC et al. v. TRA Global, Inc.*, Case 1:2011-CV-4039 (SAS) (S.D. N.Y.). Served as an expert for declaratory judgment plaintiffs in case alleging infringement of U.S. Patent [7,729,940](#), relating to anonymous matching of program viewing data from television set-top boxes with purchase data from other sources. Patentee's motion for preliminary injunction was [denied](#) on Sept. 23, 2011. Plaintiffs' motion for summary judgment of non-infringement was granted on October 3, 2013. Reversed and remanded by the Federal

Circuit. Contact: [Michael Albert, Esq.](#), [Wolf, Greenfield & Sacks, P.C.](#), 600 Atlantic Avenue, Boston, MA 02210. (R)

94. *Accenture Global Services GmbH et al. v. Guidewire Software, Inc.*, Case 3:11-03563-JSW (N.D. Cal.); *Guidewire Software, Inc. v. Accenture PLC et al.*, Case 4:11-cv-04686-LB (N.D. Cal.). Served as an expert for Accenture in related cases alleging infringement by Guidewire of U.S. Patents [6,574,636](#), [7,409,355](#) and [7,979,382](#), relating to systems for insurance claim handling and alleging infringement by Accenture of U.S. Patents [5,630,069](#), [5,734,837](#), [6,058,413](#) and [6,073,109](#), relating to workflow management systems. Cases settled in Oct. 2011. Contact: [Colleen Garlington, Esq.](#), [Kirkland & Ellis LLP](#), 300 N. LaSalle St., Chicago, IL 60604.

95. *XPRT Ventures, LLC v. eBay, Inc. et al.*, C.A. 1:2010-cv-595 (SLR) (D. Del.). Serving as an expert for Defendants eBay and PayPal in a case alleging infringement of U.S. Patents [7,483,856](#), [7,512,563](#), [7,567,937](#), [7,599,881](#), [7,610,244](#), [7,627,528](#), relating to methods of paying for items purchased through electronic auctions. Case has been stayed pending reexamination. Contact: [Adrian Percer, Esq.](#), [Weil, Gotshal & Manges, LLP](#), 201 Redwood Shores Parkway, Redwood Shores, CA 94065. (D,R)

96. *Rich Media Club, LLC et al. v. Nikolai Mentchoukov et al.*, Civil No. 2:11-cv-01202-SA (D. Utah). Served as an expert for Plaintiffs in a case alleging breach of an employment contract, unfair competition concerning systems for placing advertisements on web pages and infringement of U.S. Patent [7,313,590](#), relating to communication between client and server computers without requiring a browser. Contact: [Jared Richards, Esq.](#), [Bennett Tueller Johnson & Deere, LLC](#), 3165 East Millrock Drive, Suite 500, Salt Lake City, Utah 84121. (R)

97. *Franklin Inventions LLC v. Election Systems & Software, Inc.*, Case No: 2:09-cv-377 (E.D. Tex.). Served as an expert for Defendants in a case alleging infringement of U.S. Patents [6,986,999](#), [7,243,846](#) and [7,575,164](#), relating to voter-verifiable voting systems. Case settled after a declaration concerning invalidity was submitted by Dr. Shamos. Contact: [Robert M. Evans, Jr., Esq.](#), [Senniger Powers LLP](#), 100 North Broadway, 17th Floor, St. Louis, MO 63102. (R)

98. *Illinois Computer Research, LLC v. HarperCollins Publishers, LLC, et al.*, Case No.: 10-cv-9124 (S.D.N.Y.). Served as an expert for Defendants in a case alleging infringement of U.S. Patent [7,111,252](#), relating to limiting access to electronic books. Case settled after Markman. Contact: [Brian S. Rosenbloom, Esq.](#), [Rothwell, Figg, Ernst & Manbeck, P.C.](#), 607 14th Street, N.W., Suite 800, Washington, DC 20005. (R)

99. *Realtime Data, LLC d/b/a IXO v. Morgan Stanley et al.*, Case No.: 11 Civ. 6696 (RJH), *Realtime Data, LLC d/b/a IXO v. CME Group Inc. et al.*, Case No.: 11 Civ. 6701 (RJH), *Realtime Data, LLC d/b/a IXO v. Thompson Reuters, et al.*, Case No.: 1:2011-cv-06704 (RJH) (S.D.N.Y.). Served as an expert for Plaintiff in three consolidated cases alleging infringement of U.S. Patents [7,417,568](#), [7,714,747](#), and [7,777,651](#), relating to compression and decompression of financial data streams. Summary judgment granted for defendants, upheld by the Federal

Circuit. Contact: [Dirk D. Thomas, Esq.](#), [McKool Smith](#), 1999 K Street, N.W., Suite 600, Washington, DC 20006. (D,R,T)

100. *Mulhern Belting, Inc. v. Tele-Data Solutions, Inc.*, Civil Action L-2258-10 (Sup. Ct. Bergen Cty. NJ). Served as an expert for defendant Vertical Communications, Inc. in a case alleging breach of contract and fraud in connection with the installation of an integrated voice-over-IP (VoIP) telecommunications system. Case has settled. Contact: [John J. Abromitis, Esq.](#), [Courter, Kobert & Cohen P.C.](#), 1001 Route 517, Hackettstown, NJ 07840. (R)

101. *Decision Support, LLC v. Election Systems & Software, Inc.*, Case No: 3:10cv90 (W.D. N.C.). Served as an expert for Defendants in a case alleging infringement of U.S. Patent [7,497,377](#), relating to electronic voter registration and pollbook systems. Case has settled. Contact: [Robert M. Evans, Jr., Esq.](#), [Senniger Powers LLP](#), 100 North Broadway, 17th Floor, St. Louis, MO 63102. (R)

102. *Rovi Corporation et al. v. Amazon.com, Inc. et al.*, Case No. 11-cv-00003-RGA (D. Del.). Served as an expert for Plaintiffs in a case alleging infringement of U.S. Patents [5,988,078](#), [6,275,268](#), [6,769,128](#), [7,493,643](#) and [7,603,690](#), relating to customized on-screen television guides. The parties stipulated to entry of judgment of noninfringement. Contact: [Ragesh L. Tangri, Esq.](#), [Durie Tangri LLP](#), 217 Leidesdorff Street, San Francisco, CA 94111.

103. *Certain Products Containing Interactive Program Guide and Parental Control Technology*, USITC Inv. No. 337-TA-820. Served as an expert for Complainants Rovi Corporation et al. and against Vizio, Inc. et al. in an International Trade Commission proceeding involving alleged infringement of U.S. Patents [6,701,523](#), [7,047,547](#), [7,493,643](#) and [RE41,993](#), relating to v-chips and electronic TV program guides. Case has settled. Contact: [Hong S. Lin, Esq.](#), [Paul Hastings LLP](#), 1117 S. California Avenue, Palo Alto, CA 94304. (R)

104. *Rovi Corporation et al. v. Roku, Inc.*, Case No. 12-cv-2185 EJD (N.D. Cal.). Served as an expert for Plaintiffs in a case alleging infringement of U.S. Patent [6,898,762](#), relating to a client/server electronic television program guide. Voluntarily dismissed by plaintiff without prejudice. Contact: [Hong S. Lin, Esq.](#), [Paul Hastings LLP](#), 1117 S. California Avenue, Palo Alto, CA 94304. , 275 Middlefield Road Suite 100, Menlo Park, CA 94025.

105. *Rovi Corporation et al. v. LG Electronics, Inc. et al.*, Case No. 12-cv-00545-SLR (D. Del.). Served as an expert for Plaintiffs in a case alleging infringement of U.S. Patents [6,898,762](#), [7,065,709](#), [7,225,455](#), [7,493,643](#) and [8,112,776](#), relating to electronic television program guides. Case has settled. Contact: [Hong S. Lin, Esq.](#), [Paul Hastings LLP](#), 1117 S. California Avenue, Palo Alto, CA 94304. .

106. *Rovi Corporation et al. v. Vizio, Inc.*, Case No. 12-cv-00546-SLR (D. Del.). Served as an expert for Plaintiffs in a case alleging infringement of U.S. Patents [6,898,762](#), [7,065,709](#), [7,103,996](#) and [8,112,776](#), relating to electronic television program guides. Case has settled. Contact: [Hong S. Lin, Esq.](#), [Paul Hastings LLP](#), 1117 S. California Avenue, Palo Alto, CA 94304.

107. *Rovi Corporation et al. v. Mitsubishi Electric Corp. et al.*, Case No. 12-cv-00547-SLR (D. Del.). Served as an expert for Plaintiffs in a case alleging infringement of U.S. Patents [6,701,523](#), [7,225,455](#) and [7,493,643](#), relating to electronic television program guides. Case has settled. Contact: [Hong S. Lin, Esq.](#), [Paul Hastings LLP](#), 1117 S. California Avenue, Palo Alto, CA 94304. .

108. *Netflix, Inc. v. Rovi Corporation et al.*, Case No. 11-cv-06591-PJH (N.D. Cal.). Served as an expert for Defendants in a declaratory judgment case seeking a declaration of non-infringement of U.S. Patents [6,305,016](#), [6,898,762](#), [7,100,185](#), [7,103,906](#) and [7,945,929](#), relating to electronic television program guides. Summary judgment was granted declaring all asserted claims invalid under 35 U.S.C. §101, affirmed by the Federal Circuit. Contact: [Hong S. Lin, Esq.](#), [Paul Hastings LLP](#), 1117 S. California Avenue, Palo Alto, CA 94304. (R)

109. *Certain Products Containing Interactive Program Guide and Parental Control Technology*, USITC Inv. No. 337-TA-845. Served as an expert for Complainants Rovi Corporation et al. and against Netflix, Inc. et al. in an International Trade Commission proceeding involving alleged infringement of U.S. Patents [6,701,523](#), [6,898,762](#), [7,065,709](#), [7,103,906](#), [7,225,455](#), [7,493,643](#) and [8,112,776](#), relating to v-chips and electronic TV program guides. On Initial Determination, all claims Dr. Shamos testified about were found valid. The import requirement was found not satisfied and no infringement was found. Contact: [Hong S. Lin, Esq.](#), [Paul Hastings LLP](#), 1117 S. California Avenue, Palo Alto, CA 94304. (D,R,T)

110. *Yardi Systems, Inc. v. Realpage, Inc. et al.*, Case No. 2:11-cv-0090-ODW-JEM (C.D. Cal.). Served as an expert for Defendants in an action alleging misappropriation of trade secrets, unfair competition, violation of the Computer Fraud and Abuse Act, the Comprehensive Computer Data Access and Fraud Act (Cal. Penal Code §502) and the Digital Millennium Copyright Act, arising out of provision of cloud-based property management systems. Case has settled. Contact: [Susan van Keulen, Esq.](#), [O'Melveny & Myers LLP](#), 2765 Sand Hill Road, Menlo Park, CA 94025.

111. *Long Range Systems, LLC v. HME Wireless, Inc.*, Civil Action 3:12-cv-03659-P (N.D. Tex.). Served as an expert for plaintiff in a case alleging infringement of U.S. Patent [6,712,278](#), relating to a wireless system for locating a customer's table in a restaurant. Case was dismissed by plaintiff. Contact: [David Cabello, Esq.](#), [Wong, Cabello, Lutsch, Rutherford & Brucculeri, LLP](#), 20333 SH 249, Suite 600, Houston, Texas 77070. (R)

112. *EdiSync Systems, LLC v. Centra Software, Inc. et al.*, Civil Action 03-cv-01587-WYD-MEH (D. Colo.). Served as an expert for Defendant Saba Software Inc. in a case alleging infringement of U.S. Patent [5,799,320](#), relating to multi-author document editing systems. Case has settled. Contact: [Robert M. Abrahamsen, Esq.](#), [Wolf, Greenfield & Sacks, P.C.](#), 600 Atlantic Avenue, Boston, MA 02210. (D,R)

113. *TecSec, Inc. v. IBM et al.*, Case No. 1:10-cv-115-LMB/TCB (E.D. Va.). Served as an expert for Defendant SAS Institute, Inc. in a case alleging infringement of U.S. Patents [5,369,702](#), [5,680,452](#), [5,717,755](#) and [5,898,781](#), relating to the Distributed Cryptographic Object Method, allowing embedding of encrypted objects within other objects. The Court entered judgment of non-infringement after *Markman*. Affirmed by the Federal Circuit at 2011-1303. Contact:

[Thomas R. Goots, Esq.](#), [Jones Day](#), North Point, 901 Lakeside Avenue, Cleveland, Ohio 44114-1190.

114. *Integrated Technological Systems, Inc. v. Green Dot Corporation*, Civ. Action No. 2:11-cv-01626-GMN-(GWF) (D. Nev.). Served as an expert for Defendant in a case alleging infringement of U.S. Patent [7,912,786](#), relating to an electronic payment system for transferring money between debit card accounts. Case has settled. Contact: [Benjamin J. Sodey, Esq.](#), [Bryan Cave LLP](#), One Metropolitan Square (211 North Broadway), Suite 3600, St. Louis, MO 63102-2750.

115. *Hausen et al. v. PS Illinois Trust*, Case No. 11-cv-06888 (N.D. Ill.). Served as an expert for Plaintiff in a case concerning the reasonableness of credit card and email notification practices employed by a public storage facility prior to selling customers' stored goods. Case has settled. Contact: [Jeffrey S. Becker, Esq.](#), [Swanson, Martin & Bell, LLP](#), 330 N. Wabash, Suite 3300, Chicago, IL 60611. (D,R)

116. *Linksmart Wireless Technology, LLC v. T-Mobile, USA, Inc. et al.*, Case 2:08-cv-264-DF-CE (E.D. Texas). Served as an expert for Defendant Choice Hotels International, Inc. in a case alleging infringement of U.S. Patent [6,778,118](#), relating to rule-based redirection of Internet service requests based on a user ID. Case has settled. Contact: [Gregory R. Lyons, Esq.](#), [Wiley Rein LLP](#), 1776 K Street NW, Washington DC 20006.

117. *SAP America, Inc. v. Purple Leaf, LLC et al.*, Case No. 4:11-cv-04601-PJH (N.D. Cal.). Served as an expert for declaratory judgment plaintiff SAP in a case alleging infringement of U.S. Patents [7,603,311](#) and [8,027,913](#), relating to methods for conducting payment transactions over the Internet. Case has settled. Original firm: Simpson Thatcher & Bartless LLP. Contact: [Brian McCloskey, Esq.](#), [Greenberg Traurig, LLP](#), MetLife Building, 200 Park Ave., New York, NY 10166.

