

# William “Hawke” Hawkes-Robinson

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## SUMMARY

I enable businesses to achieve their vision by drawing from my diversity of experience in depth, an breadth, across many sectors, excelling at delivering results wearing many hats in business, technical, healthcare, education, neurotech, streaming, recreation, entertainment, psychology, gaming, media, government, information security, manufacturing, and other industries. A highly flexible technical hands-on and management leader with 15+ years of leadership and 15+ years technical engineering experience at all levels from hands-on through C-level management. Working with brand-new built-from-the-ground-up fast-growth startups, non-profits, small mom-and-pop shops, through SMBs, to global enterprises with 10,000+ employees and millions of users.

In addition to an extensive technology and management background, I can further benefit your organization by drawing on my many years background in neurosciences, cognitive neuropsychology, recreational therapy, innovation R&D, research psychology, and reputation as the “Grandfather of Therapeutic Gaming” in healthcare circles.

Fluidly able to alternate between hands-on, team building, mentoring, and C-level positions so that my knowledge, skills, and perspectives are constantly updated. This means I can help your organization adapt swiftly to requirement needs and achieving an exceptional track record of success.

## TESTIMONIALS

*“Hawke is one of the very few CTOs who possesses not only the ability to execute complex technical tasks, but the high-level soft knowledge that maintains team cohesion, communication with non-technical partners, and essential support in investor pitch meetings”* --Ben Dobyns, CEO, The Fantasy Network, and Zombie Orpheus Entertainment. <https://www.linkedin.com/in/bendobyns>

*“Hawke is an outstanding leader with the highest level of integrity. He took a rag tag team of developers and built an amazing department through coaching and leading by example. Hawke is a perfect blend of business man meets technical maven. I would recommend Hawke to any company looking for a stand-up leader, with great people skills and a broad understanding of technology.”* --Brian Scardina. Directory, Application Security at TSYS. <https://www.linkedin.com/in/bscardina>

*“Hawke’s broad expertise, deep knowledge, security-first mindset, detailed documentation, and ability to stay abreast of current technology trends is remarkable. It’s been fantastic working together -- Hawke’s work ethic is impeccable. He is a tremendous coach and mentor and was always the first person to offer help and support to his team. Hawke brings a unique skill set and breadth of experience that would benefit any organization. Overall, Hawke was truly a pleasure to work with and I have no qualms recommending him for senior technology leadership roles. Thanks, Hawke!”* --Daniel Lawrence, VP Engagement Management, LearningMate. <https://www.linkedin.com/in/wdlawrence>

*“I can unequivocally recommend Hawke Robinson as a person of high integrity and one of the very best technicians that I have ever worked with. I have worked with him on several teams and diverse projects and he has ALWAYS exceeded the expectations of the mission. His detailed knowledge and unyielding dedication make him an ideal choice for any effort on any team. One of the brightest and most dedicated individuals I have ever met, Hawke is a highly skilled technician as well as a uniquely talented individual. He demonstrates outstanding leadership abilities, an unparalleled work ethic and enjoys tremendous success in all efforts he undertakes. Finally, and perhaps most importantly, he is an extremely pleasant person to work around. I can recommend Hawke Robinson as a person and technician without reservation.”* -- Phillip Hillian, Data Systems Engineer - <https://www.linkedin.com/in/hillian/>

*“I had the pleasure of working with Hawke Robinson on a very challenging project. Apart from his diverse technical expertise, what amazed me was his level of meticulousness and thoroughness in solutioning. He leaves no stones unturned and got some great solutions to the table for our academic setting. His collaborative approach to working with the open-source community surely gives him an edge. I will be happy to work with him on another challenge if the opportunity presents itself. Hawke will be a great asset to any organization that hires him.”* --Anoop Datar, Project Manager | Scrum Master | Business Analyst, LearningMate. <https://www.linkedin.com/in/anoopdatar>

*“Hawke is largely responsible for the developer I am today. While at MightyWords, he sort of took me under his wing and gave me the room to expand my knowledge and make a massive impact on the technical operations of the company while providing opportunity after opportunity to let me learn, grow and put my new-found knowledge to work. His knowledge is amazingly broad and deep and he is able to see the big picture for any project and get the right people in the right places at the right time to make it all come together. On a personal level, he is one of the most generous and friendly people I have ever had the pleasure of knowing. This engendered a loyalty to him that I still haven't shaken. I consider him a natural leader for all of these reasons.”* --Rob Zazueta. Director of Digital Strategy at TIBCO Software Inc. <https://www.linkedin.com/in/techknowme>

