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16 *Attorneys for Defendant Google LLC*

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19 UNITED STATES DISTRICT COURT
20 CENTRAL DISTRICT OF CALIFORNIA, WESTERN DIVISION

21 SANDPIPER CDN, LLC,
22 Plaintiff,
23 vs.
24 GOOGLE LLC,
25 Defendant.

Case No. 2:24-cv-03951-AB (RAO)

**GOOGLE’S PRELIMINARY
CLAIM CONSTRUCTIONS
[PATENT L.R. 4-2]**

JURY TRIAL DEMANDED

1 Pursuant to the Northern District of California's Patent L.R. 4-2, the parties'
2 Rule 26(f) Report (Dkt. 38), and the Amended Scheduling Order (Dkt. 54), Defendant
3 Google hereby provides its Northern District of California Patent Local Rule 4-2
4 disclosures to Plaintiff.

5 Consistent with Patent Local Rule 4-2(c), Google expressly reserves the right
6 to supplement, modify, or otherwise amend the preliminary constructions and
7 preliminary identifications of intrinsic and extrinsic evidence set forth herein. Google
8 reserves the right to modify its list of terms for construction, preliminary proposed
9 constructions, and identification of intrinsic and extrinsic evidence, should Plaintiff
10 amend or provide any additional infringement contentions. Google's proposed
11 constructions were compiled prior to receiving Plaintiff's proposed claim
12 constructions, and Google may modify the proposed constructions below and/or
13 identify additional intrinsic or extrinsic evidence, including expert evidence, in light
14 of Plaintiff's proposed claim constructions and evidence. In addition, discovery, as
15 well as Google's ongoing investigation and analysis in this case, may yield other
16 information. Google therefore reserves the right to supplement the preliminary claim
17 constructions and preliminary intrinsic and extrinsic evidence disclosed herein
18 consistent with the applicable Federal Rules of Civil Procedure, the Northern District
19 of California Patent Local Rules, and any applicable Court orders.

20 **I. Preliminary Claim Constructions and Intrinsic and Extrinsic Evidence**

21 Pursuant to Patent Local Rule 4-2(a) and (b), Google hereby provides its
22 proposed construction of each term identified for claim construction and preliminary
23 identifications of intrinsic and extrinsic evidence in the chart attached hereto as
24 Exhibit A. The citations to the evidence provided in Exhibit A are exemplary, and
25 citations to the file history should be understood to include the cited references, where
26 applicable. By identifying intrinsic or extrinsic evidence, Google does not concede
27 that evidence is necessary to construe the claim terms at issue. Google reserves the
28 right to amend or supplement these Preliminary Claim Constructions, including

1 through the submission of additional intrinsic evidence and extrinsic evidence such
2 as expert declarations. Google further reserves the right to add, delete, modify, or
3 otherwise comment on the constructions set forth in Exhibit A, as well as any
4 construction provided by Plaintiff. Google further reserves the right to rely upon
5 evidence identified by Plaintiff. Google further reserves the right to rely on any
6 statements or other disclosures made by Plaintiff in *inter partes* review proceedings
7 or in other cases relating to any of the patents asserted in this case (the “Asserted
8 Patents”) or their related patents, including but not limited to IPR2025-00806,
9 IPR2025-00826, IPR2025-00860, IPR2025-00969, IPR2025-01010, and *Sandpiper*
10 *CDN, LLC v. Comcast Cable Communications, LLC, et al.*, No. 2:24-cv-886-JRG-
11 RSP (E.D. Tex.). Google also may rely on technical background materials, including
12 tutorials or summaries, to aid the Court’s understanding of the underlying technology.

13 **II. Summary of Expert Opinions Regarding the Proposed Claim Terms**

14 Pursuant to Patent Local Rule 4-2(b), Google provides the following
15 “description of the substance of [any supporting] witness’ proposed testimony that
16 includes a listing of any opinions to be rendered in connection with claim
17 construction.”