118. *Ameranth, Inc. v. PAR Technology Corp., et al.*, Civil Action 2-10-CV-294 JRG-RSP (E.D. Tex.). Served as an expert for plaintiff in a case alleging infringement of U.S. Patents [6,384,850](#) and [6,871,325](#), relating to synchronous updating of hospitality applications and data on wireless devices. Case settled after expert reports were served. Contact: John W. Osborne, Esq., Osborne Law LLC, 33 Habitat Lane, Cortlandt Manor, NY 10567. (R)

119. *Digital-Vending Services International, LLC, v. The University of Phoenix, Inc. et al.*, Civil Action 2:09-cv-555-AWA-TEM (E.D. Va.). Served as an expert for plaintiff in a case alleging infringement of U.S. Patents [6,170,014](#), [6,282,573](#) and [6,606,664](#), relating to content delivery methods particularly applicable to online courseware. Summary judgment of non-infringement granted October 4, 2013. Contact: [Andrew G. DiNovo, Esq.](#), [DiNovo Price Ellwanger & Hardy LLP](#), 7000 N. MoPac Expressway, Suite 350, Austin, TX 78731. (D,R)

120. *Analytical Mechanics Associates, Inc. v. Rhythm Engineering, LLC et al.*, Case No. 4:12-cv-00008 (E.D. Va.). Served as an expert for defendants in a case alleging breach of a contract relating to development of an image processing system to detect vehicles at intersections and

control traffic signals. Case was resolved by binding arbitration. Contact: [John K. Power, Esq.](#), [Husch Blackwell LLP](#), 4801 Main Street, Suite 1000, Kansas City, MO 64112. (D,R,T)

121. *Protegrity Corporation v. Voltage Security, Inc.*, Case No. 3:10-CV-755 (RNC) (D. Conn.). Served as an expert for defendant in a case alleging infringement of U.S. Patents [6,321,201](#), [6,963,980](#) and [7,325,129](#), relating to methods of encrypting databases. Case settled during trial. Contact: [Edward G. Poplawski, Esq.](#), [Wilson Sonsini Goodrich & Rosati Professional Corporation](#), 650 Page Mill Road, Palo Alto, CA 94304-1050. (D,R,T)

122. *Progressive Casualty Insurance Company v. Allstate Insurance Company et al.*, Case No. 1:11-cv-00082-BYP. Served as an expert for defendant Allstate in a case alleging infringement of U.S. Patent [6,064,970](#), relating to determining the cost of automobile insurance by monitoring the location and activity of a vehicle, and U.S. Patent [7,124,088](#), relating to online modification and quoting of insurance policies. Case has settled as to Allstate. Contact: [James Medek, Esq.](#), [Kirkland & Ellis LLP](#), 300 North LaSalle Chicago, IL 60654.

123. *Symantec Corporation v. Acronis, Inc. et al.*, Case No. 3:11-cv-05310 EMC (N.D. Cal.). Served as an expert for plaintiff and infringement counterclaim defendant Symantec in a case alleging infringement of U.S. Patents [6,615,365](#), [7,047,380](#), [7,246,211](#) and [7,266,655](#), relating to online disk backup, imaging and recovery systems, U.S. Patent [7,093,086](#), relating to backup of virtual machines, U.S. Patent [7,322,010](#), relating to graphic views of computer configurations and U.S. Patent [7,565,517](#), relating to retargeting hardware configuration images to new hardware. Case has settled. Contact: [Jennifer Kash, Esq.](#), [Quinn Emanuel Urquhart & Sullivan LLP](#), 50 California Street, 22nd Floor, San Francisco, California 94111. (D,R)

124. *Secure Access, LLC v. Bank of America Corp. et al.*, Civil Action No. 6:10-cv-670-LED (E.D. Tex.). Served as an expert for defendants Zions First National Bank and Amegy Bank N.A.. in a case alleging infringement of U.S. Patent [7,631,191](#), relating to authenticating web pages. Case has settled as to those defendants. Contact: [Brian Pandya, Esq.](#), [Wiley Rein LLP](#), 1776 K Street NW, Washington DC 20006.

125. *The MoneySuite Company v. Insurance Answer Center, LLC et al.*, Case No. SACV 11-1847-AG (C.D. Cal.). Served as an expert for defendants, including The Allstate Corporation, in a case alleging infringement of U.S. Patent [6,684,189](#), relating to online quoting of insurance policy rates. Case has settled. Contact: [Garret A. Leach, Esq.](#), [Kirkland & Ellis LLP](#), 300 N. LaSalle, Chicago. IL 60654. (D,R)

126. *e-LYNXX Corporation v. Innerworkings, Inc. et al.*, CA 1:10-cv-02535-CCC (M.D. Pa.). Served as an expert for defendants, including R.R. Donnelley & Sons Company, in a case alleging infringement of U.S. Patents [7,451,106](#) and [7,788,143](#), relating to electronic procurement of customized goods and services. The Court granted summary judgment of non-infringement in July 2013. Contact: [James R. Nuttall, Esq.](#), [Steptoe & Johnson](#), LLP, 115 South LaSalle Street, Suite 3100, Chicago, IL 60603. (R)

127. *Vasudevan Software, Inc. v. Microstrategy, Inc.*, Case No. 3:11-cv-06637-RS-PSG (N.D. Cal.). Served as an expert for defendant in a case alleging infringement of U.S. Patents

[6,877,006](#), [7,167,864](#), [7,720,861](#) and [8,082,268](#), relating to methods of online analytical processing (OLAP). The patents were found invalid on summary judgment. On appeal, the Federal Circuit upheld the Court's claim constructions and judgment of non-infringement. Declaratory judgment counterclaims voluntarily dismissed. Contact: [Kevin A. Smith, Esq.](#), [Quinn Emanuel Urquhart & Sullivan, LLP](#), 50 California Street, San Francisco, CA 94111. (R)

128. *Digonex Technologies, Inc. v. Qcue, Inc.*, Case No. 1:12-cv-00801-SS (W.D. Texas). Served as an expert for plaintiff in a case alleging infringement of U.S. Patents [8,095,424](#) and [8,112,303](#), relating to computerized methods for dynamic pricing. In a Markman order, the Court found the claims indefinite. Contact: [David D. Schumann](#), [Fenwick & West LLP](#), 555 California Street, 12th Floor, San Francisco, CA 94104. (D,R,T)

129. *Peter Mayer Publishers, Inc. v. Daria Shilovskaya et al.*, Case No. 12-CV-8867-PG (S.D. N.Y.). Served as an expert for declaratory judgment defendants in a case of first impression to determine whether a reliance party under 17 U.S.C. §104A(d)(3)(B) may issue an ebook version of a work to which copyright has been restored. The Court ruled that ebooks are not transformative and hence not derivative works. Contact: Timothy O'Donnell, Esq., 40 Exchange Place, 19th Fl., New York, NY 10005. (R)

130. *SIPCO, LLC v. Control4 Corporation et al.*, CA 1:11-cv-00612-JEC (N.D. Georgia). Served as an expert for defendants Schneider Electric Buildings Americas, Inc. and Schneider Electric USA, Inc. in a case alleging infringement of U.S. Patents [7,103,511](#), [7,468,661](#) and [7,697,492](#), relating to systems for monitoring remote sensors and controlling remote devices. Case has settled. Contact: [Benjamin Bradford, Esq.](#), [Jenner & Block LLP](#), 353 N. Clark St., Chicago, IL 60654-3456.

131. *Unified Messaging Solutions LLC v. Google, Inc. et al.*, Case 1:12-cv-06286 (N.D. Ill.). Served as an expert for defendant eBay, Inc. in a case alleging infringement of U.S. Patents [6,857,074](#), [7,836,141](#), [7,895,306](#), [7,895,313](#), and [7,934,148](#), relating to message storage and delivery systems. Case has settled as to defendant eBay, Inc. Contact: [Yar R. Chaikovsky, Esq.](#), [McDermott Will & Emery LLP](#), 275 Middlefield Road, Suite 100, Menlo Park, CA 94025.

132. *Credit Card Fraud Control Corporation v. PayPal, Inc.*, Case No. 9:12-CV-81143 (S.D. Fla.). Served as an expert for defendant PayPal in a case alleging infringement of U.S. Patent [8,229,844](#), relating to reduction of fraud in online transactions. Plaintiff dismissed the case with prejudice based on prior art located by PayPal. Contact: [Adrian Percer, Esq.](#), [Weil, Gotshal & Manges, LLP](#), 201 Redwood Shores Parkway, Redwood Shores, CA 94065.

133. *Comscore, Inc. v. Integral Ad Science, Inc.*, Civil Action 2:12-cv-00351-HCM-DEM (E.D. Va.). Served as an expert for defendant Integral in a case alleging infringement of U.S. Patents [6,108,637](#), [6,115,680](#), [6,327,619](#), [6,418,470](#), [7,386,473](#), [7,613,635](#), [7,716,326](#) and [7,756,974](#), relating to determining whether a portion of a displayed page is visible to a user. Case has settled as to defendant Integral. Contact: [Robert M. Abrahamsen, Esq.](#), [Wolf, Greenfield & Sacks, P.C.](#), 600 Atlantic Avenue, Boston, MA 02210.

134. *Ariba, Inc. v. Coupa Software, Inc.*, Case No. 3:12-cv-01484 JST (N.D. Cal.). Served as an expert for plaintiff Ariba in a case alleging infringement of U.S. Patent [7,117,165](#), relating to electronic methods for approving requisitions and generating purchase orders. Case has settled. Contact: [Amy Van Zant, Esq.](#), [Covington & Burling LLP](#), 333 Twin Dolphin Drive, Redwood Shores, CA 94605-1418. (D,R)

135. *Lowe v. National Board for Respiratory Care, Inc. et al.*, Docket 1:12-cv-00345-DBH (D. Maine). Served as an expert for disabled plaintiff in a case seeking an injunction permitting to take a professional qualification examination using assistive computer technology. Case settled shortly after Dr. Shamos's declaration in support of preliminary injunction was filed. Contact: Kristin Aiello, Esq., Managing Attorney, [Disability Rights Center](#), 24 Stone St., Augusta, ME 04338. (R)

136. *Checkfree Corporation et al. v. Metavante Corporation et al.*, Case No. 3:12-cv-15-J-34JBT (M.D. Fla.) Served as an expert for defendant Metavante in a case alleging infringement of U.S. Patents [7,383,223](#), [7,792,749](#), [7,853,524](#) and [7,966,311](#), relating to transferring funds in electronic payment networks. Defendants have counterclaimed, alleging infringement of U.S. Patents. [7,370,014](#), [7,734,543](#) and [7,958,049](#), relating to electronic invoice presentment. All claims of all four patents asserted by Plaintiff have been found invalid by the Patent Office. Case was stayed pending appeal, followed by voluntary dismissal by Plaintiff. Contact: [Jeffrey A. Berkowitz, Esq.](#), [Finnegan, Henderson, Farabow, Garrett & Dunner, L.L.P.](#), Two Freedom Square, 11955 Freedom Drive, Reston, VA 20190-5675. (D,R)

137. *PPS Data, LLC v. Passport Health Communications, Inc.*, Case No. 2:12-cv-00438-DN (C.D. Utah). Served as an expert for defendant Passport in a case alleging infringement of U.S. Patents [6,341,265](#) and [7,194,416](#), relating to preparing and correcting health insurance claim forms. Case settled shortly after Dr. Shamos's claim construction report was served. Contact: [Edward J. Pardon, Esq.](#), [Merchant & Gould](#), 10 East Doty Street, Suite 600, Madison, WI 53703. (R)

138. *Lodsys, LLC v. Combay, Inc. et al.*, Civil Action 2:11-cv-272 (E.D. Texas). Served as an expert for defendant Symantec Corporation in a case alleging infringement of U.S. Patents [7,222,078](#) and [7,620,565](#), relating to gathering feedback from products through a user interface. Case settled two weeks after Dr. Shamos's deposition. Contact: [David D. Schumann, Fenwick & West LLP](#), 555 California Street, 12th Floor, San Francisco, CA 94104. (D,R)

139. *Long Range Systems, LLC v. HME Wireless, Inc.*, Civil Action 3:12-cv-04162M (N.D. Tex.). Served as an expert for plaintiff in a case alleging infringement of U.S. Patents [6,542,751](#) and [7,062,281](#), relating to methods of paging customers at a restaurant. Case was dismissed by plaintiff after a tentative Markman ruling. Contact: [David Cabello, Esq.](#), [Wong, Cabello, Lutsch, Rutherford & Brucculeri, LLP](#), 20333 SH 249, Suite 600, Houston, Texas 77070. (R)

140. *Symantec Corporation v. Veeam Software Corporation*, Case No. 3:12-cv-0700-SI (N.D. Cal.). Served as an expert for plaintiff Symantec in a case alleging infringement of U.S. Patents [6,931,558](#), relating to methods for restoring network devices after failure, [7,024,527](#), relating to methods of backing up disk while applications are active, [7,093,086](#), relating to methods for

backing up virtual machines, [7,254,682](#), relating to snapshot disk backup, [7,480,822](#), relating to restoring running states of computing systems, [7,831,861](#), relating to restoring application data and [8,117,168](#), relating to virtual disk backups. Case is stayed pending PTAB review. All asserted claims have been found unpatentable. On appeal to the Federal Circuit, the PTAB's claim construction and obviousness determinations were upheld, case remanded to allow amendment of claims. Case subsequently settled. Contact: [Jennifer Kash, Esq.](#), [Quinn Emanuel Urquhart & Sullivan LLP](#), 50 California Street, 22nd Floor, San Francisco, California 94111. (R)

141. *EMG Technology, LLC v. Green Mountain Coffee Roasters and Keurig, Inc.*, Case No. 6:13-cv-144 (E.D. Texas) (Lead case: 6:13-cv-134). Served as an expert for Defendants in a case alleging infringement of U.S. Patent [7,441,196](#), relating to a method of navigating a Web page linked to a sister web site. Case has settled. Contact: [Michael A. Albert, Esq.](#), [Wolf, Greenfield & Sacks, P.C.](#), 600 Atlantic Avenue, Boston, MA 02210.