## EXPERIENCE

- 10+ years as Director and C-level technical manager while continuing hands-on experience building from the ground up from startups through small to mid-size businesses (SMB).
- 10+ years working with enterprise size environments
- Hire and manage 25+ direct reports.
- Directly manage departments of 200+ staff.
- 10+ years automotive industry technician, instructor, multiple ASE certifications in specialties in electrical, electronic, computer systems, emissions, engines, and performance
- 10+ years neurotech R&D and integration experience with EEG, EMG, BCI, xR, etc.
- 15+ years managing regulatory and compliance solution and information security
- 15+ years successfully driving technology change initiatives in an organization
- 15+ years hiring exceptional technology staff with ability to coach, manage and grow staff
- 15+ years management of development and IT technology teams
- 15+ years development and infrastructure architect, 10+ years Java Architect, OOD
- 15+ years managing budgets including annual department budgets \$20M+ USD
- 15+ years planning, implementation, and support of business application components
- 15+ years in Information Technology roles such as development, infrastructure architecture, technical client sales, IT security
- 15+ years developing and providing security in depth
- 10+ years hands-on coding Python, Java and similar object-oriented programming languages
- 10+ years running development and/or testing for large complex projects with multiple dependencies.
- 10+ years creating testing strategies and engineering best practices related to software development, test engineering, integration testing, performance testing, both manual and automated testing
- 10+ years Enterprise Resource Planning (ERP), Oracle, Sun, Odoo, ERPNext, & others
- 7+ years building DevSecOps, Agile, and continuous integration/continuous development
- 5+ years development, execution, and maintenance of automated test scripts
- 5+ years managing test environments, databases, test data setup/management for development teams
- Thrive in fast-paced environments across multiple time zones and locations
- Skilled at tactfully communicating sensitive information
- Ability to forge relationships and become a trusted advisor with personnel of various levels and responsibilities, from business partners to technology partners, to software engineers
- Proven record of delivering technology solutions within agreed upon time frames
- Experience with git, Bit bucket, github, gitlab, Docker, Selenium, Jenkins, and Kubernetes.
- Ability to inspire and influence teams effectively and partner in delivering technology-enabled business solutions that exceed business expectations
- Hands-on experience with Web services virtualization, mocking, and stubbing
- Understanding and implementation of CI/CD/Dev Ops practices, lean methodologies
- Experienced with multiple automation tools such as Selenium Web Driver, etc.
- Experienced with Agile, Scrum, Kanban, as well as classical Project Management, Gantt, etc.
- Experienced as planner with Trello, Jira, MS Project, Azure DevOpsBoards, etc.
- Experienced working with resources in different geographical locations and offshore vendors
- Experience in API test automation, UI automation using Sause labs, Selenium, or any other
- Handle difficult personnel situations directly, using appropriate discretion, HR advice, and respect for the individual
- Evoke creative and innovative thinking from team members while helping them to bring their ideas and career plans to fruition
- Help to determine new, creative ways to employ teams on projects and distribute responsibilities
- Assess training needs and selecting training tools for team members

## WORK HISTORY

### Chief Technical Officer (CTO) (remote)

#### ManufacturingPower and iNSUPPLi

April 2022 – Current

Prior Lake, Minnesota, USA – [www.manufacturingpower.com](http://www.manufacturingpower.com) – [www.insuppli.com](http://www.insuppli.com)

Directly reporting to CEO and COO, building and management local, remote, on-and-off-shore developers and other technical staff. ManufacturingPower is a startup that provides a custom-built platform addressing urgent needs for resolving supply chain issues. Most information under NDA, here is rudimentary information allowed. Create and implement methodologies, documentation, staffing, technical resources, change control, and more.

Relevant daily technologies:

- Enterprise Web Platform Development & Production: Google Cloud Platform (GCP), MongoDB (cloud, Atlas, Compass), github, Gitlab, git, Bitbucket.
- Custom-built ManufacturingPower.com enterprise web application using JavaScript, Node.js, React, RESTful API, npm, nvm, Lerna, RedHat Pubsub, self-hosted and cloud-based MongoDB and MongoDB Atlas, Mongoose, MongoDB Compass, Google Cloud CLI, tokens.
- Initial design, development supervision, and later integration of separately custom-built iNSUPPLi iOS and Android mobile application with the enterprise web platform infrastructure and datastores.
- Gluu identity management system design, implementation, and administration for user and access management, as well as single sign on (SSO).
- Ubuntu and Debian Linux, iOS, Android, Firebase.
- Project Management tools: Atlassian: Trello, Jira, Confluence
- Slack, O365, MS Teams, Sharepoint, Miro, Hubspot, Zyte, flatfile.com
- Enterprise Resource Planning (ERP): ERPNext, Odoo, Xwiki, Content Management Systems (CMS): Plone (Python), OpenCMS (Java), Wordpress (PHP).
- Communications self-hosted platforms: Matrix.org, Element-web, Element app, Jitsi, custom-coded python and JavaScript chatroom bots
- Additional infrastructure planning: Gluu for centralized user repository and authentication, SSO, SAML, OAuth, OAuth2, OpenID Connect (OIDC) Federated Identity Management (FIM), fediverse communication.
- Build self-hosted and cloud-based corporate internal infrastructure from scratch.
- Hire and manage development and IT staff, building entire department from the ground up.

### Advisor: Game Design, Ethics, Game Psychology, Lore Building, Accessibility, and Technical Design (remote)

#### Hero Trainer Inc.

February 2022 – July 2022

Pleasanton, California, USA - [www.herotrainer.io](http://www.herotrainer.io)

Hero Trainer 1.0 revolutionized exercise motivation through token economy fundamentals with the application release in early 2020. Now working on 2.0 which provides a broader whole life balance approach, not just exercise, with full gamification, and expansion of options. Most features and technology currently under NDA. High-level technologies include:

- iOS and Android Mobile application development
- Blockchain and non-fungible tokens (NFT)
- Bio, health, and fitness tracking built-in phone features and third party devices integration (Fitbit, Apple-watch, etc.)

Game Design Advisor for:

- Game design psychology and ethical use of psychological motivators
- Game design accessibility
- Game design world and lore building
- Game and infrastructure technical design

### Senior Technical Lead, Research & Development Technology Architect, Senior Security Auditor & Manager, DevOps Manager (remote) (FTE)

#### LearningMate

January 2021 - April 2022

Mumbai, India – [www.learningmate.com](http://www.learningmate.com)

“Wearing many hats” as needed, filling multiple roles from hands-on through architecture and design, to leadership and client-interfacing roles. Supervised & worked daily with teams of 15 to 25 in India, Canada, Bulgaria, Pennsylvania, Arizona, Washington, & elsewhere.

