Contact

www.linkedin.com/in/mccown (LinkedIn)
www.iInventStuff.com (Other)
iinventstuff.com/patents/ (Other)

Top Skills

Executive Team Member
Standards Development
Privacy Protection

Languages

English (Native or Bilingual)
Spanish (Limited Working)

Certifications

Certified Data Privacy Solutions Engineer (CDPSE)
Certified Information Security Manager (CISM)
Amateur Radio License

Honors-Awards

PayPal X Developer's Challenge Finalist
Contactless Intelligence
R&D 100 Award
StorageTek Technical Excellence Awards (1999-2004)

Publications

Phone app created to help first responders detect radioactivity
Leveraging the Sovrin Network to Facilitate Trust for Anonymous Digital Identities
Are Crypto Wars Coming?
A Navigation System for Personalized Databases: "StarMap"
Determining Camera Gain in Room Temperature Cameras

Patents

Steven McCown

Chief Architect, Applied Crypto R&D, CISM, CDPSE, Patented Inventor
Mapleton, Utah, United States

Summary

Innovative technology leader with a passion for creating mobile & security solutions, generating Intellectual Property, and building Minimum Viable Products that facilitate business growth. Adept at simplifying complex problems, catalyzing collaboration, and bridging communication between management, marketing, and development. Created partnerships in China, Hong Kong, India, and the US.

A Sample of My Activities:

⇨ 30 issued patents

⇨ Industry Consortia: Decentralized Identity Foundation (Steering Committee Member, Co-Chair DIDComm WG; TSC Member), Trust over IP Foundation (Steering Committee), World Wide Web Consortium (Advisory Committee), Sovrin Foundation (Technical Governance Board Member).

⇨ Mobile Payment System: a cryptographic microSD card (with NFC) used to ‘tap’ encrypted payments to VeriFone credit card terminals.

⇨ Cellphone-Based Dirty Bomb Detection Grid: created a method for ordinary cell phones to detect ionizing radiation (from ‘dirty bombs’) and then ‘phone home’ to first responders.

⇨ Pen-Based Wall Display Interface: enabled handwriting directly on rear-projected wall displays using laser pens and camera tracking.

⇨ Cloud Storage Protection: created an encryption shield to keep your cloud data (e.g., Dropbox, iCloud, Google Drive, etc.) private.

⇨ Computer Hacking R&D for the US Gov't: cellphones, computers, & such...

Wireless Device Monitoring Systems and Monitoring Devices, and Associated Methods

Encryption Key Management System Using Multiple Smart Cards

Apparatus and method for managing digital identities

Apparatus and Method for Persistent Digital Rights Management

Canister-Based Storage System

Portfolio: http://iInventStuff.com

Experience

Decentralized Identity Foundation
Steering Committee Member
October 2023 - Present (8 months)

DIF exists to advance the interests of the decentralized identity community, including performing research and development to advance “pre-competitive” technical foundations towards established interoperable, global standards.

Anonyome Labs, Inc.
Chief Architect
October 2016 - Present (7 years 8 months)
Greater Salt Lake City Area

Conduct R&D for security and crypto-related technologies, such as: encrypted messaging, identity management, secure payments, crypto currencies, blockchain / decentralized ledgers, etc. Prototyped identity and trust management software for MySudo identities using Decentralized Ledger Technologies (DLT) with Hyperledger and DIF decentralized identity solutions. Company liaison with identity industry consortia (e.g., W3C, DIF, ToIP, Hyperledger, Sovrin).

Technologies: Swift, Rust, Java, Hyperledger Indy/Aries, DIF DIDComm.

State of Utah
Personal Privacy Oversight Commission - Commissioner
May 2023 - Present (1 year 1 month)
Salt Lake County, Utah, United States

Appointed by Spencer J. Cox, Governor of Utah, to serve on the Personal Privacy Oversight Commission.

Established under H.B. 243 (https://le.utah.gov/~2021/bills/static/HB0243.html), the purpose of the Personal Privacy Oversight Commission is "to establish guidelines and best practices with respect to certain government technology uses related to personal privacy and policies related to data security".

