William Henry Mangione-Smith
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Kirkland WA, 98033
(425) 654-1424
billms@gmail.com

Highlights

Reviewed and valued thousands of patents.
Priced over $500M worth in patent portfolios.
Key technical support for licensing that has raised more than $1B.
Significant experience developing claim charts and evidence of use.
Former tenured professor at the University of California.
Deposition and trial testifying experience.

Education

BSE (1987), MSE (1992), & Ph.D. University of Michigan
Doctoral Thesis 1992: Performance Bounds and Buffer Space Requirements for Concurrent Processors

Employment

2009-Present	Sole Proprietor of Phase Two LLC – Consulting and intellectual property services All IP related work since 2009 has been conducted under the auspices of Phase Two
2012 May-June	CTO Computers and Consumer Electronics at IP Navigation Group
2005-2008	Intellectual Ventures, Bellevue Washington
2005	Patent valuation, licensing support, focus on computer patents
2006	Head of all IV valuation efforts – managed a team of 12
2007	Director of technology, outbound licensing in consumer electronics
2008	Director of investment strategy, inventor relations
2001-2005	Associate Professor, EE UCLA
1995-2001	Assistant Professor, EE UCLA Focus low power embedded multimedia communications systems
1993-1995	Motorola Wireless Data Group Systems architect for General Magic wireless PDA

1991-1992 Motorola Corporate Research
Parallel computer performance monitoring
Low power processor architecture

1986-1987 Chrysler Corporation
Software Architect

Patents

11,785,866 - High temperature superconductor
9,760,588 - Cross-media storage coordination
9,747,426 - Handling masquerading elements
9,716,548 - Data center with free-space optical communications
9,692,887 - Component information and auxiliary information related to information …
9,683,884 - Selective audio/sound aspects
9,680,699 - Evaluation systems and methods for coordinating software agents
9,659,188 - Obfuscating identity of a source entity affiliated with a communique …
9,641,537 - Conditionally releasing a communique determined to be affiliated with a …
9,583,141 - Implementing audio substitution options in media works
9,513,157 - Selective audio/sound aspects
9,479,535 - Transmitting aggregated information arising from appnet information
9,455,035 - Management of memory refresh power consumption
9,426,387 - Image anonymization
9,374,242 - Using evaluations of tentative message content
9,372,536 - Touch screen with tactile feedback
9,367,833 - Data services outsourcing verification
9,306,975 - Transmitting aggregated information arising from appnet information
9,274,582 - Power consumption management
9,230,601 - Media markup system for content alteration in derivative works
9,219,815 - Identifier technique for communication interchange
9,215,512 - Implementation of media content alteration
9,191,341 - Packet routing within an on-chip network
9,178,911 - Evaluation systems and methods for coordinating software agents
9,158,771 - Component information and auxiliary information related to information …
9,152,928 - Context parameters and identifiers for communication
9,092,928 - Implementing group content substitution in media works
9,065,979 - Promotional placement in media works
9,008,117 - Cross-media storage coordination
9,008,116 - Cross-media communication coordination
8,984,579 - Evaluation systems and methods for coordinating software agents
8,984,133 - Providing treatment-indicative feedback dependent on putative …
8,966,630 - Generating and distributing a malware countermeasure
8,949,337 - Generation and establishment of identifiers for communication

8,943,267 - Management of memory refresh power consumption
8,929,208 - Conditionally releasing a communique determined to be affiliated …
8,924,975 - Core selection for applications running on multiprocessor systems …
8,913,753 - Selective audio/sound aspects
8,910,033 - Implementing group content substitution in media works
8,886,577 - Feedback during surgical events
8,850,044 - Obfuscating identity of a source entity affiliated with a communique in …
8,839,255 - Scheduling of threads by batch scheduling
8,819,686 - Scheduling threads on different processor cores based on …
8,818,196 - Data center with free-space optical communications
8,799,912 - Application selection of memory request scheduling
8,774,637 - Data center with free-space optical communications
8,732,087 - Authorization for media content alteration
8,730,836 - Conditionally intercepting data indicating one or more aspects …
8,712,250 - Data center with free-space optical communications
8,682,982 - Preliminary destination-dependent evaluation of message content
8,655,187 - Data center with free-space optical communications
8,640,248 - Handling masquerading elements
8,640,247 - Receiving an indication of a security breach of a protected set of files
8,627,402 - Evaluation systems and methods for coordinating software agents
8,626,848 - Obfuscating identity of a source entity affiliated with a communique …
8,626,731 - Component information and auxiliary information related to …
8,613,095 - Smart distribution of a malware countermeasure
8,607,336 - Evaluation systems and methods for coordinating software agents
8,607,234 - Batch scheduling with thread segregation and per thread type marking …
8,601,530 - Evaluation systems and methods for coordinating software agents
8,601,207 - Management of memory refresh power consumption
8,601,104 - Using network access port linkages for data structure update decisions
8,588,618 - Data center with free-space optical communications
8,583,553 - Conditionally obfuscating one or more secret entities with respect to …
8,559,307 - Routing packets in on-chip networks
8,555,396 - Authenticatable displayed content
8,549,077 - Usage parameters for communication content
8,539,581 - Efficient distribution of a malware countermeasure
8,516,300 - Multi-votage synchronous systems
8,483,569 - Data center with free-space optical communications
8,281,036 - Using network access port linkages for data structure update decisions
8,255,745 - Hardware-error tolerant computing
8,243,045 - Touch-sensitive display device and method
8,224,930 - Signaling partial service configuration changes in appnets
8,224,907 - System and method for transmitting illusory identification characteristics
8,214,191 - Cross-architecture execution optimization
8,209,755 - Signaling a security breach of a protected set of files

8,209,524 - Cross-architecture optimization
8,203,609 - Anonymization pursuant to a broadcasted policy
8,191,140 - Indicating a security breach of a protected set of files
8,161,232 - Periodically and empirically determined memory refresh intervals
8,126,938 - Group content substitution in media works
8,126,190 - Targeted obstrufication of an image
8,117,654 - Implementation of malware countermeasures in a network device
8,082,225 - Using destination-dependent criteria to guide data transmission decisions
8,065,404 - Layering destination-dependent content handling guidance
8,055,797 - Transmitting aggregated information arising from appnet information
8,055,732 - Signaling partial service configuration changes in appnets
8,055,648 - Managing information related to communication
7,972,557 - Plasmon filter
7,930,389 - Adaptive filtering of annotated messages or the like
7,877,584 - Predictive processor resource management
7,860,887 - Cross-media storage coordination
7,752,255 - Configuring software agent security remotely
7,739,524 - Power consumption management
7,653,834 - Power sparing synchronous apparatus
7,607,042 - Adjusting a processor operating parameter based on a performance criterion
7,519,995 - Programmable hardware for deep packet filtering
7,512,842 - Multi-voltage synchronous systems
7,493,516 - Hardware-error tolerant computing
5,793,991 - Method of equalizing loads on a computer bus

Patent Applications

Dr. Mangione-Smith has no known financial interest in any pending US patent applications other than some applications where he is listed as an inventor. The list of such published patent applications where he is a named inventor can be found by searching the online USPTO database.

