



## Richard G. Cooper, D.Sc.

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### Expertise

- Databases, Medical Records, EHRs
  - Internet/Web/e-Commerce
  - Client/Server, N-Tier Technology
  - GPS tracking
  - Patent Analysisfor Plaintiff and Defense
  - Geographic Information Systems
  - Financial Software&Work Flow Analysis
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### Professional Summary

Dr. Cooper has over 30 years of experience in entrepreneurship, software, systems and electrical engineering. He provides consulting services for trials as an expert witness. His expert witness history comprises over sixty cases, over 100 depositions and court testimony in three courts, including federal and state courts. He has testified to judge, jury and depositioner. His litigation background includes patents, trade secrets, trade dress, software contract failure, electronics manufacturing, medical devices, database analysis, web site comparisons, enterprise software, management of patent licensing projects, internet, web site and systems development, software product development, database management systems, and software architecture.

## Employment History

From: 2007      **MetaSemantics Corporation**  
To: Present     **Consultant, Expert Witness**  
Position  
:

- contract consulting and expert witness services in computer, software, internet, web, electronics, embedded systems, and communications technologies

From: 2006      **Heller Ehrman, LLP**  
To: 2007  
Position      *Patent Specialist*  
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- Reviewed Bluetooth implementation in view of WRF patent;
- Developed licensing project plan for contingency agreement;
- Reviewed invalidity contentions;
- Expressed expert opinion on quality of opponent's case;
- Developed provisional patent application;
- Reviewed client's production materials for relevance.
- Assessed prospective client's patent portfolio for contingency licensing;
- Worked with shareholders to structure licensing of major patent portfolio
- Developed financial profile based on potential infringers;
- Worked with litigation and marketing to project IP licensing financials.

From: 2005      **MetaSemantics Corporation**  
To: 2006  
Position      *Patent Technical Advisor at Paul, Hastings, Janofsky and Walker, LLP*  
:

- Analysis of technical content in patents and in patent applications;
- support of prosecution of patent applications;
- support for patent infringement litigation and infringement defense law suits;
- provided technical opinions on the strengths and weaknesses of patents relating to software technologies, electronics technologies, business method and medical technologies;
- development of prior art materials relating to patent suits;
- assessment of patent portfolios;
- developing responses to Office Actions from patent examiners;
- analysis of technical documents to support discovery;
- definition of requirements for motion to compel opposing counsel to provide software for discovery;
- development of patent applications for clients;

- construction of claim language based on technical concept papers and other materials provided by inventors;
- development of claim charts to support litigation relating to patent infringement;
- development of tutorial materials to introduce technical concepts to legal counsel;
- analysis of software source code for detection of patent infringement;
- development of proof of infringement for presentation in court and to attorneys.

*2004-2005: President & Chief Technology Officer*

- Developed embedded medical records text mining software using WordNet database, class lattices, and semantic relationships;
- developed business plan and technical proposal for text mining technology development project;
- developed question-answering system using unstructured text resources;
- developed content analysis linguistic tool set for product release;
- refined radar processing software for recognition of 3D shapes;
- developed embedded software able to recognize the collar (joint) of underground pipeline infrastructure in a natural gas distribution system;
- software engineering for loan origination system enhancement for an Eastern Software Empower installation;
- N-tier programming support;
- development of an embedded web client application that tests a web server for security and visibility of retrieved documents.

From: 2001      **ValuTech, Inc.**  
 To: 2004  
 Position *Chief Scientist*  
 :

- Developed new financial software products using logical representations of invoice and lockbox financial objects;
- developed graphic display with zoom and pan;
- development of web services using Client/Server, SQL Server 2000, Windows 2000, and HTTP and TCP components;
- presented demonstrations and project plans to prospects and customers;
- instrumented software to collect functional history and measure performance;
- data mining of SQL Server database for invoices and payments received against unevenly structured receivables documents;
- analyzed object structure within operational data;

- analyzed time series data to predict future financial behavior on the part of customers;
- developed business financial analysis tools for calculating cash float actually observed in payable and receivable operations for Fortune 500 companies;
- developed analytical techniques and adaptive learning methods to maximize cash float in payables and to minimize cash in receivables for large companies;
- trained programming staff in object-oriented analysis and design;
- development of financial web services;
- mentored staff, and taught them good software design principles and practices.

