Randy Winters
Summary of Experience
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Summary of Experience

1. Technology experience

Over 25 years technical management experience with a focus on the latest project management and software development methodologies to include software engineering, architecture, requirements elicitation and analysis, modeling, agile development methods, testing and real-time, performance, and fault-tolerance tradeoffs, AI, machine learning (ML) and big data analytics.

Patent Infringement Claims

- Mr. Winters holds patents in the US and abroad. He has a deep understanding of patent drafting, design and drafting of claims. He received a patent in the US and abroad in Multi-user, Artificial Intelligent Expert Systems (Patent 5063522) in the early 1990s. Patents in AI at that time were virtually impossible to have granted; however his was.

- Mr. Winters drafted his patent including his claims and it was filed by Irell & Manella in Los Angeles CA.

- Mr. Winters has also been retained by clients to help draft provisional and full patents for their work which in most cases involved extremely complex products and processes.

- His experience in writing patents gives him a unique perspective and an ability to break down a patent in an effort to find discrepancies in alleged claims of patent infringement.

- Because of his computer science experience he can easily evaluate patents of a technical nature and break down complex claims into easy to understand descriptions.

- He is very knowledgeable in claim construction which is the process in which courts interpret the meaning and scope of a patent's claims. Since the claims "define the invention to which the patentee is entitled the right to exclude," construing the claims can be a critical step in determining the outcome of almost all patent litigations.e has also been retained on various PTAB cases.

Seasoned Technology Expert Witness (Including Speech Recognition and Facial and Object Recognition)

- Expert witness on various technology cases to include Apple, Samsung, Google and others. Many involving speech / facial / object recognition utilizing decades of recognition development experience. Work includes IPR, Patent Infringement, Source Code Review, Claims Construction, Requests for Documentation / Code, ESI Protocol development and negotiation, Depositions, Interrogatories and Expert Opinion Reports. He has also worked on cases involving the Biometric Information Privacy Act (BIPA) passed in the State of

Illinois. Mr. Winters has a strong interest in cases that protect user data privacy and also in defending clients who are the victim of frivolous privacy lawsuits.

Speech Recognition - Military, Aerospace, Aviation Fields

· Extensive experience developing state-of-the art AI-based speech recognition and vision systems utilizing a positive Human Computer Interaction (HCI) experience with the design of multiple GUI-based software systems.

· Extensive experience designing and developing leading edge AI/machine learning (ML) based high accuracy speech recognition systems for Air Traffic Control (ATC) transmissions, and flight deck command-and-control systems for the Military, Aerospace and Aviation industries for companies including Boeing, Honeywell and the Air Force Research Labs (AFRL)

Artificial Intelligence and Machine Learning Fields

· In the 1990's, Mr. Winters conceived and developed the first AI-based customer support system that automatically solved customer support problems in the time customers ware on hold solving 25-50% of all incoming calls in multiple languages. Used by Microsoft, Apple, Hewlett-Packard, Epson, Fujitsu, Packard Bell, Adobe to mention a few. It utilized Mr. Winters' patented Inference engine and knowledge base system that supported separate unique automated AI sessions on 48 phone lines simultaneously running on a single 386 20 mHz CPU.

· Architected an AI-based software/hardware system that diagnoses, formulates and carries out custom designed individual treatment / rehabilitation programs for patients suffering from non-fluent Broca's aphasia. The system extends the ability to teach patients to "speak" through Melodic Intonation Therapy (MIT) coupled with new and innovative leading-edge proprietary application / treatment concepts.

· Currently designing several new product concepts involving intelligent speech recognition, NLU, facial recognition, and video image facial replication utilizing more current AI and ML technologies to include product components such as CMU Sphinx, OpenFace, OpenCV, and binary classification, multi-class classification, and regression models using ML software and integrating newer AI concepts using software products such as   Tensor Flow, H20.AI and Google and Azure.

· As both an award-winning entrepreneur and a highly technical software architect/developer, Mr. Winters has the ability to present and discuss technology at the level of the recipient's knowledge and understanding. This ability is critical when presenting a case that involves technology that must be understood by all parties based at their level of understanding. It's very easy to lose the attention / interest of a judge or a jury if complex technology cannot be boiled down into both simple and technical understandable elements.

Social Media Forensics Experience

- To include Defamation / Mistaken Identity Cases and Harassment, Ownership / Identity Issues, Data Theft, Location Tracking, Preservation and Analysis of Social Media Meta Data, Identity Theft / Source Tracking through Analysis of Multiple Social Media Accounts and the Additional use of AI-based Tracing and Tracking.