18 In addition to the extrinsic evidence identified herein, Google may rely on the
19 testimony of Dr. Mark Crovella in support of its proposed constructions and its
20 assertions that certain terms are indefinite. *See* Ex. B (Dr. Crovella’s curriculum
21 vitae). Dr. Crovella may testify regarding how a person of ordinary skill in the art
22 would have understood the meaning of claim terms and phrases in the context of the
23 Asserted Patents, including in light of their specifications and prosecution histories.
24 He also may testify that certain terms and phrases, viewed from that perspective, fail
25 to inform, with reasonable certainty, those skilled in the art regarding the scope of the
26 claimed invention(s). Dr. Crovella may provide technical background to assist the
27 Court in understanding the subject matter of the Asserted Patents and the meaning of
28 the claim terms. He also may testify regarding the level of skill in the art applicable

1 to the Asserted Patents. Dr. Crovella may further respond to Plaintiff's proposed
2 constructions, technical assertions, and supporting arguments or evidence, including
3 by offering rebuttal to any expert testimony or other extrinsic evidence offered by
4 Plaintiff.

5 Pursuant to Patent Local Rule 4-3, Google will serve any expert declaration by
6 Dr. Crovella in connection with the parties' submission of the Joint Claim
7 Construction and Prehearing Statement due June 20, 2025.

8 **III. Meet and Confer Requirement**

9 Pursuant to Patent Local Rule 4-2(c), Google is available to "meet and confer
10 for the purposes of narrowing the issues and finalizing preparation of a Joint Claim
11 Construction and Prehearing Statement," due June 20, 2025.

12
13 DATED: May 27, 2025

MUNGER, TOLLES & OLSON LLP

14 By: /s/ Zachary M. Briers
15 ZACHARY M. BRIERS

16 *Attorneys for Defendant Google LLC*
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CERTIFICATE OF SERVICE

I hereby certify that the foregoing document was served by email on counsel for all parties on May 27, 2025.

/s/ Heather E. Takahashi

Heather E. Takahashi

Exhibit A

EXHIBIT A
Google's Preliminary Claim Constructions and Supporting Evidence

	Term for Construction	Asserted Claim(s)	Preliminary Construction	Preliminary Identification of Intrinsic and Extrinsic Evidence
1	“attempting to serve said second content from the second content server”	'112 patent, claim 13 and all claims dependent therefrom	Indefinite	<u>Intrinsic</u> '112 patent in its entirety, including without limitation 1:33–35, 4:34–51, 6:32–56, 6:65–8:60, Fig. 3, Fig. 5, claim 13, claim 15, claim 17, claim 23. '112 patent file history in its entirety (SANDPIPER-G-00012345 to SANDPIPER-G-00014261), including without limitation Non-Patent Literature Mockapetris, “Domain Names-Concepts and Facilities,” IETF RFC 1034, November 1987 (SANDPIPER-G-00013374 to SANDPIPER-G-00013428); 05/10/2012 Amended Claims (SANDPIPER-G-00014055 to SANDPIPER-G-00014062); 05/10/2012 Applicant Arguments/Remarks Made in an Amendment (SANDPIPER-G-00014063 to SANDPIPER-G-00014066); 01/23/2015 Appeal Brief (SANDPIPER-G-00014205 to SANDPIPER-G-00014229). Related patent applications, patents, and their files histories. <u>Extrinsic</u> Google may rely on the expert testimony of Dr. Crovella, including but not limited to testimony with respect to how a person of ordinary skill in the art would have understood this term in view of the intrinsic and extrinsic evidence.
2	“each CDN DNS server is associated with a respective	'112 patent, claims 1 and 13 and all claims	“each CDN DNS server is configured to resolve a DNS	<u>Intrinsic</u> '112 patent in its entirety, including without limitation the Abstract, 3:1–4, 4:34–51, 6:32–56, 6:65–7:32, 7:60–8:60, Fig. 3, Fig. 5, claim 1, claim 13.