From: 1992      **EfficacyFX.com**  
 To: 2000  
 Position    *President & Chief Technology Officer*  
 :

- Developed sensor processing software to support commercial low-cost utility radars;
  - applied pattern recognition techniques to detect specific target shapes;
  - implemented and tested a prototype ultrawideband radar sensor as a candidate for deployment;
  - constructed imagery software to build a 3D image from sensor inputs while scanning the ground over natural gas pipeline infrastructure;
  - developed anechoic radar range for ultrawideband (UWB) radar sensor and populated it with natural gas pipe and collar materials;
  - identified signal patterns that could discriminate between normal pipe and the collars at joints between pipes;
  - built a database of time series signals and Fourier spectra for test cases;
  - demonstrated feasibility of identifying the collars on pipeline infrastructure.
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- Defined and developed turnkey software products for hospital scheduling, staff development, medical records and vertical manufacturing industries;
  - Interviewed customer staff to define systems;
  - developed the software to meet customer expectations.
  - Developed a work flow measurement system for small and medium sized manufacturers;
  - collected work flow information by time stamping bar-coded work orders, activity labels and employee badges so that full performance information could be collected;

- developed reports for calculating the value of customers, the efficiency of employees, and the performance profile of activities.

From: 1991      **Casa Del Sol**  
 To: 1994  
 Position *Owner*  
 :

- Developed point of sale software for use in retail environment;
- analyzed customer purchasing of activities and products;
- implemented credit checking software;
- developed accounting modules for use in tracking retail accounts;
- developed reports for calculating the value of customers, the efficiency of employees, and the performance profile of activities.

From: 1980      **Hughes Aircraft Company**  
 To: 1992  
 Position *Senior Systems Engineer for Software R&D*  
 :

- Managed a team of six software engineers developing software technologies for Hughes' products;
- developed reusable radar sensor processing and display application;
- applied knowledge based and rule based technologies, including measurement and diagnosis of systems and networks;
- used Bayesian and Markov models to predict static and dynamic performance loads and to identify potential systems problems.
- Developed models and simulation software;
- planned and defined distributed database information systems;
- developed resource management, graphic information display, radar systems, command and control information systems.
- Development of technology projects for feasibility demonstrations;
- conduct of R&D projects as principal investigator;
- managed software R&D staff;
- formulated project plans for determining feasibility of risky portions of large projects.
- Planned software development tasks for large and small projects;
- developed new business proposals and technical approach;
- organized technical task plans for proposals and R&D projects;
- managed implementation of projects.

From: 1976      **Washington University**  
 To: 1980      Saint Louis, MO

Position *Assistant Professor, Computer Science*

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Taught undergraduate and graduate computer science classes, monitored thesis and dissertations for graduate students, and directed the Computer Engineering Laboratory for graduate and funded research projects. In the summers, operated Cooper Computing Company, a consulting company with close ties to the local IBM General Systems Division to provide software engineering services to manufacturers in the Saint Louis area.

From: 1968 **National Security Agency**

To: 1976 Fort Meade, MD

Position *Senior Electrical Engineer*

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At Fort Meade, developed computer systems hardware projects for two years, and then was promoted to the computer science research department after writing a scientific paper that was deemed important.

Assigned to solve numerous problems related to high performance computing and cryptology for the remaining six years at NSA. During the eight year period, was awarded a full time tuition paid scholarship from NSA to complete a Master's degree. Then continued education to complete requirements for the Doctor of Science in 1976. An article based on my dissertation was published in the *IEEE Transactions on Computers* in September, 1977. The paper is available [here](#).

### **Consulting History**

From: 2007 **Acacia Technologies Group**

To: 2007 Newport Beach, California

Duties: Analysis and opinions of database compaction patent for investment, licensing, and possible detection of infringement.