142. *eDirect Publishing, Inc. v. Live Career, Ltd., et al.*, Case No. 12-CV-1123-JAH-JMA (S.D. Cal.). Served as an expert for plaintiff eDirect in a case alleging infringement of U.S. Patents [6,363,376](#) and [6,757,674](#), relating to automatic submission of information to career websites. Case has settled. Contact: [Ryan Baker, Esq.](#), [Baker Marquart LLP](#), 10990 Wilshire Blvd., Los Angeles, CA 90024. (D,R)

143. *Motivation Innovations, LLC v. Ulta Salon Cosmetics and Fragrance, Inc. et al.*, C.A. No. 11-615-SLR-MPT (D. Del.). Served as an expert for defendant Ulta in a case alleging infringement of U.S. Patent [5,612,527](#), relating to a system for redeeming discount offers at point of sale. The Court granted summary judgment of noninfringement. Contact: [Julie Heaney, Esq.](#), [Morris, Nichols, Arsht & Tunnell, LLP](#), 1201 North Market Street, Wilmington, DE 19899-1347. (D,R)

144. *Computer Software Protection, LLC v. Autodesk, Inc.*, C.A. No. 12-452-SLR (D. Del.). Served as an expert for Defendant Autodesk in a case alleging infringement of U.S. Patent [6,460,140](#), relating to unlocking the use of software remotely using validation number, a registration key and a license key. Case has settled. Contact: [Cheryl T. Burgess, Esq.](#), [Knobbe, Martens, Olson & Bear, L.L.P.](#), 2040 Main Street, 14th Floor Irvine, CA 92614. (R)

145. *Voltage Security, Inc. v. Protegrity Corporation*, CBM2014-0024, Patent Trial and Appeal Board. Served as an expert for petitioner in a covered business method petition seeking review of U.S. Patent [8,402,281](#), relating to methods of encrypting databases. Matter has settled. Contact: [Matthew Argenti, Esq.](#), [Wilson Sonsini Goodrich & Rosati Professional Corporation](#), 650 Page Mill Road, Palo Alto, CA 94304-1050. (R)

146. *United Video Properties, Inc. et al. v. Haier Group Corp. et al.*, C.A. No. 11-1140-KAJ (D.Del.). Served as an expert for Plaintiffs in a case alleging infringement of U.S. Patents [6,701,523](#) and [7,047,547](#), relating to television parental control technology. Case has settled. Contact: [Hong S. Lin, Esq.](#), [Paul Hastings LLP](#), 1117 S. California Avenue, Palo Alto, CA 94304. (D,R)

147. *Droplets, Inc. v. E*TRADE Financial Corporation et al.*, Case No.: 1:12-CV-02326-CM (S.D.N.Y.). Served as an expert for defendants in an action alleging infringement of U.S. Patents [6,687,745](#) and [7,502,838](#), and [8,402,115](#), relating to delivering interactive links for presenting applications on a client computer. Defendants prevailed on a summary judgment of non-infringement on the '745 Patent. All claims of the '115 and '838 Patents were found invalid after IPRs, affirmed by the Federal Circuit in 2016-2504 and 2016-2602. Contact: [Michael Levin, Esq.](#), [Wilson Sonsini Goodrich & Rosati Professional Corporation](#), 650 Page Mill Road, Palo Alto, CA 94304-1050. (D,R,T)

148. *Symantec Corporation v. Acronis, Inc. et al.*, Case No. 3:11-cv-05331 JST (N.D. Cal.). Served as an expert for plaintiff and infringement counterclaim defendant Symantec in a case alleging infringement by Symantec of U.S. Patents [7,366,859](#) and [7,831,789](#), relating to incremental disk backup, and infringement by Acronis of U.S. Patent [7,024,527](#), and [7,996,708](#), relating to disk backup and restore, U.S. Patent [7,454,592](#), and U.S. Patent [7,941,459](#), relating to single instance disk storage, and U.S. Patent [7,680,957](#), relating to modifiable representations of computer configurations. Case has settled. Contact: [Jennifer Kash, Esq.](#), [Quinn Emanuel Urquhart & Sullivan LLP](#), 50 California Street, 22nd Floor, San Francisco, California 94111. (D,R)

149. *Jazz Pharmaceuticals, Inc. v. Roxane Laboratories, Inc.*, CA 2:10-cv-06108-ES-MCA (D. N.J.). Served as an expert for defendant in a case alleging infringement of U.S. Patents [7,668,730](#), [7,765,106](#), [7,765,107](#), [7,797,171](#) and [7,895,059](#), relating to methods of controlling the distribution of sensitive drugs. Case has settled. Contact: [Alan B. Clement, Esq.](#), [Locke Lord LLP](#), Brookfield Place, 200 Vesey Street, 20th Floor, New York, NY 10281-2101. (R)

150. *TuitionFund, LLC v. SunTrust Banks, Inc. et al.*, CA 3:11-cv-00069 (M.D. Tenn.). Served as an expert for defendants Cardlytics, Inc., Regions Financial Corp., and Regions Bank in a case alleging infringement of U.S. Patents [7,499,872](#), [7,653,572](#) and [7,899,704](#), relating to methods for awarding rebates for credit and debit card purchases. Case settled. Contact: [Michael S. Connor, Esq.](#), [Alston & Bird LLP](#), Bank of America Plaza, 101 South Tryon Street, Suite 4000, Charlotte, NC 28280-4000. (D,R)

151. *Pollin Patent Licensing, LLC et al. v. AT&T Corporation et al.*, Case No. 1:11-cv-07855 (N.D. Ill.). Served as an expert for defendants in a case alleging infringement of U.S. Patent [7,117,171](#), relating to verifying financial institution identification in electronic payment systems. Case has settled. Contact: [James L. Howard, Esq.](#), [Kilpatrick Townsend & Stockton LLP](#), 1001 West Fourth Street Winston-Salem, NC, 27101.

152. *PPS Data, LLC v. Bluepoint Solutions, Inc.*, Case 2:13-cv-01351 (D. Nev.). Served as an expert for plaintiff in a case alleging infringement of U.S. Patents [7,181,430](#), [7,216,106](#), [7,440,924](#), [7,624,071](#) and [8,126,809](#), relating to methods for processing check images in electronic payment systems. Case has settled. Contact: [Anthony H. Son, Esq.](#), [Andrews Kurth LLP](#), 1350 I Street NW, Washington, DC 20005. (Original firm: Wiley Rein).

153. *e-LYNXX Corporation v. Ariba, Inc.*, CA 1:12-cv-01771-CCC (M.D. Pa.). Served as an expert for defendant Ariba, in a case alleging infringement of U.S. Patents [7,451,106](#), [7,788,143](#)

and [8,209,227](#), relating to electronic procurement of customized goods and services. Case has settled. Contact: [Amy Van Zant, Esq.](#), [Covington & Burling LLP](#), 333 Twin Dolphin Drive, Redwood Shores, CA 94605-1418.

154. *EMG Technology, LLC v. AutoZone, Inc.*, C.A. 6:13-cv-134 (E.D. Tex.) (Lead case: 6:12-cv-543). Served as an expert for defendant AutoZone in a case alleging infringement of U.S. Patent [7,441,196](#), relating to transcoding web sites into mobile sites. Defendant obtained summary judgment of non-infringement. Contact: [Terry L. Clark, Esq.](#), [Bass, Berry & Sims PLC](#), 1201 Pennsylvania Ave. N.W., Washington, D.C. 20004. (R)

155. *In re: Oil Spill by the Oil Rig "Deepwater Horizon" in the Gulf of Mexico, on April 20, 2010*, MDL No. 2179 (E.D. La.). Served as an expert for litigants BP Exploration & Production Inc. et al. on an issue relating to identification of an anonymous person through Internet searching. Contact: [Mark. J. Nomellini, Esq.](#), [Kirkland & Ellis LLP](#), 300 N. LaSalle, Chicago, IL 60654. (R)

156. *EC Data Systems, Inc., v. J2 Global, Inc. et al.*, CV 12-07544 (C.D. Cal.). Served as an expert for declaratory judgment plaintiff EC Data Systems in a case alleging infringement of U.S. Patents [6,208,638](#) and [6,350,066](#), [6,597,688](#) and [7,020,132](#), relating to electronic distribution of faxes through email. Case has settled. Contact: [Matthew Spohn, Esq.](#) [Norton Rose Fulbright LLP.](#), Tabor Center, 1200 17th Street, Suite 1000, Denver, Colorado 80202.

157. *MoneyCat, Ltd. v. PayPal, Inc.*, CA 1:13-cv-01358-RGA (D. Del.), now 3:14-cv-02490-PSG (N.D. Cal.). Served as an expert for defendant PayPal in a case alleging infringement of U.S. Patents [7,590,602](#), [8,195,578](#) and [8,051,011](#), relating to issuance and transfer of electronic currency. On CBM review, the PTAB found all asserted claims of all three patents invalid, affirmed by the Federal Circuit. Case was subsequently dismissed. Contact: [Adrian Percer, Esq.](#), [Weil, Gotshal & Manges, LLP](#), 201 Redwood Shores Parkway, Redwood Shores, CA 94065. (D,R)

158. *GSI Commerce Solutions, Inc. v. Clear With Computers, Inc.*, Patent Trial and Appeal Board Case CBM2013-00055. Served as an expert for petitioner, an eBay company, in a covered business method review of U.S. Patent [8,266,015](#), relating to methods of presenting lists of product customization options. Review was instituted but the CBM was terminated by settlement. Contact: [Scott McKeown, Esq.](#), [Ropes & Gray, L.L.P.](#), 2099 Pennsylvania Avenue, Washington, DC 20006-6807. (D,R)

159. *Fidelity National Information Services, Inc. v. Cashedge, Inc. and Checkfree Corporation*, Patent Trial and Appeal Board Cases CBM2013-00028, 30, 31 and 32. Served as an expert for petitioner in covered business method reviews of U.S. Patents [7,383,223](#), [7,792,749](#), [7,853,524](#) and [7,966,311](#), relating to transferring funds in electronic payment networks. Reviews have been instituted. All claims of the four patents were invalidated by the PTAB in December 2014. Appeal was taken to the Federal Circuit but terminated by agreement. Contact: [Jeffrey A. Berkowitz, Esq.](#), [Finnegan, Henderson, Farabow, Garrett & Dunner, L.L.P.](#), Two Freedom Square, 11955 Freedom Drive, Reston, VA 20190-5675. (D,R)

160. *Boku, Inc. v. Xilidev, Inc.*, Patent Trial and Appeal Board Cases CBM2014-00140 and CBM2014-00148. Served as an expert for petitioner in two covered business method reviews of U.S. Patent [7,273,168](#), relating to authorizing payments via handheld devices. Result: claims 1-18 and 20-23 found invalid. Claim 19 cancelled. Contact: [Frank Pietrantonio, Esq., Cooley LLP](#), One Freedom Square, 11951 Freedom Drive, Reston, VA 20190. (R)

161. *Protegrity Corporation v. Phoenix Payment Systems, Inc. d/b/a Electronic Payment Exchange*, Case No. 3:13-CV-1386-VKB (D. Conn.). Served as an expert for defendant in a case alleging infringement of U.S. Patents [6,321,201](#) and [8,402,281](#), relating to methods of encrypting databases. Case has settled. Contact: [David J. Wolfsohn, Esq., Duane Morris LLP](#), 20 South 17th Street, Philadelphia, PA 19103. (R)

162. *Ameranth, Inc. v. Genesis Gaming Solutions, Inc. et al.*, Case No. SACV 8:11-0189-AG (C.D. Cal.). Served as an expert for Ameranth in a case alleging infringement of U.S. Patents [7,431,650](#), [7,878,909](#) and [8,393,969](#), relating to systems for managing casino operations, particularly in poker rooms. Case has settled. Contact: John W. Osborne, Esq., Osborne Law LLC, 33 Habitat Lane, Cortlandt Manor, NY 10567. (D,R)

163. *Telebuyer, LLC v. Amazon.com, Inc.*, Case No. 2:13-cv-01677-BJR (W.D.Wash.). Served as an expert for Telebuyer in a case alleging infringement by Amazon.com of U.S. Patents [6,323,894](#), [7,835,508](#), [7,835,509](#), [7,839,984](#), [8,059,796](#), [8,098,272](#), and [8,315,364](#), relating to systems for interfacing buyers and sellers via communication networks. Summary judgment was entered declaring all asserted claims invalid under 35 U.S. §101. Contact: [Brian Berliner, Esq., O'Melveny & Myers LLP](#), 400 South Hope Street, Los Angeles, CA 90071. (D,R)

164. *GlobeRanger Corporation v. Software AG, et al.*, Civil Action No. 3:11-CV-403-B (N.D. Texas). Served as an expert for GlobeRanger in a case alleging misappropriation of trade secrets and civil conspiracy involving radio-frequency identification (RFID) software and business processes. Result: jury verdict of \$15 million in favor of GlobeRanger, upheld on appeal to the Fifth Circuit. Contact: [Ophelia Camiña, Esq., Susman Godfrey, L.L.P.](#), 901 Main St., Suite 5100, Dallas, TX 75202-3775. (D,R,T)

165. *In re: ProvideRx of Grapevine, LLC and CERx Pharmacy Partners, LP v. Provider Meds, LP, et al.*, Adv. Proc. No. 13-03015-BJH (Bankr. N.D. Tex). Served as an expert for creditor CERx in a Chapter 7 bankruptcy case involving security interests in software for remote dispensing pharmacies and whether certain licenses constitute encumbrances under Texas law. Case has settled. Contact: [Bill Whitehill, Esq., Gardere Wynne Sewell LLP](#), 1601 Elm St., Dallas, TX 75201. (R)

166. *Square, Inc. v. Protegrity Corporation*, CBM2014-00182, Patent Trial and Appeal Board (2014). Served as an expert for petitioner in a covered business method petition seeking review of U.S. Patent [8,402,281](#), relating to methods of encrypting databases. Result: all claims invalid under §101. Contact: [Matthew Argenti, Esq., Wilson Sonsini Goodrich & Rosati Professional Corporation](#), 650 Page Mill Road, Palo Alto, CA 94304-1050. (D,R)

167. *VigLink, Inc. v. Linkgine, Inc.*, Patent Trial and Appeal Board (2014). Served as an expert for petitioner in covered business method petitions 2014-00184 and 2014-00185 seeking review of U.S. Patents [7,818,214](#) and [8,027,883](#), relating to modifying affiliate links on webpages. Result: all challenged claims found invalid. Affirmed by the Federal Circuit at 2016-2087, 2016-2088. Contact: [Robert C. Hilton, Esq.](#), [McGuireWoods LLP](#), 2000 McKinney Ave., Suite 1400, Dallas, TX 75201. (R)

168. *Juhline et al. v. Ben Bridge Jewelers Inc. et al.*, Case 11-cv-2096-GPC-NLS (S.D. Cal.). Served as an expert for defendant Ben Bridge in a class action alleging violation of California Civil Code §1747.8, relating to the collection of personal identification information in connection with credit card transactions. Case has settled. Contact: [Rosemarie T. Ring, Esq.](#), [Munger, Tolles & Olson LLP](#), 560 Mission St., 27th Fl., San Francisco, CA 94105.