- Full stack development team leader, Hands-on development, Full-stack development, data systems, encryption management, federated communications

- SysOps, lead & train DevOps staff
- Research & Development (R&D), architecture, design, and rigorous documentation
- staff interviewing & hiring, new staff & developer onboarding & training, code review
- Jitsi meet conferencing server R&D, setup, administration, customization of code, configurations, scaling to 20,000+ concurrent users.
- Matrix.org Federated communications and data exchange platform
- Full-stack development, Java, JWT, SSO, ADS, Python, Lua, Go / Golang, C, C++, C#, .Net, PyTorch, TensorFlow, HTML, JavaScript, TypeScript, CSS, React, shell scripts, NodeJS, MySQL, Microsoft SQL Server, MongoDB, NoSQL, MS SQL, Postgresql, MariaDB, SQLite, NoSQL, and FireBase
- Build automation, Terraform, Ansible, Amazon Web Services (AWS), Google Cloud Platform (GCP), Azure Cloud, Docker, containerd, Kubernetes, Jenkins, Puppet, SysOps, DevOps, EBS, AMI, Elastic Compute Cloud (EC2), S3, Autoscaling, CloudWatch, ECS, Networking, & more.
- Ansible and Terraform infrastructure development and automation.
- Artificial Intelligence (AI) R&D, Bot development (Python, Java, & Javascript), Machine Learning (ML), Automated Speech Recognition (ASR), Deep Neural Networking (DNN).
- Operating systems: Linux, CentOS, RedHat, Ubuntu, Debian, Linux kernel customization, Windows Server, Mac OS, iOS
- Software as a Service (SaaS), Infrastructure as a Service (IaaS), Platform as a Service (PaaS)
- Software Development Life Cycle SDLC, and relevant sections for Management, Leadership, Analysis, Design, R&D, and Hands-on, Continuous Integration, Continuous Development CI/CD
- Project Management, Waterfall and Agile, Scrum
- Designed and built from scratch performing Selenium load-testing simulated 5,000+ video users.
- I built from the ground up entire conferencing infrastructure capable of supporting 20k+ concurrent users, and chat/communications infrastructure capable of supporting millions of users globally.
- LearningMate has more than 1,200 employees world-wide creating and employing products and services to build and connect digital channels to enable the free flow of content, data, and learning.
- Supervised and worked daily with teams in India, Canada, Bulgaria, Pennsylvania, Arizona, Washington, & elsewhere.
- Lead technical design sessions and development teams, as well as Agile and scrum project management
- Architect and document technical solutions that are aligned with client business objectives.
- Translate business requirements into well-architected solutions.
- Personally research, design, develop, and lead teams to deliver innovative solutions in support of business' strategic and tactical objectives.
- Provide hands-on, expert-level technical assistance to developers.
- Engages others throughout the solution delivery process to provide design acceptance, understand and plan for infrastructure impacts, plan for and validate functional and non-functional requirements, ensure compliance with secure development standards.
- Business planning and envisioning technology architecture by studying the needs of the target audience aligned with the site goals, corporate strategy, opportunities, and constraints.
- Creating user flow scenarios with a focus on information structure, data flow, consumer journey workflow, and navigation.
- Producing workflow diagrams, user scenarios, flowcharts, and storyboards and from those creating page layouts, navigation rules, organization of information, and site maps.
- Evaluating traffic patterns, studying user feedback, coordinating with usability team members.
- Validating information delivery including through results of usability test plans.
- Perform periodic security and/or code reviews to ensure compliance to standards. • Research, evaluation, setup and use test automation frameworks
- Research, evaluation, setup, and use of load/performance test frameworks
- Research, evaluation, setup, and use of automation frameworks from scratch
- Research, analysis, selection, building, and use of building performance testing frameworks, and selecting which testing tools should be used
- Selenium design, setup, and implementation or 5,000+ simulated users
- Asked to join LearningMate to help save a specific project that was using opensource-based real-time communications media, conferencing, and learning technologies whose implementation was in jeopardy.
- Specifically hired due to my extensive background with relevant opensource and commercial technologies in video-conferencing, media streaming, education, online learning, community building, distributed synchronous and asynchronous communications and learning.
- The previous project was also very sparse in planning and documentation. The revised project was much more extensively designed, tested, and documented, making sustainability much more manageable for future teams.

