

# David HM Spector

351 HIGHLAND AVE SAN FRANCISCO, CA 94110

voice +1 415.480.0313 ~ spectator@zeitgeist.com ~ mobile +1 631.827.3132

[www.linkedin.com/in/davidhmspector](http://www.linkedin.com/in/davidhmspector)

- 20 year history of hands-on innovation for major financial institutions, technology firms, and startups
- Hands-on developer & experienced manager; able to bridge the gap between business & tech
- Tech Leader of several startups & due diligence expert called on by several venture capital firms
- Excellent communicator: columnist and freelance writer for major publications

## Summary of Qualifications

- 20+ years experience developing and managing agile, cohesive development/support teams and delivering product/services on time and on budget while retaining security, scalability and reliability
- Proficient at generating actionable product/services ideas/specifications and instantiate/productize them
- Expert in technology transfer and education of executives and others on technology trends
- Experienced researcher with in-depth experience in technology due diligence for venture capital firms

## Technical Expertise

- Active iPhone & Mac OSX developer; proficient in Objective-C, Xcode & OSX development practices
- 20+ years experience in programming in Unix/Linux/BSD & Macintosh environments
- Experienced in the development/deployment of virtualized services using Amazon EC2/S3
- 20+ years experience in design & implementation of network security strategies, policies and systems
- Due-diligence expert called upon by several VCs to analyze potential portfolio companies
- Extra Class Amateur Radio License since 1979, active in emergency services communications and the design of wireless emergency communications systems/networks using voice, digital and satellite technologies

## Publications and Speaking/Conference Engagements (portfolio available on request)

- DropZone Networks was the 2004 DEMOMobile wireless startup; one of the Red Herring “Top100 Startups”
- *Linux in the Enterprise* columnist at The O’Reilly Network/O’Reilly Media (1999 – 2004)
- Feature writer and blogger for C|Net’s Tech Republic
- Freelance writer for WiReD Magazine, InformationWeek, Fortune, and other publications

## Apps (partial list – confidential “white-box apps” not listed)

- **Farolito** (est. release date: 5/15/14, pending iOS7.2 release) – a custom iBeacon monitor and discovery app. Waiting for Apple to fix Radar #15606232. ☺

**Thing-o-Meter** (est. release date 5/15/14, pending iOS7.2 release) – a custom BluetoothLE discovery, monitoring and mapping app, waiting for Apple to fix Radar #15606232. ☺

- **StepLively** (released December 2013) – a custom health/fitness app using the M7 Motion co-processor on the new iPhone 5S. <http://appstore.com/StepLively>
- **Hobbit Movies App** – (released Fall 2012) developed the “motion poster” feature for MX productions/Warner Brothers Studios <https://itunes.apple.com/us/app/hobbit-movies/id545808528>

Designed & built the “live motion posters” feature for the version 1.x of this app. This feature presented lenticular images of Gandalf (and eventually all other characters) and incorporated simultaneous background looping movies, foreground transparent animations and character animation of 36 full-frame 32-bit PNGs (from iPhone3GS to retina 3<sup>rd</sup> gen iPad) in a 70° range of motion as a faux “lenticular image” where the character seems to follow the user as the user moves the iOS device (just like old-timey lenticular novelty cards). This was especially challenging given the requirement to run on such a broad range of devices with limited system memory and the fact that just a few of these character frames alone would exceed the available RAM on even a 3<sup>rd</sup> generation iPad. I devised a system that would gracefully tune animations, the number of animation frames, degrees of available lenticular motion, etc depending on specific iOS hardware features at run-time to ensure smooth operation across these devices.

- **“The Dark Knight Rises FX”** – (released Winter 2012/2013) developed “put the bat-mobile in your video” feature developed for MX productions/Warner Brothers Studios. URL Not available – seems to be currently unavailable on the App Store due to iOS7 compatibility issues; still runs on iOS6 however.

Designed & implemented an AVFoundation-based 32-grey-level Chroma/alpha key system (allows for true shadows around/under objects, not just simple color replacement) that allowed the user to capture video, set an insertion point, trim video length, and then have various “bat-mobile” movies overlaid into their video with full stereo sound mixed into their audio, etc. The user could then save their creation to their photo album, email it, share it, etc.

- **Sammu** – (released 2011) for GroupSmarts, LLC developed CoreData internals for MacOSX application for museum-scale photo data management system for The Balboa Park Collective in San Diego <http://www.flickr.com/services/apps/72157626477703002/>

Developed and implemented the core data model and supporting code to handle the ingestion/storage/management of museum level (read: up to millions) of photos and metadata that can be imported from or exported to Flickr using their bulk-upload APIs.