Trust Over IP Foundation

Steering Committee Member
May 2020 - Present (4 years 1 month)

Help create governance models and technology standards for digital identity (e.g., for Self-Sovereign Identity / Decentralized Identity).

Sovrin Foundation
Technical Governance Board Member
February 2020 - Present (4 years 4 months)
Provo, Utah, United States

Foster the development of technical standards for the Sovrin open identity framework.

TekStarts
President / Founder
May 2012 - Present (12 years 1 month)
Mapleton, UT

Provide consulting and development services to help clients with business & technology strategy, new business development, intellectual property creation, Minimum Viable Products, and software development. Major technology areas include mobile technologies, computer security, education solutions, cloud applications, embedded software, and security vulnerability analysis.

RFinity Corporation
CEO / CTO / Co-Founder
October 2008 - April 2017 (8 years 7 months)
Idaho Falls, ID

Created and launched an innovative contactless mobile payment system consisting of a cryptographic microSD card with NFC. Invented mobile payment security technologies at the INL, raised $5M startup capital, and co-founded RFinity as an INL a spinout. Established industry partnerships in the US and China.

• RFinity Pilot (2009-2010): ~5000 students at Brigham Young University—Idaho used RFinity's cell phone payments to make purchases at the campus store and local merchants (Subway, Jamba Juice, etc.)
• microSD Smart Card: Architected embedded security using Java Card 2, AES, digital signatures, and PKI.
• Phone Apps: Designed payment apps for iPhone, Android, Blackberry, Windows Mobile, Java OS, Symbian, and BREW using Java, Objective C, & C/C++.

• Payment Server: Cleared mobile payments using bank accounts (Jack Henry & Associates APIs), PayPal, and closed loop. Compliant with PCI-DSS & SAS 70. Platform: C#, MS Server, SQL Server, XML, & ASP.
• VeriFone Payment Terminal: Designed the C software injected into VeriFone terminals.

Awards: * PayPal Developers Challenge Top 10 Finalist (2010) * Contactless Intelligence Award from Krowne Communications & Visa Europe (2010) * R&D 100 Award from R&D Magazine (2009).

ISC Federal / iSchool Campus
Chief Technology Officer
August 2013 - August 2015 (2 years 1 month)

Created the product definition and oversaw development activities for ISC Federal's Interactive Workbook Platform. ISC's platform engages learners through highly interactive eBooks containing rich text, video, 3D animation, quizzes, augmented reality, messaging, and student proficiency analytics.

• Helped secure an FAA contract to deliver a pilot training program using mobile devices.
• Led the incorporation of FAA-approved training courses within the Interactive Workbook Platform.
• Resulted in FAA personnel receiving official FAA Academy training certifications using ISC's platform.

Technologies: iOS, Android, OSX, Windows, C#, Java, JavaScript, HTML5, SCORM, PHP, and Adobe Air.

Bonneville International
Director of Digital Services
August 2012 - August 2013 (1 year 1 month)

Managed digital service offerings: website creation & modernization, mobile app design, contract development, radio streaming, and implementation of next-generation digital distribution systems for Bonneville radio stations.

• Managed the contract negotiation and system design of the first geo-fenced online radio streaming of Major League Baseball games for KIRO radio in Seattle, WA.
• Negotiated a strategic alliance with TuneIn.com, resulting in a 30% increase in Bonneville listeners.

• Led creation of KSWD's Roku channel, increased listeners by 30%, rose to #12 of Roku music channels.

Partnet
Senior Architect
November 2011 - April 2012 (6 months)

Lead architect on a short-term project to explore cloud security vulnerabilities and solutions. Created an encryption 'shield' to protect user data stored in commercial cloud storage platforms (e.g., Dropbox, Google Drive, Apple iCloud, etc.). Provided users with end-to-end encryption, simplified key management & exchange, and enabled users to retain local control of encryption keys for increased security.

Technologies: Java 7, Tomcat, Jersey, JDBC, AES, PKI, OSX, Windows, and Linux.

Idaho National Laboratory
Research Scientist / Project Manager (Principal Investigator)
June 2004 - October 2009 (5 years 5 months)
Idaho Falls, ID

Enhanced national security by leading innovative scientific research, creating classified applications of that research, and performing program management & budgeting in support of US Government Agencies.