- Some technologies and proprietary information are currently under NDA. The technologies listed here are the open source products introduced to avoid having to “reinvent the wheel” and focus instead of the specific areas distinctive to LearningMate’s solutions. Also worked on overhauling existing dysfunctional project design, management, development, staging, testing, and production roll-out methodologies.
- R&D, design, setup, administration, auditing, load-testing and performance tuning the following technologies:
- Secured, enhanced, and scalable Jitsi-based large-scale video conferencing and recording • Jitsi Meet Server (JMS), Jitsi Videobridge (JVB), Prosody, Jicofo, Jibri, Jigasi, Octo, HA Proxy, etc.
- Automated speech recognition (ASR) and various neural networks R&D
- Real-time closed captioning and custom profanity and keyword filtering (self-implemented not using public services)
- Vosk, wav2letter, Flashlight-ASR
- Offline audio video (AV) language translation
- xR (Virtual Reality (VR), Augmented Reality (AR), etc.) for use in educational settings
- Gamification of developer and educational platforms • Natural language (NL) and accessible human readable, .srt., and .vtt AV to text transcripts.
- Accessible AV playback for various population needs through integration with Able Player
- Real-time, offline, synchronous, and asynchronous online learning
- [matrix] protocol with Synapse Home Server, Element matrix client and other clients, application integration management server, identity management server, bots, and other infrastructure relevant to the ecosystem • SaaS, PaaS, IaaS • Microservices research, development, implementation, and management
- Nginx, Apache, and Microsoft Internet Information Server (IIS)
- Microsoft Office, Adobe, and LibreOffice
- Online Learning Management Systems (LMS), custom-built proprietary systems, as well as opensource systems such as Moodle, open edX, and others
- Project and source management related: Agile, Scrum, Git, Bitbucket, Github, Gitlab, Jira, and Confluence.
- Selenium load-testing of video-conferencing, XMPP, Web-RTC, federated chat, and other components with thousands of simulated users.
- MARKETS: Video Conferencing, Data Exchange Services, Education, Online Education, Communication Services, Streaming, LMS, and Media, B2B, B2C, B2E, E2E, PaaS, SaaS, IaaS, Regulations Compliance, eCommerce.
- DETAILS: <https://www.hawkenenterprising.com/archives/resumes/experience/learningmate>

## **Consultant and Corporate Trainer**

### **PBS Public Broadcast Service**

**August 2020 - May 2021**

**Virginia, USA – [www.pbs.org](http://www.pbs.org)**

Corporate Training Games and Accessibility Education Program Designer and Instructor (remote) (contract). Contracted through RPG Therapeutics LLC, provided consulting and educational training services related to recreation therapy, gaming, and accessibility for the Public Broadcasting Service (PBS) national network in the USA.

- Contracted part-time to train PBS staff on recreation therapy concepts, use of games to achieve therapeutic goals, including role-playing games. Populations include children 2-8+ years old, gifted & talented, ADHD, learning disabilities (LD’s), accessibility, Autism Spectrum (ASD / PDD) and other neurodiverse).
- Initially focused on ways to enhance programming for PBS Kids Online, community, and broadcast programming to add recreation therapy approaches to games, including various tabletop, live-action, and electronic games. • Introduction to role-playing games (RPG) (tabletop, live-action, electronic, & hybrids), accessibility in gaming, brain-computer interface (BCI) technologies for accessibility & games, & BCI + robotics solutions for accessibility & games.
- After first live webinar, asked to expand scope to address internal corporate-wide accessibility issues with synchronous online meetings presenting challenges for people with various disabilities. Help consult on improving accessibility internally corporate-wide (expanding beyond the original scope of online, community, and television programming), adjust training sessions to become asynchronous, providing extensive examples of accessibility solutions built into delivery of the training, addressing people with visual impairments & blindness, hearing impairments & deafness. & people with various cognitive differences & neurodiversity challenges. Not just content of training, but delivery as well.
- Utilized extensive range of methodologies, technologies, & customization:
- Recreation Therapy & Therapeutic Recreation
- Cognitive neuropsychology of learning in educational and other settings

- Videoconferencing development for Zoom and Jitsi
- [matrix] federated communications, matrix-synapse, element-web / vector / riot, sydent.
- Moodle Learning Management System (LMS)
- Odoo Enterprise Resource Planning (ERP) platform
- Video recording / editing, DaVinci Resolve
- Closed captioning for Hard of Hearing (HoH) / Deaf
- Transcriptions for Visually Impaired (VI) / Blind
- Brain Computer Interface (BCI) Electroencephalogram-based (EEG) technologies
- Robotics controlled by BCI
- Python, Java, JavaScript, NodeJS
- Web servers Nginx, Apache, IIS
- SQLite, NoSQL, Postgres, Firebase, Firestore
- MARKET: Corporate Culture training, Real-time and Asynchronous Learning, Education, Online Education, Recreation Therapy, Role-Playing Game, Professional Development.

**Kerberos and Authentication Analyst Consultant (remote)  
Robert Half Technology Client: Critigen & Omaha Municipal  
June 2017 - July 2017**

**Omaha, Nebraska, USA – [www.roberthalf.com](http://www.roberthalf.com)**

Consulting and troubleshooting for Rober Half client, Critigen's client. Kerberos integrated with ADS, and iOS app, over VPN and various infrastructure. Client had been struggling for weeks before I came on board.

- Client planned for around 18 hours to troubleshoot a problem their entire government IT department and other consultants had been completely stuck trying to solve for several weeks and hundreds of man hours. Issues with iOS client software not authenticating with ADS Kerberos infrastructure over VPN connection. I coordinated with half a dozen administrators and developers, and I tracked down the situation details (NDA) solving their problem within 3 hours total, they used the additional budgeted time for additional guidance and suggestions from me to improve their overall infrastructure.
- Technologies used: Microsoft Active Directory (ADS), Kerberos, VPN, iOS, Single Sign-on (SSO), Authentication, Identity Management, Opentext Server.
- MARKET: Government, Municipal Services, Identity Management, Information Security

**Accessibility Compliance Officer**

**SpoCon Inc. Conventions**

**November 2016 - September 2017**

**Spokane, Washington, USA – [www.spocon.org](http://www.spocon.org)**

Created Accessibility documentation, audited Americans with Disabilities Act (ADA) regulatory standards regulations compliance for facilities and large events (1,000+ participants). Provided recommendations and implemented improvements.