Expert Consultant in IP Matters – Multi-Year Engagements Noted Once

<u>2024</u>

Onesta
IP Evaluation

IPR2024-00598, IPR2024-00600, IPR2024-00718, IPR2024-00719, and IPR2024-00720
Engaged by Mosaid via Lowenstein & Weatherwax LLP

IPR2024-00599

Engaged on behalf of Mosaid Technologies Inc. via Winstead PC

Mosaid v. Mediatek EDTX 2:23-CV-00129-JRG-RSP
Engaged by Mosaid via Winstead PC

COGNIPOWER LLC, v. SAMSUNG ELECTRONICS CO., LTD., and
SAMSUNG ELECTRONICS AMERICA,
INC.
Engaged on behalf of Cognipower LLC, counsel is Nixon Peabody
Eastern District of Texas, Marshall Division
Civil Action No. 2:23-cv-00160-JRG

Top Victory Investments, Ltd. v. DivX, LLC, Case No. 37-2022-00024579-CU-CO-CTL
Engaged on behalf of DivX

2023

DivX, LLC v. Mitsubishi Electric Corporation
JAMS Ref. No. 5240000886
Engaged on behalf of DivX, LLC, counsel is Dechert LLP
Declaration filed

NETLIST, INC, vs. Micron Technology Inc
Eastern District of Texas, Marshall Division
Civil Action No. 2:22-cv-203-JRG
Civil Action No. 2:22-cv-00294-JRG
Engaged on behalf of Netlist, counsel is with Irell & Manella LLP
Submitted multiple expert reports.

Alertus v. Desktop Alert, Inc.
Engaged through Millen White Zelano & Brannigan, P.C.
Provided declaration for IPR.

2022

VLSI v. Intel CA 5:17-cv-05671-BLF
Engaged by Irell and Manella LLP on behalf of VLSI
Provided written testimony and was deposed.

Engaged by Mintz Levin on behalf of Lumenis Be Ltd.
Provided written declaration.

DivX, LLC v. Harman International Industries, Inc.,
Engaged by Morrison & Foerster LLP on behalf of DivX, LLC

Provided written testimony and was deposed.

Certain Integrated Circuits, Mobile Devices Containing the Same, and Components Thereof, Inv. No. 337-TA-1335
Engaged by Mintz Levin on behalf of Complainant Daedalus Prime LLC
Provided written testimony, deposed, and at trial.

ITC 337-TA-1318
Advanced Micro Devices, Inc. and ATI Technologies and TCL et. al
Engaged by Mintz Levin on behalf of AMD

NETLIST, INC, vs. SAMSUNG ELECTRONICS CO., LTD.
Eastern District of Texas, Marshall Division
Case No. 2:22-CV-293-JRG
Civil Action No. 2:21-CV-463-JRG
Engaged on behalf of Netlist, counsel is with Irell & Manella LLP
Provided testimony via report, deposition and testimony at trial.

WSOU Investments, LLC d/b/a Brazos Licensing and Development v. ZTE
CIVIL ACTION 6:20-CV-00487-ADA
CIVIL ACTION 6:20-CV-00488-ADA
CIVIL ACTION 6:20-CV-00489-ADA
CIVIL ACTION 6:20-CV-00490-ADA
CIVIL ACTION 6:20-CV-00491-ADA
CIVIL ACTION 6:20-CV-00492-ADA
CIVIL ACTION 6:20-CV-00493-ADA
CIVIL ACTION 6:20-CV-00494-ADA
CIVIL ACTION 6:20-CV-00495-ADA
CIVIL ACTION 6:20-CV-00496-ADA
CIVIL ACTION 6:20-CV-00497-ADA
Engaged by Kasowitz Benson Torres LLP on behalf of WSOU Investments
Provided written testimony and was deposed.

WSOU Investments, LLC d/b/a Brazos Licensing and Development v. Google LLC
CIVIL ACTION 6:20-CV-00571-ADA
CIVIL ACTION 6:20-CV-00572-ADA
CIVIL ACTION 6:20-CV-00573-ADA
CIVIL ACTION 6:20-CV-00575-ADA
CIVIL ACTION 6:20-CV-00576-ADA
CIVIL ACTION 6:20-CV-00579-ADA
CIVIL ACTION 6:20-CV-00580-ADA
CIVIL ACTION 6:20-CV-00583-ADA
CIVIL ACTION 6:20-CV-00584-ADA

CIVIL ACTION 6:20-CV-00585-ADA
Engaged by Folio Law Group on behalf of WSOU
Provided written testimony and was deposed.

Highlands Advisory
IP evaluation

Interdigital
IP evaluation

KONINKLIJKE KPN N.V., v. XIAOMI CORPORATION et al, and COOLPAD TECHNOLOGIES INC.,
The District of Delaware
C.A. No. 21-cv-41-LPS-CJB and C.A. No. 21-cv-43-LPS-CJB
Engaged on behalf of KPN
Counsel is Sussman & Godfrey
Provided declaration.

2021

WSOU Investments, LLC d/b/a Brazos Licensing and Development v. Microsoft Corp., Case No. 6:12-cv-463 (W.D.T.X.)
Engaged by Susman Godfrey on behalf of WSOU Investments
Provided testimony via declaration

KONINKLIJKE KPN N.V., vs.TELEFONAKTIEBOLAGET LM ERICSSON AND ERICSSON INC.
Case 2:21-cv-113 in the Eastern District of Texas
Engaged by Susman Godfrey LLP on behalf of Koninklijke KPN
Testified via declaration and deposition as well as at trial.

Barkan Wireless IP Holdings, L.P. v. T-Mobile US, Inc., T-Mobile USA, Inc., and Nokia of America Corp., No. 2:21-cv-00034-JRG (E.D. Tex.)
Engaged on behalf of Barkan by Heim, Payne & Chorush, LLP
Technology relates to communications equipment.
Provided testimony via declaration and deposition.

Intel Corporation v. FG SRC LLC et al.
Engaged on behalf of FG SRC LLC, by DiMuroGinsberg PC
IPR case number IPR2020-01449
Technology relates to reconfigurable computing
Provided testimony via declaration and deposition.

StratosAudio, Inc. v. multiple automotive manufacturers
Engaged on behalf of StratosAudio, Inc by White & Case LLP
Technology relates to accounting for content distribution

2020

Netlist vs. S. K. Hynix
Nos. 6:20-cv-00194-ADA and 6:20-cv-00525-ADA (W.D. Tex.)
Engaged on behalf of Netlist, provided testimony on behalf of Netlist
Technology relates to memory modules

INTEL CORPORATION, Petitioner v. PACT XPP SCHWEIZ AG
Before the Patent Trial and Appeal Board of the US Patent and Trademark Office
Working with Quinn Emanuel Urquhart & Sullivan on behalf of PACT XPP

Digital Video-Capable Devices and Components Thereof, USITC 337-TA-1224
Working with Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C
On behalf of Koninklijke Philips N.V. and Philips North America LLC
Provided sworn testimony

UNILOC 2017, LLC et al. v. GOOGLE LLC
Northern District of California
4:20-cv-04355-YGR
Prince Lobel Tye LLP
Working on behalf of Uniloc

UNILOC 2017, LLC et al. v. GOOGLE LLC
Working with Ethridge Law Group and Carter Arnett on behalf of Uniloc
Eastern District of Texas, Marshall Division
Case No. 2-18-cv-00492-JRG-RSP, filed 2018-11-17
Case No. 2-18-cv-00496-JRG-RSP, 2018-11-17
Case No. 2-18-cv-00499-JRG-RSP, 2018-11-17
Patent consulting thus far, testimony anticipated
INTEL CORPORATION, v. VLSI TECHNOLOGY LLC
IPR2019-01197, Patent 6,212,633
Working with LOWENSTEIN & WEATHERWAX LLP on behalf of VLSI
Provided expert testimony in the form of a declaration and deposition.

Consulting work for Global Foundries related to computer chips.

GPU++, LLC v. Qualcomm Incorporated, et al.,
Working with Steptoe & Johnson on behalf of GPU++
Texas Western District, case 6:19-cv-00474-ADA, filed 2019-08-16

Testimony provided.
Technology relates to graphics processing systems

VLSI Technology v. Intel
Western District of Texas, case 6:19-CV-256
Working with Irell & Manella LLP on behalf of VLSI Technology LLC
Provided testimony in the form of expert reports and depositions.

