

## **Jason Coombs, CEO of We Cluster, Inc. / Risk Nerd Limited / Homeland Forensics**

Websites: ( [wecluster.com](http://wecluster.com) ) ( [risknerd.com](http://risknerd.com) ) ( [homelandforensics.com](http://homelandforensics.com) / [forensics.org](http://forensics.org) ) ( [publicstartup.com](http://publicstartup.com) )

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**New Zealand** (30-34 Rathbone Street, Whangarei, Northland 0110)

### **Curriculum Vitae and Expert Witness Resume**

Jason Coombs is CEO of *Homeland Forensics* a cyberforensics & cybersecurity startup; *Public Startup Company, Inc.* developer of forensic social media and crowdfunding tech; *We Cluster, Inc.* a cloud computing software vendor and *Risk Nerd Limited*, a proprietary trading private hedge fund. He was CEO/Chair of a public company, PivX Solutions, Inc. (OTCBB/OTC Pink: PIVX) which split into a private company *Homeland Forensics* and the public startup company known as *Adia Nutrition* (OTC Pink: ADIA).

Mr. Coombs has worked as an expert witness in several areas: **derivatives trading algorithms/software** and **cloud computing/virtualization software** and **information security** and **forensics**, **Internet architecture** and services, **software development** and analysis, **electronic commerce** and payments, **trademark** and **copyright** litigation, **cybercrime** investigation or defense, **patent litigation**, **vulnerability research**, and **network intrusion** countermeasures. Mr Coombs has provided clients with legal services in **digital evidence investigations** and **electronic discovery** legal case support. In 2004 Mr. Coombs was instructor of CCE **computer forensics** training for **InfoSec Institute**.

### **Litigation Support, Forensics and Expert Witness Services**

As an expert witness, Mr. Coombs has consulted in cases where damages were sought up to a billion dollars. He has been accepted as a testifying expert in U.S. Federal court and also in a Uniform Code of Military Justice (UCMJ) court martial where he has provided testimony. Mr. Coombs has also given deposition testimony and submitted written reports in civil cases involving software copyright infringement, trade secrets, patent litigation, and breach of contract. He has authored numerous affidavits in criminal cases.

2009-2010 Chief architect, forensic analysis, real-time trading platform for global finance industry. Mr. Coombs' proprietary methodology won 1st place in a global trading contest.

2008-2010 Consulting expert in patent litigation, virtual private networking/cryptography

2004-2009 Coalition America v. National Health Benefits Corporation, firm Alston & Bird, Atlanta Testified at trial in Federal court, Atlanta; qualified as expert in computer forensics & software analysis; Expert witness for the defense in a software copyright infringement case, submit expert report, deposed as expert witness, rebuttal to plaintiff's expert re substantial derivation; Attorney Scott Hilsen

2008 Confidential pre-litigation forensic analysis, large medical data processing solution. Authored expert report regarding potential intellectual property risk to a global standard.

2006-2007 Confidential patent mining work for a client's patent portfolio, infringement detection Project: Pre-litigation patent search, claim mapping and infringement analysis for hundreds of patents out of a large patent portfolio. Cryptography, electronic commerce, information security, and similar.

2006-2007 State of Arizona vs. Phillip Gregory Speers, in pro per defendant, advisor Kristi Riggins Project: expert witness for defense in criminal retrial resulting from successful appeal; law enforcement computer forensic examiners lied repeatedly & attempted to arrest me for doing my job. Due to clear prosecutorial misconduct, "Internet For Dummies" author Dr. John Levine took my place as defense expert witness at trial.

2006 State of Hawaii v Jon VanCleave wrote amicus curiae affidavit Defendant acquitted

2006 Confidential securities derivatives trading platform source code analysis for bank client. Pre-litigation forensic analysis of source code designed to price derivatives.

2005 WCI v. AOL law firm McAndrews, Held, & Malloy, Chicago, Atty Peter McAndrews Project: Testifying expert on behalf of plaintiff, patent litigation, Instant messaging and online chat patent infringement lawsuit, C++ and Java source code review, claim infringement analysis, expert testimony, prior art research, claim construction Markman analysis. Attys Chris Carroll/Brian Bianco

2004-2005 Cardinal Health vs. BioDose, law firm Gordon & Silver, Las Vegas, Atty Paras Barnett Project: Consulting expert on behalf of Cardinal Health, patent research, Radio pharmaceutical software patent and trade secret dispute, analyze eight years of source code written in Delphi and C++. Investigate patent claims/prior art, source code comparison, forensic analysis/deposed; fact witness

2004 Navy Judge Advocate General UCMJ Court Martial, Pearl Harbor, Hawaii Project: Expert testimony, information security and computer forensics, Analyzed computer forensic examination procedures employed by Department of Defense Computer Forensics Laboratory in a UCMJ court martial proceeding. Reviewed EnCase images of the defendant's hard drives. Explain to the court what the limits of forensic value are to a hard drive taken from a Windows 98 computer that previously was under the control of third-party by way of a Trojan and/or Windows vulnerabilities.