- Expert witness on various technologies covering social media to include personal social media to commercial proprietary data such as the protection of and the tracking down of individuals who have stolen sensitive data such as sales leads, and personal private data.

- Responsible for the identification of suspected individuals as well the production of hard undeniable evidence of illegal unauthorized access to company valuable information.

- Responsible for tracking down the identification of radical social media actors who use other individual's accounts and multiple aliases and VPNs to hide their identity. Some of the postings included death threats.

- Experience tracking "breadcrumbs" of partial data on individuals who attempt to hide their identity. This is accomplished using a method of forensics that ties an individual to an event through the discovery of and production of solid evidence which sometimes spans multiple unassociated platforms connecting bits and pieces of technical data together thus providing a traceable collection of evidence..

Cyber Security / Biometric Data Protection and Misuse / Exposure
- Expert experience in Cyber Security / Biometric Data / User Personal Data protection and cases involving the storage of and exposure / release / sale / sharing / leakage of user personal biometric and other private data on various devices to include smart phones / devices, smart TV's, iPads, computers, data center / iCloud and other devices that store / share user private data. Experience encompasses both software issues and the use of hardware in the process to include various OS systems (IOS, OS X, watchOS, tvOS, Linux, Android, Windows, etc.) as well as system hardware chipsets (such as Apple's A-series and M-series chips etc.)
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Experience with the Newly Emerging AI-Advances
- Experience using and programming interfaces to the newly emerging AI-based software revolution utilizing many of the current and future systems such as ChatGPT, GPT-4, Perplexity, StockGpt and more.

- Experience developing the correct prompts and directional requests/control to elicit the desired most accurate and clear response. Basically, experience on how to best enable and receive the best use of AI.
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Technology / Software Engineering Core Development Principles

- Masters Degree in Software Engineering from Carnegie Mellon University in 2002.

- Full command of formal agile development processes in both embedded and non-embedded software design managing both local and remote teams in startups as well as complex teams for large corporations.

Technology / Software Engineering Core Development Principles (Cont'd)

· Excellent software architectural and R&D skills with a proven track record to "think out of the box and see over the horizon" allowing for the development of new and innovative technology never before developed giving companies new opportunities to further penetrate existing or even new profitable markets over the competition.

· In addition to excellent managing skills, proficient in programming at the lowest levels in multiple languages including Java, C, C++, C#, Objective C and their various supporting scripting and development packages. Also familiar with AI, NLU and ML systems/software.

· Human Computer Interaction (HCI) experience designing software/hardware systems that provide the proper balance of performing autonomously and HCI to eliminate operational errors due to poor interfaces with the software system interface and the human operator.

· Prior Director of Advanced Development for Novell, one of the largest networking companies in the late 1990s, managing a team of the world's top developers developing next generation technologies for a 9,000+ employee company.

· Extensive experience in AI design, ML, and currently holds AI patents in multi-tasking AI designs in the US and abroad.

· Experience writing provisional and full-blown patents to include several patents for the above systems and their unique concepts.

Blockchain Development

· Experience developing secure blockchain systems (the latest technology being adopted for cryptocurrency, finance as well as data storage and transaction in the corporate, medical and finance industries today.

· Expert designer of blockchain technology to protect from cyber hacking utilizing advanced IT configurations, software and special secure storage protocols to protect from unauthorized protection which is necessary for both cryptocurrency as well as HIPPA compliant data.

· Experience developing trading systems with Restful APIs to connect to and monitor/trade on multiple exchanges in multiple cryptocurrencies simultaneously.

· In depth datacenter configuration designed under strict protocols to protect cryptocurrency from hacking (cold and hot storage, firewall settings, redundancy, real-time and fault tolerant systems and setup of hack free initial datacenter system protocols to countermeasure initial infections that can occur during setup of a crypto server configurations/systems).

· Design of secure client connective systems designed with proprietary safety protocols and hardware to protect clients from hacking.

Datacenter Services / Design

· Experience designing, implementing and installing datacenter client installations including the setup and management of server systems and racks for MatrixDC's customers.
· Responsible for handling client's technical support needs and the management and coordination of hands on services on a 24/7 real-time basis for high-bandwidth server banks.
· Responsible for implementing secure firewall and cyber hacking protection and protocols.

