Brad Thomas Ulrich

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As the Director of Quandary Peak's Health IT and Audits division, I oversee a team of software and health informatics experts in audits of health IT software systems and companies, including reviews for private companies as well as the Department of Health and Human Services and United States Department of Justice.

My professional experience includes risk management, SDLCs and project management, software governance and compliance with SDO standards, CTO and strategic management, IP management and consulting, litigation support, and expert testimony as a computer scientist.

Employment

Vice President, Health IT and Audits Division

Quandary Peak Research | Nashville, TN | Nov 2017–Present

- Consulting for major Health IT software vendors and the department of Health and Human Services (HHS), the ONC (Office of National Coordinator for Health IT) and the U.S. Department of Justice on matters involving Health IT software compliance and best practices, including specific guidance on quality management systems, SDLC, risk management, patient safety, software architectures, DevOps, and software usability.

- Directing a Division of 15 software and IT subject-matter experts in analyses and audits related to software regulatory compliance, quality and risk management systems, and best practices for managing risk and safety in IT.

- Assisting Health IT vendors in designing policies and procedures that combine agile processes with regulatory governance methods.

- Providing software process and code quality reviews for private companies and the U.S. Government, including the Consumer Financial Protections Bureau (CFPB), the department of Health and Human Services (HHS) and the ONC (Office of National Coordinator for Health IT).

Software Expert Consultant

Quandary Peak Research | Los Angeles, CA | June 2012–Present

- Providing sound and informative software reviews, audits and expert opinions covering industry standards, knowledge, and practices in computer software.

- Experienced in expert reports, depositions, independent audits, and code review covering a range of professional software subjects including: safety and regulatory compliance, patents, trade secrets, defect and code quality analysis, contract disputes, and software project cost and impact analysis.

- Providing software process and code quality reviews for private companies and the U.S. Government, including the Consumer Financial Protections Bureau (CFPB), the department of Health and Human Services (HHS) and the ONC (Office of National Coordinator for Health IT).

- Industry expertise in Health IT and electronic health record (EHR) software, smartphone and mobile apps, embedded systems, cellular devices, signal processing and algorithms, gaming, industrial process control, enterprise web applications, graphics and media.

- Offering law firms, and private and government agencies clear and effective software code analysis in languages and platforms including Java, C++, Python, HTML/CSS, Android, Objective C, PHP, C#, Microsoft .NET, and Web 2.0 APIs.

- Provided expert analysis opinions and testimony in trade secret and contract dispute cases for Fortune 500 companies, hospitals, and municipalities, covering subjects such as project management, industry standards, project costs, technical impacts, and code quality.

- Successfully delivered code review, infringement analysis and expert witness testimony in numerous patent cases involving mobile applications and smartphones, internet routers, financial software, industrial and machinery controls and gaming systems.

- Provided consultation in several contract dispute cases involving electronic health record (EHR) software installations at local and community hospitals, representing both hospitals and EHR companies.

Software Developer
Independent Contractor | Nashville, TN | Feb 2006–Nov 2017

- Lead software engineer developing microcontroller-based motorized equipment for a zipline gear company.

- Developed motion control system for motor control and vibration sensing for a custom vibration table.

- Contracted to successfully develop and release a web-based financial trading software plug-in for eSignal to provide enhanced trading data download functionality; utilized PHP/MySQL.

- Ported a suite of trading system tools and financial trading indicators from Java to C++.

- Developed, tested and deployed on-schedule a major rebuild of the member website of the American College of Neuropsychopharmacology (ACNP) using ASP.NET and Microsoft SQL including integration with iMISdonor software.

- Developed, tested, and released an interactive drawing and markup tool for medical applications in VB.NET for Ulrich Medical Concepts, Inc's. Team Chart Concept (TCC) software.

Chief Technology Officer
Genesis Health Technologies LLC | Paducah, KY | Nov 2011–Apr 2013

- Managed the commercial launch of Genesis' flagship products and technology services for diabetes healthcare: the Genesis Blood Glucose Meter (BGM) - a cellular-enabled blood glucose monitor for home use; and the Genesis Health Record Systems (GHRS) - a web- and mobile app-based system for real-time diabetes management.

- Developed and implemented internal processes for compliance with federal FDA Quality Management Systems (QMS) guidelines through various software documentation and risk management controls.

- Developed and submitted final Software Documentation for official FDA 510(k) submissions for both the Genesis BGM and Genesis BGMS.

- Managed a technical team in the regulatory testing and device certification requirements for the Genesis BGM, including FCC testing and Verizon device certification.

- Successfully managed the build and launch of the GHRS, including recent improvements for enterprise-level professional use and cloud-based APIs to Verizon eBiz and nPhase.

Project Manager
Genesis Health Technologies LLC | Paducah, KY | Feb 2011–Nov 2011

- Managed software development team and delivered to client on-time a Blackberry mobile phone application for the gDriveTM Blood Glucose Meter; implemented a phone-to-meter two-way USB control interface.
- Assisted with the design and testing of a secure AES-128 bit encrypted, tcp-based communication protocol between the meter's CMDA module and a linux-based TCP Server.

Co-Founder and CEO
mSight Mobile, | Nashville, TN | Aug 2009–Nov 2011

- Pioneered the development of Google Android applications as an early adopter, beginning with Android SDK v1.1.
- Contracted with Premo Applications, LLC to design, develop, market and release the App-Packs suite of apps on the Google Android Market (now named Google Play).
- Designed a Java and Android SDK-based secure licensing API enabling packages of applications to be sold as a single transaction using the Google License Verification Library (LVL).
- Developed PhoneFraze, one of the longest-running games on the Google Android Market and one of first applications to integrate with Facebook "Like" and Twitter "Tweet" APIs.