2019

VLSI Technology LLC v. Intel
District of Delaware, case 1:18-cv-00966
Working with Irell & Manella LLP on behalf of VLSI Technology LLC
Technology relates to semiconductor manufacturing
Patent consulting thus, testimony anticipated

Consulting work for DivX – related to computer video.

2018

INVT SPE LLC v. Apple Inc., HTC Corp. and HTC America, Inc. ZTE Corp. and ZTE (USA) Inc.
Certain LTE- and 3G-Compliant Cellular Communications Devices, Investigation No. 337-TA-1138
Provided Expert Testimony on behalf of INVT
Technology relates to wireless communications

Mahltig Management- und Beteiligungsgesellschaft mbH in patent proceedings relating to European Patent 1 714 229
Adverse to Intel and Lenovo
Technology relates to microprocessors

Netlist vs. S. K. hynix
US ITC 337-TA-1089
Engaged on behalf of Netlist, provided testimony on behalf of Netlist
Technology relates to memory modules

Voip-Pal.com Inc.
Technology relates to VOIP service providers
Voip-Pal.com, Inc. v. Amazon.com, Inc. et al - 2:18-cv-01076
Voip-Pal.com, Inc. v. Apple, Inc. - 2:16-CV-00260
Voip-Pal.com, Inc. v. Apple, Inc. - 2:18-cv-00953
Voip-Pal.com Inc. v. Verizon and AT&T - 2:16-CV-00271

Voip-Pla.com, Inc. v. Twitter - 2:16-CV-02338

2017

AMD v. LG, Vizio, MediaTek and Sigma Designs
US ITC 337-TA-1044
Provided Expert Testimony on behalf of AMD
Technology relates to graphics processing hardware

Netlist vs. S. K. hynix
US ITC 337-TA-1023
Engaged on behalf of Netlist
Provided Expert Testimony via Report, Deposition and at hearing
Technology relates to memory modules

Advanced Micro Devices Inc.
Engaged on behalf of AMD
USPTO Re-Exam Defense
Provided testimony via expert report and interview
Technology relates to microprocessors

Advanced Micro Devices Inc.
Engaged on behalf of AMD
IPR Defense
Provided testimony via expert report for IPR2015-00321
IPR2015-00328 and IPR2015-00321
Technology relates to microprocessors

2016

INTEL CORPORATION v. FUTURE LINK SYSTEMS, LLC - C.A. No. 14-377-LPS
Retained by Irell and Manella LLP on behalf of Future Link Systems, LLC
Technology relates to computer communications systems
Declarations filed on behalf of Future Link Systems, LLC

Voip-Pal.com Inc.
Technology relates to VOIP service providers
Retained to assist during an IPR action
IPR2016-01198 and IPR2016-01201

TiVo Inc. v. Samsung Electronics Co., Ltd., et al., Case No. 2:15-cv-1503 (E.D. Tex.)
Technology relates to digital video recorders
Retained by Irell and Manella LLP on behalf of TiVo Inc.

Rosetta-Wireless Corporation Inter Partes Reviews Nos. IPR2016-00616 and IPR2016-00622
Technology relates to personal communications and computing devices. Retained by Heim, Payne and Chorush on behalf of Rosetta-Wireless Declaration filed.

Innovative Memory Solutions, Inc. (IMS) v. Micron Technology
District of Delaware - 14-cv-01480-RGA
Engaged by IMS via Cohen & Grace, LLC
Technology relates to semiconductor memory manufacturing

Zak v. Facebook
Eastern District of Michigan - 4:15-cv-13437
Engaged by Zak via Harness, Dickey & Pierce PLC
Technology relates to client-server software Declaration filed.

2015

Advanced Silicon Technologies, LLC Delaware District Court and at the ITC (No matter number assigned)
Technology relates to programmable processor hardware Accused parties:

- Texas Instruments Incorporated 1:15-cv-01175
- NVIDIA Corporation 1:15-cv-01177
- Renesas Electronics Corporation et al. 1:15-cv-01176
- Fujitsu Ten Limited et al. 1:15-cv-01174
- Bayerische Motoren Werke AG et al. 1:15-cv-01178
- VOLKSWAGEN AG 1:15-cv-01181
- Harmon International Industries Incorporated et al. 1:15-cv-01173
- Honda Motor Co., Ltd. et al. 1:15-cv-01179
- Toyota Motor Corporation 1:15-cv-01180

FlatWorld Interactives LLC v. Samsung and LG
C.A. No. 12-804·-LPS and C.A. No. 12-964-LPS
Engaged on behalf of FlatWorld
Technology relates to user interface design

Ericsson Inc. vs. Apple Inc.
EDTX 2:15-cv-290 and 2:15-cv-292
Engaged on behalf of Ericsson
Technology relates to peripheral devices

Synaptics vs. Goodix

US ITC 337-TA-957
Engaged on behalf of Goodix
Provided Expert Testimony via Report, Deposition and at hearing
Technology relates to touch screens

Advanced Micro Devices Inc.
Engaged on behalf of AMD
IPR Defense
Provided testimony via expert report
Technology relates to digital video
IPR2015-00328 and IPR2015-00321

Solocron Media LLC v. Verizon Communications, Inc., Cellco Partnership d/b/a/ Verizon Wireless, AT&T Mobility LLC, T-Mobile USA, Inc., and Sprint Spectrum L.P.
The Eastern District of TX, Case 2:13-cv-1059-JRG
Retained by tensegrity on behalf of Solocron
Technology relates to MMS and multi-media transcoding.
Prepared expert reports on infringement.

Enterprise Systems Technologies S.a.r.l v. Apple Inc., Cirrus Logic Inc., HTC Corporation, LG Electronics, Inc., Samsung Electronics Co
The International Trade Commission of the United States of America
Inv. No. 337-TA-924
Retained by Mintz, Levin, Cohn, Ferris, Glovsky and Popeo LLP for complainant.
Technology relates to device drivers. Prepared
expert reports and deposed.

Ziilabs Inc., LTD., v. Samsung and Apple
Case 2:14-cv-00203 In the Eastern District of Texas Marshall Division
Retained by Davis of Heim, Payne & Chorush, L.L.P. for Ziilabs Technology relates to graphics systems.
Provided expert report on infringement as well as deposition testimony.

Packet Intelligence LLC v. Cisco
Case 2:2014cv00252 In the Eastern District of Texas Marshall Division
Retained by Heim, Payne & Chorush, L.L.P. for Packet Intelligence Technology relates to secure networking.

Advanced Micro Devices, Inc. v. LG Corp., et al.
5:14-cv-01012 U.S. District Court for the Northern District of California Retained by Robins, Kaplan, Miller & Ciresi LLP on behalf of Advanced Micro Devices, Inc.
Technology relates to microprocessors and multimedia.

dunnhumby USA, LLC, et al. v. emnos USA Corp.
U.S. District Court for the Northern District of Illinois
Case No.: 1:13-cv-00399
Retained by Baker Hostetler who represents dunnhumby Technology
relates to databases.