2. Corporate Innovation/Marketing/Communication Experience

Innovation Experience / Results

Over 25 years as a proven innovator and leader in the the software industry developing award-winning leading-edge technologies to include areas of medicine, speech, vision, finance and the latest blockchain technologies - conceiving and developing technologies in spaces where current solutions do not exist yet and thought by industry to be impossible to develop at the time using existing technologies. A few examples of innovation include:

a) First AI-based speech recognition system to successfully recognize Air Traffic Control (ATC) radio transmissions allowing pilots and unmanned aircraft to receive their specific, actionable transcripts and flight directives with an accuracy rate in the high 90 percentile rage. Used by Honeywell, Boeing, and Air Force Research Labs (AFRL).

b) First AI-based software/hardware system that diagnoses, formulates and carries out custom designed individual treatment / rehabilitation programs for patients suffering from non-fluent Broca's aphasia. The system extends the ability to teach patients to "speak" through Melodic Intonation Therapy (MIT) coupled with new and innovative leading-edge proprietary application / treatment concepts.

c) First AI-based customer support system that automatically solves customer support problems in the time customers are on hold solving 25-50% of all incoming calls in multiple languages. Used by Microsoft, Apple, Hewlett-Packard, Epson, Fujitsu, Packard Bell, Adobe to mention a few.

d) First AI-based cryptocurrency trading system using AI to automatically trade cryptocurrency using buy/sell arbitrage price spread opportunities.

e) First sales contact management system for microcomputers (pre-Salesforce etc.) which won national awards.

f) First real-time Internet pornographic filtering system to block inappropriate content in real-time for Internet Service Providers.

Other Marketing/Communication Experience

- Corporate and entrepreneurial experience with direct responsibility for marketing, communications and corporate engagement.

- Business Development Management experience including representing Novell's Advanced Development Group leading-edge R&D product licensing through interfacing with major associated business partners negotiating licensing for Novell's major new technologies.

- Experience in conflict resolution of deals involving large scale corporations.

- Experience with the fundamentals of establishing and running successful research project teams and departments in both single and multi-location environments.

- Excellent negotiator and public speaker with seasoned presentation skills.

- Effective communicator/mentor at all levels of a business from high-level C management, external/internal stakeholders, as well as highly technical teams with the ability to "roll up his sleeves" down to the software coding level to get involved in order to keep projects running on course and on time.

- Embraces the challenge of solving complex problems and venturing into pioneering areas that have not been explored or experienced before.

- Believes that it is amazing what you can accomplish when you don't take credit for it yourself.

Academic Experience

- Master's Degree in Software Engineering – Carnegie Mellon University (2002).

- Experience teaching full-time at the undergraduate and graduate level (Lecturer/Assistant Professor) for Carnegie Mellon University, and Brigham Young University in Hawaii.

- Highly effective teacher with an excellent teacher evaluation (average) score of 6.2 over campus average of 5.97 at BYU Hawaii (2006).

3. Employment History

2008 - Present
MatrixHCI, LLC - Saint George, UT (www.matrixhci.com)
Founder, President & CEO - Speech Recognition Development & Client Datacenter Services Mgmt.
MatrixHCI develops highly accurate real-time speech recognition of Air Traffic Control transmissions. It also develops new technologies using blockchain approaches in the cryptocurrency, commercial, medical, military and aviation / aerospace industries. Matrix has also designed and developed propriety autonomous AI-based API exchange trading platforms for various cryptocurrency markets and also helps the military develop methods to fly unmanned UAVs through manned airspace using Matrix's unique and highly accurate speech recognition of real ATC transmissions. He is responsible for team management and client interface on these products. Matrix also has a sister company that offers datacenter services for clients and other datacenter customers (www.matrixdc.com).

MatrixHCI, LLC - Saint George, UT (www.matrixhci.com) (Cont'd)
Founder, President & CEO - Speech Recognition Development & Client Datacenter Services Mgmt.
- Responsible for the management of ongoing corporate relationships with major corporations to include Boeing, Honeywell, ARFL, Rockwell-Collins.

- Responsible for the inception, management, and development of leading-edge speech recognition technology for commercial, aerospace, and military markets to include the above-mentioned companies.

- These software designs resulted in the use of MatrixHCI's custom proprietary speech recognition solutions which he successfully designed and developed including successful speech recognition solutions for other challenging acoustical environments, including areas such as aviation and NASCAR racing.