Co-Founder and Project Lead
Pubpicks.net | Nashville, TN | Mar 2010–Apr 2011

- Worked in a joint venture with mSight Mobile, LLC and The Melrose Pub to successfully design, develop, test and release PubPicks–an interactive, phone-based sports game played on-location at bars and restaurants during live sporting events.
- Designed a cutting-edge, cross-platform, in-browser architecture for the PubPicks app using HTML-5, jQueryMobile, and GPS-based location awareness.
- Managed product development team of two designers and two developers to build, test, demo, and launch the product ahead of schedule in bars and restaurants in Nashville.
- Managed game administration team of six people to advertise, administer and run the game in three restaurants in the Nashville area during the 2010-11 NFL season and the 2011 Men's "March Madness" NCAA Basketball Tournament.

Director of Technology
MOR Technology | Metropolis, IL | Oct 2007–Dec 2009

- Played an integral role in the development and implementation of a two-year, $2,000,000 strategic plan to rapidly develop and commercialize process technologies for the renewable energy and commodity processing industries.
- Assisted company engineers and IP firm C.R. Miles with patent prosecution, including filing and granting of four U.S. patents.
- Successfully tested and demonstrated proprietary technologies in the laboratory and at pilot-scale research facilities in Missouri, Iowa, Illinois, Texas, and Canada.
- Team awarded $150,000 matching grant from the Illinois Corn Marketing Board for the installation of a $300,000 demonstration and testing facility at the Illinois River Energy Ethanol Plant in Rochelle, Illinois; assisted in project planning, test program implementation and data collection during the successful installation, start-up, and operation of the facility.
- Assisted with project management and planning for selection of PLC and automation technology for the company's flagship corn mill design.

- Developed multivariate programmable plant operational models in Visual Basic and Excel. Tailored models for potential customers based on individual plant design, location, logistics, and commodity pricing scenarios.
- Developed and refined company branding, logos, advertisements, website, and press releases, in collaboration with the Director of Business Development and outside consultants.
- Oversaw the formation of a subsidiary technology company, MOR Supercritical, LLC, by the company's legal team in March 2008; current member of the Board of Directors.
- Managed business development effort for MOR Supercritical's algae-to-biofuels oil extraction technology; drafted and filed grant applications through the State of Pennsylvania and DARPA.
- Drafted, filed for and received three grants for the companies, totaling $195,000.
- Assisted a legal and executive team in drafting a private placement memorandum offering to sell securities in the company; directly marketed the securities and successfully raised over $1,000,000 in outside funding for the company.
- Interfaced with legal representatives of multiple stakeholders to oversee the formation of a joint venture technology company, MOR Value Products, LLC in February 2009 with Japanese partner Itochu.

Project Developer

MOR Energy | Grand Chain, IL | May 2005–Dec 2007

- Co-founded company to develop a proposed $250,000,000 ethanol plant in Southern Illinois.
- Reviewed and selected primary, next-generation ethanol production technologies; performed technical feasibility and risk assessment, economic modeling and business case analyses for the project; selected technologies for implementation.
- Participated in selecting members of the project development team, including legal, business and finance consultants, local and state economic development agencies, environmental engineers, process engineers, energy suppliers, and owner's engineers; helped to negotiate project contracts in excess of $800,000.
- Coordinated project development, successfully achieving early milestones, including technology selection, site selection and layout, site engineering, preliminary process design, and air and water permit acquisition.
- Supervised development and drafting of the company business plan, including detailed financial pro formas.

Software Engineer

Ulrich Medical Concepts | Paducah, KY | Nov 2003–Nov 2005

- Member of a 4-person engineering team providing active software development and support for the company's flagship product: Team Chart Concept (TCC), and electronic medical record, billing, and office management software solution medical practices and correctional facilities with over 1,000 medical health professional users in 10 states.
- Designed and developed from conception to release an integration of TCC with the UnicorMed-Easy Code Win32 DLL, allowing medical practices to maximize insurance reimbursements.
- Designed and implemented a Win32 module providing new functionality for digital annotation/markup of medical images and diagrams with customizable database linkage as lead developer on a three-person team.
- Developed and successfully released a WinCE application for handheld devices that enabled off-network collection of medical data and synchronization with the primary database and application server.
- Managed and performed development tasks throughout product life cycles, from needs assessment and definition through internal reviews/releases, quality assurance, documentation, developer and sales employee training, release, and maintenance.

– Researched evolving government and industry compliance requirements and implemented software and controls for various standards and organizations as including HL7, X12, Medicare/Medicaid, HIMSS, HIPAA, and others.

Co-Founder, Chief Technology Officer
The Dynamic Market Lab | Paducah, KY | Jan 2005–Dec 2016

  – Co-founded the company, an on-going and profitable business with over 400 customers in 10 countries.
  – Developed and marketed the company's flagship product, Adaptive Cycle Toolkit (ACT), a top-selling Official Add-On software module for the Metastock Professional Trading Platform.
  – Successfully procured a worldwide marketing and license agreement with Equis International, a subsidiary of Thomson Reuters.
  – Designed and developed engineering-based financial trading indicators using advanced signal processing mathematics.
  – Created from conception through commercial release the complete ACT product - a Win32 C++ application that includes over 60 financial time-series indicators, several trading systems and tools, a website and a 90-page user manual.