- **TiltWorld** – (Released 2009) for XEODesign, Berkeley, CA, developed back end software and in-game location display/management technologies <https://itunes.apple.com/us/app/tilt-world/id432854196>

This early iPhone game was the outgrowth of the first version of the game “Tilt!” developed at iPhoneDevCamp in 2008 – In this iPhoneOS version I developed the player map system UI and a player location system (to connect with other players) using CoreLocation and MapKit. I also developed the back end system (a Rails application) that stored game play info that allowed users to compete for points used to heal Flip’s (the game’s little newt-like protagonist) in-game world. The back end system later became the prototype for a larger game support system for these kind of in-game systems developed by XEODesign: <http://www.tiltworld.com/about.html>

## Employment History

2/2006 – Present

**Owner, Zeitgeist Information Systems (software development and IT consulting company), San Francisco, CA**

Provide infrastructure, software development and analysis/research services to a variety of clients, including:

- Developer of in-house iPhone and iOS apps for numerous corporate clients
- For Snibbe Interactive (SF) developed iBeacon-based (Bluetooth LE) location management system for their client Viacom/MTV as part of Digital Music Experience2.0 program for delivery of real-time art experiences at MTV concerts that are displayed on concert-goers iPhones/iPads
- For MX Productions (SF) developed feature components of Hollywood studio movie companion apps for iPhone and iPad, including *Batman: The Dark Knight Rises*, and *The Hobbit Movies*; developed proposals, prototypes/proof-of-concept iOS architectures for various MX clients.
- For Academic Partnerships (Dallas, TX) Developed the online degree search site The Edification (<http://theedification.com>)
- For GroupSmarts, LLC: Developed CoreData internals for MacOSX application for museum-scale photo data management system for The Balboa Park Collective in San Diego.
- For XEODesign, Oakland, CA: Architect/Developer of Rails-based web-scale Amazon EC2/S3 Linux-based virtualized system and Objective-C support frameworks for iPhone gaming back-end support system
- For 4Profit, LLC SF/NYC: Architect/Developer of custom Rails-based high-end business profitability analysis web service ([www.prof-fit.com](http://www.prof-fit.com)),
- For NELA Partners, San Francisco, CA: Architect/Developer of the social networking application *Never Eat Lunch Alone* - a “web 2.0” application written in RIFE (a full-stack Java application framework) + AJAX technology that uses advanced location-based services to allow users to create and syndicate social/business events from browsers and mobile devices
- For Markinekt, Los Angeles/NYC: Designed specialized VPN network for distributed recruiter network based on customized embedded firewalls supporting VoIP, file sharing and email.
- Contract developer of various iPhone applications and frameworks for business, productivity & gaming
- For Draper, Fisher, Jurvetson/DFJ Gotham Ventures, Palo Alto/NYC: provided due diligence analysis on a variety of potential portfolio companies

3/2010 – 2/2011

**3<sup>rd</sup> Party Developer Program Manager/Developer Evangelist, VUDU, Inc (a WalMart Company), Santa Clara, CA**

Advise management on, and implement a 3<sup>rd</sup> party developer program for the VUDU Apps Platform, including

- Develop Objective-C SDK for VUDU back end to allow for iOS (iPhone/iPad) and MacOSX application development
- Specification of goals and requirements for the 3<sup>rd</sup> party developer program
- Write specifications for and implement developer tools
- Evangelize VUDU Apps platform to prospective 3<sup>rd</sup> party developers ranging from small content startups to major media organizations
- Assist WalMart properties and high-profile clients with their VUDU App development
- Develop VMWare-based turn-key developer SDK platform
- Research and recommend debugger & IDE integration solutions to main engineering team to enhance SDK.
- Develop Lua code examples and set best practices for application development
- Develop specifications for full-service developer portal to automate common developer tasks including SDK downloads, FAQ and documentation delivery, application submission, developer app stats tracking, etc.
- Provide VUDU management with competitive analysis of marketplace to aid in medium- and long-term product planning

2004 to 2/2006

**Senior Technologist/Managing Director, Corporate Technology Office, Bear Stearns & Co., New York**

- Senior technologist, responsible for creating, syndicating and implementing a business-centric model for support of traders and back-office clearing operations that reduced overall support costs by 50% over the stand-alone support groups previously run by the business units themselves
- Used parallel/grid computing experience to aid in the development of C/Java based scalable virtualized computing platforms for real-time program trading that enabled hundreds of analytic and trade processing nodes to be created/destroyed on the fly to meet peak trading demands
- Conceived/designed NTP-based high-precision trading platform to implement time-based (sub-millisecond) trading arbitrage
- Designed new SAN storage products, which reduced Equities Program Trading Group's storage costs to 1/10 of previous costs, saving over \$10MM in storage costs per year
- Designed/implemented Java/Shell based systems performance and trending tools to enable the firm to assess current system utilization and future needs