2004 Criner v. Fisher, law firm of William Sink, Honolulu, Hawaii Project: Expert witness for plaintiff, digital invasion of privacy, slander/libel, Review evidence amid claims of computer intrusion, password theft, authored expert report.

2004 State of Georgia v. Kristopher Vonderheide, Atlanta, Dreger, Coyle, Bergman Pieschel Project: Analyzed law enforcement's computer forensics, authored report critical of Georgia Tech computer network security technician who attempted to conduct his own

private investigation into the alleged crime instead of solving security defects on GA Tech's computer network that enabled third-party unauthorized access to defendant's computer. Court ordered access for defense to computer evidence at FBI, Atlanta. Performed evidence review at FBI field office. Attorney Elyssa Korman

2004 State of Georgia vs. Larry Dorman, Augusta, Attorney Andy Tisdale  
Project: Expert witness for defense, found conclusive proof Georgia Bureau of Investigation computer forensic examiner failed to detect pornography-related spyware on defendant's computer. Presentation.

2004 Paiea Properties, Honolulu, Andrew Maxwell bankruptcy trustee, Hilton Lui investigator  
Project: Chapter 7 bankruptcy litigation, Created EnCase forensic images of hard drives, assist private investigator & bankruptcy trustee acquire electronic evidence from a company in forced bankruptcy.

2003 Rush vs. Ritter, on behalf of Russell Rush, law firm Bowles, Verna, Atty David Trotter  
Project: Forensic analysis of a decade of software development conducted by a California software developer specializing in life insurance illustration software. Consulting expert witness and forensic analyst role performed on behalf of the plaintiff in a civil case brought against the software developer alleging misappropriation of trade secrets, fraud, and breach of contract.

2003 U.S. v. Alba, et al. Criminal Defense Forensics on behalf of co-defendant in pro per  
Project: Forensic analysis of the FBI's Carnivore (DCS 1000) system for Internet pen register/trap and trace or wiretap warrant execution on behalf of the defense in a federal jurisdiction criminal conspiracy Drug Enforcement Agency case, Southern California 9th circuit court. Examined over a terabyte of hard drives and electronic surveillance evidence in case find residual signs of remote penetration or unauthorized searches conducted outside of approved warrants.

2002 Cardservice International vs. IBM, law firm Quinn Emmanuel Urquhart Oliver Hedges  
Project: Performed forensic analysis of IBM's Net.Commerce Hosting Service (NCHS) and AIX for IBM in defense of lawsuit by Cardservice International. Cardservice alleged product defects prevented development/launch of OEM e-commerce solution based on NCHS and ClearCommerce Corporation credit card transaction-processing gateway marketed by Cardservice under LinkPoint brand. Settled '03

1999 RSA Data Security vs. Pearson Macmillan Publishing, firm Morgan, Lewis & Bockius  
Project: Consulting Expert for Pearson Macmillan Publishing in defense of a suit brought by RSA Data Security, Inc. alleging patent infringement of the RSA algorithm as well as various cryptography and software patents pertaining to public key and SSL encryption in Linux products. Case settled 1999.

1997-98 Innovative Business Systems vs. Westinghouse, firm Akin Gump Strauss Hauer & Feld  
Project: Consulting Expert for Westinghouse in defense of civil suit brought by Innovative Business Systems alleged breach of software license agreement and

unauthorized transfer of source code for the client/server SQL database application and pascal/C programs used by a subsidiary of Westinghouse commercial and residential security alarm monitoring and response service. Case settled during trial.

1995-96 Electronic Data Systems v. EMA, law firm Madrid Corallo Brooks, Atty Karen Corallo Project: Consulting Expert for Electronic Data Systems in a civil suit against startup EMA regarding alleged violations of trade secret confidentiality and non-compete agreements and misappropriation of PowerBuilder programs developed by EDS for the electric utility industry. Also assisted testifying expert at trial. Verdict in favor of EDS.