169. *Catch Curve, Inc. v. Integrated Global Concepts, Inc. v. j2 Global Communications, Inc. et al.*, Case 1:06-CV-02199 (N.D. Ga.). Served as an expert for defendant and counterclaim plaintiff Integrated Global Concepts in a case alleging infringement of U.S. Patents [4,994,926](#), [5,291,302](#), [5,459,584](#), [6,643,034](#), [6,785,021](#), [7,365,884](#) and [7,525,691](#), relating to store-and-forward fax systems. Infringement claims were dropped. The issue at bar is whether j2 Global had an objective basis to believe that Integrated Global was infringing. Case has settled. Contact: [James Heiser, Esq.](#), [Chapman and Cutler, LLP](#), 111 West Monroe St., Chicago, IL 60603. (D,R)

170. *Phoenix Payment Systems, Inc. v. Protegrity Corporation*, CBM2014-00121, Patent Trial and Appeal Board (2014). Served as an expert for petitioner in a covered business method petition seeking review of U.S. Patent [8,402,281](#), relating to methods of encrypting databases. Underlying litigation settled before CBM could be instituted. Contact: [David J. Wolfsohn, Esq.](#), [Duane Morris LLP](#), 20 South 17th Street, Philadelphia, PA 19103. (R)

171. *Informatica Corporation v. Protegrity Corporation*, CBM2015-00010, CBM2015-00021, Patent Trial and Appeal Board (2014). Served as an expert for petitioner in two covered business method petitions seeking review of U.S. Patents [8,402,281](#) and [6,321,201](#), relating to methods of encrypting databases. Result: all claims found invalid under 35 U.S.C. §101. The Board's opinions in the '[201 case](#)' and the '[281 case](#)' comment favorably on Dr. Shamos's testimony. Contact: [Mark S. Kaufman, Esq.](#), [Reed Smith LLP](#), 1301 K Street N.W., Washington, DC 20005. (D,R)

172. *Qualtrics, LLC v. OpinionLab, Inc.*, IPR2014-00314, IPR2014-00356, IPR2014-00366, IPR2014-00406, IPR2014-00420, and IPR2014-00421, Patent Trial and Appeal Board (2014). Served as an expert for patent owner OpinionLab, Inc. in *inter partes* reviews of U.S. Patents [6,421,724](#), [6,606,581](#), [8,041,805](#), [7,085,820](#), [7,370,285](#) and [8,024,668](#), relating to methods of soliciting page-specific feedback regarding web pages. All challenged claims have been found invalid except as to the '805 patent. '724 was not instituted. Contact: [Chris Kennerly, Esq.](#), [Paul Hastings LLP](#), 1117 S. California Ave., Palo Alto, CA 94304. (D,R)

173. *Callwave Communications, LLC v. AT&T Mobility, LLC et al.*, Case 1:12-cv-01788-RGA (D. Del.). Served as an expert for defendant Research In Motion, Corp. in a case alleging

infringement of U.S. Patent [7,907,933](#), relating to methods of billing for purchases by placing a call to a pay-per-call service. Plaintiff stipulated to non-infringement for appeal purposes, but the Federal Circuit upheld on January 10, 2017. Contact: [John V. Gorman, Esq.](#), [Morgan, Lewis & Bockius LLP](#), 1701 Market Street, Philadelphia, PA 19103.

174. *SoftVault Systems, Inc. v. Dassault Systèmes Solidworks Corporation*, Case 5:14-cv-03221-LHK (N.D. Cal.). Served as an expert for defendant Solidworks. in a case alleging infringement of U.S. Patents [6,249,868](#) and [6,594,765](#) relating to embedded agents for protecting computer systems against theft. Case has settled. Contact: [Cheryl T. Burgess, Esq.](#), [Knobbe, Martens, Olson & Bear, L.L.P.](#), 2040 Main Street, 14th Floor Irvine, CA 92614.

175. *PPS Data, LLC v. TransCentra, Inc.*, Case 13-359-LPS (D. Del.). Served as an expert for plaintiff in a case alleging infringement of U.S. Patents [7,181,430](#), [7,440,924](#), [7,624,071](#) and [8,126,809](#), relating to methods for processing check images in electronic payment systems. Case has settled. Contact: [Anthony H. Son, Esq.](#), [Andrews Kurth LLP](#), 1350 I Street NW, Washington, DC 20005. (Original firm: Wiley Rein).

176. *Clear With Computers, Inc. v. Spanx, Inc.*, C.A. 6:12-cv-950-LED (E.D. Texas). Served as an expert for defendant, an eBay company, in a case alleging infringement of U.S. Patent [8,266,015](#), relating to methods of presenting lists of product customization options. Judgment on the pleadings was granted, invalidating the asserted claims under 35 U.S.C. §101. Case was appealed to the Federal Circuit, but the appeal with withdrawn. Case has settled. Contact: [Scott McKeown, Esq.](#), [Oblon, Spivak, McClelland, Maier & Neustadt, L.L.P.](#), 1940 Duke Street Underpass, Alexandria, VA 22314.

177. *Integrated Global Concepts, Inc. v. Advanced Messaging Technologies, Inc.*, IPR2014-01027 and IPR2014-01028 Patent Trial and Appeal Board (2014). Served as an expert for petitioner seeking *inter partes* review of U.S. Patents [6,020,980](#), relating to delivering faxes through electronic mail. The PTAB declined to institute review. Contact: [Robert J. Schneider, Esq.](#), [Taft Stettinius & Hollister LLP](#), 111 East Wacker, Suite 2800, Chicago, IL 60601. (R)

178. *athenahealth, Inc. v. AdvancedMD Software, Inc.*, Civil Action 1:11-cv-11260-GAO (D. Mass.). Served as an expert for plaintiff athenahealth, Inc. in a case alleging infringement of U.S. Patents [7,617,116](#) and [7,720,701](#), relating to detecting errors in medical insurance claim submissions and automated configuration of medical practice management systems. Case has settled. Contact: [Robert M. Abrahamsen, Esq.](#), [Wolf, Greenfield & Sacks, P.C.](#), 600 Atlantic Avenue, Boston, MA 02210.

179. *CEATS, Inc. v. Orbitz Worldwide, Inc.*, Civil Action 2:13-cv-01385-MMD-PAL (D. Nev.). Served as an expert for plaintiff in a case alleging infringement of U.S. Patents [7,548,667](#), [7,640,178](#), [7,660,727](#), [8,219,448](#), [8,229,774](#) and [8,244,561](#), relating to systems and methods for managing airline seat reservations. Case has settled. Contact: [Jared Bunker, Esq.](#), [Knobbe, Martens, Olson & Bear, L.L.P.](#), 2040 Main Street, 14th Floor Irvine, CA 92614.

180. *Audatex North America, Inc. v. Mitchell International, Inc.*, Civil Action 3:13-cv-01523-BEN (BLM) (S.D. Cal.). Served as an expert for plaintiff in a case alleging infringement of U.S.

Patents [7,912,740](#), [8,200,513](#) and [8,468,038](#), relating to systems and methods for determining the valuation of a damaged vehicle for insurance purposes. Claims found invalid after CBM review, affirmed by the Federal Circuit. Contact: [David McPhie, Esq., Irell & Manella LLP](#), 840 Newport Center Dr., Newport Beach, CA 29660. (R)

181. *Skimlinks, Inc. et al. v. Linkgine, Inc.*, Patent Trial and Appeal Board (2015). Served as an expert for petitioners in covered business method petitions 2015-00086 and 2015-00087 seeking review of U.S. Patents [7,818,214](#) and [8,027,883](#), relating to modifying affiliate links on webpages. Result: all claims found invalid, affirmed by the Federal Circuit. Contact: [Richard F. Martinelli, Esq., Orrick, Herrington & Sutcliffe LLP](#), 51 West 52nd St., New York, NY 10019. (R)

182. *Advanced Auctions, LLC v. eBay, Inc.*, Case 12-cv-1612-BEN (JLB) (S.D. Cal.). Served as an expert for defendant eBay in case alleging infringement of U.S. Patent [8,266,000](#), relating to methods of conducting Internet auctions. Defendant obtained judgment of invalidity on the pleadings under 35 U.S.C. §101. Contact: [Adrian Percer, Esq., Weil, Gotshal & Manges, LLP](#), 201 Redwood Shores Parkway, Redwood Shores, CA 94065.

183. *MaxMind, Inc. et al. v. Fraud Control Systems.com Corporation*, CBM2015-00094, Patent Trial and Appeal Board (2014). Served as an expert for petitioner in a covered business method petition seeking review of U.S. Patent [8,630,942](#), relating to methods of determining whether a payment transaction may be fraudulent based on IP addresses. Review was instituted on §101 grounds and Patent Owner requested adverse judgment. Contact: [Anthony H. Son, Esq., Andrews Kurth LLP](#), 1350 I Street NW, Washington, DC 20005. (R)

184. *Square, Inc. v. Unwired Planet, LLC*, CBM2014-00156, Patent Trial and Appeal Board (2014). Served as an expert for petitioner in a covered business method petition seeking review of U.S. Patent [7,711,100](#), relating to conducting point-of-sale transactions based on the location of a wireless device. Challenged claims found invalid. Contact: [Sasha G. Rao, Esq., Maynard Cooper and Gale PC](#), 275 Battery St., San Francisco, CA 94111 (D,R)

185. *Unified Patents, Inc. v. Finnnavations LLC*, IPR2015-01209, Patent Trial and Appeal Board (2015). Served as an expert for petitioner in an inter partes review of U.S. Patent [8,132,720](#), relating to verifying online transaction data through a graphical user interface. Status: not instituted. Contact: [Paul C. Haughey, Esq., Kilpatrick Townsend & Stockton LLP](#), Eighth Floor, Two Embarcadero Center San Francisco, CA 94111 (R)

186. *Hoskin Hogan et al. v. BP West Coast Products LLC et al.*, Case BC 460880 (Super. Ct. Los Angeles Cty. CA, 2011). Served as an expert for defendant Retalix Ltd., alleging negligence in the development and testing of software for processing point-of-sale transactions. Summary judgment granted in favor of Retalix. Contact: [Richard H. Zelichov, Esq., Katten Muchin Rosenman LLP](#), 2029 Century Park East, Suite 2600, Los Angeles, CA 90067-3012. (D,R)

187. *In re U.S. Patent Application 12/912,726* (USPTO). Serving as an expert for applicant AlmondNet, Inc. in an application for a patent relating to distributing digital advertising based on a recipient profile. Contact: [Louis J. Hoffman, Esq.](#), [Hoffman Patent Firm](#). (R)
188. *Wickfire, LLC v. TriMax Media, Inc. et al.*, C.A. 1:14-CV-34 (W.D. Tex). Served as an expert for defendants in a case alleging click fraud in Internet advertising. Jury verdict for Plaintiff, now on appeal to the Fifth Circuit. Contact: [Barry M. Golden, Esq.](#), [Miller, Egan, Molter & Nelson LLP](#), 2911 Turtle Creek Blvd., Suite 1100 Dallas, TX 75219. (D,R,T)
189. *Square, Inc. v. Unwired Planet, LLC*, CBM2015-00148, Patent Trial and Appeal Board. Served as an expert for petitioner in a covered business method petition seeking review of U.S. Patent [7,711,100](#), relating to conducting point-of-sale transactions based on the location of a wireless device. Not instituted because claims were found invalid under §101 in CBM2014-00156. Contact: [Sasha G. Rao, Esq.](#), [Maynard Cooper and Gale PC](#), 275 Battery St., San Francisco, CA 94111. (D,R)
190. *Datatrak International Inc. v. Medidata Solutions, Inc.*, C.A. 1:11-cv-00458-PAG (N.D. Ohio). Served as an expert for defendant in a case alleging infringement of U.S. Patent [7,464,087](#), relating to federated database queries. Defendant obtained summary judgment of invalidity under 35 U.S.C. §101. Contact: [Duane-David Hough, Esq.](#), [Mayer Brown LLP](#), 1675 Broadway, New York, NY 10019. (R)
191. *SNMP Research, Inc. et al. v. Avaya, Inc.*, C.A. 1:12-cv-00191-RGA-MPT (D. Del.). Served as an expert for Avaya in an action alleging breach of contract, trade secret misappropriation and copyright infringement involving software implementing the Simple Network Management Protocol (SNMP). Case has settled. Contact: [Joshua Krumholz, Esq.](#), [Holland & Knight, LLP](#), 10 St. James Avenue, 11th Floor, Boston, MA 02116. (D,R)
192. *Certain Automated Teller Machines and Point of Sale Devices and Associated Software Therefor*, USITC Inv. No. 337-TA-958. Served as an expert for Respondents NRT Technology Corp. et al. in an International Trade Commission proceeding brought by Complainant Global Cash Access Inc. involving alleged infringement of U.S. Patent [6,081,792](#), relating to structuring ATM and POS transactions with respect to withdrawal limits. Result: all claims found invalid as indefinite. In [affirming](#) this determination, the Commission wrote: "should the extrinsic evidence be considered, the Commission finds NRT's expert testimony credible, see Rebuttal Expert Report of Michael Shamos Regarding Claim Construction ¶¶ 52-58, and that Everi's expert's testimony is not credible." Contact: [Colby B. Springer, Esq.](#), [Polsinelli LLP](#) (formerly at Lewis Roca Rothgerber LLP), Three Embarcadero Center, Suite 1350, San Francisco, CA 94111. (D,R)
193. *Better Mouse Company, L.L.C. v. SteelSeries ApS, Inc. et al.*, C.A. 2:14-cv-198-JRG (E.D. Texas). Served as an expert for defendant in a case alleging infringement of U.S. Patent [7,532,200](#), relating to computer mouse whose resolution can be set without external software. Dr. Shamos testified at trial on non-infringement. The jury found for defendant on non-

infringement. Contact: [Joshua M. Masur, Esq.](#), [Turner Boyd LLP](#), 702 Marshall Street, Suite 640, Redwood City, California 94063. (R,T)

194. *Vesta Corporation v. Amdocs Management Limited et al.*, No. 3:14-cv-01142-HZ (D. Ore.). Serving as an expert for defendants in a case alleging misappropriation of trade secrets relating to billing in the prepaid mobile phone payment processing market. Contact: [Yonaton M. Rosenzweig, Esq.](#), [Katten Muchin Rosenman LLP](#), 2029 Century Park East, Suite 2600, Los Angeles, CA 90067-3012. (D,R)

195. *Benefit Funding Systems, LLC et al. v. U.S. Bancorp*, CA 1:12-cv-00803-LPS (D.Del.). Served as an expert for defendant U.S. Bancorp in an action alleging infringement of U.S. Patent [6,625,582](#), relating to a method of establishing a financial account based on the present value of future retirement payments. All asserted claims were found invalid under 35 U.S.C. §101, a decision affirmed by the Federal Circuit. Contact: [Anthony H. Son, Esq.](#), [Andrews Kurth LLP](#), 1350 I Street NW, Washington, DC 20005. (Original firm: Wiley Rein).