- MatrixHCI develops highly accurate real-time speech recognition of Air Traffic Control (ATC) transmissions which produced accuracy levels in the high 95% range.

- Developed flight deck command-and-control speech recognition systems that are capable of high-99% accuracy recognizing commands spoken by pilots in a wide range of aircraft, including extremely noisy flight decks such as the AStar350 helicopter.

- Worked with a cryptocurrency client serving as their CTO (under consulting contract), where he is also designing the world's first autonomous AI-based arbitrage trading system for the cryptocurrency market. This system also includes a custom-designed internal "Smart" blockchain technology to foster new ways of managing trading data for use and analysis by custom-developed AI modules, which he is also designing. The system communicates with multiple exchanges instantly extracting bid/ask and sale history of multiple currency pairs and also evaluates the current order book status of cryptocurrency availability to determine and execute on the most profitable trades.

- Designed security protocols and data center presence to safely store cryptocurrency and other client data using secure, air-gapped, cold and hot storage configurations to protect data from hackers.

- During custom development for clients Matrix HCI can add AI, NLU, and ML integration into their core speech products.

- Experience developing blockchain architectures which are now being adopted by many industries currently to include large data storage and transactions in financial and corporate markets.

2016 - Present
CINGLE, LLC - Las Vegas Nevada Area
Founder & CTO/Business Development Datacenter Services
- Founder and creator of a state-of-the-art AI-based crypto investment software system.

- Responsible for all technical/security aspects of the business coupled with his extensive startup experience and expertise which he has applied to the new company.

- Architected and lead the development of CINGLE's AI-based automated arbitrage trading system which generates revenue through intelligently identified exchange margins and other AI driven trading algorithms involving real-time multi-currency trades.

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CINGLE, LLC - Las Vegas Nevada Area (Cont'd)
Founder & CTO/Business Development Datacenter Services
- Responsible for establishing CINGLE's mission statement and its current position in the market.
- Also responsible for the protection of CINGLE's investments from hacking vulnerabilities both internally and externally.

2006-2008
Gandi Innovations - San Antonio, TX
Director of R&D - Vision Recognition Research and Development
Gandi Innovations developed large scale continuous roll color printers ranging from 3-5 meters wide with a continuous printable length. These printers had 100's of printheads and thousands of print jets requiring constant alignment and compensation when individual print jets failed. As Director of R&D - Vision Recognition Research and Development a new method was designed to allow for automatic printer alignment without shutting down the printers through vision recognition. Company was purchased by Agfa.

- Developed and formed the intelligent computer vision department for the company.
- Developed and designed intelligent and unique vision software algorithms to read alignment of printed images.
- Designed new special internal alignment cameras to use vision recognition technology to perform automatic color-to-color alignment and fine-tuning of printed image quality without the intervention of a human operator.
- Conceived, prototyped and designed multiple compact camera systems, including a camera with tricolor, LED lighting, to allow B&W non-reflective capture of color vision alignment patterns.
- This design reduced core camera component costs from thousands of dollars per color camera to less than $100 per camera component.

2004-2006
Brigham Young University Hawaii - Laie, Hawaii
Assistant Professor / Computer Science

- Mr. Winters took a break for a few years from industry to teach and give back to new up and coming students.
- Assistant Professor at BYU Hawaii. Responsible for the development and teaching of the Software Engineering core classes (CS333/CS433).
- Highly effective teacher with average student evaluations of 6.2 compared to department median of 5.4 (BYU Hawaii - Winter 2006).

2000-2004

Carnegie Mellon University - Pittsburgh, PA
Professor, Computer Science / Software Engineering MSE Program
· After graduation from Carnegie Mellon University in 2002 with a Master's Degree in Software Engineering (MSE), Mr. Winters was invited to teach core classes for the Master of Software Engineering distance program at Carnegie Mellon University where he also helped re-develop some of their course content for distance learning.
· Member of the Carnegie Mellon University MSE Admissions Committee.'

1995-2000

Novell, Inc. - Provo, UT
Director, Advanced Development & Business Development Evangelist
Novell was the first company to invent computer networking. It was a leader in the industry until 2000 when it experienced intense competition from Microsoft. At it's hay-day it employed around 10,000 employees.
· Directed both the business and technical operations of Novell's Advanced Development Group during their development of Internet proxy cache technologies.

· Member of Novell's Business Development Team representing Novell's Advanced Development Group's business interests and licensing with outside customers as well as internal departments.