	Term for Construction	Asserted Claim(s)	Preliminary Construction	Preliminary Identification of Intrinsic and Extrinsic Evidence
	plurality of content servers” (claim 1); “each DNS server is associated with a respective plurality of content servers” (claim 13)	dependent therefrom	request to the IP address of one of a respective plurality of content servers” (claim 1); “each DNS server is configured to resolve a DNS request to the IP address of one of a respective plurality of content servers” (claim 13)	’112 patent file history in its entirety (SANDPIPER-G-00012345 to SANDPIPER-G-00014261), including without limitation 11/09/2009 Applicant Arguments/Remarks Made in an Amendment (SANDPIPER-G-00012490 to SANDPIPER-G-00012492); 07/29/2010 Amended Claims (SANDPIPER-G-00012647 to SANDPIPER-G-00012655); 07/29/2010 Applicant Arguments/Remarks Made in an Amendment (SANDPIPER-G-00012656 to SANDPIPER-G-00012657); 02/18/2011 Applicant Arguments/Remarks Made in an Amendment (SANDPIPER-G-00014011 to SANDPIPER-G-00014014); 05/10/2012 Amended Claims (SANDPIPER-G-00014055 to SANDPIPER-G-00014062); 05/10/2012 Applicant Arguments/Remarks Made in an Amendment (SANDPIPER-G-00014063 to SANDPIPER-G-00014066); 05/13/2013 Amended Claims (SANDPIPER-G-00014100 to SANDPIPER-G-00014106); 05/13/2013 Applicant Arguments/Remarks Made in an Amendment (SANDPIPER-G-00014107 to SANDPIPER-G-00014111); 12/06/2013 Applicant Arguments/Remarks Made in an Amendment (SANDPIPER-G-00014174 to SANDPIPER-G-00014178); 01/23/2015 Appeal Brief (SANDPIPER-G-00014205 to SANDPIPER-G-00014229). Related patent applications, patents, and their files histories. <u>Extrinsic</u> Google may rely on the expert testimony of Dr. Crovella, including but not limited to testimony with respect to how a person of ordinary skill in the art would have understood this term in view of the intrinsic and extrinsic evidence.

	Term for Construction	Asserted Claim(s)	Preliminary Construction	Preliminary Identification of Intrinsic and Extrinsic Evidence
3	“popularity service”	’573 patent, claims 1 and 19 and all claims dependent therefrom	“a component or functionality that determines the popularity of content and provides information used to determine where the content will be served from”	<u>Intrinsic</u> ’573 patent in its entirety, including without limitation the Abstract, 4:32-42, 5:27-6:10, 6:27-7:45, 8:8-9:37, 9:65-10:15, 10:50-64, 11:3-61, Fig. 1, Fig. 2, Fig. 3, Fig. 4, Fig. 5, Fig. 6, Fig. 7, claim 1, claim 7, claim 8, claim 11, claim 17, claim 18, claim 19. ’573 patent file history in its entirety (SANDPIPER-G-00014503 to SANDPIPER-G-00014822). Related patent applications, patents, and their files histories in their entirety, including without limitation U.S. Patent Application No. 12/408,681 (the “’681 App.”); 04/04/2011 Non-Final Rejection re the ’681 App.; 08/04/2011 Applicant’s Amendment/Response re the ’681 App.; 08/04/2011 Applicant Arguments/Remarks Made in an Amendment re the ’681 App.; 11/30/2011 Non-Final Rejection re the ’681 App.; 03/30/2012 Applicant’s Amendment/Response re the ’681 App.; 03/30/2012 Applicant’s Arguments/Remarks Made in an Amendment re the ’681 App.; 07/18/2013 Final Rejection re the ’681 App.; 06/23/2014 Applicant Arguments/Remarks Made in an Amendment re the ’681 App.; 11/07/2014 Notice of Allowance re the ’681 App.; 06/23/2014 Applicant Appeal Brief re the ’681 App.; U.S. Patent No. 8,930,538. <u>Extrinsic</u> Google may rely on the expert testimony of Dr. Crovella, including but not limited to testimony with respect to how a person of ordinary skill in the art would have understood this term in view of the intrinsic and extrinsic evidence.
4	“receiving an instruction to	’573 patent, claim 3 and all	Indefinite	<u>Intrinsic</u>