196. *Telesign Corporation v. Twilio, Inc.*, C.A. 3:18-cv-03279-VC (N.D. Cal.). Serving as an expert for defendant Twilio in an action alleging infringement of U.S. Patent [7,945,034](#), relating to verification of telephone users based on characteristics of the telephone number, such as carrier and geographic location. Defendant successfully resisted issuance of a preliminary injunction. Case is stayed pending PTAB review. Contact: [Thomas J. Friel, Jr., Esq.](#), [Cooley LLP](#), 3175 Hanover Street, Palo Alto, CA 94304. (R)

197. *Cronos Technologies, LLC v. Expedia, Inc.*, C.A. 13-1538-LPS (D. Del.), *Cronos Technologies, LLC v. Priceline.com, Inc.*, C.A. 13-1541-LPS (D. Del.) and *Cronos Technologies, LLC v. Travelocity.com L.P.*, C.A. 13-1544-LPS (D. Del.). Served as an expert for defendants in three cases, consolidated for some purposes, in actions alleging infringement of U.S. Patent [5,664,110](#), relating to a remote ordering system enabling a user to build lists of products to be ordered. The Court found non-infringement on summary judgment, affirmed by the Federal Circuit. Contact: [Matthew C. Acosta, Esq.](#), [JacksonWalker LLP](#), KPMG Plaza at Hall Arts, 2323 Ross Avenue, Suite 600, Dallas, TX 75201. (D,R)

198. *Ex Parte Reexamination of U.S. Patent 7,333,430*, Control No. 90/013,532. Served as an expert for patent owner Fortinet, Inc. in a reexamination of U.S. Patent [7,333,430](#), drawn to distributing network packets for intermediate security processing based on the ultimate destination of the packet. Result: all challenged claims and newly presented claims patentable. Contact: [Michael A. DeSanctis](#), [Hamilton DeSanctis & Cha LLP](#), Financial Plaza at Union Square, 225 Union Boulevard, Ste. 150, Lakewood, CO 80228. (R)

199. *Inter Partes Review of U.S. Patent 7,027,411*. Case IPR2015-00717. Served as an expert for patent owner Hewlett-Packard Company in an inter partes review of U.S. Patent [7,027,411](#), drawn to efficient determination of changes in network topology. Status: settled. Contact: [Monica Grewal, Esq.](#), [Wilmer Cutler Pickering Hall and Dorr LLP](#), 60 State Street, Boston, MA 02109. (D,R)

200. *Intellectual Ventures I LLC v. Nextel Operations, Inc. and Sprint Spectrum L.P.*, C.A. No. 13-1634 (D.Del) and related cases 13-1635; *Intellectual Ventures I LLC v. T-Mobile USA, Inc. et al.*, C.A. No. 13-1632; 13-1633; *Intellectual Ventures I LLC v. United States Cellular Corporation*, C.A. No. 13-1636 and related case 13-1637, all D. Del. Served as an expert for defendants Sprint, T-Mobile and U.S. Cellular in related cases alleging infringement of U.S. Patent [6,115,737](#), drawn to use of an Internet gateway for processing customer service requests to a web server. The Court invalidated the '737 patent on §101 grounds. Contact: [Jason W. Cook, Esq., McGuireWoods LLP](#), 2000 McKinney Ave., Suite 1400, Dallas, TX 75201. (D,R)

201. *Ex Parte Reexamination of U.S. Patent 7,968,744*, Control No. 90/013,533. Served as an expert for patent owner Fortinet, Inc. in a reexamination of U.S. Patent [7,968,744](#), drawn to systems and methods for allowing execution of authorized computer code and for protecting computer systems and networks from unauthorized code execution. Result: challenged claim and 14 new claims determined patentable. Contact: [Michael A. DeSanctis, Hamilton DeSanctis & Cha LLP](#), Financial Plaza at Union Square, 225 Union Boulevard, Ste. 150, Lakewood, CO 80228. (R)

202. *Ex Parte Reexamination of U.S. Patent 7,376,125*, Control No. 90/013,531. Served as an expert for patent owner Fortinet, Inc. in a reexamination of U.S. Patent [7,376,125](#), drawn to a virtual routing engine for software-based packet routing. Result: newly presented claims patentable. Contact: [Michael A. DeSanctis, Hamilton DeSanctis & Cha LLP](#), Financial Plaza at Union Square, 225 Union Boulevard, Ste. 150, Lakewood, CO 80228. (R)

203. *Inter Partes Review of U.S. Patent 7,945,034*, Case IPR2016-00360. Served as an expert for requester Twilio in an *inter partes* review of U.S. Patent [7,945,034](#), relating to verification of telephone users based on characteristics of the telephone number, such as carrier and geographic location. Challenged claims confirmed. Contact: [Thomas J. Friel, Jr., Esq., Cooley LLP](#), 3175 Hanover Street, Palo Alto, CA 94304. (D,R)

204. *Twilio, Inc. v. Telesign Corporation*, IPR2016-00450, Patent Trial and Appeal Board (2016). Served as an expert for petitioner in an *inter partes* review of U.S. Patent [8,462,920](#), relating to verification of telephone users based on characteristics of the telephone number, such as carrier and geographic location. Trial was not instituted. Contact: [Carrie J. Richie, Esq., Cooley LLP](#), 3175 Hanover Street, Palo Alto, CA 94304. (R)

205. *Smart Systems Innovations, LLC v. Chicago Transit Authority, et al.*, C.A. 14-cv-08053 (N.D. Ill.). Served as an expert for defendants in an action alleging infringement of U.S. Patent [5,828,044](#), relating to a radio-frequency ID (RFID) credit card system. Defendant successfully resisted issuance of a preliminary injunction. All claims invalidated as non-statutory under 35 U.S.C. §101. Affirmed by the Federal Circuit in October 2017. Contact: [Jeffrey M. Connor, Esq.](#), formerly at Kilpatrick Townsend & Stockton LLP, now IP counsel at Honeywell. (D,R)

206. *Unwired Planet LLC v. Google, LLC*, C.A. 3:12-cv-00504-MMD-VPC (D. Nevada). Serving as an expert for Google in an action alleging infringement of U.S. Patents [6,292,657](#), [6,654,786](#), [6,662,016](#), [6,684,087](#), [6,895,240](#), [6,944,760](#), [7,024,205](#), [7,035,647](#), [7,203,752](#) and [7,463,151](#), relating to provision of wireless services. All asserted claims of the '151, '205 and '751 patents

have been found invalid by the Patent Trial and Appeal Board. After appeal to the Federal Circuit, the case continues with respect to certain claims of the '752 Patent. Contact: [Peter E. Gratzinger, Esq.](#), [Munger, Tolles & Olson LLP](#), 355 South Grand Avenue, Los Angeles, CA 90071.

207. *Xilidev, Inc. v. Boku, Inc. et al.*, C.A. 3:13-cv-02793 (S.D. Cal.). Served as an expert for defendants in an action alleging infringement of U.S. Patent [7,273,168](#), relating to point-of-sale billing on handheld devices. Claims 1-18 and 20-23 of the '168 patent have been found invalid by the Patent Trial and Appeal Board. Plaintiff agreed to a voluntary dismissal with prejudice. Contact: [Frank Pietrantonio, Esq.](#), [Cooley LLP](#), One Freedom Square, 11951 Freedom Drive, Reston, VA 20190.

208. *Intellectual Ventures II LLC v. Commerce Bancshares, Inc. et al.*, C.A. 2:13-CV-04160 (W.D. Mo.). Served as an expert for defendants in an action alleging infringement of U.S. Patents [5,745,574](#), relating to security in electronic transactions, [6,314,409](#) and [6,826,694](#), relating to controlling access to digital property, [6,715,084](#), relating to intrusion detection, and [7,634,666](#), relating to a cryptographic engine. All asserted claims have been declared invalid by the Patent Trial and Appeal Board. Decision affirmed by the Federal Circuit in December 2016. Contact: [Mark Vander Tuig, Esq.](#), [Senniger Powers LLP](#), 100 North Broadway, 17th Floor, St. Louis, MO 63102.

209. *Hy-Vee, Inc. v. Inmar Digital Promotions Network, Inc.*, C.A. 4:15-cv-00275 (S.D. Iowa). Served as an expert for defendant in an action seeking indemnity for infringement of U.S. Patents [8,219,445](#), [8,370,199](#) and [8,538,805](#), relating to point-of-sale processing of promotions, such as coupons. Hy-Vee had been sued for infringing these patents in *Advanced Marketing Systems, LLC v. Hy-Vee, Inc.*, C.A. 3:15-cv-00103 (W.D. Wisc.). Both cases have settled. Contact: [Richard J. Keshian, Esq.](#), [Kilpatrick Townsend & Stockton LLP](#), 1001 West Fourth Street Winston-Salem, NC, 27101. (R)

210. *Motivation Innovations, LLC v. PetSmart, Inc.*, C.A. 1:13-cv-00957 (D.Del.). Served as an expert for defendant in an action alleging infringement of U.S. Patent [5,612,537](#), relating to a system for redeeming discount offers at point of sale. On motion for judgment on the pleadings, all asserted claims were found invalid under 35 U.S.C. §101. Contact: [Kevin A. Zeck, Esq.](#), [Perkins Coie, LLP](#), 1201 Third Avenue, Suite 4900, Seattle, WA 98101-3099.

211. *PPS Data, LLC v. VSoft Corporation et al.*, Case 1:15-cv-00084 (N.D. Ga.). Served as an expert for plaintiff in a case alleging infringement of U.S. Patents [7,181,430](#), [7,216,106](#), [7,440,924](#), [7,624,071](#) and [8,660,956](#), relating to methods for processing check images in electronic payment systems. Case has settled. Contact: [Anthony H. Son, Esq.](#), [Andrews Kurth LLP](#), 1350 I Street NW, Washington, DC 20005.

212. *Sally Beauty Holdings et al. v. Intellectual Ventures I LLC*, CBM2016-00029, Patent Trial and Appeal Board. Served as an expert for petitioner in a covered business method petition seeking review of U.S. Patent [5,969,324](#), relating to accounting methods utilizing a non-predictable bar code. Trial was instituted, the PTAB writing in its [decision](#): "We credit the

testimony of Dr. Michael Shamos." Case has settled. Contact: [Derek Swanson, Esq.](#), [McGuireWoods LLP](#), Gateway Plaza, 800 East Canal Street, Richmond, VA 23219. (R)

213. *Square, Inc. v. Protegrity Corporation*, CBM2015-00014, Patent Trial and Appeal Board (2016). Served as an expert for petitioner in a covered business method petition seeking review of U.S. Patent [6,321,201](#), relating to methods of encrypting databases. Result: all challenged claims found invalid under 35 U.S. §§101 and 103. Contact: [Matthew Argenti, Esq.](#), [Wilson Sonsini Goodrich & Rosati Professional Corporation](#), 650 Page Mill Road, Palo Alto, CA 94304-1050. (R)

214. *T-Mobile US, Inc. v. Intellectual Ventures II LLC*, CBM2016-00083, Patent Trial and Appeal Board. Served as an expert for petitioner in a covered business method petition seeking review of U.S. Patent [6,115,737](#), relating to use of an Internet gateway for processing customer service requests to a web server. The PTAB determined that the patent did not claim a covered business method. Contact: [Alison R. Watkins, Esq.](#), [Gibson, Dunn & Crutcher LLP](#), 1881 Page Mill Road, Palo Alto, CA 94304-1211. (R)

215. *Twin Peaks Software, Inc. v. IBM Corporation*, Case 3:14-cv-03933-JST (N.D. Cal.). Served as an expert witness for defendant IBM in an action alleging infringement of U.S. Patent [7,418,439](#), relating to a system for storing and sharing networked files. All asserted claims found invalid during claim construction. Contact: [Andrew Bramhall, Esq.](#), [Quinn Emanuel Urquhart & Sullivan](#), LLP, 555 Twin Dolphin Drive, 5th Floor, Redwood Shores, CA 94065-2139.

216. *Live Face on Web, LLC v. The Control Group Media Company, Inc. et al.*, Case 2:15-cv-01306 (E.D. Pa.). Served as an expert witness for defendants in an action alleging breach of contract and infringement of copyrights relating to web media players and video productions in which recorded actors promote products for websites. Case has settled. Contact: [Damon W.D. Wright, Esq.](#), [Venable LLP](#), 575 Seventh St. N.W., Washington, DC 20004.

217. *Nomadix, Inc. v. Hospitality Core Services, LLC*, Case 2:14-cv-08256-DDP (C.D. Cal.) Served as an expert witness for defendant in a case alleging infringement of U.S. Patents [6,636,894](#) and [6,868,399](#), relating to network gateways, U.S. Patent [7,698,432](#), relating to bandwidth management, U.S. Patent [7,953,857](#), relating to dynamic data transfer over networks, U.S. Patent [8,266,266](#), relating to dynamic network authorization, and U.S. Patents [8,156,246](#), [8,266,269](#), [8,364,806](#), [8,725,888](#) and [8,788,690](#), relating to providing network content. Case has settled. Contact: Michael J. Mehrman, Merhman Law Office, P.C., 150 Spalding Creek Court, Sandy Springs, GA 30350.