- Provided direct services to clients with disabilities. An annual science fiction and fantasy convention for the Spokane area.
- Also provided hosting services, webmaster, and user training for back office website.
- "Accessibility Advocate" to help convention organizers include consideration for participants with various disabilities. Created new position of "Accessibility Advocate" for annual convention hosting thousands of attendees. SpoCon has never had anyone looking out for attendee accessibility needs previously.
- Created policies, documentation, awareness, training, and Accessibility Table.
- Trained other volunteers in how to work with different populations needs, to help accommodate them to be able to have as enjoyable a convention experience as everyone else. SpoCon currently has around 1800 members.
- Performed site surveys of event locations, hotels, etc. Providing wheelchair accessible trailer for gaming activities. <http://www.rpgtrailer.com> Speaking on panels about the benefits of role-playing games, from the TR perspective. Participants with disabilities raved about how greatly improved the event was due to the Accessibility Services, and asked if I would provide similar services in Tri-Cities and Montana.
- Technologies used: ADA & HIPAA compliance, accessibility audits, OpenSuse Linux 13.2, CentOS, Zope with Plone 4.3, Python, DHTML, CSS, HTML, SSH, postfix, dovecot, SMTP, POP3, IMAP.
- MARKETS: Events, Convention, Conference, Accessibility, ADA, Compliance, Audit

**Chief Technology Officer (CTO), Chief Information Security Officer (CSO / CISO), Senior Developer, Architect, DevOps & Director of Operations (remote)  
The Fantasy Network and Zombie Orpheus Entertainment  
October 2016 - August 2021**

## **Bellevue, WA, USA – [www.thefantasy.network](http://www.thefantasy.network)**

Turned the CEO's vision into a reality from walking him through the business and technology scoping phases, to early R&D and prototyping, through the full software development life cycle (SDLC) of 5 full software versions (0 through 5.x).

- The Fantasy Network (TFN) over-the-top (OTT) subscription video-on-demand (SVOD) service delivers creator-owned genre television & film content in a more accessible, shareable, & discoverable way across the web & via IPTV apps on iOS, Apple TV, Roku, Android, Android TV, Amazon Fire, Amazon Prime Video, and many others.
- Personally built & developed from scratch, the MVP and 1.0 through 3.0 platform delivering end-to-end interactive movie & live streaming studio & on-site productions, broadcasting, community connected, & supply-chain delivery of physical & digital media products. Developed & implemented customized server, desktop, & mobile platforms. AWS DevOps lead and new DevOps staff trainer.
- Version 4 extended platform to support large-scale live real-time interactive conventions, communities, tabletop gaming, & other live events worldwide.
- Scaled Jitsi & Matrix to over 20,000 concurrent live video chatroom users in conventions/event settings on self-hosted hardware and cloud with customized opensource code. Nearest competitor in Hollywood spent over \$30M & 3 years only to have their platform launch fail catastrophically. We successfully launched while saving TFN more than \$1M USD in initially planned development costs, I was able to deliver entire working platform for only \$10,000 in development costs, using a combination of opensource and custom code in just a few months.
- DETAILS: <https://www.hawkenterprising.com/archives/resumes/experience/the-fantasy-network-chief-technology-officer-cto>
- MARKETS: Entertainment Media, Live Events, Online Events, Video Conferencing, Multimedia, Streaming, SaaS, PaaS, IaaS, eCommerce, OTT, SVOD, SaaS, IaaS, PaaS, Communication, B2B, B2C, B2E, E2E

## **President**

### **RPG Therapeutics LLC, RPG.LLC, RPG Parties**

**October 2006 - Current**

### **Spokane, Washington, USA – [www.rpg.llc](http://www.rpg.llc)**

Washington State Department of Health Registered Recreational Therapist.

Beginning initially as private practice as Therapeutic Recreation Specialist (TRS), as practice expanded now with 6 employees.

In addition to a wide range of recreational and music programs used as therapeutic intervention modalities, developed especially powerful implementations using role-playing games, and over time became known in the industry by competitors, peers, and conferences as "The Grandfather of Therapeutic Gaming", because I have been involved with researching and application of role-playing games to achieve specific effects since 1979.

## **Chief Architect, Network & Systems Engineer, Sales Engineer, Project Manager, & DevOps Interlink Advantage (now Intrinium)**

**March 2010 - July 2018**

### **Spokane, Washington, USA – [www.intrinium.com](http://www.intrinium.com)**

Information Security and IT Services company. I directly worked with civilian businesses, healthcare, educational, and government clients with more than 5,000 employees.

- MARKETS: IT, InfoSec, SaaS, IaaS, PaaS, eCommerce, B2B, B2C, C2C, E2E, B2E, Consulting, IaaS, SaaS, Paas, Hosting
- DETAILS: <https://www.hawkenterprising.com/archives/resumes/experience/architect-pm-and-other-experience-at-interlink-advantage-now-intrinium>

## **Chief Technology Officer (CTO), Chief Executive Officer (CEO), Founder, DevOps Manager, Architect, Director Operations, Lead Research & Development: Software & Hardware**

### **RPG Research**

**January 2004 – Current**

### **Spokane, Washington, USA – [www.rpgresearch.com](http://www.rpgresearch.com)**

- Neurotechnology Brain-Computer Interface RPG Project Founded in 2004, online multiplayer game you can play with just your brain: [www.bcirpg.com](http://www.bcirpg.com).
- staff from the ground up to over 200 volunteer staff members across 6 continents,
- supervised more than 30 PhDs on staff. In the software development department,
- Director of Software Development Lead for software development team of 10 to 20 developers working on opensource Brain-Computer Interface (BCI) ERPG multi-user online turn-based system.
- MARKETS: Software Development, Research and Development (R&D), Architecture and Design, Develop Team Lead, Brain-Computer Interfaces (BCI), Games, Accessibility, Neurosciences,