	Term for Construction	Asserted Claim(s)	Preliminary Construction	Preliminary Identification of Intrinsic and Extrinsic Evidence
	cache the resource at the first server of the first tier of servers when the resource is obtained from the content server of the content delivery network”	claims dependent therefrom		’573 patent in its entirety, including without limitation the Abstract, 2:28-65, 4:19-31, 5:57-7:54, 10:7-41, Fig. 4, Fig. 5, claim 1, claim 2, claim 3, claim 11, claim 12, claim 13, claim 19, claim 20. ’573 patent file history in its entirety (SANDPIPER-G-00014503 to SANDPIPER-G-00014822), including without limitation 02/25/2019 Specification, Claims, Abstract, and Drawings (SANDPIPER-G-00014516 to SANDPIPER-G-00014551); 07/24/2020 Non-Final Rejection (SANDPIPER-G-00014701 to SANDPIPER-G-00014725); 09/17/2020 Applicant Amendment and Remarks, Amendments to the Claims, and Remarks (SANDPIPER-G-00014771 to SANDPIPER-G-00014779); 12/31/2020 Notice of Allowance and Fee(s) Due (SANDPIPER-G-00014790 to SANDPIPER-G-00014797). Related patent applications, patents, and their files histories. <u>Extrinsic</u> Google may rely on the expert testimony of Dr. Crovella, including but not limited to testimony with respect to how a person of ordinary skill in the art would have understood this term in view of the intrinsic and extrinsic evidence.

Exhibit B

MARK E. CROVELLA

Computer Science Department
Boston University
111 Cummington St
Boston, MA 02215
Office: (617) 353-8923
Department: (617) 353-8919

Date of Birth: October 28, 1959
Location: Buffalo, New York, USA
Nationality: USA

Current as of April 24, 2025

EDUCATION

Ph.D. Computer Science, University of Rochester, October 1994.
M.S. University of Rochester, May 1991.
M.S. State University of New York at Buffalo, May 1990.
B.S. Cornell University, May 1982.

SELECTED PROFESSIONAL EXPERIENCE

Professor Department of Computer Science, Boston University, 2006 to present. **Department Chair, Computer Science** 2013 – 2018; **Associate Professor** 2000 – 2006; **Assistant Professor** 1994 – 2000. On leave 2000 – 2001.
Professor Faculty of Computing & Data Sciences, Boston University, 2022 to present. **Chair of Academic Affairs, Faculty of Computing & Data Sciences** 2022 – present; **Founding Member, Faculty of Computing & Data Sciences**, 2020 – 2022; **Data Science Faculty Fellow** 2019 – 2022.
Chief Scientist Guavus, Inc., February 2012 to August 2014.
Technical Director Network Appliance, Tewksbury, MA. November 2000 to April 2002.
Chief Architect Webmanage Technologies, Chelmsford, MA. May 2000 to acquisition by Network Appliance in November 2000.
Senior Computer Scientist Calspan Corporation, Buffalo, NY. August 1984 to August 1994.

LEGAL CONSULTING

The following are all cases in which I provided consulting and provided a report or testified at trial or deposition.

Visual Networks v. Paradyne, 2005, District of Maryland.

Retained by Sughrue Mion, Washington DC on behalf of Visual Networks.
Provided Report on validity of Visual Networks patents.
Subject area: Communications networks.

Akamai Technologies and MIT v. Limelight Networks, 2007 - 2008, District of Massachusetts.

Retained by Choate, Hall and Stewart, Boston MA on behalf of Akamai.
Provided Infringement Report, Noninfringement Rebuttal, Deposition on expert reports, Testimony at trial (3 days).
Subject area: Content delivery networks.

Interval Research v. Apple, Google, AOL, et al, 2011, US PTO.

Retained by O'Melveny & Myers, San Francisco on behalf of Apple.
Provided expert report in support of re-examination claim.
Subject area: Web browsers.

Straight Path IP Group v. Sony Et. Al., 2013, International Trade Commission and ED Virginia.
Retained by Wolf Greenfield, Boston MA on behalf of Sony.
Provided declarations in support of petitions for Inter Partes Review to USPTO.
Subject area: Video streaming technology.
Case number: 2:13-cv-00427. Filing Date: 8/1/2013.

PersonalWeb v. Microsoft and Yahoo!, 2013-2014, Eastern District of Texas.
Retained by Haltom and Doan, and GreenbergTraurig on behalf of Yahoo!, and Microsoft.
Provided Invalidity Report on PersonalWeb patents, Deposition.
Subject area: Search engine technology.
Case number: 6:12-CV-658, 6:12-CV-663. Filing Date: 9/17/2012.