1/2001 to 9/2004

**Principal Technologist/Founder, DropZone Networks, New York**

Developed new form of wireless access point that is solar charged and battery operated for outdoor wireless network deployments. The technology allows wireless operators, communications companies and enterprises to quickly and inexpensively deploy wireless networks (802.11a/b/g, microwave, 3G, WiMAX, etc.) and includes specialized technologies that allow applications to be run on the network fabric/infrastructure itself making network applications more flexible and reducing back-end infrastructure requirements.

*DropZone Networks was the 2004 DEMOMobile featured wireless startup & in the Red Herring "Top100 Startups"*

12/99 to 11/2000

**Principal Technologist, TradingNews/M4logic, Inc., New York**

Designed and implemented the infrastructure and team to implement and deploy an advanced technical analysis service to be used by individual investors and institutional professional traders. Designed a Linux-based Beowulf supercomputer using C & MPI parallel cluster to perform advanced technical analysis of stocks and other financial instruments.

10/96 to 1/99

**Senior Technologist, Sharp Decisions, Inc., New York**

Provided technical expertise and analysis to management in all aspects of contract consulting efforts of multi-million dollar consulting services company. Responsible for the personal care of key financial clients including Citibank and Salomon Brothers including verification of firewall and network security systems & policies; design of on-line applications and conversion of legacy systems to WWW environments. Advisor/Consultant to Sun Microsystems on service-level gap analysis with regard to IBM Global Services US\$11B technology outsourcing from Lucent Technologies.

12/95 to 10/96

**Vice President, Long Term Advanced Development Group, Citibank, New York**

Recruited from J.P. Morgan & Co. to capitalize on Internet and WWW as a delivery mechanism for Citibanking products and services. Proposed utilizing available Internet technology to provide virtual business meeting environments to reduce business travel. Analyzed the business of the consumer bank, recommending ways in which early internet technology could be used to provide consumer information, consumer banking products, and account management remotely to customers. Provided technical expertise to Citibank units on Internet Technology issues.

4/92 to 12/95

**Vice President, Internet Services Group, J.P. Morgan & Co., New York**

- In 1991 (while a consultant), brought The Internet into J.P. Morgan as a bank-wide resource for use by developers, support teams, and business units. Created/managed the JP Morgan Internet Services Group that placed the firm as the first money center bank on the Internet.
- Developed support systems/services that saved the firm over \$50MM per year in technology support costs by using the Internet to speed problem resolution with the firm's thousands of vendors/suppliers.
- In charge of the infrastructure services group that led the design, implementation and deployment of distributed UNIX systems (C, Shell, Perl, etc) and services strategies for business units at the firm.
- Provided research funding for as well as technical expertise and code to UIUC "Mosaic" developers (original Netscape team) on implementation of security system of the original Mosaic application.
- Led team that delivered firm's RiskMetrics Value-at-Risk modeling system over the Internet
- Re-architected firm wide TCP/IP network, replacing business unit level networks with a single, unified, worldwide coordinated network. Improved availability, reliability, and support, resulting in significant reduction in downtime and cost of services.
- Designed and implemented custom secure firewall systems and associated policies/practices to connect the firm to The Internet and to the networks of clients and business partners.
- Developed UNIX based electronic mail system that served as message switch for over 14,000 email users worldwide. Replaced multiple incompatible department level mail systems, enabling firm wide electronic communication for the first time.
- Wrote and contributed to numerous white-papers on various topics ranging from the design of on-line distributed information archives to the development of firm-wide coding standards to ensure software integrity, and portability.

***Press Coverage***

- Interviewed for various publications on topics ranging from parallel Linux clusters to wireless network design and deployment.
- Featured in FORTUNE magazine articles on corporate users of the Internet
- Featured in Information Week that described my work at JPMorgan as one of the "Internet Pioneers" in getting businesses on the Internet.
- Featured in various articles regarding my design of the firm's public Internet services system in The Wall Street Journal, and in industry publications such as Information Week and Communications Week.
- Profiled in Doing Business on the Internet a book on pioneering Internet users by Dr. Mary Cronin of Boston University (Van Nostrand Reinhold, 1994)