### **Employment History**

**Homeland Forensics, Inc. ([homelandforensics.com](http://homelandforensics.com)) a public startup** formerly known as: **PivX Solutions, Inc. ([pivx.com](http://pivx.com)) (Formerly listed on OTCBB/OTC Pink: PIVX)**

From: June 2006 To: present, **Chairman and Chief Executive Officer**

Also From: May 2004 To: June 2005, **Director of Forensic Services**

Homeland Forensics, Inc. is a computer forensics and information security company, it was previously PivX Solutions, an information security product vendor and professional services firm that went public on the NASDAQ OTCBB through a reverse acquisition of a shell company named Drilling, Inc. The company's software products block malicious exploitation of security vulnerabilities in the Microsoft Windows operating system or in application software and scans for the presence of vulnerabilities on Windows hosts. My first role as Director of Forensic Services ended, then I rejoined PivX as CEO/Chairman.

**Public Startup Company, Inc. ([publicstartup.com](http://publicstartup.com))**

From: April 2012 To: present, **CEO and Co-Founder**

Public Startup, Inc. is helping to pioneer forensic social media and cyber self-regulatory organization (SRO) or venture exchange platforms for securities sales by public startups.

**We Cluster, Inc. ([wecluster.com](http://wecluster.com))**

From: November 2011 To: present, **CEO and Co-Founder**

We Cluster, Inc. is a cloud computing technology company.

**Risk Nerd Limited. ([risknerd.com](http://risknerd.com))**

From: July 2010 To: present, **CEO and Founder**

Risk Nerd Limited is a private proprietary trading hedge fund specializing in derivatives.

**Digital Marketplace, Inc.**

From: June 1999 To: 2011, **President and Founder**

Digital Marketplace, Inc. was an Internet programming, forensics, and infosec firm providing software engineering services, computer forensics, infosec, and e-commerce hosting products and services. The corporation was formed in 1999 to create and market Internet, e-commerce, information security, and computer forensics products and services. The company was privately-owned and merged with PivX Solutions, Inc.

**SCIENCE.ORG, a Private Non-profit Research Institute**

From: 1995 to 2009, **President and Co-Founder**

SCIENCE.ORG was a California non-profit corporation devoted to scientific R&D of resources for expert witnesses and consultants in forensics, computer and life sciences.

### **Pacific Knowledge**

From: 1991 To: 1994, **President and Co-Founder**

Pacific Knowledge provided software development services to wireless, telecom and cable industries. Its two largest projects spanned multiple years and involved software engineering for Pacific Telesis Cellular, Nielsen Media Research, and Pacific Bell.

### **Independent Contractor**

From: 1989 To: 1991 located in Silicon Valley and the San Francisco Bay Area

Position: Computer programmer, system and network administrator, tech support

## **Consulting History**

### **Signeta Corporation**

From: 2000 To: 2001, Consulting Software Engineer

Duties: Designed and built e-commerce framework source, Internet promotional products ordering system. Product selection and order details included complex configuration steps to upload custom artwork, indicate where on the selected product the artwork should be embroidered, screen-printed, or laser-engraved. Real-time dynamic pricing based on variable pricing tiers and other factors.

### **CMP Media, Inc.**

From: 1999 To: 2000, Consulting Software Engineer

Duties: Created an online store for BYTE.com and techreviews.com including pay-for-access publishing of Internet content.

### **Tristrata Security, Inc.**

From: 1998 To: 1998, Consulting Software Engineer

Duties: Assisted with the design and coding of an encryption system for data networks and secure application software conceived by Tristrata Security founder and creator of the Atalla box for bank ATM network PIN number encryption, John Atalla. The software was developed for Windows 95/98 and Windows NT 4 using Microsoft Visual C++.

### **Digital Equipment Corporation**

From: 1997 To: 1997, Consulting Software Engineer

Duties: Wrote network communications component for Digital's Millicent micropayment e-commerce system. Coded a Windows Sockets 2 layered service provider using C++ and COM/Win32. Java/COM

### **AdExpress/Nielsen Media Research**

From: 1993 To: 1994, Consulting Software Engineer

Duties: Wrote application in PowerBuilder version 3 under Windows 3.1 for joint venture between AdExpress/Nielsen Media Research that enabled advertising sales to query demographic and cable television network viewer ratings data in the U.S. to place ad

spots on regional cable systems in order to reach a particular size and quality of audience within a prescribed budget. Donnelly marketing data was optionally available as part of query criteria to allow targeting of regions where particular products or services were known to be in high demand. Deployed on CD using stand-alone SQL RDBMS.