Parthenon Unified Memory Architecture LLC, v. HTC CORPORATION and HTC AMERICA, INC., LG ELECTRONICS, INC. and LG ELECTRONICS USA, INC.
Case No. 2:14-cv-690-JRG-RSP
Case No. 2:14-cv-691-JRG-RSP
Eastern District of Texas, Marshall Division Technology
relates to multimedia systems.
Retained on behalf of Parthenon

Parthenon Unified Memory Architecture LLC, v. SAMSUNG ELECTRONICS CO., LTD., ET AL. HUAWEI TECHNOLOGIES CO. LTD, HUAWEI TECHNOLOGIES USA, INC. and HUAWEI DEVICE USA, INC. and MOTOROLA MOBILITY LLC
Case No. 2:14-cv-902-RSP
Case No. 2:14-cv-687-JRG-RSP
Case No. 2:14-cv-689-JRG-RSP
Eastern District of Texas, Marshall Division Technology
relates to multimedia systems.
Retained on behalf of Parthenon

NEXUS DISPLAY TECHNOLOGIES LLC, Plaintiff, v. DELL INC., LENOVO (UNITED STATES) INC., PANASONIC CORP. OF NORTH AMERICA, EIZO CORP. AND
EIZO INC., NEC CORP. AND NEC DISPLAY SOLUTIONS OF AMERICA, INC.
Civil Action No: 2:14-cv-00762
Civil Action No: 2:14-cv-00762
Civil Action No. 2:14-cv-00763
Civil Action No. 2:14-cv-00764
Civil Action No. 2:14-cv-00765
Technology relates to communications circuits.
Retained on behalf of Nexus Display Technologies

INTEL CORPORATION, v. FUTURE LINK SYSTEMS, LLC
C.A. No. 1:14-CV-00377-LPS
District Court for Delaware
Technology relates to communications circuits.
Retained on behalf of Future Link Systems

2014

Content Guard v. Apple Inc., Amazon.com Inc., BlackBerry Corporation, Huawei Device USA, Inc., Motorola Mobility LLC, BlackBerry Limited, HTC Corporation, HTC America, Inc., Huawei Technologies Co., Ltd., Samsung Electronics Co., Ltd., Samsung Electronics America, Inc., and Samsung Telecommunications America, LLC
The Eastern District of TX, case 2:13-cv-01112-JRG
Retained by McKool Smith on behalf of Content Guard
Technology relates to digital right management.

Content Guard v. Google Inc.
The Eastern District of TX, Case 2:14-cv-00061-JRG Retained
by McKool Smith on behalf of Content Guard Technology
relates to digital right management.

Solocron Media LLC v. Verizon Communications, Inc., Cellco Partnership d/b/a/
Verizon Wireless, AT&T Mobility LLC, T-Mobile USA, Inc., and Sprint Spectrum L.P.
The Eastern District of TX, Case 2:13-cv-1059-JRG
Retained by tensegrity on behalf of Solocron
Technology relates to MMS and multi-media transcoding.

Enterprise Systems Technologies S.a.r.l v. Apple Inc., Cirrus Logic Inc., HTC Corporation, LG Electronics, Inc., Samsung Electronics Co
The International Trade Commission of the United States of America
Inv. No. 337-TA-924
Retained by Mintz, Levin, Cohn, Ferris, Glovsky and Popeo LLP for complainant.
Technology relates to device drivers.

Ziilabs Inc., LTD., v. Samsung and Apple
Case 2:14-cv-00203 In the Eastern District of Texas Marshall Division
Retained by Davis of Heim, Payne & Chorush, L.L.P. for Ziilabs Technology
relates to graphics systems.

Packet Intelligence LLC v. Cisco
Case 2:2014cv00252 In the Eastern District of Texas Marshall Division
Retained by Heim, Payne & Chorush, L.L.P. for Packet Intelligence Technology
relates to secure networking.

Rockstar Consortium US v. Asustek, Google, HTC, LGE, Pantech, Samsung and ZTE
2:13-cv-00899 In the Eastern District of Texas Marshall Division
Retained by McKool Smith for Rockstar
Technology relates to user interfaces and messaging.

Advanced Micro Devices, Inc. v. LG Corp., et al.
5:14-cv-01012 U.S. District Court for the Northern District of California Retained by Robins, Kaplan, Miller & Ciresi LLP on behalf of Advanced Micro Devices, Inc.
Technology relates to microprocessors and multimedia.

Pragmatus Mobile LLC v. Samsung Electronics Co. Ltd, etc.
U.S. ITC Inv. No. 337-TA-905
Retained by Flagship IP. P.C. on behalf of Complainant Pragmatus Mobile LLC
Technology relates to converged devices.

CallCopy Inc.
Assistance with Reexamination efforts related to Verint Americas Inc.
Retained by Baker Hostetler
Technology related to call systems and call center management. Submitted declarations with the USPTO.

dunnhumby USA, LLC, et al. v. emnos USA Corp.
U.S. District Court for the Northern District of Illinois
Case No.: 1:13-cv-00399
Retained by Baker Hostetler who represents dunnhumby Technology
relates to database technology.

Graphics Properties Holdings, v. Panasonic et al.
ITC Inv. No. 337-TA-884
Retained by Mintz, Levin, Cohn, Ferris, Glovsky and Popeo LLP for complainant.
Provided testimony through expert reports, deposition and at trial. Technology relates to graphics hardware.

2013

Graphics Properties Holdings, v. Panasonic et al.
ITC Inv. No. 337-TA-884
Retained by Mintz, Levin, Cohn, Ferris, Glovsky and Popeo LLP for complainant.
Provided testimony through expert reports and deposition. Technology
relates to graphics hardware.

CallCopy Inc.
Assistance with Reexamination efforts related to Verint Americas Inc.
Retained by Hahn Loeser & Parks LLP
Technology related to call systems and call center management. Submitted declarations with the USPTO.

dunnhumby USA, LLC, et al. v. emnos USA Corp.
U.S. District Court for the Northern District of Illinois
Case No.: 1:13-cv-00399
Retained by Baker Hostetler who represents dunnhumby Technology
relates to database technology.

Microlinc, LLC v. INTEL CORPORATION, ACER, INC., ACER AMERICA CORPORATION, ADVANCED MICRO DEVICES, INC., APPLE, INC., DELL, INC., GATEWAY, INC., HEWLETT-PACKARD COMPANY, LENOVO GROUP, LTD, LENOVO (UNITED STATES), INC., NVIDIA CORPORATION, SONY COMPUTER ENTERTAINMENT AMERICA INC., TOSHIBA CORPORATION, TOSHIBA AMERICA INC., and TOSHIBA AMERICA INFORMATION SYSTEMS, INC.
Eastern District of Texas
Retained by Eugene M. Cummings, P.C.
Submitted reports regarding infringement, invalidity and claim construction along with numerous declarations. Appeared at the Markman hearing. Deposed. Technology relates to microprocessor communications.

FlashPoint Technology, Inc. v. HTC Corporation, HTC America, Inc., Pantech Co., Ltd., Pantech Wireless, Inc., Huawei Technologies Co., Ltd., FutureWei Technologies, Inc. d/b/a Huawei Technologies (USA), ZTE Corporation, ZTE (USA) Inc.,
USA International Trade Commission
Certain Electronic Imaging Devices, Inv. No. 337-TA-850
Expert for FlashPoint, who is represented by Pepper Hamilton, LLP.
Submitted reports numerous declarations. Testified at the ITC. Deposed. Technology relates to converged devices.

2012

FlashPoint Technology, Inc. v. HTC Corporation, HTC America, Inc., Pantech Co., Ltd., Pantech Wireless, Inc., Huawei Technologies Co., Ltd., FutureWei Technologies, Inc. d/b/a Huawei Technologies (USA), ZTE Corporation, ZTE (USA) Inc.,
USA International Trade Commission
Certain Electronic Imaging Devices, Inv. No. 337-TA-850
Expert for FlashPoint, who is represented by Pepper Hamilton, LLP.
Submitted reports numerous declarations. Testified at the ITC. Deposed. Technology relates to converged devices.

Graphics Properties Holdings v. HTC et. al.
Graphics Properties Holdings v. LG Electronics et. al.
Graphics Properties Holdings v. Sony et. al.
Graphics Properties Holdings v. Samsung Electronics et. al.
Graphics Properties Holdings v. Apple
Graphics Properties Holdings v. Research In Motion et. al.

United States District Court for the District of Deleware
Testifying expert witness for GPH on matters related to invalidity.
Pepper Hamilton LLP and Mintz, Levin, Cohn, Ferris, Glovsky and Popeo LLP represent plaintiffs.
Subject matter relates to graphics systems and CPU microarchitecture. Submitted reports numerous declarations. Deposed.