Neurotech, Electroencephalogram (EEG), Hardware Development, Opensource, Education, Healthcare, Therapy, B2C • DETAILS:

<https://www.hawkenterprising.com/archives/resumes/experience/rpg-research-software-development-director>

- Enterprise Resource Planning platforms: Odoo, ERPNext
- Web servers: Apache, httpd, nginx
- Content Management Servers (CMS): Plone, OpenCMS, Wordpress
- Learning Management Systems (LMS): Moodle
- Video conferencing self-hosted: Jitsi
- Communications / chat: Matrix + Element (element-web, mobile, and desktop apps)

## **Global Corporate Systems Performance & Security Auditor and Analyst**

### **Devon Energy Corporation**

**August 2002 - January 2003**

**Oklahoma City, Oklahoma, USA – [www.devonenergy.com](http://www.devonenergy.com)**

Devon Energy is a multinational energy and oil company,

- 10,000+ employees
- audited their entire server infrastructure in 4 months, providing detailed reports, presentations, and remediation planning to help them address many serious enterprise-wide performance and security issues.
- MARKETS: Critical Infrastructure, Engineering, Energy, Oil, Information Security, B2B, E2E
- DETAILS: <https://www.hawkenterprising.com/archives/resumes/experience/architect-pm-and-other-experience-at-interlink-advantage-now-intrinium>

## **Physical and Information Security Consultant**

### **Dev 2 Dev Portal LLC**

**January 2002 – Current**

**Various Locations – [www.dev2dev.com](http://www.dev2dev.com)**

Provided deep & broad proven hands-on, leadership, & project management skills in systems administration, network administration, & security. Years of physical & information security background including:

- auditing and assessments, red & blue teams, penetration testing (pentesting).
- incident handling and forensics.
- Compliance auditing, implementation, administration, & oversight for: Sarbanes-Oxley (SOX), Gramm-Leach-Bliley Act (GLBA), Payment Card Industry Data Security Standard (PCI-DSS), Americans with Disabilities Act (ADA), Health Insurance Portability and Accountability Act (HIPAA), Systems and Organization Controls 2 (SOC2), Health Information technology for Economic and Clinical Health Act (HITECH), European Union (EU) General Data Protection Regulation (GDPR), Children's Online Privacy Protection Rule (COPPA), & others.
- Maintained efficient operation of 20+ data center locations.
- Incident handling, forensics, recovery, & mitigation for multiple companies ranging from small "mom & pop shops" to Fortune 500 and Fortune 100 companies.
- Directly hired/managed 100+ IT staff on-and-off-shore. • Built entire infrastructure from scratch for multiple companies.
- Facilitated IT enterprise architecture across organization's enterprise transformation programs. • Conduct performance and security audits across multinational companies infrastructure with hundreds of core servers for 10,000+ employees, and provide mitigation.
- MARKETS: Information Security, Physical Security, Security • DETAILS: <https://www.hawkenterprising.com/archives/resumes/experience/dev-2-dev-portal-llc>

## **Chief Operating Officer (COO), Founder**

### **MaladNet ISP, Hosting, and Rural Wireless (WISP) (acquired by other companies)**

**July 2002 – January 2004**

Southeast, Idaho - <https://web.archive.org/web/20030524063059/http://www.maladnet.net/>

Built entire Internet Service Provider company from scratch, specializing in providing broadband services to rural and small towns. Provided broadband wireless Internet services to entire valley in 8 mile by 12 mile coverage area. Provided services to home users, businesses, government, and medical facilities. Provided up to T1 service to each location. Full traffic usage tracking and reporting, filtered content and email upon request, bandwidth shaping, fail-over connections, website hosting and design, support services. Trained multiple installation and support technicians. Supported nearly 100 users at peak with reliable high speed access. Assets and inventions sold to AXCESS Wireless and Hess Mining.

- Java, PHP, Python, and Perl programming, MySQL and PostgreSQL databases
- Novell eDirectory, , Apache, SSL, MRTG, SNMP, SMTP, POP3, Qmail, Tripwire, iptables, pf, etherreal, etherape, various other IDS technologies (not disclosed), CuSeeMe client and reflectors



for full audio/video conferencing with full duplex multi-user simultaneous meetings, PPTP and IPsec VPNs, PostNuke, PHPNuke, Zope, Jserv, Tomcat

- RADIUS, LEAP, 802.1x, MAC and IP access control
- Linux Redhat, Debian Linux, OpenBSD, Trusted Solaris 6 & 7, Windows 3.x/9x/Me/NT/w2k/XP, Mac OS 8x/9x/XX, Linux (several distros), Solaris 6/7/8/9
- 802.11b & g and 802.11a 2.4 ghz and 5 ghz wireless.
- Cisco Aironet Aps and bridges (3x0 and 1x00 series), 3Com, Intel, D-link, Hyperlink, Fab-corp, Linksys, and many other wireless companies' technologies for clients, bridges, and Aps.
- Amplifiers, high gain antennae (sector, omni, pad, and parabolic), LMR 400 and 240 custom coax and fittings.

Completely self supported solar powered tower systems providing connectivity, relay/repeater, and full monitoring of voltage, temperature, traffic, and physical intrusion detection and motion activated video all on solar powered/battery operated system on mountainside.