### **Pacific Bell Digital Subscriber Group**

Year: 1993, Consulting Software Engineer

Duties: TCP/IP application using C socket programming API from FTP Software, Inc. to demonstrate at a trade show the ability of ISDN to quickly transmit high-resolution x-ray images for telemedicine.

### **Pacific Telesis Cellular (now part of Verizon Wireless)**

From: 1991 To: 1993, Consulting Software Engineer

Duties: Wrote programs in Sun Microsystems/Informix environment using C, UNIX shell scripts, Informix 4GL products/SQL, for Motorola EMX 2500 cellular switch Man/Machine Interface. Led multi-market radio frequency (RF) engineering specification development of network management system for performance, capacity planning and analysis of cellular networks. Assisted with system and network administration of SunOS 4.1.3 servers, data acquisition systems for Motorola EMX 2500 cellular switches, RF engineering reports & algorithms including periodic President's report. Provided support for design of cellular network of South Korea. Initiated program to audit cellular switch.

## **Independent Software Developer Project History**

From: 1994 To: 1999, Created a Windows Sockets 1.1 programming API for PowerBuilder called the "PowerSocket Library" to enable PowerBuilder programmers to write Internet applications. Provided consulting to companies around the world seeking to build & deploy TCP/IP applications for corporate networks and the Internet. Marketed and distributed the PowerSocket Library as shareware. Licensed to Powersoft Corporation in 1996. Coded as a DLL in C.

### **Stardust Technologies (Windows Sockets Labs)**

Year: 1996, Consulting Software Engineer and Technical Writer

Duties: Continued development in C++ of Stardust's Winsock Component Architecture WCA for building layered service providers to extend the functionality of network applications. Wrote Windows Sockets 2 programming class material for Intel developer course. Provided consulting to Stardust clients. Made extensive use of Soft Ice by NuMega for system-level debugging of Windows 95/NT.

### **Logic-Covalent Corporation**

Year: 1996, Consulting Software Engineer

Duties: Completed development of a PowerBuilder 4 application already in progress. Built a TCP/IP communications module using PowerSocket Library, rewrote user interface code to connect to a commercial printer driven by a Macintosh server running custom TCP/IP print service software.

## Publications

IIS Security and Programming Countermeasures, 440 pages, self published 2003  
Setting up an Internet Site for Dummies, published by IDG Books in 3 editions  
ActiveX Sourcebook, published by John Wiley & Sons  
Netscape LiveWire Sourcebook, published by John Wiley & Sons  
PowerBuilder 4 Programming for Dummies, published by IDG Books  
dBASE 5 for Windows Programming for Dummies, published by IDG Books  
PowerBuilder 4.0 Power Toolkit, published by Ventana Press

Dr. Dobb's Journal Windows Security Columnist (<http://www.ddj.com/columns/security>)  
*Investigating Software and Source-Code Theft* July 19, 2005, *Win32 API Obscurity for I/O Blocking and Intrusion Prevention* June 21, 2005, *Securing the Win32 File I/O APIs* June 7, 2005, *A Metacode Standard for Rootkit and Intrusion Prevention* May 17, 2005, *Security-Hardening Third-Party Applications* May 3, 2005, *Wiping Out Sensitive Data* April 21, 2005, *Understanding Oracle Attacks on Information Services* December 3, 2004, *Scripted Screen Capture* November 17, 2004, *Scripting Patch Deployment with WUA API* November 3, 2004, *Protecting RAM Secrets with Address Windowing Extensions* October 18, 2004, *Beware of File-Slack Attacks* October 6, 2004, *Spyware Exploits the Run Key—and the Law* September 17, 2004, *Security is a Service, Not a Product* September 9, 2004, *Solving the Malicious Content Problem* August 17, 2004, *Runtime Call Stack Analysis with .NET* July 21, 2004, *The Intractable Screen Scraping Paradox* July 6, 2004, *IE's Local Machine Zone and the Attack of the TLAs* June 18, 2004, *Programmer Defects as a Proactive Defense* June 5, 2004, *Pen Testing with Raw Sockets* May 17, 2004, *Microsoft Security Guidance for Developers* May 3, 2004, *XML Security Features of .NET, Part 2* April 23, 2004, *XML Digital Signatures with SignedXML, Part 1* April 8, 2004, *Extracting Digital Signatures from Signed Files with .NET* March 16, 2004, *WinXP SP 2 Process and Port Hardening* March 3, 2004, *Windows Stack Buffer Overflow Protection* February 19, 2004, *Programming Public Key CryptoStreams, Part 2* February 3, 2004, *Programming Public Key CryptoStreams, Part 1* January 17, 2004, *Packet Sniffing for Incident Response* January 6, 2004, *Detecting Man in the Middle Attacks with DNS* December 17, 2003, *More on Hash Codes and Security* December 4, 2003, *Forensic Data Validation and Integrity Logging* November 17, 2003, *Counterfeit Software, Digital Rights Management, and Security* November 4, 2003, *Antivirus Software Turned Upside Down* October 17, 2003, *Building a Database of Known Hashes* Oct 3, 2003, *Hash Codes and Security* Sep 17, 2003, *The Lessons of SoBig.F* Sep 5, 2003, *Backdoors Can Damage Trust* Aug 20, 2003, *Analyzing the Mescaline Worm* Aug 5, 2003