· Specialized in conflict resolution and the negotiation of major partnership and license deals for Novell.

· Successfully negotiated several deal-breaker licenses with 3rd party companies that were holding up the release of Novell's Java/GUI version of their core Netware OS.

· Represented Novell throughout the world as their international expert on internet content rating/filtering.

· Managed the R&D, architecture, and development teams, which collectively developed leading-edge technology, including pioneering work on Novell's ICS (Internet Cache Server) (ICS) and Proxy Cache development.

• Managed the development processes of Novell's ICS (Internet Cache Server) and Proxy Cache core team.
• Developed Novell's internet real-time word/object parser and content filtering technology used in the Proxy Cache and ICS core OS code.

1990-1995

Winters Development, Inc. - Chatsworth, CA
• Founder/President/CEO
• Founded Winters Development and created VoiceKit, one of the first software development toolkits for computer telephony boards that turned microcomputers into computer telephony systems.
• Managed all major corporate accounts to include software licenses, OEM sales and ongoing relations.
• VoiceKit won Editor's Choice Award from Voice Processing Magazine in 1993.
• Managed the company's overall direction and growth until VoiceKit's acquisition by Callware Inc.

1984-1990

IntelliSystems, Inc. - Chatsworth, CA

Founder/President/CEO/CTO

* Founded Intellisystems and developed the first computer telephony system to incorporate artificial intelligence and voice recognition, which was used to offer unattended telephone customer support to callers during the pre-Internet days solving 25-50% of all incoming support calls.
* Responsible for the overall direction of the company including its technical efforts.
* Personally responsible for all marketing, communications and business development efforts to include major licenses to Intellisystem's clients which included Microsoft, Apple, Epson, Aldus, Fijutsu and Hewlett Packard.
* Intellisystem technology was granted a patent in the US and abroad for its Multi-tasking Artificial Intelligent System design.
* Personally responsible for the company's creative efforts as well as its corporate identity.
* The technology won Editor's Choice Award from Voice Processing Magazine.
* Intellisystems products also won the Call Center Product of the Year award.
* IntelliSystems was acquired by TeleTech.

1976-1984

Winters Associates - Sherman Oaks, CA

Founder/President/CTO

* Founded Winters Associates and developed SalesPro, the worlds first sales prospect management program (similar to today's contact manager software i.e. salesforce.com etc.).
* SalesPro, which was years ahead of its time, managed sales prospects and customers and helped salespersons to better manage their time in order to meet their sales quota/goals.
* In 1980, SalesPro won Infoworld Magazine's "Runner-up Product of the Year" award second to Microsoft's MultiPlan (their precursor to Excel) which won "Product of the Year".
* Responsible for marketing to major computer manufacturers as an OEM product and was also sold at the consumer level.
* SalesPro was purchased by Computer Associates in 1981.

Professional

· Bertelsmann Foundation, Panel of Experts on Self-Regulation of Internet Content.

· Represented Novell worldwide in Internet self-regulation studies and policies in the industry.

· Former board member ICRA (Internet Content Rating Association).

· International expert for Novell on Internet content rating/filtering.

· Developed Novell's Internet real-time word/object parser and content filtering technology.

· US & foreign patents on Real-Time Multi-Tasking Artificial Intelligent Inferencing technology.

· Product designs have won national product of the year awards from publications such as InfoWorld and Voice Processing Magazine.

· Served as technology advisor for Utah State Attorney General Mark Shurtleff to include advice on Technology, Pornography Filtering and Internet Child Safety.

Education

· Master's Degree in Software Engineering - Carnegie Mellon University (2002)
· Undergraduate - Boston University / Florida State University / Embry-Riddle Aeronautical University

Research Areas

· Speech Recognition, Speech Analytics, Facial Detection and Recognition, AI, Machine Learning, Biometric data markers and facial and objects,
· Software failure in Aviation and Aerospace accidents.
· Cyber security, crypto currency and blockchain development and protection.
· Operation of Unmanned UAVs through Manned Airspace.
· Datacenter systems and secure cage/installation and design including the design of safe cold storage systems and transfers to and from such systems.
· Design of secure data center crypto and cyber sites.
· Sound practices to best prevent cyber attacks and ransomware as it relates to both systems design as well as the human factor as an entry point for a data security breaches.

Hobbies

· Flying (both fixed-wing and hot air balloons), photography, videography, biking, boating, skiing, horseback riding and hiking.

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