From: 2006 **Acacia Technologies Group**

To: 2006 Newport Beach, California

Duties: Analysis and opinions of patents for investment, licensing, detection of infringement, and analysis of several potential infringing companies.

From: 2005 **Paul, Hastings, Janofsky & Walker, LLP**

To: 2006 San Diego, California

Duties: Provided a wide array of technical analysis and opinions on intellectual property issues related to prosecution and litigation of patents, defense for infringement suits, analysis of patentability, analysis of software source code for infringement, document discovery, development of patent applications, replies of office actions, and many other tasks.

From: 1998 **Consumer's Gas**

To: 2000 Toronto, Canada  
Duties: Development of ultrawideband (UWB) technology for identifying the collar joint of underground gas delivery infrastructure;  
Developed anechoic UWB radar range to support data collection of positive and negative reflections;  
Developed pattern recognition software for detection of collar joints;  
Demonstrated efficacy of collar joint detection.

From: 1997 **Contract Resources**  
To: 2001 Cerritos, California  
Duties: Define requirements for manufacturing execution system;  
Develop methods for instrumenting work and material flow;  
Select equipment to implement capture of work flow and material flow;  
Develop distributed client/server implementation system;  
Develop analysis programs for calculating value of customers, profitability of products, and efficiency of employee labor.

## **Litigation Experience**

Date: 2014 **ADT**  
Case: Fitzhenry v ADT; Litigation relates to Telecommunications Consumer  
Project: Privacy Protection Act (TCPA) requiring an algorithm for distinguishing voice calls from recorded calls in a database of two million conversations.  
Wrote rebuttal.  
Status: Completed

Date: 2014 **Citigroup**  
Case: Maxim v Citigroup; Relates to app for smart phones which handles  
Project: financial transactions with banks. See also CNB, Imperial v Sussex, First American Title in 2010 below.  
Status: Completed

Date: 2014 **Microsoft**  
Case: BE v Microsoft; Patent litigation case on hold for IPR.  
Project:  
Status: Completed

Date: 2014 **Appistry**  
Case: Appistry v Amazon; Appistry asserted a patent on multiprocessing and  
Project: distributed processing systems against Amazon Web Services (AWS) in cloud computing services.  
Status: Completed

Date: 2014 **State Farm**

Case: I have worked on three State Farm Insurance cases, all of which related to  
Project: the storage of medical records in State Farm databases. I showed that  
deletion of medical records would cause unreasonable harm to State  
Farm's computing systems used by over 100,000 employees nationwide.  
Status: Three cases completed

Date: 2013 **Uniloc USA**  
Case: Uniloc v eClinical. I demonstrated both infringement and validity of the  
Project: asserted patent.  
Status: Completed.

Date: 2013 **Variant**  
Case: Variant v Hotels. I demonstrated infringement and validity of the  
Project: asserted patent.  
Status: Completed.

Date: 2012 **Dish Network**  
Case: Federal Trade Commission (FTC) v Dish Network. I developed report  
Project: for Dish Network showing their compliance with database requirements  
for meeting discovery practices required by the court.  
Status: Completed.

Date: 2012 **MDx**  
Case: HealthGrades v MDx. I developed report for defendant showing that the  
Project: asserted patent was not practiced by MDx. I was deposed in this case  
three times. An In Process Review (IPR), and a continuation patent with  
additional claims was issued to HealthGrades during the first litigation,  
and thus a second litigation case was started on the newly released claims  
between the parties.  
Status: Completed, after four full years of litigation support, both cases.

Date: 2012 **Extended Disk North America**  
Case: Target Training v EDNA. I wrote report demonstrating that EDNA did  
Project: not practice the asserted Target Training patent. I was deposed, and the  
litigation was settled before going to court.  
Status: Completed.

Date: 2011 **Parallel Networks**  
Case: Parallel Networks v many defendants; I developed claim construction  
Project: opinions, and demonstrations of infringement, sufficient for litigation.  
Status: Completed.