218. *Certain Digital Video Receivers and Hardware and Software Components Thereof*, USITC Inv. No. 337-TA-1001. Serving as an expert for Complainants Rovi Corporation et al. against Comcast Corporation et al. in an International Trade Commission proceeding involving alleged infringement of U.S. Patents [8,006,263](#), [8,046,801](#) and [8,578,413](#), relating to remote and local electronic TV program guides. On Initial Determination, a violation was found with respect to the '263 and '413 patents. Contact: [Richard A. Kamprath, Esq.](#), [McKool Smith](#), 300 Crescent Court, Suite 1500, Dallas, TX 75201. (D,R,T)

219. *ZKey Investments, LLC v. Facebook, Inc.*, Case 2:16-cv-00782-RSWL-KS (C.D. Cal.). Served as an expert for defendant in a case alleging infringement of U.S. Patent [6,820,204](#), relating to providing granular control over access to data. Result: all claims found invalid under §101. Affirmed by the Federal Circuit on Jan. 10, 2018. Contact: [Andrew C. Mace, Esq.](#), [Cooley LLP](#), 3175 Hanover Street, Palo Alto, CA 94304. (R)
220. *In re: The Matter of the 2016 Presidential Election*, 659 MD 2016 (Pa. Cmwlt. Ct., 2016). Served as an expert for intervenors opposing an action brought seeking a recount of votes in Pennsylvania on the grounds that the state's voting systems are unsecure and vulnerable to hacking by foreign actors. Petitioners discontinued the suit before hearing, refusing to post the required bond. Contact: [Lawrence J. Tabas, Esq.](#), [Obermayer Rebmann Maxwell & Hippel LLP](#), One Penn Center, 19th Floor, 1617 John F. Kennedy Blvd., Philadelphia, PA 19103.
221. *Stein v. Cortés.*, Case 2:16-cv-06287-PD (E.D. Pa.). Serving as an expert for defendant Secretary of the Commonwealth of Pennsylvania in an action for mandatory injunction to compel a recount and forensic examination of voting systems. Result: injunction denied. The Court's [memorandum](#) comments favorably on Dr. Shamos's qualification and testimony. Contact: [Timothy Gates, Esq.](#), Chief Counsel, PA Department of State, 3306 North ffile Bldg., Harrisburg, PA 17120. (R,T)
222. *Free Stream Media Corp. v. Alphonso Inc.*, Case No. 3:17-cv-02107 (N.D. Cal., transferred from E.D. Tex.). Serving as an expert for defendant Alphonso in an action alleging infringement of U.S. Patents [9,026,668](#) and [9,386,356](#), relating to a system for targeting data, such as advertising, to a device, such as a tablet, based on content that is identified as playing on a different device, such as a television. Contact: [Tigran Guledjian, Esq.](#), [Quinn Emanuel Urquhart & Sullivan](#), LLP, 865 S. Figueroa St., 10th Floor, Los Angeles, CA 90017. (D,R)
223. *Copart, Inc. v. Sparta Consulting, Inc.*, Case 2:14-cv-00046-KJM-CKD (E.D. Cal.). Served as an expert for defendant Sparta in an action alleging misappropriation of trade secrets relating to imaging batches of items to be offered at auction. Misappropriation counts were dropped during trial. Contact: [Frederick Brown, Esq.](#), [Gibson, Dunn & Crutcher LLP](#), 555 Mission Street, Suite 3000, San Francisco, CA 94105. (D,R)
224. *Apple Inc. v. Masa LLC.*, IPR2016-00748, Patent Trial and Appeal Board (2016). Served as an expert for patent owner in an *inter partes* review of U.S. Patent [8,519,834](#), relating to a wearable device to alert a user to an incoming cellphone call. All challenged claims found invalid. Contact: [Robert M. Evans, Jr., Esq.](#), [Senniger Powers LLP](#), 100 North Broadway, 17th Floor, St. Louis, MO 63102. (R)
225. *Tele-Publishing, LLC v. Facebook, Inc. et al.*, Case 1:09-cv-11686-DPW (D. Mass.). Served as an expert for defendants in a case alleging infringement of U.S. Patent [6,253,216](#), relating to controlling access to information on personal web pages. Result: all claims found invalid under §101; judgement for defendants. Case settled during appeal to the Federal Circuit. Contact: [Reuben Chen, Esq.](#), [Cooley LLP](#), 3175 Hanover Street, Palo Alto, CA 94304. (R)

226. *Groupon, Inc. v. International Business Machines Corporation*, Case 1:16-cv-5064 (N.D. Ill.). Serving as an expert for Groupon in a case alleging infringement of U.S. Patent [7,856,360](#), relating to gathering information from attendees at a venue. Contact: [Saina Shamilov, Esq., Fenwick & West LLP](#), 801 California Street, Mountain View, CA 94041. (R)

227. *Stingray Digital Group Inc. v. Music Choice*, Patent Trial and Appeal Board. Serving as an expert for petitioner in five *inter partes* reviews of U.S. Patents [7,320,025](#) (IPR2017-00888) and [9,351,045](#) (IPR2017-01191), relating to providing supplementing a broadcast media service with an on-demand, personalized media service and U.S. Patents [8,769,602](#) (IPR2017-01192), [9,357,245](#) (IPR2017-1193, IPR 2018-0114), relating to providing a visual complement to an audio program, and [9,414,121](#) (IPR 2017-1450), relating to systems and methods for providing on-demand entertainment. Trial has been instituted in '025, '045, '121 and '602. Patent owner requested adverse judgment in IPR2017-1193. Two claims survived in IPR2018-00114. Contact: [Heath Briggs, Esq., Greenberg Traurig, LLP](#), 1200 17th St., Suite 2400, Denver, CO 80202. (D,R)

228. *Music Choice v. Stingray Digital Group Inc. et al.*, C.A. No. 2:16-CV-0586-JRG-RSP (E.D. Texas). Serving as an expert for defendants in a case alleging infringement U.S. Patents [7,320,025](#) and [9,351,045](#), relating to providing supplementing a broadcast media service with an on-demand, personalized media service, U.S. Patents [8,769,602](#) and [9,357,245](#), relating to providing a visual complement to an audio program, and U.S. Patent [9,414,121](#), relating to systems and methods for providing on-demand entertainment. Case is stayed pending PTAB proceedings. Contact: [Joshua Raskin, Esq., Greenberg Traurig, LLP](#), MetLife Bldg., 200 Park Avenue, New York, NY 10166. (R)

229. *LivePerson, Inc. v. 24[7] Customer, Inc.*, IPR2017-00609, Patent Trial and Appeal Board. Served as an expert for patent owner in an *inter partes* review of U.S. Patent [6,970,553](#), relating to converting a voice call into a chat session. Four of six challenged claims were not found unpatentable. Contact: [Bill Trac, Esq., O'Melveny & Myers LLP](#), Two Embarcadero Center, 28th Floor, San Francisco, CA 94111. (R)

230. *Blackberry Limited v. Blu Products, Inc.*, Case 1:16-cv-23535-FAM (S.D. Fla.). Served as an expert for defendants in a case alleging infringement of 15 patents, including U.S. Patent [6,271,605](#), relating to a battery disconnect system, U.S. Patent [8,169,449](#), relating to a multilayer graphics controller, and U.S. Patent [8,411,845](#), relating to the display of call logs on mobile phones. Case has settled. Contact: [Victor Castellucci, Esq., Cozen O'Connor](#), 2 South Biscayne Blvd., 30th Floor, Miami, FL 33131. (R)

231. *Twitter, Inc. v. YouToo Technologies, LLC.*, Patent Trial and Appeal Board. Serving as an expert for patent owner in two *inter partes* reviews of U.S. Patent [9,083,997](#) (IPR2017-0829, IPR2017-00830), relating to publishing content on social media sites. Trial has been instituted. Contact: [Samuel E. Joyner, Esq., Carrington, Coleman, Sloman & Blumenthal, LLP](#), 901 Main Street, Suite 5500, Dallas, TX 75202. (R)

232. *IPDEV Co. v. Ameranth, Inc.*, Case No. 3:14-cv-01303-GPC-JLB (S.D. Cal.). Served as an expert for defendant in an action to determine priority of invention among interfering patents

involving U.S. Patents [6,384,850](#) and [6,871,325](#), assigned to Ameranth and relating to synchronous updating of restaurant menus on wireless devices, and U.S. Patents [5,991,739](#) and [8,738,449](#), relating to Internet ordering methods. Consolidated with Case 233, below. On summary judgment, the Court awarded priority to Ameranth. Contact: John W. Osborne, Esq., Osborne Law LLC, 33 Habitat Lane, Cortlandt Manor, NY 10567. (D,R)

233. *In re: Ameranth Patent Litigation*, Case No. 3:11-cv-01810-DMS-WSG (S.D. Cal.). Serving as an expert for Ameranth in an action against numerous defendants alleging infringement of U.S. Patents [8,146,077](#), relating to synchronous updating of restaurant menus on wireless devices. Contact: John W. Osborne, Esq., Osborne Law LLC, 33 Habitat Lane, Cortlandt Manor, NY 10567. (D,R)

234. *Google Inc. v. Spring Ventures, Ltd.*, IPR2017-01652 and 01653, Patent Trial and Appeal Board. Serving as an expert for petitioner in *inter partes* reviews of U.S. Patent [8,661,094](#), relating to WWW addressing. Trial instituted in 2017-01653, denied in 2017-01652. Contact: [Scott McKeown, Esq.](#), [Ropes & Gray, L.L.P.](#), 2099 Pennsylvania Avenue, Washington, DC 20006-6807. (D,R)

235. *Rovi Guides, Inc. et al. v. Comcast Corporation et al.*, Case No. 1:16-cv-09278-JPO (S.D.N.Y.). Serving as an expert for plaintiffs in an action alleging infringement of U.S. Patent [8,713,595](#), relating to electronic TV program guides and [9,172,987](#), relating to the use of markup language to alter the functionality of set-top boxes. Case is stayed pending IPR. Contact: [Richard A. Kamprath, Esq.](#), [McKool Smith](#), 300 Crescent Court, Suite 1500, Dallas, TX 75201. (D,R)

236. *StrikeForce Technologies, Inc. v. Entrust, Inc. et al.*, Case No. 1:17-cv-00309-LMB-TCB (E.D. Va.). Served as an expert for plaintiff in an action alleging infringement of U.S. Patents [8,484,698](#), and [8,713,701](#), relating to out-of-band authentication using mobile devices. Case has settled. Contact: [Josef Schenker, Esq.](#), [Ropes & Gray LLP](#), 1211 Avenue of the Americas, New York, NY 10036. (R)

237. *Level One Technologies, Inc. v. Penske Truck Leasing Co, Inc. and Penske Logistics, LLC*, Case No. 4:14-cv-1305-RWS (E.D. Mo.). Serving as an expert for defendant in an action alleging trade secret misappropriation and contractual breach of confidentiality relating to a computer system for invoicing and rendering electronic payments in the trucking industry. Contact: [Douglas Y. Christian, Esq.](#), [Ballard Spahr LLP](#), 1735 Market Street, 51st Floor, Philadelphia, PA 19103. (D,R)

238. *Uniloc USA Inc. et al. v. Netsuite Inc.*, Case No. 2:16-cv-00862-RWS (E.D. Texas) and *Uniloc USA Inc. et al. v. Nutanix Inc.*, Case No. 2:16-cv-01193-RWS (E.D. Texas). Served as an expert for plaintiff on claim construction issues in an action alleging infringement of U.S. Patent [6,324,578](#), relating to management of configurable application programs on network. Later, the asserted claims were found invalid under 35 U.S.C. § 101. Contact: [James J. Foster, Esq.](#), [Prince Lobel Tye LLP](#), One International Place, Suite 3700, Boston, MA 02110. (R)

239. *Muransky v. The Cheesecake Factory, Inc. et al.*, Case 2:17-cv-07569-CJC-RAO (C.D. Cal). Serving as an expert for defendants in a case involving alleged violations of the Fair Credit Reporting Act, 15 U.S.C. § 1681 ("FCRA") arising from display of more than five digits of a credit card number on customer receipts. Contact: [John L. McManus, Esq.](#), [Greenberg Traurig, P.A.](#), 401 E. Los Olas Blvd., Suite 2000, Fort Lauderdale, FL 33301. (R)

240. *Twilio, Inc. v. Telesign Corporation*, IPR2016-00451, Patent Trial and Appeal Board (2016). Served as an expert for petitioner in an *inter partes* review of U.S. Patent [8,687,038](#), relating to verifying an online registration via an out-of-band telephone connection. Trial was not instituted. Contact: [Carrie J. Richie, Esq.](#), [Cooley LLP](#), 3175 Hanover Street, Palo Alto, CA 94304. (R)

241. *Twilio, Inc. v. Telesign Corporation*, IPR2016-01688, Patent Trial and Appeal Board (2016). Served as an expert for petitioner in an *inter partes* review of U.S. Patent [9,300,792](#), relating to verification of telephone users based on characteristics of the telephone number, such as carrier and geographic location. All challenged claims found unpatentable. Contact: [Carrie J. Richie, Esq.](#), [Cooley LLP](#), 3175 Hanover Street, Palo Alto, CA 94304. (R)

242. *EdiSync Systems, LLC v. Adobe Systems, Inc.*, Civil Action 12-cv-02231-MSK-MEH (D. Colo.). Served as an expert for Defendant Adobe in a case alleging infringement of U.S. Patent [5,799,320](#), relating to multi-author document editing systems. Case has settled. Contact: [David Sipiora, Esq.](#), [Kirkpatrick Townsend & Stockton LLP](#), Suite 600, 1400 Wewatta Street, Denver, CO 80202.