RPX Corporation v. Cedatech Holdings, 2015, Patent Trial and Appeal Board.
Retained by Wolf Greenfield, Boston MA on behalf of RPX.
Provided declaration in support of petition for Inter Partes Review.
Subject area: Web browser and media technology.
Case number: IPR2015-00736. Filing Date: 2/13/2015.

Fortinet v. Sophos, 2015, Eastern District of Texas.
Retained by Quinn Emanuel on behalf of Fortinet.
Provided Reports on Invalidity and Noninfringement, Deposition.
Subject area: Security products.
Case number: 3:13-cv-05831-EMC. Filing Date: 12/16/2013.

RPX v. Applications In Internet Time, 2015, Patent Trial and Appeal Board.
Retained by Wolf, Greenfield, Boston MA on behalf of RPX.
Provided Declaration in Support of Petition for IPR, Deposition.
Subject area: Application architecture.
Case number: IPR2015-01750. Filing Date: 8/17/2015.

Akamai v. Limelight, 2016-2017, Patent Trial and Appeal Board.
Retained by Choate, Hall & Stewart and WilmerHale, Boston, MA on behalf of Akamai.
Provided Declarations in Support of Petition for IPR, Deposition.
Subject area: Content delivery networks.
Case number: IPR2016-01011. Filing Date: 5/13/2016.

Limelight v. Akamai, 2016-2017, Patent Trial and Appeal Board.
Retained by WilmerHale, Boston MA on behalf of Akamai.
Provided Declaration in Support of Patent Owner Preliminary Response.
Subject area: Content delivery networks.
Case number: IPR2016-01711. Filing Date: 9/6/2016.

Finjan v. Symantec, 2017, Northern District of California.
Retained by Quinn Emanuel, Chicago IL on behalf of Symantec.
Provided Damages Rebuttal Report, Deposition.
Subject area: Security products.
Case number: 4:14-cv-02998. Filing Date: 6/30/2014.

Sound View Innovations v. Hulu, 2017-2019, Central District of California.
Retained by O'Melveny & Myers on behalf of Hulu, LLC.
Provided Expert Reports on Noninfringement and Invalidity, Deposition.
Subject area: Database Technology.

Case number: LACV17-04146 JAK (PLAx). Filing Date: 6/2/2017.

RPX and Bank of America v. Publishing Technologies, 2018, PTAB.

Retained by Winston & Strawn on behalf of RPX Corporation.

Provided Declaration in support of Petition for Inter Partes Review.

Subject area: Content Management System.

Case number: IPR2018-01131 and IPR2018-01132. Filing Date: 5/31/2018.

Intellectual Ventures v. BITCO and Great West (Old Republic), 2015-2019, Eastern District of Texas.

Retained by Sidley Austin on behalf of BITCO and Great West.

Provided Expert Reports on Invalidity and Noninfringement, Deposition, Testimony at Trial.

Subject area: Web Technology.

Case number: 6:18-cv-00298. Filing Date: 1/20/2015.

Centripetal Networks, Inc. v. Cisco Systems, Inc., 2019, Eastern District of Virginia, Norfolk.

Retained by Duane Morris on behalf of Cisco.

Provided Expert Reports on Invalidity and Noninfringement, Deposition, Testimony at Trial.

Subject area: Security Products.

Case number: 2:18-cv-00094-HCM-LRL. Filing Date: 3/29/2018.

British Telecommunications PLC v. Fortinet LLC, 2019, PTAB.

Retained by Duane Morris on behalf of Fortinet.

Provided Declaration in Support of IPR.

Subject area: Distributed Network Management.

Case number: IPR2019-01323. Filing Date: 7/11/2019.

Express Mobile v. Magento (X.commerce), 2019, Northern District of California.

Retained by Sidley Austin on behalf of Magento.

Provided Expert Reports on Invalidity and Ensnarement, Deposition.

Subject area: Web Authoring Software.

Case number: 17-cv-02605-RS. Filing Date: 2019.

Ohio State Innovation Foundation v. Akamai, 2019, District of Massachusetts, PTAB.

Retained by Farella Braun & Martell on behalf of Akamai.

Provided Declaration in Support of IPR.

Subject area: Content Distribution and Prefetching.

Case number: 1:19-cv-11528. Filing Date: 2019.

Askeladden v. Lightwire, 2020, PTAB.