Education

B.S. in Computer Science, with cum laude honors
Vanderbilt University | Nashville, TN | May 2004

B.S. in Mathematics, with cum laude honors
Vanderbilt University | Nashville, TN | May 2004

Management, Audits, & Compliance Consulting

• **MAK-SYSTEM Group** | Apr 2024–Present
Providing training to MAK-SYSTEM personnel to prepare for FDA audit including content, audit process, and preparedness strategies. Performing a mock audit utilizing the FDA's Quality Systems Guide to Inspections of Quality Systems. Based on QSR and other applicable 21 CFR Part 800 and ISO 13485 requirements. Will incorporate applicable FDA guidance such as General Principles of Software Validation; Final Guidance for Industry and FDA Staff (2002) and the ISO 14971 and 62304 standards.

• **Electronic Health Record Vendor |** CLIENT CONFIDENTIAL | Feb 2019–Jan 2020
Performing consultation regarding compliance and regulatory matters for Certified Health IT software.

• **Electronic Health Record Vendor |** CLIENT CONFIDENTIAL | Mar 2019–Present
Performing gap analysis and recommendations for improving compliance with CEHRT regulations for Certified Health IT software.

• **REMS–Data, Quality, Process and Systems Review |** CLIENT CONFIDENTIAL | Apr 2019–Present
Performing independent, internal data, quality, process and systems review for a major FDA-regulated REMS (Risk Evaluation and Mitigation Strategies) program and for a popular generic medication with serious side effects. Includes 21 CFR Part 11 compliance review, review of software development, architecture, requirements, documentation, testing and validation; review of annual report data and assisting with responses to FDA inquiries.

- **Electronic Health Record Vendor** | CLIENT CONFIDENTIAL | Nov 2017–Present
Developing guidance to meet CEHRT regulations with a focus on software governance and quality management systems; drafting policies and procedures that combine agile processes with regulatory governance requirements. Reviewing source code and issue tracking records to identify potential regulatory issues.

- **Office of National Coordinator for Health IT**
ONC Health IT Safety Evaluation Technical Analysis | Aug 2017–Dec 2018
Engaged as the leading software engineer on a small team led by NORC at the University of Chicago and selected under a federal contract and open solicitation (Solicitation # 17-233-SOL-00329) issued by the ONC. The project was expected to include technical reviews of known or expected patient safety issues in ONC-certified EHR systems, including software process and source code review, including review of past issues, recommendations for risk and quality management systems, design controls, improvements to software development and testing processes, code review and manual and automated code quality analysis.

- **eClinicalWorks, LLC and the Office of the Inspector General of HHS**
Software Quality Oversight Organization, Team Lead | July 2017–Feb 2021
Led a team of seven serving as the Software Quality and Oversight Organization (SQOO) under the Corporate Integrity Agreement between eClinicalWorks LLC and the Office of the Inspector General of the United States Department of Health and Human Services dated May 30, 2017. Served as an independent audit and oversight organization covering a technical review of EHR software and development processes as it relates to patient safety. The project included software process and source code review, including review of past issues, recommendations for risk and quality management systems, design controls, improvements to software development and testing processes, code review and manual and automated code quality analysis.

- **Office of National Coordinator for Health IT**
Independent Consultative Expert (ICE), Team Lead | Nov 2016–June 2017
Led a team of four serving as an Independent Consultative Expert (ICE) and issued a formal ICE report covering a technical review and audit of a major EHR software product as it relates to patient safety. The project included software process and source code review, review of past issues, and development of recommendations for risk and quality management systems, design controls, improvements to software development and testing processes, code review and manual and automated code quality analysis.

- **Consumer Financial Protections Bureau (CFPB)**
Technical Review, Team Lead | Mar 2016–Dec 2016
Leading a team of three from Quandary Peak Research in providing technical review and audit for the CFPB in an ongoing investigation of a large mortgage servicing company. The review covers software process and code review, including a review of internal software development processes, documentation and communication practices, data storage and access practices, and source code review. The project includes assessing the integrity and reliability of key data and identifying potential data integrity and validation remedies.

Pre-Litigation Consulting

- **C3 AI.** | Aug 2022 - Present
Nature of Suit: Intellectual Property investigation and audit
Retained by: C3 AI, Inc
Technology: machine learning; AI cloud and big data infrastructure

Litigation Consulting

- **William J. Van Kirk v. <u>West Virginia United Health System, WVU Medicine, and University Health Associates</u>** | Nov 2023–Present
  Jurisdiction: Circuit Court of Monongalia County, West Virginia
  Case Number: 23-C-281
  Counsel: Thomas Combs & Spann, PLLC
  Nature of Suit: Medical Malpractice

- **Madelyn Hammock v. <u>Hackensack Meridian Health</u>** | Oct 2023–Present
  Jurisdiction: Superior Court of New Jersey
  Case Number: MON-L-003760-21 - 20510
  Counsel: Walsh Pizzi O'Reilly Falanga LLP
  Nature of Suit: Medical Malpractice

- **Kristen Dondero, et al. v. <u>Yaakov Abdelhak, M.D.</u>** | Aug 2023–Present
  Jurisdiction: Superior Court of New Jersey Bergen County
  Case Number: BER-L-3527-20
  Counsel: Walsh Pizzi O'Reilly Falanga LLP
  Nature of Suit: Medical Malpractice

- **<u>Club Speed, LLC</u> v. K1 Speed, Inc** | July 2023–Present
  Jurisdiction: Superior Court of California
  Case Number: 30-2022-01241507-CU-BC-CJC
  Counsel: Rutan & Tucker, LLP
  Nature of Suit: Breach of Contract