• Radiation Detection System: Created a cellphone-based dirty bomb detection grid by enabling cellphone cameras to detect high-energy photons from radiation sources and crowd-sourcing GPS reports. Authored a National Nuclear Security Agency (NNSA) proposal and received multi-year $1M+ funding. DOE Radiation Worker. (KSL TV: https://tinyurl.com/d6htmtb; INL https://tinyurl.com/2p8wpsnr).
• Cyber Security: Conducted cyber security exploit discovery (white hat hacking) of computers, cellular systems, and related communication networks. Created mission critical exploit applications.
• CIPRSim: Created a distributed object communication layer for disaster modeling and simulation.
• Committees: N&HS Directorate Patent Evaluation Committee and Technical Advisory Group.

Technologies: Java, C/C++, Atmel MCU, IEEE 1516, Python, VoIP, special applications of Google, Windows, Windows Mobile, Blackberry, Linux, Ida Pro, Nessus, nmap, Metasploit, Wireshark, and Cain & Able.

Storage Technology Corporation

Development Engineer - Advisory

October 1997 - April 2004 (6 years 7 months)

Louisville, CO

Member of the Corporate Advanced Technology strategy team. Invented, analyzed, and promoted new technologies key to corporate growth and expansion. Filed patents to secure Intellectual Property.

• Canister: co-designed hot-swappable hardware to provide secure, reliable, & cost effective storage.
• Encrypted Storage: created a HW & SW independent encryption layer eliminating the need for strong physical security during long-term storage. Enabled random access of encrypted tape.
• Soft-Drive: built a cloud file storage service to simplify access between mobiles, desktops, servers.
• General Purpose GPU computing: researched graphics processors as general purpose computers.

Technologies: Java, C/C++, embedded, packet protocols, pixel shaders, cron, HTML, & browser plugins.

U.S. Air Force - Air Force Research Laboratory

4 years 9 months

Human Computer Interaction R&D Scientist (Captain)

September 1995 - September 1997 (2 years 1 month)

Rome, NY

Pioneered human computer interface and virtual reality technologies for military and civilian applications.

• Created a video camera-tracked laser pointer system that enabled on-screen interaction with rear-projected computer wall displays. Result: 50% speed increase over keyboard and mouse systems.
• Designed and developed a peer-to-peer (P2P) graphical mission planning system that facilitated distributed, collaborative mission planning across heterogeneous networked computing platforms.

• Created a voice-activated command interface to enhance military Virtual Reality systems.

Technologies: Java (& RMI), sockets, C/C++, BBN Hark, client-server, Windows, IRIX, Solaris, & Unix.

Analysis Software Element Leader – AWACS Software Development
Programmer / Analyst (1LT)
January 1993 - September 1995 (2 years 9 months)
Tinker AFB, OK

Led a diverse team of 17 military and civilian software developers to build revolutionary security, communication, and post-mission analysis systems for the AWACS aircraft and its support operations.

• Designed a PC-based system to convert AWACS radar data into animated simulations. Accelerated mission debriefs (from 2 days to 30 minutes); eliminated the need for C-5 equipment transport.
• Developed and fielded an encrypted communication system to send classified data over standard telephone lines. Enabled remote USAF commanders to review activities within hours of an event.
• Led the preparation of AWACS data for the accident investigation board reviewing the downing of two US Army Black Hawk helicopters in Iraq. Resulted in key AWACS training improvements.

Technologies: C/C++, Ada, Windows, IBM 370, Rational Rose, & object-oriented modeling.

Zinc Software, Incorporated
Chief Technical Writer / Software Developer
December 1990 - December 1992 (2 years 1 month)
Pleasant Grove, UT

Chief Technical Writer for all documentation supporting Zinc Software's Jolt Award-winning graphical user interface library.

• Wrote and maintained 3 separate Zinc Application Framework books, which provided managerial overviews, programmer tutorials, diagrams, and technical reference material.

• Developed and supervised the development, testing, and maintenance of all tutorial and example program software (written in C/C++).

Education

Brigham Young University

Master’s Degree, Computer Science -- Robotics · (1991 - 1992)

Brigham Young University

Bachelor’s Degree, Computer Science · (1984 - 1991)