Temperature/climate controlled units designed and modified to withstand winters with several feet of snow and temperatures below -20f and summers over +112f (shade) and over 140f (radiant).

### **Chief Technology Officer (CTO)**

**MightyWords Inc. by Fatbrain, acquired by Barnes & Noble**

**September 2000 - March 2002**

**Santa Clara, California -**

**<https://web.archive.org/web/20011202201828/http://mightywords.com/>**

As CTO, managed through entire startup life-cycle from beginning, through industry leadership as the number one online e-book seller, & profitability, to acquisition by Barnes & Noble & final liquidation of all remaining assets

- Full Software Development Life Cycle (SDLC).
- Built entire technical company and department from the ground up, built rapid-growth series A \$43 million dollar startup company from 2 employees (CEO and CTO), to 80+ employees on-shore and off-shore, local and remote.
- Built entire IT department from scratch, starting with hands-on facilities acquisition, server & network infrastructure, hiring, VAR contracts, and directly responsible & single check-signatory for IT dept. directly managed and signatory to annual budget \$20M+.
- MARKETS: Publishing, eBooks, DRM, eCommerce, B2B, B2C, C2C, B2E, E2E
- DETAILS: <https://www.hawkenterprising.com/archives/resumes/experience/chief-technology-officer-mightywords-inc>

### **Corporate Systems & Components Architect, Systems and Network Administrator, Security Manager, & Director of Operations**

**Franklin Covey Co.**

**May 1999 - September 2000**

**Salt Lake City, UT – [www.franklincovey.com](http://www.franklincovey.com)**

Started as third-party contractor as Application Server specialist, then hired into corporate Information Technology (IT) department as Unix Administrator, rapidly promoted to Manager of Security, then Director of Operations, and finally Corporate Architect.

- MARKETS: Professional Services, Publishing, Project Management, Information Security, Online Learning, Education, Professional Development, eCommerce, payment systems integration, SaaS, PaaS, B2C, B2B, E2E
- DETAILS: <https://www.hawkenterprising.com/archives/resumes/web/franklin-covey-inc>

### **Information Technology International**

**Network Manager, Webmaster, and Java Developer**

06/01/1998 – 08/31/1999

Salt Lake City, UT

Utah, New Mexico, & Arizona Network administration, website development, Java programming, server and workstation support. MS Exchange and OWA (Outlook Web Access) tools. Maintain client site networks (LAN's, WAN's, Intranets, & VPNs). Elected as Administrator for Utah Silverstream User's Group. Order, configure and help support ADSL, ISDN, and T1 lines for company and clients.

Used the following applications and operating systems regularly: SilverStream Application Server 1x & 2x, Sybase Adaptive Server, Oracle Server 7.3 and 8 & 8i, Sybase SQL Anywhere, JConnect (JDBC), ODBC connections, Solaris 2.51/2.6/2.7, Linux Slackware/Redhat/Debian, FreeBSD, Windows NT

Workstation/Server/Enterprise, Windows 95, IIS 4.0, MS SQL 6.5 and 7.0, Netware 4.11 and Netware Web Server, Netware LDAP server, Apache Web Server, Netscape Enterprise Web Server, PC Anywhere, VNC, Symantec Café, jBuilder.

**Softdocs, Inc.**

## **Software Developer**

06/01/1997 – 01/31/1998

Salt Lake City, UT

SoftDocs Inc. (Changed to Verticore Technologies). Salt Lake City, Utah

Designed, implemented, and maintained entire corporate Internet & Intranet sites from scratch. Created (& maintained) Web-based Customer support database using Java. Order, configure and maintain ISDN for company's divisions. Install & maintain NT Proxy, and MS Exchange Servers LAN & Internet Mail. Designed implemented and maintained corporate (800 number) dialup and ISP services.

Some clients included: Kennecott Mining Corp, Varian Mfg, Smiths Foods, Swire (Coca Cola) Distributing, St. Alphons' Hospital, AG&G Chemical Demolitions Facility, LDS Church Missionary Dept., LDS Church Genealogical Dept., Salt Lake City Corporation, Utah State Corrections, Gem Insurance Company.

Worked with integration of software on many platforms: DOS, 3x, 95, NT (3x & 4), UNIX (AIX, HPUX, Sun/Solaris, Linux), OS/2 WARP, MAC, Netware (2x, 3x, & 4x).

Supported the following network technologies: TCP/IP, IPX/SPX, NetBEUI, Banyan-VINES, Arcnet.

Application support included: Filenet, Documentum, Optika, Saros, InConcert, Frequent Filer, and many other "custom coded" programs related to document imaging, document workflow & document management.

## **Comspec Inc**

### **Systems Administrator & Client On-site Support Technician**

06/01/1997 – 01/01/1998

Salt Lake City, UT

Designed, implemented, and maintained entire corporate Internet & Intranet infrastructure and websites from scratch. Java Developer. ISDN. NT Proxy, and MS Exchange Servers LAN & Internet Mail.

Designed implemented and maintained corporate (800 number) dialup and ISP services.

Some clients included: Kennecott Mining Corp, Varian Mfg, Smiths Foods, Swire (Coca Cola) Distributing, St. Alphons' Hospital, AG&G Chemical Demolitions Facility, LDS Church Missionary Dept., LDS Church Genealogical Dept., Salt Lake City Corporation, Utah State Corrections, Gem Insurance Company. Worked

with integration of software on many platforms:

DOS, 3x, 95, NT (3x & 4), UNIX (AIX, HPUX, Sun/Solaris, Linux), OS/2 WARP, MAC, Netware (2x, 3x, & 4x). TCP/IP, IPX/SPX, NetBEUI, Banyan-VINES, Arcnet.