243. *Ford Motor Company v. Versata Software, Inc. et al.*, Case No. 2:15-cv-106280-MFL-EAS (E.D. Mich.). Serving as an expert for defendant/counterplaintiff Versata in a declaratory judgment action relating to alleged infringement of U.S. Patents [5,825,651](#), [6,405,308](#) and [6,675,294](#), relating to product configuration through a graphical user interface; U.S. Patent [7,882,057](#), relating to complex product configuration using submodels; U.S. Patents [7,200,582](#) and [7,464,064](#), relating to checking the consistency of a product configuration model using set equations; and U.S. Patent [8,805,825](#), relating to product configuration in which attributes are prioritized. Contact: [Steve Mitby, Esq.](#), [Ahmad, Zavitsanos, Anaipakos, Alavi & Mensing P.C.](#), 1221 McKinney, Suite 2500, Houston, TX 77010. (D,R)

244. *Improved Search LLC v. Microsoft Corporation*, C.A. No. 16-cv-650-JFB-SRF (D.Del.). Serving as an expert for plaintiff in an action alleging infringement of U.S. Patents [6,604,101](#) and [7,516,154](#), relating to methods and systems for translanguing searching. Contact: [Robert Yorio, Esq.](#), [Carr & Ferrell LLP](#), 120 Constitution Drive, Menlo Park, CA 94025. (D,R)

245. *Comcast Cable Communications, LLC v. Rovi Guides, Inc.*, IPR2017-00866, IPR2017-00867, Patent Trial and Appeal Board. Serving as an expert for patent owner in *inter partes* reviews of U.S. Patent [8,713,595](#), relating to electronic television program guides. Review has been instituted. Contact: [Josef B. Schenker](#), [Ropes & Gray LLP](#), 1211 Avenue of the Americas, New York, NY 10036. (D,R)

246. *Comcast Cable Communications, LLC v. Rovi Guides, Inc.*, IPR2017-00950, IPR2017-00951, IPR2017-00952, Patent Trial and Appeal Board. Serving as an expert for patent owner in *inter partes* reviews of U.S. Patent [8,006,263](#), relating to electronic television program guides. Review has been instituted. Contact: [Josef B. Schenker](#), [Ropes & Gray LLP](#), 1211 Avenue of the Americas, New York, NY 10036. (D,R)

247. *Unified Patents, Inc. v. Anuwave LLC.*, IPR2018-00223, Patent Trial and Appeal Board. Served as an expert for petitioner in *inter partes* reviews of U.S. Patent [8,295,862](#), relating to enabling short message system (SMS) communication without using IP services. Terminated by settlement. Contact: [Robert High, Esq.](#), [Finnegan, Henderson, Farabow, Garrett & Dunner, LLP](#), 271 17th St. N.W., Suite 1400, Atlanta, GA 30363-6209. (R)

248. *Comcast Cable Communications, LLC v. Rovi Guides, Inc.*, IPR2017-01048, IPR2017-01049, IPR2017-01050, Patent Trial and Appeal Board. Serving as an expert for patent owner in *inter partes* reviews of U.S. Patent [8,578,413](#), relating to electronic television program guides. Review has been instituted. Contact: [Josef B. Schenker](#), [Ropes & Gray LLP](#), 1211 Avenue of the Americas, New York, NY 10036. (D,R)

249. *Comcast Cable Communications, LLC v. Rovi Guides, Inc.*, IPR2017-01065, IPR2017-01066, IPR2017-01143, Patent Trial and Appeal Board. Serving as an expert for patent owner in *inter partes* reviews of U.S. Patent [8,046,801](#), relating to electronic television program guides. Review has been instituted. Contact: [Josef B. Schenker](#), [Ropes & Gray LLP](#), 1211 Avenue of the Americas, New York, NY 10036. (D,R)

250. *DevFactory FZ-LLC v. Magnitude Software, Inc.*, Arbitration WIPOA300617. Serving as an expert for Claimant DevFactory in an arbitration relating to a claim of breach of a software Technology Services Agreement. Contact: [Steve Mitby, Esq.](#), [Ahmad, Zavitsanos, Anaipakos, Alavi & Mensing P.C.](#), 1221 McKinney, Suite 2500, Houston, TX 77010.

251. *BookIT Oy Ajanvarauspalvelu v. Bank of America Corporation et al.*, 3:17-cv-02577-K (N.D. Texas). Serving as an expert for BookIT in an action alleging infringement of U.S. Patents [8,589,194](#) and [9,177,268](#), relating to mediating communications between a service provider and a user in a telecommunications network. Contact: [Richard A. Kamprath, Esq.](#), [McKool Smith](#), 300 Crescent Court, Suite 1500, Dallas, TX 75201. (D,R)

252. *Promptu Systems Corporation v. Comcast Corporation et al.*, 2:16-cv-06516-JS (E.D. Pa.). Serving as an expert for plaintiff in an action alleging infringement of U.S. Patents [7,047,196](#), [7,260,538](#) and [RE44,326](#), relating to voice control of television set-top boxes. Contact: [Robert Yorio, Esq.](#), [Carr & Ferrell LLP](#), 120 Constitution Drive, Menlo Park, CA 94025. (D,R)

253. *Snap Inc. v. Vaporstream, Inc.*, IPR2018-00200, IPR2018-00312, IPR2018-00369, IPR2018-00397, IPR2018-00404, IPR2018-00408, IPR2018-00416, IPR2018-00439, IPR2018-00455, IPR2018-00458, Patent Trial and Appeal Board. Serving as an expert for patent owner in *inter partes* reviews of U.S. Patents [8,886,739](#), [8,935,351](#), [9,306,885](#), [9,306,886](#), [9,313,155](#), [9,313,156](#), [9,313,157](#), [9,338,111](#) and [9,413,711](#), relating to reducing

traceability of electronic messages. Contact: [Thomas Kohler, Esq.](#), [Downs Rachin Martin PLLC](#), Courthouse Plaza, 199 Main Street, Burlington, VA 05402-0190. (R)

254. *Shopify, Inc. v. DDR Holdings, LLC*, IPR2018-01008, IPR2018-01009, IPR2018-01010, IPR2018-01011, IPR2018-01012, IPR2018-01014, Patent Trial and Appeal Board. Serving as an expert for petitioner in *inter partes* reviews of U.S. Patents [8,515,825](#), [9,043,228](#), and [9,639,876](#), relating to online affiliate marketing. Contact: [Jinnie L. Reed, Esq.](#), [Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.](#), One Financial Center, Boston, MA 02111. (R)

255. *Election Systems & Software, LLC v. Dominion Voting Systems, Inc.*, 1:17-cv-01172-CJB (D. Del.). Served as an expert for plaintiff in a case alleging infringement of U.S. Patent [8,991,701](#), relating to an accessible voting system. Case has settled. Contact: [Robert M. Evans, Jr., Esq.](#), [Senniger Powers LLP](#), 100 North Broadway, 17th Floor, St. Louis, MO 63102.

256. *General Motors LLC et al. v. Dorman Products, Inc. et al*, 2:15-cv-129170-VAR-EAS (E.D. Mich.). Served as an expert for plaintiff in a case alleging copyright infringement and violation of the anti-circumvention provisions of the Digital Millennium Copyright Act relating to offloading of transmission control software from automobiles. Case has settled. Contact: [Aaron A. Barlow, Esq.](#), [Jenner & Block LLP](#), 353 North Clark Street, Chicago, IL 60654-3456.

Legislative Testimony

Testimony before the Texas Legislature concerning electronic voting, Austin, Texas, 1987. Result: passage of the Texas Electronic Voting Law.

Invited [testimony](#) before the British House of Lords, Subcommittee B of the European Union Committee, April 20, 2000. Subject: European regulation of eCommerce.

[Testimony](#) before the Pennsylvania Legislature State Government Committee concerning electronic voting, Philadelphia, March 10, 2004.

[Testimony](#) before the United States Commission on Civil Rights concerning electronic voting, Washington, DC, April 9, 2004.

[Testimony](#) before the U.S. House of Representatives Committee on Science concerning voting system certification, Washington, DC, June 24, 2004.

[Testimony](#) before the U.S. House of Representatives Committee on House Administration concerning voting system security, Washington, DC, July 7, 2004.

[Testimony](#) before the U.S. House of Representatives Committee on Government Reform concerning electronic voting technology, Washington, DC, July 20, 2004.

Testimony on DREs and paper trails before the Virginia Legislature Study Commission on Voting System Certification and Security, Richmond, VA, August 16, 2004.

[Testimony](#) before the Election Assistance Commission, Technical Guidelines Development Committee, Subcommittee on Computer Security and Transparency, Gaithersburg, MD, Sept. 20, 2004.

[Testimony](#) before the House Ways and Means Committee of the Maryland General Assembly on voting machine paper trails, Annapolis, MD, December 7, 2004.

[Testimony](#) before the U.S. House of Representatives Committee on House Administration concerning paper trails, Washington, DC, September 28, 2006.

[Testimony](#) before the U.S. Election Assistance Commission concerning the Voting System Testing and Certification Program, Washington, DC, October 26, 2006.

Testimony before the Georgia State Board of Elections, Powder Springs, GA, December 21, 2007.

Testimony before the Maryland House of Delegates Ways and Means Committee, Annapolis, MD, January 18, 2007.

[Testimony](#) before the U.S. Senate Committee on Rules and Administration on the Ballot Integrity Act of 2007, Washington, DC, July 25, 2007.

Arbitration

Dr. Shamos has served as an arbitrator in computer-related disputes for the American Arbitration Association.

Electronic Voting

Dr. Shamos has served as an examiner of electronic voting systems and consultant on electronic voting.

Member, Sarasota Source Code Audit Task Force, Florida Secretary of State (2007-2008)

Consultant to the [Pennsylvania Secretary of the Commonwealth](#) (2004-).

Consultant to the [Massachusetts Secretary of the Commonwealth](#) (2006).

Project SERVE Security Peer Review Group (2003).

Attorney General's Designee for electronic voting examinations, State of Texas (1987-2000).

Statutory Examiner for electronic voting, Commonwealth of Pennsylvania (1980-1996).

Consultant to Montgomery County, Pennsylvania (1996).

Consultant to the Secretary of State of Nevada (1996).

Consultant to the Delaware Legislature (1989).

Consultant to the [Secretary of State of West Virginia](#) (1984).

Business Experience

President, [Expert Engagements LLC](#), expert witness firm (2003-present).

President, Unus, Inc., database publishing software (formerly Unilogic, Ltd.) (1990-1992)

President, Notifax Corporation (1989-1994). Automated notification by facsimile.

President, Lexeme Corporation (1984-87), software language translation products.

Managing Partner, Shamos and Tchen (1978-82), computer consulting firm.

Supervisory Programmer, [National Cancer Institute](#) (1970-72), while a commissioned officer in the [United States Public Health Service](#) (O-3).

Associate Engineer, [IBM Corporation](#) (1968-70) (Components Division), design of manufacturing information systems.

Consulting

[Morgan Stanley Dean Witter](#) (2000-2002) (now Morgan Stanley).

[McKinsey & Co.](#) (1999-2001).

[Bell Atlantic Corporation](#) (1999-2008) (now Verizon).

[LG-CNS](#), South Korea (2002-). Project to automate the Korean court system.

Directorships

Unilogic, Ltd. (1979–87) (later Unus, Inc. d/b/a Cygnet Publishing Technologies, 1987-2013). Database publishing software.

The Billiard Archive (1983–). Historical nonprofit foundation.

Lexeme Corporation (1984-1987). Computer source language translation.

Notifax Corporation (1989-1994)

Insurance Technology Corporation (1992–1995). IT consulting for the insurance industry.

Personal Data

Date of birth: April 21, 1947.

Married to Julie Shamos (formerly Julie Van Allen), August 12, 1973.

Children: Josselyn (born May 20, 1982), Alexander (born August 3, 1984).

Grandchildren: Harlow Elizabeth Crane (born April 9, 2010), Bishop Moses Crane (born July 13, 2012)

Military Status: Veteran (Commissioned Officer, [U.S. Public Health Service](#), 1970-72).

Contact Information

Contact should be by email. Letters and packages should be sent to the Home Address:

Home Address:

605 Devonshire Street
Pittsburgh, PA 15213-2904
Home Telephone: 412-681-8398
Home Fax: 412-681-8916

Office Address:

6707 Gates Hillman Complex
5000 Forbes Avenue
Carnegie Mellon University
Pittsburgh, PA 15213
Office Telephone: 412-268-8193
Office Fax: 412-268-6298
Email: shamos@cs.cmu.edu

Publications

SCIENCE

Books

1. [*Computational Geometry: An Introduction*](#), with [F. P. Preparata](#). Springer-Verlag (1985, revised ed., 1991), 390 pp. ISBN 0387961313. According to [CiteSeer](#) in 2012, this is the 93rd most cited work in the field of computer science.
2. [*Вычислительная геометрия: введение*](#). Russian translation of "Computational Geometry: An Introduction." Moscow: Mir Publishers (1989). ISBN 5030010416.
3. [*Keisan kikagaku nyumon*](#). Japanese translated by T. Asano and T. Asano of *Computational Geometry: An Introduction*, with F. P. Preparata. Soken Shuppan (Jul. 1992). ISBN 4795263213.
4. [*Handbook of Academic Titles*](#). 193 pp. (Jan. 2011). An encyclopedia of various academic designations used at over 1000 colleges and universities in the United States.
5. [*Geometria obliczeniowa. Wprowadzenie*](#). Polish translation of "Computational Geometry: An Introduction." Warsaw: Helion (2003) 392 pp. ISBN 83-7361-098-7.
6. [*Shamos's Catalog of the Real Numbers*](#). A list, patterned after Sloane & Plouffe, [The Encyclopedia of Integer Sequences](#), Academic Press (1995). Over 10,000 interesting real numbers arranging in lexical order by decimal expansion, with accompanying formulas.

Book Chapters

1. "[Privacy and Public Records](#)." Chapter 16 in [Personal Information Management](#), Jones & Teevan, eds., Univ. of Washington Press (2007), ISBN978-0-295-98737-8.

Articles

1. "[On the Piezoelectric Effect in Bone](#)," with M. H. Shamos and L. S. Lavine. *Nature* **197**:81 (1963).
2. "[An Absorber Theory of Acoustical Radiation](#)," with M. A. Tavel. *Journal of the Acoustical Society of America* **54**:46–49 (1973).
3. "Problems in Computational Geometry." Unpublished book manuscript (1974, revised 1977). Distributed in photocopy.
4. "[Geometric Complexity](#)." *Proceedings of the Seventh Annual ACM Symposium on Automata and Theory of Computation* (May 1975) 224–233.
5. "[Closest-point Problems](#)," with D. J. Hoey. *Proceedings of the Sixteenth IEEE Symposium on Foundations of Computer Science* (Oct. 1975) 151–162.
6. "[Divide and Conquer in Multidimensional Space](#)," with J. L. Bentley. *Proceedings of the Eighth Annual ACM Symposium on Automata and Theory of Computing* (May 1976) 220–230.