IPValue
Non-litigation related patent evaluation services.

TV Interactive Data Corporation v. Sony Corporation, Sony Computer Entertainment Inc, Sony Computer Entertainment America Inc, Sony Corporation of America, Sony Electronics Inc, Samsung Electronics Co Ltd, Samsung Electronics America Inc, Royal Philips Electronics NV, Philips Electronics North America Corporation, Toshiba Corporation, Toshiba America Inc., Toshiba America Consumer Products LLC, Panasonic Corporation, Panasonic Corporation of North America, Victor Company of Japan, LTD, JVC Americas Corp, LG Electronics Inc, LG Electronics USA Inc., Zenith Electronics LLC, Pioneer Corporation, Pioneer Electronics (USA) Inc., Sharp Corporation, Sharp Electronics Corporation, Funai Electric Co., Ltd., Funai Corporation, Inc., D&M Holdings Inc., D&M Holdings US Inc. and Denon Electronics (USA), LLC
United States District Court for the Northern District of California Case 5:2010cv00475
Consultant for defendant Funai
Defendants Funai Electric Co. Ltd. and Funai Corporation, Inc. are represented by Kevin W. Kirsch, David A. Mancino, John F. Bennett, Matthew P. Hayden, and Hayes F. Michel of Baker Hostetler
Subject matter relates to DVDs and computer Operating Systems.

Interval Licensing LLC, v. AOL, Inc.,; Apple, Inc.; eBay, Inc.; Facebook, Inc.; Netflix, Inc.; Office depot, Inc.; Officemax, Inc.; Staples, Inc.; Yahoo! Inc.; and Youtube, LLC.
United States District Court for the Western District of Washington Case 2:10-cv-01385
Consultant for Interval Licensing LLC
Technology relates to user interfaces and data organization.

Interval Licensing LLC is represented by Michael F. Heim, Eric J. Enger, and Nathan J. Davis of Heim, Payne & Chorush, L.L.P.
Subject matter relates to online search, advertising and data presentation.
Submitted declarations related to claim construction. Deposed. Technology relates to user interfaces and data organization.

St. Clair Intellectual Property Consultants, Inc. v. Acer, Inc., Acer America Corporation, Dell Inc., Gateway Companies, Inc., Gateway, Inc., Lenovo Group, Limited and Lenovo (United States) Inc.

United States District Court for the District of Delaware - 1:2009cv00354
Consultant for St. Clair Intellectual Property Consultants
St. Clair is represented by R. Terrance Rader, Charles W. Bradley, Glenn E. Forbis, and Justin S. Cohen of Rader Fishman & Grauer PLLC
Subject matter relates to power management and graphics hardware.
Filed reports regarding validity and infringement and provided deposition testimony.

ST. CLAIR INTELLECTUAL PROPERTY CONSULTANTS, INC., v. APPLE, INC. HIGH TECH COMPUTER CORP., a/k/a HTC CORP., HTC (B.V.I.), HTC AMERICA, INC., EXEDEA, INC., RESEARCH IN MOTION LTD., and RESEARCH IN MOTION CORPORATION
United States District Court for the District of Delaware - 1:10-cv-00982-LPS
Consultant for St. Clair Intellectual Property Consultants
St. Clair is represented by R. Terrance Rader, Charles W. Bradley, Glenn E. Forbis, and Justin S. Cohen of Rader Fishman & Grauer PLLC Filed a declaration.
Subject matter relates to cameras and messaging.

Red Chalk Group
Subject matter relates to patent analysis.

Siemens
Subject matter relates to patent analysis.

Phoenix Technologies
Subject matter relates to patent analysis.

2011

TV Interactive Data Corporation v. Sony Corporation, Sony Computer Entertainment Inc, Sony Computer Entertainment America Inc, Sony Corporation of America, Sony Electronics Inc, Samsung Electronics Co Ltd, Samsung Electronics America Inc, Royal Philips Electronics NV, Philips Electronics North America Corporation, Toshiba Corporation, Toshiba America Inc., Toshiba America Consumer Products LLC, Panasonic Corporation, Panasonic Corporation of North America, Victor Company of Japan, LTD, JVC Americas Corp, LG Electronics Inc, LG Electronics USA Inc., Zenith Electronics LLC, Pioneer Corporation, Pioneer Electronics (USA) Inc., Sharp Corporation, Sharp Electronics Corporation, Funai Electric Co., Ltd., Funai Corporation, Inc., D&M Holdings Inc., D&M Holdings US Inc. and Denon Electronics (USA), LLC
United States District Court for the Northern District of California
Case 5:2010cv00475
Consultant for defendant Funai

Defendants Funai Electric Co. Ltd. and Funai Corporation, Inc. are represented by Kevin W. Kirsch, David A. Mancino, John F. Bennett, Matthew P. Hayden, and Hayes F. Michel of Baker Hostetler
Subject matter relates to DVDs and computer Operating Systems.

Interval Licensing LLC, v. AOL, Inc.,; Apple, Inc.; eBay, Inc.; Facebook, Inc.; Netflix, Inc.; Office depot, Inc.; Officemax, Inc.; Staples, Inc.; Yahoo! Inc.; and Youtube, LLC.
United States District Court for the Western District of Washington Case 2:10-cv-01385
Consultant for Interval Licensing LLC
Interval Licensing LLC is represented by Michael F. Heim, Eric J. Enger, and Nathan J. Davis of Heim, Payne & Chorush, L.L.P.
Subject matter relates to online search, advertising and data presentation.

St. Clair Intellectual Property Consultants, Inc. v. Acer, Inc., Acer America Corporation, Dell Inc., Gateway Companies, Inc., Gateway, Inc., Lenovo Group, Limited and Lenovo (United States) Inc.
United States District Court for the District of Delaware - 1:2009cv00354
Consultant for St. Clair Intellectual Property Consultants
St. Clair is represented by R. Terrance Rader, Charles W. Bradley, Glenn E. Forbis, and Justin S. Cohen of Rader Fishman & Grauer PLLC Technology relates to power management.

ST. CLAIR INTELLECTUAL PROPERTY CONSULTANTS, INC., v. APPLE, INC. HIGH TECH COMPUTER CORP., a/k/a HTC CORP., HTC (B.V.I.), HTC AMERICA, INC., EXEDEA, INC., RESEARCH IN MOTION LTD., and RESEARCH IN MOTION CORPORATION
United States District Court for the District of Delaware - 1:10-cv-00982-LPS
Consultant for St. Clair Intellectual Property Consultants
St. Clair is represented by R. Terrance Rader, Charles W. Bradley, Glenn E. Forbis, and Justin S. Cohen of Rader Fishman & Grauer PLLC Filed a declaration.
Subject matter relates to power management and graphics hardware.

Negotiated Data Solutions
Consultant for Negotiated Data Solutions
Negotiated Data Solutions is represented by Susman, Godfrey LLP. Subject matter relates to IO devices.

Acqis LLC
Declarations filed with USPTO in response to a series of reexamination requests.
Deposed in a related case (Texas Eastern District Court 6:2009cv00148) as a consequence of declarations.
Acqis LLC is represented by Cooley, Godward, Kronish LLP Subject matter relates to computer systems.

FlashPoint Technology, Inc. v. Nokia Corp. of Finland, Nokia, Inc. of Irving, Texas, Research In Motion Ltd. of Canada, Research In Motion Corp. of Irving, Texas, HTC Corp. of Taiwan, HTC America, Inc. of Bellevue, Washington, LG Electronics of South Korea, LG Electronics U.S.A., Inc. of Englewood Cliffs, New Jersey, and LG Electronics MobileComm U.S.A., Inc. of San Diego, California
US ITC Inv. No. 337-TA-726
Consultant for FlashPoint Technology, Inc.
FlashPoint Technology Inc. is represented by William D. Belanger, Gregory D. Len, and Frank Liu of Pepper Hamilton LLP.
Filed reports regarding validity and infringement and provided testimony both via deposition and in court.
Subject matter relates to camera systems.