- **<u>Avelardo Rivera and Yasmine Romero</u> v. Amazon Web Services, Inc** | July 2023–Present
  Jurisdiction: Western District of Washington
  Case Number: 2:22-cv-00269-JHC
  Counsel: Edelson P.C.
  Nature of Suit: Class Action

- **<u>AlmondNet Inc</u> v. Amazon.com Inc** | July 2023–Present
  Jurisdiction: Western District of Texas
  Case Number: 6:21-cv-00898-ADA
  Counsel: Russ August & Kabat
  Nature of Suit: Patent

- **<u>Pioneer Rx, LLC</u> v. Danwins, LLC** | June 2023–Present
  Jurisdiction: Louisiana Western District
  Case Number: 5:21-cv-01738
  Counsel: Kirkland & Ellis, LLP
  Nature of Suit: Trade Secret

- **Richard Lasiw v. <u>Hackensack University Medical Group</u>** | June 2023–Present
  Jurisdiction: Superior Court of New Jersey, Appellate Division
  Counsel: Walsh Pizzi O'Reilly Falanga LLP
  Nature of Suit: Medical Malpractice
  Health IT System: Epic

- **<u>Lifescience Technologies, LLC</u>, v.**

  Mercy Health, Mercy ACO Clinical Services, Inc and Myia Labs, Inc | Apr 2023–Present

  Jurisdiction: U.S. District Court, Eastern District of Missouri

  Counsel: Stinson LLP

  Nature of Suit: breach of contract, trade secret

  Providing analysis of trade secrets and trade secret misappropriation in health IT applications including virtual health and telehealth.

- **Kasandra Izquierdo v. <u>The New York and Presbyterian Hospital</u>** | Apr 2023–Present

  Jurisdiction: Supreme Court of the State of New York County of Bronx

  Counsel: Heidell, Pittoni, Murphy & Bach, LLP

  Nature of Suit: Medical Malpractice

  Health IT System: Eclipsys (Now Allscripts/ Veradigm)

- **<u>Jazmine Harris</u> v. Public Broadcasting Service** | Apr 2023–Present

  Jurisdiction: US District Court for the Northern District of Georgia

  Case Number: 1:22-cv-02456-AT

  Counsel: Edelsberg Law, P.A.

  Nature of Suit: Class Action

- **<u>Jabari Seller</u> v. Bleacher Report, Inc (Warner Media)** | Apr 2023–Present

  Jurisdiction: US District Court for the Northern District of California

  Case Number: 3:2023cv00368

  Counsel: Edelsberg Law, P.A.

  Nature of Suit: Class Action

- **<u>Zachary Rohlfs</u> v. WGNTV (Nexstar Media Inc)** | Apr 2023–Present

  Jurisdiction: US District Court for the Central District of Illinois

  Case Number: 1:23-cv-01050

  Counsel: Edelsberg Law, P.A.

  Nature of Suit: Class Action

- **<u>Jennifer Waller</u> v. Tampa Bay Times (Times Publishing Company)** | Apr 2023–May 2023

  Jurisdiction: US District Court for the Middle District of Florida

  Case Number: 8:23-cv-00119

  Counsel: Edelsberg Law, P.A.

  Nature of Suit: Class Action

- **<u>Greg Roland</u> v. The Chive (Chive Media Group, LLC)** | Apr 2023–Present

  Jurisdiction: US District Court for the Western District of Texas

  Case Number: 1:2023cv00337

  Counsel: Edelsberg Law, P.A.

  Nature of Suit: Class Action

- **<u>Emma Mendoza</u> v. Newsweek Digital, LLC** | Apr 2023–Present

  Jurisdiction: US District Court for the Southern District of New York

  Case Number: 1:2023cv00643

  Counsel: Edelsberg Law, P.A.

  Nature of Suit: Class Action

- **<u>Melanie Barber</u> v. Eisenhower Medical Center, Inc** | Apr 2023–May 2023

  Jurisdiction: California Central District Court

  Case Number: 5:23-cv-00250

  Counsel: Edelsberg Law, P.A.

  Nature of Suit: Class Action, Breach of Contract

- **<u>Emma Mendoza</u> v. WP Company LLC dba The Washington Post** | Apr 2023–May 2023
  Jurisdiction: U.S. District of Columbia Superior Court
  Case Number: 2023CAB001101
  Counsel: Edelsberg Law, P.A.
  Nature of Suit: Class Action

- **Estate of Alan Reyes-Landweer v. <u>Advocate Health and Hospitals</u>** | Apr 2023–Present
  Jurisdiction: Circuit Court of Cook County, Illinois
  Case Number: 2020 L 003397
  Counsel: Barker, Castro & Steinback, LLC
  Nature of Suit: Medical Malpractice

- **K+S Potash Canada General Partnership v. <u>Veolia Water Technologies Inc</u>** | Mar 2023–Present
  Jurisdiction: Court Of Queen's Bench For Saskatchewan
  Case Number: QB No. 817 (filed 2018)
  Nature of Suit: Breach of Contract
  Counsel: Stikeman Elliott LLP
  Technology: Plant Design Management Systems (PDMS), Clash Detection, Database synchronization
  Role: Served as Testifying Expert

- **<u>Hayden Mac Ingram</u> v. Cerner Health Services** | Feb 2023–Present
  Jurisdiction: Circuit Court Of Jefferson County, Alabama
  Counsel: Hare, Wynn, Newell & Newton, LLP
  Nature of Suit: Medical Malpractice
  Health IT System: Cerner
  Review and analyze electronic health records, system configurations, and system generated artifacts along with internal development documents to determine the nature of microbiology laboratory results display.