Retained by Wilmer Hale on behalf of Askeladden.

Provided Declaration in Support of IPR.

Subject area: Identity Management in E-commerce.

Case number: IPR2020-01415. Filing Date: 2020.

Broadcom Corporation and Avago Technologies International Sales Pte. Limited v. Netflix, Inc., 2020, Northern District of California.

Retained by Kecker, Van Nest & Peters on behalf of Netflix.

Provided Expert Reports on Invalidity and Non-infringement, Deposition.

Subject area: Video Streaming.

Case number: 3:20-cv-04677-JD. Filing Date: 2020.

CA, Inc. and Avago Technologies International Sales Pte. Limited v. Netflix Inc., 2020, Eastern District of Texas.

Retained by Kecker, Van Nest & Peters on behalf of Netflix.

Provided Expert Reports on Invalidity and Non-infringement; Declaration on Claim Construction.

Subject area: Video Streaming.

Case number: 2:21-CV-80-JRG-RSP. Filing Date: 2021.

Sable Networks Inc et al v. Juniper Networks, Inc., 2020, Western District of Texas.

Retained by Farella Braun + Martell, LLP on behalf of Juniper.

Provided Prior Art Search and Analysis.

Subject area: Network Switch Technology.

Case number: 6:20-cv-00524. Filing Date: 2020.

Sable Networks Inc et al v. Cloudflare, 2021, Western District of Texas.

Retained by Farella Braun + Martell, LLP on behalf of Cloudflare.

Provided Prior Art Search, Declaration in IPR.

Subject area: Network Switch Technology.

Case number: 6:21-cv-00261. Filing Date: 2021.

Eolas v. Amazon et al., 2021, Northern District of California.

Retained by Latham and Watkins, LLP on behalf of Amazon.

Provided Report on Invalidity, Deposition.

Subject area: Web Browser Technology.

Case number: 4-17-cv-03022. Filing Date: 2017.

RightQuestion, LLC v. Samsung Electronics Co., et al, 2021, Eastern District of Texas.

Retained by O'Melveny and Myers LLP on behalf of Samsung.

Provided IPR Declaration, Invalidity Report, Deposition.

Subject area: Authentication Management.

Case number: 2:21-cv-00238. Filing Date: 2021.

Ebates Performance Marketing, Inc. d/b/a Rakuten Rewards v. IBM, 2021-2022, PTAB.

Retained by GreenbergTraurig, LLP on behalf of Petitioner Ebates Performance Marketing, Inc. d/b/a Rakuten Rewards.

Provided Declaration in Support of IPR, Deposition.

Subject area: Personalization Methods.

Case number: IPR2022-00438, IPR2022-00439. Filing Date: 2021.

Ebates Performance Marketing, Inc. d/b/a Rakuten Rewards v. IBM, 2021-2022, PTAB.

Retained by GreenbergTraurig, LLP on behalf of Petitioner Ebates Performance Marketing, Inc. d/b/a Rakuten Rewards.

Provided Declaration in Support of IPR, Deposition.

Subject area: Authentication Methods.

Case number: IPR2022-00646.

Wapp Tech v. Bank of America, 2022, Eastern District of Texas.

Retained by O'Melveny & Myers LLP on behalf of Bank of America.

Subject area: Mobile Software Development.

Case number: 4:21-cv-00670. Filing Date: 2021.

IBM v. Rakuten, Inc. et al., 2022, District of Delaware.

Retained by GreenbergTraurig, LLP on behalf of Defendants.

Provided Declaration in Support of Claim Construction, Deposition.

Subject area: Networking Technologies.
Case number: 1:21-00461.

Repairify v. LKQ Corp. and Keystone Automotive Industries, Inc., 2022, Western District of Texas.

Retained by Irwin IP on behalf of Keystone.
Provided Expert Report on Technology, Deposition.
Subject area: Automotive Networking.
Case number: 6:21-cv-00819.

Lionra v. Cisco, 2022, PTAB.

Retained by Duane Morris on behalf of Cisco.
Provided Declaration in IPR, Deposition.
Subject area: Network Security.
Case number: IPR2023-00673.

Daedalus v. Samsung, 2022-2023, Eastern District of Texas.