Application support included: Filenet, Documentum, Optika, Saros, InConcert, Frequent Filer, and many other "custom coded" programs related to document imaging, document workflow & document management.

## **PC Easy**

### **Chief Information Officer (CIO) and Software Developer**

09/01/1996 – 06/30/1998

Salt Lake City, UT

Increased system build productivity from 2-3 computer systems built per tech, per day, to 12-20 systems per tech, per day. Managed 12 technicians. Built assembly line. Responsible for evaluating, testing, & approving new hardware & software for purchase by company. LAN administrator for company, as well as contracts for other companies. Webmaster for company site as well as for contracted web-site creation/design/administration for other companies. Train new tech employees. Hire and manage technicians (up to 5 employees).

## **Utah Career College**

### **Instructor, Systems, & Network Administrator. Computer Graphics Program Designer and**

### **Senior Instructor, Automotive Instructor**

03/01/1996 – 09/30/1996

Salt Lake City, UT

Created and instructed approved course in Computer Graphics & trained other instructors to teach the course (up to 20 students). Network Administrator for Novell Netware 2.12, 3.1, WANG, & WFWG/DOS. 4x ASE certified, specialties in emissions, performance, electrical, electronic, and computer systems. Instructor for Automotive Technical Division & Office Administration courses (up to 25 students). Novell Netware 2.12 & 3.1, WANG and WFWG 3.11 Administrator on IPX/SPX & TCP/IP networks. Created curriculum and trained instructors on teaching course in Graphics Design. Course initially focused on Corel Draw, but eventually became full certification program.

## **Independent Freelancer**

### **Software Developer**

01/01/1979 – 03/01/1996

USA

Independent freelance software development in many languages on many platforms.

## BOARDS

- RPG Research, Board of Directors, Chair
- Dots RPG Project, Board of Directors, Voting Board Member
- CAR-PGa, Board of Directors, Voting Board Member
- Hero Fitness, Advisory Board, Board Member

## EDUCATION

- **Bachelor of Arts (BA) in Interdisciplinary:** Neuroscience, Neuropsychology, Recreational Therapy, Music, Research Psychology - Eastern Washington University, Washington - Cheney, Washington – 3.7.
- **Associates of Science (AS) in Computer Science (CS)**
- Minor in Accounting - Certified Careers Institute, Utah - Salt Lake City, Utah – 4.0.

## CERTIFICATIONS

- **DCSE – Dell Certified Systems Expert.**
- **GCIH - Global Information Assurance Certification (GIAC), Incident Handling.** SANS Institute Information Security certification.
- **SCSA – Sun Certified Systems Administrator,** Solaris Systems Administrator Unix certification.
- **MCSE – Microsoft Certified Systems Engineer,** Microsoft Certification.
- **CNA – Certified Netware Administrator,** Novell Netware certification.
- **Certified Linux Instructor,** Novell Hotlabs, Inc Linux certification.

## SOFT SKILLS

Executive Leadership, Leader, Leadership, Strategic Planning, Tactical Implementation, Managing Teams, Business Ownership/Management, Managing Teams, Architecture design, Documentation, Budgets, Audits, Research & Development, Analysis and reporting, Strategic thinking, Business planning, Processes & solutions, Product management roadmap, Software development, Hands-on, Infrastructure, DevOps, xR (Virtual Reality, Augmented Reality, etc.) R&D, Operations, Scaling, Project Management, Information Security • Regulatory standards compliance, IT Services Management, Full-cycle software development life-cycle (SDLC), 25+ direct reports, 200+ department staff. 10,000+ employees, Excellent verbal and written communication skills, Problem-solving aptitude, Vision, Strategic thinker, Solutions Oriented, Customer-centric, Goals oriented, Demonstrated Success, Mentor, Innovation, Best practices, Stakeholder collaboration, Interpersonal, Verbal, Critical Thinking, Solve, Aptitude, Self Starter, Self Motivated, Enthusiastic, Problem Solver, Collaborative, Resourceful, Entrepreneurial Spirit, Entrepreneur, Startup, Grow, Experienced

## HARD SKILLS

DevOps, Technical Architecture Design, Documentation, Neurotech (EEG, EMG, BCI, etc.), xR (Virtual Reality, Augmented Reality, etc.), Machine Learning (ML), Natural Language, Deep Neural Networking (DNN), Artificial Intelligence (AI), PyTorch, OpenAI, Business, Electroencephalogram (EEG), Brain-computer Interface (BCI), Technical, Documentation, Instruction, Governance, Compliance, Regulatory, Audit, Site reliability and scalability architecture, design, implementation, and assessment, Scalability, Load testing, E-Commerce, Leading Technical Skills, Test, Testing, Quality Assurance, Audits, Vulnerability Scan, Assessment, Remediation.

**Software:** Java, Python, Javascript, JQuery, Html, Html Css, Angular, Node Js, React Js, Node, Cli, Unix, Linux, Os, Server, IIS, Server, Windows, Vmware, Vsphere, Shell, Shell Scripting, Bash, Command Line, Ansible, Terraform, AWS, GCP, Docker Container, Kubernetes, Pytorch, Container, CI/CD, Continuous, Automation, Devops, Engineer.

**Languages:** American Sign Language, ASL, English