7. "[Geometric Intersection Problems](#)," with D. J. Hoey. *Proceedings of the Seventeenth Annual IEEE Symposium on Foundations of Computer Science* (Oct. 1976) 208–215.
8. "[Lower Bounds from Complex Function Theory](#)," with G. Yuval. *Proceedings of the Seventeenth Annual IEEE Symposium on Foundations of Computer Science* (Oct. 1976) 268–273.
9. "[Geometry and Statistics: Problems at the Interface](#)." In *Algorithms and Complexity: New Directions and Recent Results*, J. F. Traub, ed., Academic Press (1976) 251–280.
10. "[Divide and Conquer for Linear Expected Time](#)," with J. L. Bentley. *Information Processing Letters* 7 (1977) 87–91.
11. "[A Problem in Multivariate Statistics: Algorithm, Data Structure, and Applications](#)," with J. L. Bentley. *Proceedings of the Fifteenth Allerton Conference on Communications, Control and Computers* (Sep. 1977) 193–201.
12. "[Optimal Algorithms for Structuring Geographic Data](#)," with J. L. Bentley. *Proceedings of the Harvard Conference on Topological Data Structures for Geographic Information Systems* (Oct. 1977) 43–51.
13. "[Computational Geometry](#)." Ph.D. Thesis, Yale University (1978). [University Microfilms](#), Ann Arbor, MI.
14. "[Time and Space](#)," with A. R. Meyer. In *Perspectives on Computer Science*, A. K. Jones, ed. Academic Press (1978).
15. *Combinatorics on Graphs I: Graph Polynomials*. Unpublished book manuscript (1978).
16. "[Robust Picture Processing Operators and Their Implementation as Circuits](#)." *Proceedings of the Fall 1978 Workshop on Image Processing*, Carnegie Mellon University (1978).
17. "A practical system for source language translation," with T. R. Kueny and P. L. Lehman. *Proceedings of the National Conf. on Software Reuseability and Maintainability*, pp. B-1 – B-12, Washington, DC (Sep. 1986).
18. "[The Early Years of Computational Geometry – A Personal Memoir](#)." *Advances in Discrete and Computational Geometry* (B. Chazelle, J. E. Goodman, and R. Pollack, eds.), *Contemporary Mathematics*, Amer. Math. Soc., Providence (1998).
19. "[A Multiparty Computation for Randomly Ordering Players and Making Random Selections](#)," with Latanya Sweeney. Carnegie Mellon University School of Computer Science Technical Report CMU-ISRI-04-126 (July 2004)
20. [Overcounting Functions](#). A systematic method of transforming certain multiple summations into single summations, with new number-theoretic results.

21. [Property Enumerators and a Partial Sum Theorem](#). A new result allowing rapid symbolic evaluation of certain types of double summations.

DIGITAL LIBRARIES

Articles

1. "[Machines as readers: a solution to the copyright problem](#)." J. Zhejiang Univ. Science 6A, 11, pp. 1179-1187 (Nov. 2005).

Book Chapters

1. "[The Universal Digital Library: Intelligent Agents and Information on Demand](#)," with Raj Reddy. Chapter 6 in [Emerging Communication Technologies and the Society](#), by N. Balakrishnan, Indian National Science Academy (2000). ISBN 81-7319-341-X.

Reports

1. "Japanese Digital Information Policy, Intellectual Property and Economics," in "[Digital Information Organization in Japan](#)," International Technology Research Institute (1999).

ELECTRONIC VOTING

Books

1. "[Glossary of Electronic Voting](#)."

Articles

2. "Voting System Certification — An Examiner's View." Invited paper presented at the Election Center Conference, Reno, Nevada (Sep. 1989).
3. "[Electronic Voting — Evaluating the Threat](#)." Proc. Third ACM Conf. on Computers, Freedom & Privacy, San Francisco, CA (Mar. 1993).
4. "[Paper v. Electronic Voting Records — An Assessment](#)." Proc. 14th ACM Conf. on Computers, Freedom & Privacy, Berkeley, CA (Apr. 2004).
5. "[Evaluation of Voting Systems](#)," with P.L. Vora, B. Adida, R. Bucholz, D. Chaum, D. Dill, D. Jefferson, D. Jones, W. Lattin, A. Rubin and M. Young, Commun. ACM 47(11):144 (2004).
6. "[Voting as an Engineering Problem](#)." *The Bridge* (publication of the National Academy of Engineering), Summer 2007, pp. 35-39.

7. "[Realities of E-Voting Security](#)," with A. Yasinsac. IEEE Security and Privacy 10:5 (Sep/Oct 2012), pp. 16-17. Also guest editor of that issue, devoted to E-voting Security.
8. "[Why our voting systems are safe](#)." Op-ed in the Pittsburgh Post-Gazette, Dec. 31, 2016.

Published Reports

9. "[Software and Security Analysis of the ES&S iVotronic 8.0.1.2 Voting Machine Firmware](#)," with Yasinsac et al., February 23, 2007. Review commissioned by the Secretary of State of Florida to investigate irregularities in the Florida Congressional District 13 election of 2006.

BILLIARDS

Books

1. [Pool](#). New York: Mallard Press division of Bantam-Doubleday-Dell Promotional Book Company (Aug. 1991). 128 pp. ISBN 0-7924-5310-7.
2. [Le billard et le billard américain](#). Paris: Minerva, 1992, reprinted 1997. 128 pp. Translation by Jean-Yves Prate of the author's American book, *Pool*. ISBN 2-8307-0160-7 (1992), 2-8814-3135-6 (1997).
3. [The Illustrated Encyclopedia of Billiards](#). New York: Lyons & Burford (1993). 310 pp. ISBN 1-55821-219-1.
4. [Pool Snooker Carambola](#). Padua: Facto Edizioni (1993). 128 pp. Italian translation of *Pool*. Translated by Elisabetta Bezzon. ISBN 88-85860-20-6. The first English-language billiard book ever published in Italian.
5. [Pool](#). New York: Friedman/Fairfax (Jun. 1994). 128 pp. ISBN 1-56799-061-4. Paperback edition of the author's 1991 *Pool*.
6. [Shooting Pool: The People, the Passion, the Pulse of the Game](#), with photographs by George Bennett. New York: [Artisan](#) (Jun. 1998). 144 pp. ISBN 1-885183-95-X. A photographic survey of pool in the U.S. in 1997. A Book-of-the-Month Club bonus selection (Fall, 1998).
7. *Setting the Stage for Fifty Years*. Coralville, IA: [Billiard Congress of America](#) (Jun. 1998). 88 pp. A history of the Billiard Congress of America.
8. [The New Illustrated Encyclopedia of Billiards](#). New York: [Lyons Press](#) (1999). 320 pp. ISBN 1-55821-797-5. An expanded and revised edition of [The Illustrated Encyclopedia of Billiards](#).
9. [The Complete Book of Billiards](#). New York: [Gramercy Books](#) (2000). 306 pp. ISBN 0-517-20869-5. Reissue of author's 1993 [The Illustrated Encyclopedia of Billiards](#).

In Preparation

SCIENCE

Articles

1. *A Graph-Theoretic Model of Electronic Payment Systems.*

LAW

Books

1. *A Dictionary of American Intellectual Property.*

Invited Talks

ELECTRONIC COMMERCE

"The Future of eCommerce." Address to the Association for Corporate Growth, Pittsburgh, PA (Dec. 2001).

"The U.S., Korea and the Internet Bubble." Korea International Trade Association (Seoul, July 2003).

"Electronic Judiciary Services in the United States." Address at the Supreme Court of Korea (Dec. 2004).

"eGovernment in the United States." Public address at the University of Hong Kong (Feb. 2005).

"Global SCM as a Cross-Border eCommerce Model," Korea International Trade Association, Seoul, Korea (Mar. 2007).

"Innovate or Die." Invited talk at the Verizon Leadership Meeting, Morristown, NJ (Jun. 2007).

"A Formula for Innovation." Public address at the University of Hong Kong (Feb. 2008).

"Ask My Robot: How Computers Answer Questions." University of Hong Kong (Feb. 2013).

"How Bitcoin Works: A Non-Technical Introduction." University of Hong Kong (Mar. 2014).

"What's a Bitcoin? A Non-Technical Introduction." Carnegie Mellon University (Oct. 2014).

COMPUTER SCIENCE

"Surprises in Experimental Mathematics." Carnegie Mellon University Mathematics Seminar (Feb. 2002).

"Learning by Doing or Learning by Listening?" University of Hong Kong (Feb. 2007).

"Discoveries in Experimental Mathematics." University of Hong Kong (Feb. 2009).

"How Did It (Computational Geometry) Start?" Keynote address at the 20th Canadian Conference on Computational Geometry, Montreal, Canada (Aug. 2008).

"The Internet of Everything." University of Hong Kong (Mar. 2015).

"How Do Driverless Cars Work?" University of Hong Kong (Mar. 2017).

SCIENCE AND LAW

"Digital Property in the 21st Century." Keynote address for the Spring Meeting of the American Intellectual Property Law Association, Pittsburgh, PA (May 2000). View [slides](#).

"Who Owns This Algorithm?" Carnegie Mellon University (Nov 1991); Microelectronics and Computer Corporation (Jan. 1992); Univ. of Texas at Austin (Jan. 1992); UCLA (Feb. 1992).

"New Computer Technology and Its Application to Worker's Compensation." Forum IV, Newport Beach, CA (Feb. 1992).

"The Office of the Future, If There Is One." 1994 IAIABC Conf., Pittsburgh, PA (Sep. 1994).

"The Fringes of Infringement." University of Texas, Austin, TX (Sep. 1995).

"The Arts and the Internet." Allegheny County Bar Association Continuing Legal Education course (June 26, 1996).

"The Universal Information Resource." Inventing the Future, Symposium in Honor of Raj Reddy's 60th Birthday, Carnegie Mellon University, Pittsburgh, PA (May 1998).

"The Universal Library." University of Texas at Austin (Sep. 1998)

"The Universal Library and Its Role in Scientific Information." Keynote address to the RNA Society symposium on Emerging Sources of RNA Information, Arlington, VA (Dec. 8, 1998).

"Digital Property in the 21st Century." Luncheon address to the American Intellectual Property Law Association, Pittsburgh, PA (May. 2000).

"Copyright Protection and Distance Learning." Hong Kong Intellectual Property Office (Feb. 2002).

"The Universal Dictionary." Address at International Institute of Information Technologies (IIIT), Hyderabad, India (Jan. 2003).

"The Million Book Projects." Public address at the University of Hong Kong (Jan. 2003).

"Mathematics and the Privacy Laws." ALADDIN Workshop on Privacy in D.A.T.A., Pittsburgh, PA (Mar. 2003).

"Machines as readers: a solution to the copyright problem." 1st Int'l Conf. on Universal Digital Library, Hangzhou, China (Nov. 2005).

"Your Books Might Cost More Now: The Role of the Expert in Software Patent Litigation." University of Hong Kong (Feb. 2006).

"University Technology Transfer: How to Fix It." Asia Conference on Technology Transfer (ACTT) 2006, Seoul, S. Korea (Mar. 2006).

"How Big a Problem is Copyright"? USAIN Conference, Cornell University, Ithaca, NY (Oct. 2006).

"Digital Ownership." 2d Intl. Conf. on Universal Digital Library, Alexandria, Egypt (Nov. 2006).

"Google and the Death of Books." University of Hong Kong (Feb. 2010).

"FaceWars." (About the lawsuit between Facebook and the Winkelvoss twins). University of Hong Kong (Feb. 2011).

"Swiping the iPhone: Billions Lost With the Stroke of a Pen." University of Hong Kong (Feb. 2012).

"Global Phone Wars: Apple v. Samsung." University of Hong Kong (Mar. 2016).

ELECTRONIC VOTING

"Voting System Certification — An Examiner's View." Election Center Conference, Reno, Nevada (Sep. 1989).

"Electronic Voting — Evaluating the Threat." Third Conf. on Computers, Freedom and Privacy, San Francisco, CA (Mar. 1993).

"What's Happening in Florida?" Carnegie Mellon University (Nov. 2001)."

"Electronic Voting: The Technology of Democracy." Hong Kong University (Feb. 2004).

"Theory v. Practice in Electronic Voting." DIMACS (Rutgers Univ., May 2004).

"HAVA: Are We Ready?" Panel at the League of Women Voters National Convention, Washington, DC (Jun. 2004).

"Testing Voting Machines." Panel at the American Enterprise Institute, Washington, DC (Jun. 2004).

"Electronic Voting: Promise and Peril." Talk at the Moritz College of Law, Ohio State University (Sep. 2004).

"Is e-voting ready for prime time: Legal and technical issues regarding the upcoming Presidential election." Panel at John Marshall Law School (Chicago, IL, Oct. 2004).

"Is Electronic Voting Reliable?" Talk to the Kiwanis Club of Dubuque, Iowa (Feb. 2005).

"The Top Ten Problems in Practical Electronic Voting." Int'l Workshop on Mathematics and Democracy, Ettore Majorana Centre, Erice, Sicily (Sept. 2005).

"Why Don't We Have Paper Trails in Pennsylvania?" Carnegie Mellon Univ. CyLab Seminar, Pittsburgh, PA (Jan 2006).

"Paper Trails and the Pennsylvania Certification Process." County Commissioners Association of Pennsylvania 2006 Spring Conference, Harrisburg, PA (Mar. 2006).

"The 2006 Elections: Are We Ready?" Panel at the American Enterprise Institute, Washington, DC (Sept. 2006).

"What's Right with Electronic Voting?" University Lecture Series, Carnegie Mellon University (Oct. 12, 2006).

"What Happened in Yesterday's Election?" Center for Research on Computation and Society, Harvard University (Nov. 8, 2006).

"What Happened in Sarasota County"? Council on Government Ethics Laws, New Orleans, LA (Dec. 6, 2006).

"What Happened to 18,000 Votes? Results of the Sarasota Source Code Audit." Carnegie Mellon University (Apr. 16, 2007).

"Opscan Voting: The Good, the Bad and the Ugly." Florida State Association of Supervisors of Elections, Destin, Florida (May 24, 2007).

"Voting Machine Fraud." University of Pittsburgh (Nov. 11, 2008)