- **<u>Amy Fleschert</u> v. Cedars-Sinai Medical Center** | Feb 2023–Present
  Jurisdiction: Superior Court of California, County of Los Angeles
  Counsel: Carpenter Law
  Nature of Suit: Class Action, Medical Billing
  Health IT System: Epic
  Assist in the review and analysis of billing information to aid in determination of system export capabilities regarding medical billing

- **<u>James Barcz</u> v. Mercy Hospital Cedar Rapids Iowa** | Nov 2022–Present
  Jurisdiction: Iowa District Court for Linn County
  Counsel: Hayes Lorenzen Lawyers, PLC
  Nature of Suit: Medical Malpractice
  Health IT System: Epic
  Review and analyze electronic health records, audit logs, and automated vitals machine data.

- **<u>RedVector.com, LLC</u> v. Locality Media, Inc** | Oct 2022
  Case Number: 21-CA-001419
  Filed in: Delaware District Court
  Retained by: Plaintiff

- **Ruth Elsie Sowder v. <u>Louis Kattine, M.D.</u>** | July 2022–August 2022
  Jurisdiction: Montana Fourth Judicial District Court Missoula County
  Counsel: Hall Booth Smith
  Nature of Suit: Medical Malpractice
  Health IT System: Epic
  Review and guide client on subpoena requests for audit trails across multiple Epic features such as InBasket messages and Sticky Notes. Review relevant audit trails and electronic health records.

- **Tony L. Sylvester v. University of S. Alabama Health Services Foundation (representing <u>Laboratory Corporation of America Holdings</u>)** | July 2022–Jan 2023
  Jurisdiction: Circuit Court, Mobile County Alabama
  Counsel: Lewis Rice, LLC
  Nature of Suit: Medical Malpractice
  Health IT System: LabCorp, NextGen, Cerner
  Review and analyze electronic health records, audit logs, interface messages (HL7) relevant to the case. Provide expert analysis on industry standard laboratory information system (LIS) integration with EHR systems.

- **Angela Prieto v. <u>Rush University Medical Center</u>** | July 2022–Present
  Jurisdiction: Circuit Court, Cook County Illinois
  Case Number: 18 L 003531
  Counsel: Swanson, Martin & Bell LLP
  Nature of Suit: Medical Malpractice
  Health IT System: Epic
  Review and provide affidavit and analysis of electronic health records, audit logs, and system configurations for the Epic EHR.

- **Byron Foxie v. <u>Ann and Robert Lurie Children's Hospital of Chicago and Almost Home</u>** | July 2022–Present
  Jurisdiction: Circuit Court, Cook County Illinois
  Case Number: 19 L 7430
  Counsel: Barker, Castro & Steinbeck, LLC
  Nature of Suit: Medical Malpractice
  Health IT System: Epic
  Assist with the review and discovery production of electronic health record information relevant to the case. Provide analysis of electronic health records, audit logs, and system configurations for the Epic EHR.

- **<u>Masonicare Corporation</u> v. Cerner Corporation** | Apr 2022–Present
  Jurisdiction: U.S. District Court
  District of Connecticut
  Counsel: Blank Rome LLP
  Nature of Suit: breach of contract
  Description of Services: providing analysis of the attempted implementation of Cerner's CommunityWorks EHR product and related software for use with Masonicare's residential living, skilled nursing, long term care, acute care and home care services; work includes review of the health IT software and services and compliance with industry standards.

- **Roche Diabetes Care, Inc v. <u>Insulet Corporation</u>** | Jan 2022 - Present
  Jurisdiction: U.S. District Court
  District of Delaware
  Counsel: Willkie Farr & Gallagher LLP
  Nature of Suit: patent infringement
  Description of Services: provided expert report and deposition testimony regarding design and function of medical device source code for use in insulin pumps and diabetes management.

- **People of the State of California; <u>Aetna Health of California </u>v. Dr. Shahrokh Dayyani** | Nov 2021–Present
Jurisdiction: Superior Court, State of CA, County of Los Angeles
Counsel: Kennaday Leavitt PC
Nature of Suit: healthcare billing fraud
Description of Services: assisting with the review and discovery production of electronic health record information relevant to the case and providing analysis regarding industry standards for electronic health record audit logs.

- **Ellen Turner, Estate of Kelly Turner v.**
<u>University Health Care Physicians, Inc and Robert Cicchino</u> | May 2021–Present
Jurisdiction: Circuit Court of Berkeley County West Virginia
Counsel: West Virginia United Health System
Nature of Suit: medical malpractice
Description of Services: assisting with the review of electronic health record information relevant to the case and providing analysis regarding industry standards for electronic health record audit logs.

- **<u>Truinject Corp.</u> v. Nestle Skin Health, S.A.** | Dec 2021–Present
Jurisdiction: U.S. District Court
District of Delaware
Counsel: Beus Gilbert McGroder PLLC
Nature of Suit: breach of contract, fraud, patent infringement, trade secret misappropriation
Description of Services: providing expert analysis including source code analysis for medical injection training software and patents; provided expert report.

- **Allscripts Healthcare, LLC v. <u>Andor Health LLC</u>** | Nov 2021–Present
Jurisdiction: U.S. District Court
District of Delaware
Counsel: Lock Lorde LLP
Nature of Suit: health IT software contract and trade secret dispute
Description of Services: provided expert report, deposition testimony and expert analysis including source code comparison of configuration software for patient engagement applications.

- **Aetna Inc v. <u>Mednax, Inc</u>** | Oct 2020–July 2021
Jurisdiction: U.S. District Court Eastern District of Pennsylvania
Counsel: Robbins, Russell, Englert, Orseck & Untereiner LLP
Nature of Suit: medical billing fraud claim
Provided expert analysis and authored expert reports regarding the use of IT technology in medical records and billing software, including the use of artificial intelligence.