Retained by O'Melveny and Myers LLP on behalf of Samsung.
Provided Consulting on Invalidity.
Subject area: Security Technology.
Case number: 2:22-cv-352. Filing Date: 2021.

Taasera v. Trend Micro, 2022-2023, Eastern District of Texas.

Retained by Duane Morris LLP on behalf of Trend Micro.
Provided Consulting on Invalidity, Noninfringement.
Subject area: Security Technology.
Case number: 2:21-cv-00441.

Lionra v. Cisco, 2023-2024, PTAB.

Retained by Haynes and Boone on behalf of Cisco.
Provided Declaration in IPR.
Subject area: Network Security.
Case number: IPR2024-00734.

Optimorphix v. Google, 2024, District of Delaware.

Retained by Latham & Watkins on behalf of Google.
Provided Consulting on Invalidity.
Subject area: Network Communication.
Case number: 1:23-cv-01065.

Headwater v. AT&T, 2024-2025, Eastern District of Texas.

Retained by McKool Smith on behalf of AT&T.
Provided Report on Invalidity, Deposition.
Subject area: Network Communication.
Case number: 2:23-cv-00397, -00398.

Nokia v. Amazon, 2024-2025, PTAB.

Retained by SheppardMullin on behalf of Amazon.
Provided Declaration in IPR.
Subject area: Data Management Systems.
Case number: IPR2024-01507.

B.E. Tech v. Google, 2023-2025, District of Delaware.

Retained by Kecker, Van Nest, and Peters on behalf of Google.
Provided Declaration in support of Claim Construction.
Subject area: Electronic Advertising.
Case number: 20-cv-622 (D. Del.).

PATENTS HELD

Methods for Storing and Reading Digital Data on a Set of DNA Strands, US Patent # 10,027,347, issued July 17, 2018.

Method and Apparatus for Whole-Network Anomaly Diagnosis and Method to Detect and Classify Network Anomalies Using Traffic Feature Distributions, US Patent # 8,869,276, issued October 21, 2014.

Compressed Set Representation for Sets as Measures in OLAP Cubes, US Patent # 8,533,167, issued September 10, 2013.

Method and Apparatus for Dynamic Resource Discovery and Information Distribution in a Data Network, US Patent # 7,747,741, issued June 29, 2010.

System for Creating and Distributing Prioritized List of Computer Nodes Selected as Participants in a Distribution Job, US Patent # 7,346,682, issued March 18, 2008.

Method and Apparatus for Election of Group Leaders in a Distributed Network, US Patent # 6,993,587, issued January 31, 2006.

Method and Apparatus for Scalable Distribution of Information in a Distributed Network, US Patent # 6,748,447, issued June 8, 2004.

Method and Apparatus for Reliable and Scalable Distribution of Data Files in Distributed Networks, US Patent # 6,718,361, issued April 6, 2004. European Patent # EP1305924 issued March 31, 2010.

Distributed Routing, US Patent # 6,370,584, issued April 9, 2002.

Method and Apparatus for Assigning Tasks in a Distributed Server System, US Patent # 6,223,205, issued April 24, 2001.

SELECTED HONORS

Duan Family Fellow, 2024, Boston University

Innovator of the Year, 2014, Boston University.

IEEE Fellow, 2011, “For contributions to the measurement and analysis of networks and distributed systems.”

ACM Fellow, 2010, “For contributions to the measurement and analysis of networks and distributed systems.”

FUNDING

Recipient of over 25 research grants from NSF, ARO, NGIA, Google, Sprint, GTE, Xerox, and Hewlett-Packard totalling over \$15 M.

SELECTED PROFESSIONAL ACTIVITIES

Scientific Advisory Board of the Max Plank Institute for Software Systems, 2016 – present.

General Co-Chair, CoNEXT 2011.

Chair, ACM SIGCOMM 2007–2009.

Program Co-Chair, IFIP Networking 2010.

Program Committee Chair, Internet Measurement Conference 2003.

BOOKS

M. Crovella and B. Krishnamurthy, “Internet Measurement: Infrastructure, Traffic, and Applications,” John Wiley and Sons, 2006, 512 pp.

PUBLISHED ARTICLES

Author of over 200 published articles in Computer Science, cited more than 30,000 times according to Google Scholar.