MicroUnity, Inc.v. Texas Instruments Inc., Qualcomm, Inc., Samsung Electronics Co LTD, Motorola, Inc., Nokia Corporation, Palm, Inc., Samsung TeleCommunications America, LLC, Acer, Inc., HTC Corporation, Google Inc., LG Electronics Inc, Apple, Inc., Cellco Partnership d/b/a Verizon Wireless, Sprint Nextel Corporation and AT&T
2:2010cv00091
Consultant for MicroUnity, Inc.
Eastern District of Texas
MicroUnity, Inc., is represented by Heim, Payne, and Chorush LLP. Subject matter relates to graphics hardware and microarchitecture.

2010

TV Interactive Data Corporation v. Sony Corporation, Sony Computer Entertainment Inc, Sony Computer Entertainment America Inc, Sony Corporation of America, Sony Electronics Inc, Samsung Electronics Co Ltd, Samsung Electronics America Inc, Royal Philips Electronics NV, Philips Electronics North America Corporation, Toshiba Corporation, Toshiba America Inc., Toshiba America Consumer Products LLC, Panasonic Corporation, Panasonic Corporation of North America, Victor Company of Japan, LTD, JVC Americas Corp, LG Electronics Inc, LG Electronics USA Inc., Zenith Electronics LLC, Pioneer Corporation, Pioneer Electronics (USA) Inc., Sharp Corporation, Sharp Electronics Corporation, Funai Electric Co., Ltd., Funai Corporation, Inc., D&M Holdings Inc., D&M Holdings US Inc. and Denon Electronics (USA), LLC
United States District Court for the Northern District of California
Case 5:2010cv00475
Consultant for defendant Funai
Defendants Funai Electric Co. Ltd. and Funai Corporation, Inc. are represented by Kevin W. Kirsch, David A. Mancino, John F. Bennett, Matthew P. Hayden, and Hayes F. Michel of Baker Hostetler
Subject matter relates to DVDs and computer Operating Systems.

Interval Licensing LLC, v. AOL, Inc.,; Apple, Inc.; eBay, Inc.; Facebook, Inc.; Netflix, Inc.; Office depot, Inc.; Officemax, Inc.; Staples, Inc.; Yahoo! Inc.; and Youtube, LLC.
United States District Court for the Western District of Washington Case 2:10-cv-01385
Consultant for Interval Licensing LLC
Interval Licensing LLC is represented by Michael F. Heim, Eric J. Enger, and Nathan J. Davis of Heim, Payne & Chorush, L.L.P.
Subject matter relates to online search, advertising and data presentation.

St. Clair Intellectual Property Consultants, Inc. v. Acer, Inc., Acer America Corporation, Dell Inc., Gateway Companies, Inc., Gateway, Inc., Lenovo Group, Limited and Lenovo (United States) Inc.
United States District Court for the District of Delaware - 1:2009cv00354
Consultant for St. Clair Intellectual Property Consultants
St. Clair is represented by R. Terrance Rader, Charles W. Bradley, Glenn E. Forbis, and Justin S. Cohen of Rader Fishman & Grauer PLLC
Subject matter relates to power management and graphics hardware.

Negotiated Data Solutions
Consultant for Negotiated Data Solutions
Negotiated Data Solutions is represented by Susman, Godfrey LLP. Subject matter relates to IO devices.

Acqis LLC
Declarations filed with USPTO in response to a series of reexamination requests.
Deposed in a related case (Texas Eastern District Court 6:2009cv00148) as a consequence of declarations.
Acqis LLC is represented by Cooley, Godward, Kronish LLP Subject matter relates to computer systems.

FlashPoint Technology, Inc. v. Nokia Corp. of Finland, Nokia, Inc. of Irving, Texas, Research In Motion Ltd. of Canada, Research In Motion Corp. of Irving, Texas, HTC Corp. of Taiwan, HTC America, Inc. of Bellevue, Washington, LG Electronics of South Korea, LG Electronics U.S.A., Inc. of Englewood Cliffs, New Jersey, and LG Electronics MobileComm U.S.A., Inc. of San Diego, California
US ITC Inv. No. 337-TA-726
Consultant for FlashPoint Technology, Inc.
FlashPoint Technology Inc. is represented by William D. Belanger, Gregory D. Len, and Frank Liu of Pepper Hamilton LLP.
Subject matter relates to camera systems.
Filed reports regarding validity and infringement and provided testimony both via deposition and in court.

MicroUnity, Inc.v. Texas Instruments Inc., Qualcomm, Inc., Samsung Electronics Co LTD, Motorola, Inc., Nokia Corporation, Palm, Inc., Samsung TeleCommunications America, LLC, Acer, Inc., HTC Corporation, Google Inc., LG Electronics Inc, Apple, Inc., Cellco Partnership d/b/a Verizon Wireless, Sprint Nextel Corporation and AT&T
2:2010cv00091
Consultant for MicroUnity, Inc.
Eastern District of Texas
MicroUnity, Inc., is represented by Heim, Payne, and Chorush LLP. Subject matter relates to graphics hardware and microarchitecture.

Saxon Innovations, LLC v. Apple, Inc., Gateway, Inc., Gateway Companies, Inc., Acer America Corp., Acer, Inc., Hewlett-Packard Co. and Dell, Inc
Eastern District of Texas 6:2008cv00265
Consultant for Saxon Innovations, LLC
Representing Saxon Innovations, LLC, who was represented by Heim, Payne, and Chorush LLP.
Subject matter relates to multiprocessors systems and computer systems. Filed reports regarding validity and infringement and provided testimony both via deposition and in court.

Joel M. Geddis and Shaun Legacy v. Microsoft Corporation, Toshiba Corporation, Freescale Semiconductor, Inc., Wolfson Microelectronics, Inc., Wolfson Microelectronics PLC
Superior Court of Washington in and for King County 08-2-40731-4 SEA
Consultant for Toshiba Corporation
Toshiba Corporation is represented by Forsberg & Umlauf, P.S. Subject matter relates to portable audio devices.

2009

Saxon Innovations, LLC v. LG Electronics Inc., LG Electronics USA Inc., LG Electronics Mobilecomm U.S.A., Inc., Samsung Electronics Co. Ltd, Samsung Electronics America Inc., Samsung Telecommunications America LLC, Palm Incorporated, Research in Motion Ltd, Research In Motion Corporation, Nintendo Co. Ltd, and Nintendo of America
Eastern District of Texas 6:07-CV-490
Prepared expert report regarding invalidity on behalf of Saxon Innovations, LLC.
Saxon Innovations, LLC, was represented by Pepper Hamilton LLP.
Subject matter relates to multiprocessors systems and computer systems. Filed reports regarding validity and infringement and provided testimony both via deposition and in court.

Saxon Innovations, LLC, v. Nokia Corp., Research In Motion Ltd., High Tech Computer

Corp., Palm, Inc., Panasonic Corporation, US
ITC 337-TA-667
Expert witness for Saxon Innovations, LLC.
Submitted reports, was deposed, and testified at trial regarding claim construction and invalidity.
Saxon Innovations, LLC was represented by William D. Belanger, Aaron J. Levangie, Gregory D. Len, and Charles H. Carpenter of Pepper Hamilton LLP.
Subject matter relates to multiprocessors systems and computer systems.

Advanced Micro Devices, Inc. v. Samsung Electronics Co, Ltd.
U.S. District Court for the Northern District of California 3:08-cv-00986-SI Consultant for Advanced Micro Devices, Inc. Reverse engineering efforts to support infringement contentions.
Advanced Micro Devices, Inc is represented by Robins, Kaplan, Miller and Ciresi LLP.
Subject matter relates to memory devices.