- **<u>WIPRO Limited, LLC</u> v. State of Nebraska** | Oct 2020–Present
Jurisdiction: District Court of Lancaster County, Nebraska
Counsel: Cline Williams Wright Johnson & Oldfather, LLP
Nature of Suit: contract dispute
Providing expert services regarding the development of software and services for the State of Nebraska's Medicaid Eligibility and Enrollment solution.

- **<u>NCH Healthcare Systems Inc</u> v. PaxeraHealth** | May 2020–Present
Jurisdiction: U.S. District Court Middle District of Florida, Fort Myers Division
Counsel: Wicker Smith
Nature of Suit: contract dispute
Providing expert services regarding the installation and use of Health IT technology for radiology services, specifically a picture archiving (PACS) system in a hospital setting; provided expert report.

- **Lenovo Group Limited** | Mar 2020–May 2020
  Counsel: Sheppard Mullin Richter and Hampton LLP
  Nature of Suit: patent analysis
  Provided analysis regarding patent invalidity of Nokia-owned patents related to Android smartphone software.

- **Private Parties v. CONFIDENTIAL** | July 2018–May 2019
  Jurisdiction: U.S. District Court
  Counsel: Schlichter Bogard & Denton LLP
  Nature of Suit: False Claims Act
  Provided expert analysis regarding potential false claims related to Meaningful Use and CEHRT regulations in the Health IT industry.

- **North Brevard County Hospital District v. McKesson Technologies, Inc** | Nov 2016–Nov 2017
  Jurisdiction: U.S. District Court, Middle District of Florida
  Counsel: GrayRobinson, P.A.
  Nature of Suit: contract dispute
  Provided expert report and analysis of the implementation of McKesson's Horizon and Paragon systems at a community hospital, including a review of the EHR software and services and their compliance with industry standards.

- **Automation Middleware Solutions v. Emerson Process Management LLP** | May 2016–Apr 2017
  Jurisdiction: U.S. District Court, Eastern District of Texas
  Counsel: Bragalone Conroy PC
  Nature of Suit: patent infringement
  Performed code review and infringement analysis for middleware components in industrial motion control software.

- **CWI, Inc v. SmartDog Services LLC** | Sept 2016–June 2017
  Jurisdiction: U.S. District Court, Western District of Kentucky
  Counsel: Broderick and Davenport LLP
  Nature of Suit: contract dispute
  Reviewed and provided expert report covering Oracle eBusiness Suite and WMS installation for a large outdoor products retail and distribution company.

- **AliphCom, Inc v. Fitbit, Inc** | Nov 2015–June 2016
  Jurisdiction: International Trade Commission, U.S. District Court, Northern Dist. of California
  Counsel: Gibson Dunn and Crutcher LLP
  Nature of Suit: patent infringement
  Providing software analysis regarding infringement and domestic industry use for wearable health and activity trackers.

- **Walmart-Stores, Inc v. Cuker Interactive, LLC** | May 2015–Apr 2017
  Jurisdiction: U.S. District Court, Western District of Arkansas
  Counsel: Kutak Rock LLP
  Nature of Suit: contract dispute
  Provided analysis, expert report, and deposition and trial testimony regarding development of responsive ecommerce websites.

- **Ericsson Inc v. TCL Communication Technology Holdings, LTD** | Apr 2015–Dec 2016
  Jurisdiction: U.S. District Court, Eastern District of Texas and Inter Partes Review
  Counsel: Sheppard Mullin Richter and Hampton LLP, Morgan Lewis and Bockius, LLP
  Nature of Suit: patent infringement
  Providing analysis regarding patent invalidity for Android smartphone and Java mobile software, issued declaration in IPR proceeding.

- **Justin Hull and Amy Sweigard v. <u>Marriott International, Inc</u>** | Mar 2015–Feb 2016
  Jurisdiction: U.S. District Court, Southern District of Maryland
  Counsel: Conn Maciel Carey PLLC
  Nature of Suit: Americans with Disabilities Act (ADA) compliance
  Providing analysis regarding suitability of software solutions for making an Oracle Siebel Hospitality software compatible with the JAWS screen reader. Authored an expert report and provided deposition testimony.

- **Mary Rutan Hospital v. <u>Nextgen Healthcare Information Systems Inc</u>** | Feb 2015–Mar 2015
  Jurisdiction: U.S. District Court, Southern District of Ohio
  Counsel: Reminger Co., L.P.A.
  Nature of Suit: EMR contract dispute
  Provided analysis of NextGen EMR software and software installation for arbitration negotiations.

- **Computer Programs and Systems, Inc v.
  <u>Mad River Community Hospital and American Hospital Management Corporation</u>** | Jan 2015–Mar 2015
  Jurisdiction: Circuit Court, Mobile County Alabama
  Counsel: Janssen Malloy LLP
  Nature of Suit: EMR contract dispute
  Provided analysis of CPSI EMR software and software installation for arbitration negotiations.

- **<u>Core Wireless Licensing S.a.r.l.</u> v.
  LG Electronics, Inc & LG Electronics MobileComm USA, Inc** | Feb 2015–Sept 2016
  Jurisdiction: U.S. District Court for the Eastern District of Texas
  Counsel: Bunsow De Mory Smith & Allison LLP
  Nature of Suit: software patent infringement
  Review of source code for LG Android smartphone devices.