2003: Windows Developer Network Magazine feature articles; "Requiring Trusted Public Keys for Certificate Chains in SSL Connections" and "Programming Public Key Cryptostreams"

September, 2002 issue of MSDN Magazine

"Tamper-Resistant Apps: Cryptographic Hash Algorithms Let You Detect Malicious Code in ASP.NET" –

<http://www.msdn.microsoft.com/msdnmag/issues/02/09/ASPNETHashAlgorithms>

November, 2001-October, 2002: "Network Programming" series for Pinnacle Publishing  
"Parsing Web Pages as XML", October 2002 – "SSL Encryption for the Web in C#",  
March 2002 "HTTP Basic Authentication in C#", April 2002 – "HTTP File Upload in  
C#", May 2002 "Integrating QuickBooks 2002 with .NET", March, 2002 – "Generating  
GUIDs in ASP with a Little Help from VB", February 2002 – "Porting Classic ASP to  
ASP.NET: What's Really Necessary?", December 2001 – "Using MTS to Coordinate  
Transactions Across Multiple Databases", Nov. 2001

Digital Business Columnist for Byte Magazine (<http://www.byte.com/digitalbusiness/>)  
"Collectible Data As Digital Business", May 2000 – "Internet Patents Are Changing The  
Rules", March 2000 – "Privacy and Internet Customer Service", February 2000 – "The  
Business Of Open Source", January 2000 – "Encryption Programming For Second-  
Generation E-Commerce", December 1999 – "For Instant Success, Add Instant  
Messaging", November 1999 – "Preparing SSL Encryption For Y2K", October 1999 –  
"Check-By-Internet Requires No Checking", August 1999 – "Netsourcing Your Apps",  
August 1999 – "The Old Grey DBMS Ain't What It Used To Be", August 1999 – "No  
More Spam", August 1999 – "Accept Credit Cards On Your Website", July 1999

Contributing Editor, "Microsoft Internet Developer" Magazine ([microsoft.com/mind](http://microsoft.com/mind))  
"Order Processing on Your E-Commerce Site", August 1999  
"Co-Locating Your Web Server with an ISP to Simplify Maintenance", June 1999  
"Active Streaming Format with Microsoft NetShow", September 1997  
"The Site Building Series Part III: The Software on the Server", June 1997  
"How to Set Up Dedicated Internet Access for Your Site", April 1997  
"The Site Building Series: Getting Connected", February 1997  
"Creating A Virtual Server with Java Sockets", January 1997  
"Amazon Associates Plan Wins Patent Protection", Feb 25, 2000 with Mo Krochmal,  
TechWeb News  
"Windows Sockets 2 Programming", Proceedings of Intel Professional Developer  
Conference, SF 1997  
"ActiveX and Java: Two Roads to the Same Destination", CMP TechWeb, Nov 1996  
Co-Editor of Java Developer's Journal Premier, Netscape Developer's Conference, San  
Francisco, 1996  
"The Cutting Edge: Java and Netscape, PowerBuilder Developer's Journal", Jan/Feb 1996  
"Internet Programming Using PowerBuilder and WinSock 1.1", PBDJ, Dec 95 vol 2 is 11  
"Windows Sockets 1.1 Programming with PowerBuilder", PowerBuilder User Conf '95

### **Conferences and Speaking Engagements**

2004: Instructor of CCE computer forensics training for InfoSec Institute, Chicago & DC  
Intel Prof. Dev. Conference, San Francisco, California 1997 Invited Speaker: WinSock 2  
PowerBuilder User Conference, Orlando FL 1995 Invited Speaker: Windows Sockets 1.1  
Programming with PowerBuilder, Featured speaker, Powersoft Corporation "Night At  
The Net" event