Intellectual Ventures
Subject matter relates to patent analysis.

2005

Speedera Networks,Inc., v. Akamai Technologies,Inc.
U.S. District Court for the Northern District of California 5:02-cv-03050-JW Consultant for Speedera Networks, Inc.
Reviewed depositions and provided review of computer security.
Speedera Networks, Inc. was represented by Jim Bowman of O'Melveny & Myers LLP.
Technology related to computer security.

Research in Motion Limited et al. v. Inpro II Licensing SARL
U.S. District Court for the Northern District of Texas 3:03-cv-02669-B Consultant for InPro II Licensing SARL . Provided patent analysis.
InPro II Licensing SARL was represented by Dechert. Technology related to IO devices.

Digi International, Inc. v. Lantronix, Inc., 0:04-cv-01560-DWF-SRN U.S. District Court for the District of Minnesota
Consultant for Lantronix, Inc. Prepared expert reports.
Lantronix, Inc. was represented by Stradling Yocca Carlson & Rauth. Technology related to IO devices.

2004

Intergraph Hardware Technologies Company, Inc v. Hewlett-Packard

U.S. District Court for the Eastern District of Texas *Company*6:04-cv-00214-LED
Expert for Intergraph Hardware Technologies Company, Inc. Prepared expert reports and claim charts.
Intergraph represented by McDermott, Will and Emery LLP. Technology related to computer communications.

Mentor Graphics
Provided licensing support and IP valuation.
Technology related to emulation.

Veterinary Imaging Centers, Inc. v. Sound Technologies, Inc., et al., 1:02-cv-00282-DCN
U.S. District Court for the Northern District of Ohio
Consultant for Sound Technologies, Inc. Prepared expert reports. Technology related to computer communication.

Interealty Corp. v. Superaltive, Inc., et al., 8:01-cv-00969-AHS-AN
U.S. District Court for the Central District of California
Consultant for Superlative,Inc. Matter involved software copyright. Prepared expert reports and was deposed.
Superlative, Inc. was represented by Edward F. O'Connor with the law firm of Levin & O'Connor.
Technology related to databases.

All Computers, Inc. v. Intel Corporation, 1:04-cv-00586-GBL-LO
U.S. District Court for the Eastern District of Virginia
Consultant for All Computers, Inc. Filed numerous expert reports. Deposed by Ruffin Cordell of Fish & Richardson.
Plaintiff was represented by Edward F. O'Connor with the law firm of Levin & O'Connor.
Technology related to microprocessors.

2001

Ikos Systems, Inc. v. Axis Systems, Inc., 5:01-cv-21079-JW
U.S. District Court for the Northern District of California
Filed numerous expert reports. Deposed by Ikos Counsel. Presented tutorial to Judge Ware. Deposed.
Axis Sytems, Inc. was represented by George Riley of O'Melveny and Myers
Technology related to emulation.

Professional Activities

Member of ACM and IEEE
Program Chair 26'th International Symposium on Microarchitecture

General Chair 36'th International Symposium on Microarchitecture
Associate Editor of IEEE Transactions on Computers
Associate Editor of ACM Transactions on Embedded Computing Systems
Associate Editor of IEEE Computer
Program Committees: ISCA, MICRO, ISLPED, Network Processors Workshop, FPL, Complexity-Effective Design, RAW, Workshop on Mediaprocessors and DSP, FPT, INTERACT

Publications

Journal

1. W. H. Mangione-Smith, T.-P. Shih, S. G. Abraham, and E. S. Davidson, "Approaching a Machine-Application Bound in Delivered Performance on Scientific Codes," *Proceedings of the IEEE*, vol. 81, pp. 1166-1178, 1993.
2. C. Chien, S. Nazareth, P. Lettieri, S. Molloy, B. Schoner, W. A. I. Boring, J. Chen, C. Deng, W. H. Mangione-Smith, and R. Jain, "An Integrated Testbed for Wireless Multimedia Computing," *Journal of VLSI Signal Processing*, vol. 13, pp. 105-24, 1996.
3. K.-G. Chia, H. J. Kim, S. Lansing, W. H. Mangione-Smith, and J. Villasenor, "High Performance Automatic Target Recognition through Data-Specific VLSI," *IEEE Transactions on VLSI*, vol. 6, pp. 364-372, 1998.
4. N. R. Shnidman, W. H. Mangione-Smith, and M. Potkonjak, "On-line Fault Detection for Bus-Based Field Programmable Gate Arrays," *IEEE Transactions on Very Large Scale Integration (VLSI) Systems*, vol. 6, pp. 656-66, 1998.
5. J. Lach, W. H. Mangione-Smith, and M. Potkonjak, "Low Overhead Fault-Tolerant FPGA Systems," *IEEE Transactions on Very Large Scale Integration*, pp. 212-21, 1998.
6. D. Kirovski, C. Lee, M. Potkonjak, and W. H. Mangione-Smith, "Application-Driven Synthesis of Memory-Intensive Systems-on-Chip," *IEEE Transactions on ComputerAided Design of Integrated Circuits and Systems*, vol. 18, pp. 1316-1326, 1999. 7. W. H. Mangione-Smith, "Technical Challenges for Designing Personal Digital Assistants," *Design Automation for Embedded Systems*, vol. 4, pp. 23-39, 1999.
8. D. Kirovski, J. Kin, and W. H. Mangione-Smith, "Procedure Based Program Compression," *International Journal of Parallel Programming*, vol. 27, pp. 457-475, 1999.
9. J. Lach, W. H. Mangione-Smith, and M. Potkonjak, "Enhanced FPGA Reliability through Efficient Run-Time Fault Reconfiguration," *IEEE Transactions on Reliability*, vol. 49, pp. 296-304, 2000.
10. B. Kahng, J. Lach, W. H. Mangione-Smith, S. Mantik, I. L. Markov, M. Potkonjak, P. Tucker, H. Wang, and G. Wolfe, "Constraint-based Watermarking Techniques for Design IP Protection," *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, vol. 20, pp. 1236-52, 2001.

11. Lach, W. H. Mangione-Smith, and M. Potkonjak, "Fingerprinting Techniques for FieldProgrammable Gate Array Intellectual Property Protection," *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, vol. 20, pp. 1253-61, 2001.
12. C. Lee, J. Kin, M. Potkonjak, and W. H. Mangione-Smith, "Exploring Hypermedia Processor Design Space," *Journal of VLSI Signal Processing Systems for Signal, Image, and Video Technology*, vol. 27, pp. 171-186, 2001.
13. J. Kin, C. Lee, W. H. Mangione-Smith, and M. Potkonjak, "Exploring the Diversity of Multimedia Systems," *IEEE Transactions on VLSI Systems*, vol. 9, pp. 474-485, 2001.
14. J. Kin, M. Gupta, and W. H. Mangione-Smith, "Filtering Memory References to Increase Energy Efficiency," *IEEE Transactions on Computers*, vol. 49, pp. 1-15, 2002.
15. G. Memik and W. H. Mangione-Smith, "Precise Instruction Scheduling", *To Appear in the Journal of Instruction-Level Parallelism*, 2005.