- **<u>Core Wireless Licensing S.a.r.l.</u> v. Apple Computer, Inc** | Feb 2015–Sept 2016
  Jurisdiction: U.S. District Court for the Eastern District of Texas
  Counsel: Bunsow De Mory Smith & Allison LLP
  Nature of Suit: software patent infringement
  Review of source code for Apple smartphone and tablet devices.

- **<u>Packet Intelligence, LLC</u> v. Cisco Systems, Inc** | Oct 2014–Mar 2015
  Jurisdiction: U.S. District Court for the Eastern District of Texas
  Counsel: Heim, Payne and Chorush LLP
  Nature of Suit: software patent infringement
  Review of source code for Cisco routers

- **<u>Denise C. Tullock and Sandra M. Fry</u> v. Success Health Corp.** | Oct 2014–Dec 2014
  Jurisdiction: Circuit Court, City of St. Louis, Missouri
  Counsel: Thurman Howald Weber Senkel & Norrick LLC
  Nature of Suit: Medical Malpractice
  Forensic Retrieval and Investigation of Electronic Medical Records.

- **Bridgetree, Inc v. <u>Red F Marketing LLC</u>** | June 2014–Mar 2015
  Jurisdiction: U.S. District Court - Western District of North Carolina Charlotte Division
  Counsel: Harwell Howard Hyne Gabbert & Manner
  Nature of Suit: Intellectual Property–Trade Secret
  Authored expert report on the similarities of web-based financial services software.

- **YPPI v. <u>SuperMedia LLC</u>** | June 2014–Sep 2014
  Jurisdiction: U.S. Bankruptcy Court - District of Delaware
  Counsel: Kirkland and Ellis
  Nature of Suit: Intellectual Property–Copyright Infringement
  Authored expert report and testified at trial on the transfer of digital images via the world wide web.

- **<u>Guitar Apprentice, Inc</u> v. Ubisoft, Inc** | Oct 2013–Dec 2015
  Jurisdiction: U.S. District Court - Western District of Tennessee Western Division
  Counsel: Waddey Patterson
  Nature of Suit: Intellectual Property–Patent
  Performing code review and infringement analysis for interactive learning game.

- **Special Learning, Inc v. <u>Step-By-Step Academy, Inc</u>** | Oct 2013–Dec 2014
  Jurisdiction: U.S. District Court - Southern District of Ohio Eastern Division
  Counsel: Cooke Demers and Gleason LLP
  Nature of Suit: Contract Dispute
  Expert analysis of web-based medical software; analysis of compliance with CARF and CCHIT standards.

- **<u>Wasielewicz</u> v. Southwestern Illinois Health Facilities, Inc** | Oct 2013–Jan 2014
  Jurisdiction: Illinois State Court, Madison County
  Counsel: Thurman Law
  Nature of Suit: Defect Analysis
  Prepared for expert testimony re: medical records software defects.

- **<u>Mediware Information Systems, Inc</u> v. Hematerra Technologies, LLC** | Dec 2013–Mar 2018
  Jurisdiction: U.S. District Court, Middle District of Florida Jacksonville Division
  Counsel: Barack Ferrazzano Kirschbaum & Nagelberg LLP
  Nature of Suit: Trade Secret
  Performed analysis of trade secrets related to healthcare software used by blood banks and hospitals; authored expert report and provided deposition and court testimony.

- **<u>Intellectual Ventures LLC</u> v. AT&T Mobility LLC; Intellectual Ventures LLC v. T-Mobile USA, Inc; Intellectual Ventures LLC v. Nextel Operations, Inc; and Intellectual Ventures LLC v. United States Cellular Corporation** | Oct 2013–Aug 2019
  Jurisdiction: U.S. District Court for the District of Delaware
  Counsel: Dechert LLP
  Nature of Suit: Intellectual Property–Patent
  Performed code review and infringement analysis for cellular telephone services.

- **<u>ROY-G-BIV Corporation</u> v. Honeywell International, Inc; ROY-G-BIV Corporation v. Siemens Corporation; and ROY-G-BIV Corporation v. ABB, Ltd.** | Oct 2013–Sept 2014
  Jurisdiction: U.S. District Court for the Eastern District of Texas
  Counsel: Boies, Schiller & Flexner LLP
  Nature of Suit: Intellectual Property–Patent
  Performed code review and infringement analysis for industrial motion control systems.

- **<u>Motion Games, LLC</u> v. Nintendo Co., Ltd., Nintendo of America Inc, Retro Studios, Inc, Rent-a-Center, Inc, and Gamestop Corp.** | Sept 2013–Apr 2015
  Jurisdiction: U.S. District Court for the Eastern District of Texas
  Counsel:Boies, Schiller & Flexner LLP
  Nature of Suit: Intellectual Property–Patent
  Performing code review and infringement analysis for camera-based sensing and gaming systems.

- **Nokia Corporation and Nokia Inc** v. HTC Corporation and HTC America, Inc | Aug 2013– Apr 2014
  Jurisdiction: United States International Trade Commission
  Counsel: Desmarais LLP
  Nature of Suit: Intellectual Property–Patent
  Performed code review and infringement analysis for three mobile smartphone related patents.

- **N5 Technologies, LLC** v.
  Capital One, N.A., Capital One Bank (USA), and Capital One Services, LLC | June 2013–Oct 2013
  Jurisdiction: U.S. District Court for the Eastern District of Virginia
  Counsel: Panovia Group, LLP
  Nature of Suit: Intellectual Property - Patent
  Provided source code review and analysis of mobile banking SMS application.

- **Wisconsin Technology Venture, LLC** v. Fatwallet, Inc | Mar 2013–Dec 2013
  Jurisdiction: U.S. District Court for the Western District of Wisconsin
  Counsel: Newman Du Wors LLP
  Nature of Suit: Intellectual Property - Patent
  Provided source code review and analysis and authored expert report.