Date: 2011-12 **State Farm Insurance**  
Case: State Farm filed as Intervenor in a Colorado insurance case. The plaintiff  
Project: had moved to require State Farm to delete information from their many

databases after the case had been completed. I demonstrated to the judge that this put an undue burden on State Farm, limited their capability to make continuing payments, and interfered with actuarial data modeling.

Status: Completed.

Date: 2011      **INova**  
Case: INova v many defendants. Patent infringement case; my task was to  
Project: demonstrate infringement through discovery.  
Status: Completed.

Date: 2011      **Sleepy's**  
Case: Escalate v Sleepy's. Infringement of software license alleged; I  
Project: demonstrated that Sleepy's used different methods.  
Status: Completed.

Date: 2011      **Motorola, Motorola Mobility**  
Case: Apple, Next v Motorola, Motorola Mobility. Three patents related to  
Project: touch screen and Android portable smart phones, tablets.  
Status: Completed.

Date: 2010      **Genutec**  
Case: Genutec v Taus. Evaluation of how portable software was at time of  
Project: acquisition.  
Status: Completed.

Date: 2010      **Hunter**  
Case: Hunter v Home Depot; Hunter v Lamps Plus; Hunter v Ikea. Developed  
Project: claim charts, expert reports for three independent cases related to LED  
light strip technology.  
Status: Completed.

Date: 2010      **City National Bank (CNB), Imperial**  
Case: CNB, Imperial v Sussex, First American Title. I demonstrated from  
Project: deposition and web site evidence regarding problems with the computing  
methods used to process "flip" transaction for real estate.  
Status: Completed.

Date: 2009      **John Lawless**  
Case: Microsoft v Lawless. Case that settled within hours; I only read the  
Project: complaint, did nothing else on the case.  
Status: Completed.

Date: 2009      **Medcorp, Inc**

Case: Medcorp v Pinpoint, Zoll. Wrote report, and was deposed, on how an  
 Project: SQL Server database application could be restructured to improve  
 performance and responsiveness in a 911 response database system.  
 Status: Completed.

Date: 2009      **Inalfa Roof Systems**  
 Case: Inalfa v Nidec. Analyzed software source transformations in refactored  
 Project: library of software functions re possible introduction of software errors.  
 Status: Completed.

Date: 2009      **Motivation Innovations**  
 Case: Motivation v Hallmark. Analyzed candidate prior art in view of validity  
 Project: examination for patents.  
 Status: Completed.

Date: 2008      **Health Hero**  
 Case: Health Hero v Alere. Demonstrated infringement of patent claims;  
 Project: developed detailed claim charts from discovery materials.  
 Status: Completed.

Date: 2008      **Family Honda**  
 Case: Winer v Family Honda. Assessed GPS functionality for position location,  
 Project: travel planning, and console management of electronics peripherals;  
 testified in deposition.  
 Status: Completed.

Date: 2008      **Bradshaw, International**  
 Case: Fitzpatrick v Bradshaw. Assessed complaint, motions and depositions.  
 Project: The case was settled quickly.  
 Status: Completed.

Date: 2008      **KeyLink, Incorporated**  
 Case: Patent litigation LogicLink v KeyLink. Assessed computer rental  
 Project: processes using internet, MS Office, etc in hotels re asserted patent.  
 Wrote rebuttal expert report; was deposed; testified at trial.  
 Status: Completed.

Date: 2008      **WindOptions Corporation**  
 Case: WindOptions v RAM, Tier. Inspected factory production of electronics  
 Project: inverters for wind turbine power generation and interface to power grid.  
 Status: Completed.

Date: 2008      **Jesse Kohler**

Case: Kohler v Wyeth case required database analysis re stability, reliability and  
 Project: control processes on history database. Gave deposition on database  
 issues; second deposition anticipated.  
 Status: Completed.

Date: 2008 **Net Currents**  
 Case: Net Currents v Dow Jones, Factiva. Analyzed DJ Factiva functionalities  
 Project: with regard to demonstrating patent infringement for reputation  
 management on the internet; I was consulting expert assisting inventor.  
 Status: Completed.