- **Anthony Dike, M.D.** v. Kindred Healthcare Operating, Inc | Mar 2013–Mar 2014
  Jurisdiction: Superior Court of the State of California, County of Los Angeles–East District
  Counsel: Giovanniello & Michels, LLP
  Nature of Suit: Loss of Property
  Valuation of medical software and best practices analysis.

- **Nokia Corp. and Intellisync Corp.** v. HTC, HTC America, Inc, and Exedea, Inc | Feb 2013–May 2013
  Jurisdiction: United States International Trade Commission
  Counsel: Desmarais LLP
  Nature of Suit: Intellectual Property–Patent
  Delivered code review and infringement analysis for three patents across a number of smartphone models running the Android operating system.

- Yazmin Reyazuddin v. **Montgomery County, Maryland** | Aug 2012–Mar 2014
  Jurisdiction: U.S. District Court for the District of Maryland (Southern Division)
  Counsel: Office of the Montgomery County Attorney
  Nature of Suit: Reasonable Accommodations Dispute Re: Section 504 of the Rehabilitation Act
  Authored expert report and provided deposition testimony including analysis of project cost and impacts for a Siebel Public Sector call center installation.

- **MobileMedia Ideas, LLC** v. HTC Corporation and HTC America, Inc | July 2012–Mar 2013
  Jurisdiction: U.S. District Court for the Eastern District of Texas
  Counsel: Desmarais LLP
  Nature of Suit: Intellectual Property–Patent
  Delivered code review and infringement analysis providing review for nine patents across 29 smartphone models running the Android, Windows Mobile and Windows Phone 7 operating systems.

Professional and Technical Expertise

Software Languages and Platforms:

- **Web:** Google APIs, RESTful APIs, Java EE, Swing, Spring Framework, HTML5, CSS, JavaScript, jQuery/jQueryMobile, Django, Python, Chef, Fabric, PostgreSQL, JSON, SOAP, XML, PHPMyAdmin, Rackspace Cloud, Amazon EC2, Apache, Ruby, Gunicorn, nginx, ZeroMQ, RabbitMQ, SendGrid, Twilio, Perl, Linux, SMS, HTTP, TCP/IP, CDMA, GSM, Zigbee, Bluetooth
- **Microsoft Platforms:** .NET, ASP.NET, C#, VB.NET, Windows Phone SDK, IIS, COM/DCOM, Visual C++, Win32 applications and DLLs, WinCE applications, MFC 6.0, Visual Basic 6.0
- **Database/ERP/Analytics:** MySQL, PostgreSQL, Oracle, Siebel, OFBiz, OpenERP, JDBC, ADO.NET, OLE, Microsoft SQL, SugarCRM, PowerBI, MS Excel Pivot Tables, Tableau
- **Mobile and Social:** Java/JavaEE, Google Android SDK (v1.1 through 4.1), Google Maps API, Google Licensing API, Google Cloud Messaging API, Google Wallet, Apple iOS, iPhone SDK, Objective C, Facebook API, Twitter API, Blackberry SDK, Windows Phone, Sencha, Appcelerator Titanium
- **Project Development and Management:** Eclipse, Visual Studio 6, 8, 2005-2010, Visual Studio .NET, Siebel Tools, Visual Paradigm, UML, Github, JIRA, COCOMO, Microsoft Project, Visual SourceSafe
- **Medical/Compliance:** HL7, FHIR, CCDA, X12M, DICOM, 510(k), PCT Codes, ICD9/ICD10, SNOMED, RxNorm, HIPAA, CEHRT, Meaningful Use, ISO 14971, ISO 13485, ISO 25000, ISO 62332, ISO/IEEE 11073
- **Embedded/Circuits/Robotics:** Texas Instruments/PIC/Arduino microcontroller programming, Labview, analog circuit design, spectrum analysis, Modbus, Profibus, OPC, IOT protocols, ABB and Siemens controller software
- **Other:** MATLAB, eSignal, TradeStation, AutoCAD, Adobe Photoshop, Google APIs, BI

Skills and Experience:

- **Software Development:** desktop applications, mobile and web applications, object-oriented design, web services, design patterns, graphics and animation, image and media processing, embedded and cellular device application and frameworks, machine-to-machine platforms, ERP applications, agile development, scalable design, process controls, documentation and technical writing, database design and optimization
- **Hardware and Firmware Development:** microcontroller programming, ladder programming, PID loop design, circuit design, AC/DC motor control, robotics, motion control theory, spectrum analysis Software Project Management: project design, lifecycle and change management, design audits, cost estimation, process controls and professional standards compliance, risk management
- **Technology Management and IP:** risk management, IP portfolio management and strategy, staffing and team management, strategic planning, market analysis, technology licensing agreements, software terms of service and privacy policies, confidentiality agreements, service agreements
- **Business Administration:** business organization and legal structuring, LLC formation, private placement memorandums, series financing, stock option agreements, equity/debt structures
- **Analytics and Finance:** statistics and numerical analysis, BI (business analytics), signal processing algorithms and systems, financial trading indicators and systems, business accounting, finance math, business valuation methodologies
- **Medical:** FDA 510(k) pre-market notification for medical devices filings; QMS compliance, HIPAA compliance, EMR and EHR systems, medical devices
- **Expert Legal Services in Computer Science:** expert reports, deposition, testimony, code review, patent claims analysis, patent infringement litigation support, software cost and impact analysis, defect analysis, forensics, software licensing and contracts

Professional Associations

- **Member**, IEEE Computer Society