Date: 2008 **Emptoris Corporation**  
 Case: Emptoris v BIQ. Analyze source code, trade secret documentation,  
 Project: copyright of software look and feel; write expert report  
 Status: Completed.

Date: 2008 **GTX Corporation**  
 Case: GTX v Kofax, Nuance, Cannon et al. Evaluate expert reports on  
 Project: document imaging/understanding; write expert report re patent invalidity  
 & alleged prior art; provide two days of deposition; prepare to testify  
 Status: Completed.

Date: 2007 **Phillip Shi**  
 Case: Avaak v Shi. Software trade secret case requiring response to challenge  
 Project: by Avaak re my participation in this case.  
 Status: Completed.

Date: 2007 **California State Board of Equalization**  
 Case: PeoplePC v State Board of Equalization. Methodically evaluate the  
 Project: percentage of compact disk (CD) storage used in mailers for advertising  
 Status: Completed.

Date: 2007 **Manatt, Phelps & Phillips**  
 Case: Aeschbacher v California Pizza Kitchen.  
 Project: Identify process of changing point of sale software to meet requirements  
 Status: Completed.

Date: 2007 **Chatham Law Group**  
 Case: NITV, LLC v Computer Voice Stress Testing  
 Project: Analyze software evidence re copying of source code for a stress analyzer  
 Status: Completed.

Date: 2007 **Payne & Fears, LLP**  
 Case: American Reprographics v Brazo, Inc.  
 Project: Analyze evidence re copying of source code for business IT system

Status: Completed.

Date: 2007 **Beckley, Singleton, CHTD**  
Case: Watson v Eaton Electrical, Inc.  
Project: Provided expert advice re variable frequency drives patent infringement  
Status: Completed.

Date: 2007 **Gordon, Rees, LLP**  
Case: SG Services v God's Girls, LLC  
Project: Wrote expert report re findings on trade dress of two web sites  
Status: Completed.

Date: 2007 **Heller Ehrman, LLP**  
Case: Asteres  
Project: Developed patent application related to pharmacy vending machine  
Status: Completed.

Date: 2007 **Heller Ehrman, LLP**  
Case: WRF v Apple - represented Apple  
Project: Reviewed contentions alleging Bluetooth technology infringed.  
Status: Completed.

Date: 2007 **Neufeld Law Group**  
Case: Epicore Software v Imagery Group - represented Imagery Group  
Project: Was deposed in suit on use of manufacturing software and damages due to delayed implementation of software.  
Status: Completed.

Date: 2006-7 **Heller Ehrman, LLP**  
Case: Wyeth v Impax - represented Impax  
Project: Reviewed discovery documents for possible use in suit.  
Status: Completed.

Date: 2006 **Heller Ehrman, LLP**  
Case: Licensing project - represented Heller Ehrman, LLP  
Project: Define strategic licensing approach for patent portfolio; estimate costs and payoffs for contingency agreement; structure attorney representation contract for contingency; present to shareholders for review.  
Status: Completed.

Date: 2006 **Heller Ehrman, LLP**  
Case: Cellport v @Road - represented @Road  
Project: Assist attorney in demonstrating that patent claim does not read on client's wireless vehicle instrumentation system.  
Status: Completed.

Date: 2006      **Heller Ehrman, LLP**  
Case: Appeligo  
Project: Developed provisional patent application relating to content analysis of video and audio documents.  
Status: Completed.

Date: 2006      **Heller Ehrman, LLP**  
Case: Broadcom v. Qualcomm - represented Qualcomm  
Project: Analyzed invalidity contentions re wireless networking patent; reviewed client's production of discovery documents for possible technical strengths and weaknesses.  
Status: Completed.

Date: 2006      **Julander, Brown and Bollard**  
Case: Capton v Comcash - represented Comcash  
Project: Wrote report analyzing contract violation allegations re wireless liquor bottle caps point of sale software; prepared to testify in arbitration of suit regarding software design equivalence and charges of reverse engineering.  
Status: Completed.

Date: 2006      **Paul, Hastings, Janofsky & Walker, LLP**  
Case: Matthew Snyder  
Project: Conducted patentability study of email client concept in light of prior art found during patent search; identified open conceptual material not previously addressed related to email client functionality, versus conceptual material anticipated by earlier patent applications  
Status: Completed.

Date: 2006      **Paul, Hastings, Janofsky & Walker, LLP**  
Case: MediaTek v. Sanyo – representing MediaTek  
Project: Developed claim chart on strengths and weaknesses of plaintiff's invalidity contentions related to AC-3 coder/decoder standards as prior art to issued patent  
Status: Completed.

Date: 2006      **Paul, Hastings, Janofsky & Walker, LLP**  
Case: XSLENT Corporation  
Project: Developed three patent applications, including claim language, specifications and abstracts, for distributed computing infrastructure architecture, computing networks, data modeling methods  
Status: Completed.

Date: 2006      **Paul, Hastings, Janofsky & Walker, LLP**

Case: WebEx v. Raindance – representing Raindance  
Project: Developed invalidity contentions claim chart for suite of nine patents;  
Demonstrated diligent reduction to practice through software source code  
history in defense of patent  
Status: Completed.

Date: 2005 **Paul, Hastings, Janofsky & Walker, LLP**  
Case: Cendant v. Amazon – representing Cendant  
Project: Patent infringement – electronic commerce; Searched patent database for  
prior art to invalidate patent; Developed three claim charts demonstrating  
prior art; Briefed counsel on technical matters to assist in presenting case  
Status: Completed.

Date: 2005-2006 **Paul, Hastings, Janofsky & Walker, LLP**  
Case: Autobyte v. Dealix – representing Autobyte  
Project: Patent infringement – electronic commerce; demonstrated infringement  
through electronic discovery of source code functionality; prepared  
questions for interrogatories to further develop discovery materials;  
supported motion to compel opposing counsel to prepare adequate  
software source code environment with observation programs; identified  
timing issues related to patent claims; performed discovery of timing  
specifications in database settings; nine months of active involvement in  
this case covered a wide variety of tasks related to patent litigation  
technology investigations  
Status: Completed.

Date: 2005 **Paul, Hastings, Janofsky & Walker, LLP**  
Case: Transitive, Ltd  
Project: Prepared response to office action for two patent prosecutions related to  
emulation and translation of object code images in multiple host  
environments  
Status: Completed.

Date: 2005 **Paul, Hastings, Janofsky & Walker, LLP**  
Case: Scott Adams  
Project: Searched patent database for possible prior art on self heating cups;  
Wrote patent application specification for self heating cup invention  
Status: Completed.

Date: 2005 **Paul, Hastings, Janofsky & Walker, LLP**  
Case: Persyst, Inc.  
Project: Wrote patent continuation application for EEG analysis invention,  
including specification, claims, abstract  
Status: Completed.



### **Personal Patents filed, prosecuted and issued**

<u>App Number</u>	<u>Date Filed</u>	<u>Title</u>
11/337359	Jan 23, 2006	“Organizing structured and unstructured database columns using corpus analysis and context modeling to extract knowledge from linguistic phrases in the database”
Office Action	June 9, 2006	Developed reply to office action with amended claims and amended drawings supported by appropriate legal language
Office Action	Sept 13, 2006	Replied to office action with amended claims appropriate legal language to demonstrate that claims are novel – negotiated notice of allowance
Patent 7,209,923	April 24, 2007	Patent issued by USPTO as 7,209,923
Patent App 2009007031	September 7, 2007	Filed US Patent application “Patent Claim and Specification Analysis” published March 12, 2009

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### **Education**

<u>Year</u>	<u>College/University</u>	<u>Degree</u>
1976	George Washington University	DSc, Computer Science and Electrical Engineering
1971	George Washington University	MS, Computer Science and Electrical Engineering
1968	Georgia Institute of Technology	BS, Electrical Engineering