Conference

1. T. Conte and W. Mangione-Smith, "Determining Cost-Effective Multiple Issue Processor Designs," presented at International Conference on Computer Design, 1993.
2. W. H. Mangione-Smith, S. G. Abraham, and E. S. Davidson, "The Effects of Memory Latency and Fine-Grain Parallelism on Astronautics ZS-1 Performance," presented at Twenty-Third Hawaii International Conference on System Sciences, 1990.
3. W. H. Mangione-Smith, S. G. Abraham, and E. S. Davidson, "Architectural vs. Delivered Performance of the IBM RS/6000 and the Astronautics ZS-1," presented at Twenty-Fourth Hawaii International Conference on System Sciences, 1991.
4. W. H. Mangione-Smith, S. G. Abraham, and E. S. Davidson, "Vector Register Design for Polycyclic Vector Scheduling," presented at Fourth Conference on Architectural Support for Programming Languages and Operating Systems, 1991.
5. W. Mangione-Smith, S. G. Abraham, and E. S. Davidson, "Register Requirements of Pipelined Processors," presented at International Conference on Supercomputing, 1992.
6. W. H. Mangione-Smith and B. Hutchings, "Configurable Computing: The Road Ahead," presented at Reconfigurable Architectures Workshop, Geneva, 1997.
7. J. Kin, C. Lee, W. H. Mangione-Smith, and M. Potkonjak, "Hypermedia Processors: Design Space Exploration," presented at Multi-Media Signal Processing Conference, 1998.
8. J. Lach, W. H. Mangione-Smith, and M. Potkonjak, "Fingerprinting Digital Circuits on Programmable Hardware," presented at Second International Workshop on Information Hiding, 1998.
9. J. Lach, W. H. Mangione-Smith, and M. Potkonjak, "Signature Hiding Techniques for FPGA Intellectual Property Protection," presented at IEEE/ACM International Conference on Computer-Aided Design, 1998.
10. J. Lach, W. H. Mangione-Smith, and M. Potkonjak, "FPGA Fingerprinting Techniques for Protecting Intellectual Property," presented at Custom Integrated Circuits Conference, 1998.

11. J. Lach, W. H. Mangione-Smith, and M. Potkonjak, "Efficiently Supporting FaultTolerance in FPGAs," presented at International Symposium on Field Programmable Gate Arrays, 1998.
12. W. Mangione-Smith, "Configurable Computing: Concepts and Issues," presented at Thirtieth Hawaii International Conference on System Sciences, 1997.
13. J. Villasenor, B. Schoner, C. Kang-Ngee, C. Zapata, K. Hea Joung, C. Jones, S. Lansing, and B. Mangione-Smith, "Configurable Computing Solutions for Automatic Target Recognition," presented at FPGAs for Custom Computing Machines, 1996.
14. B. Mangione-Smith, "Low Power Communications Protocols: Paging and Beyond," presented at IEEE Symposium on Low Power Electronics, 1995.
15. H. J. Kim, W. H. Mangione-Smith, and M. Potkonjak, "Protecting Ownership Rights of a Lossless Image Coder through Hierarchical Watermarking," presented at IEEE Workshop on Signal Processing Systems, 1998.
16. B. Kahng, J. Lach, W. H. Mangione-Smith, S. Mantik, I. L. Markov, M. Potkonjak, P. Tucker, H. Wang, and G. Wolfe, "Watermarking Techniques for Intellectual Property Protection," presented at Design and Automation Conference, 1998.
17. Rashid, J. Leonard, and W. H. Mangione-Smith, "Dynamic Circuit Generation for Solving Specific Problem Instances of Boolean Satisfiability," presented at FPGAs for Custom Computing Machines, 1998.
18. D. Kirovski, C. Lee, M. Potkonjak, and W. Mangione-Smith, "Synthesis of Power Efficient Systems-on-Silicon," presented at Asia and South Pacific Design Automation Conference, 1998.
19. J. Leonard and W. H. Mangione-Smith, "A Case Study of Partially Evaluated Hardware Circuits: Key-Specific DES," presented at Field-Programmable Logic and Applications, 1997.
20. N. R. Shnidman, W. H. Mangione-Smith, and M. Potkonjak, "Fault Scanner for Reconfigurable Logic," presented at Advanced Research in VLSI, 1997.
21. J. Kin, M. Gupta, and W. H. Mangione-Smith, "The Filter Cache: an Energy Efficient Memory Structure," presented at International Symposium on Microarchitecture, 1997.
22. D. Kirovski, J. Kin, and W. H. Mangione-Smith, "Procedure Based Program Compression," presented at International Symposium on Microarchitecture, 1997.
23. D. Kirovski, C. Lee, M. Potkonjak, and W. H. Mangione-Smith, "Application-Driven Synthesis of Core-Based Systems," presented at International Conference on Computer Aided Design, 1997.
24. Mangione-Smith, P. S. Ghang, S. Nazareth, P. Lettieri, W. Boring, and R. Jain, "A Low Power Architecture for Wireless Multimedia Systems: Lessons Learned from Building a Power Hog," presented at International Symposium on Low Power Electronics and Design, 1996.
25. Lee, J. Kin, M. Potkonjak, and W. H. Mangione-Smith, "Media Architecture: General Purpose vs. Multiple Application-Specific Programmable Processor," presented at Design Automation Conference, 1998.
26. Lee, M. Potkonjak, and W. H. Mangione-Smith, "MediaBench: a Tool for Evaluating and Synthesizing Multimedia and Communications Systems," presented at International Symposium on Microarchitecture, 1997.

27. Rashid, J. Asher, W. H. Mangione-Smith, and M. Potkonjak, "Hierarchical Watermarking for Protection of DSP Filter Cores," presented at IEEE 1999 Custom Integrated Circuits Conference, San Diego, CA USA, 1999.
28. H. Zou, H. J. Kim, S. Kim, B. Daneshrad, R. Wesel, and W. H. Mangione-Smith, "Equalized GMSK, Equalized QPSK, and COFDM, a Comparative Study for High Speed Wireless Indoor Data Communications," presented at International Vehicular Technology Conference, Houston, TX USA, 1999.
29. J. Kin, C. Lee, W. H. Mangione-Smith, and M. Potkonjak, "Power Efficient Mediaprocessors: Design Space Exploration," presented at Design Automation Conference, New Orleans, LA USA, 1999.
30. J. Lach, W. H. Mangione-Smith, and M. Potkonjak, "Robust FPGA Intellectual Property Protection through Multiple Small Watermarks," presented at Design Automation Conference, 1999.
31. J. Lach, W. H. Mangione-Smith, and M. Potkonjak, "Efficient Error Detection, Localization and Correction for FPGA-based Debugging," presented at Design Automation Conference, 2000.
32. J. Lach, W. H. Mangione-Smith, and M. Potkonjak, "Algorithms for Efficient Runtime Fault Recovery on Diverse FPGA Architectures," presented at IEEE International Symposium on Defect and Fault Tolerance in VLSI Systems, 1999.
33. Lee, J. Kin, M. Potkonjak, and W. Mangione-Smith, "Designing Power Efficient Hypermedia Processors," presented at International Symposium on Low Power Electronics and Design, 1999.
34. J. Lach, W. H. Mangione-Smith, and W. Potkonjak, "Enhanced Intellectual Property Protection for Digital Circuits on Programmable Hardware," presented at International Workshop on Information Hiding, 1999.
35. J. Lach, W. H. Mangione-Smith, and M. Potkonjak, "Runtime Logic and Interconnect Fault Recovery on Diverse FPGA Architectures," presented at Military and Aerospace Applications of Programmable Devices and Technologies, 1999.
36. Benyamin and W. Mangione-Smith, "Functional Unit Specialization through Code Analysis," presented at International Conference on Computer Aided Design, 1999.
37. J. Kin, C. Lee, W. H. Mangione-Smith, and M. Potkonjak, "A Technique for QoSBased System Partitioning," presented at ASP-DAC, 2000.
38. S. Brown, C. Lee, and W. H. Mangione-Smith, "Offline Program Re-Mapping to Improve Branch Prediction Efficiency in Embedded Systems," presented at ASP-DAC, 2000.
39. H. Kim and W. Mangione-Smith, "Factoring Large Numbers with Programmable Hardware," presented at International Symposium on Field Programmable Gate Arrays, 2000.
40. G. Memik, W. Hu, and W. Mangione-Smith, "NetBench: A Benchmarking Suite for Network Processor," presented at Computer Aided Design, 2001.
41. G. Memik, S. Memik, and W. Mangione-Smith, "Design and Analysis of a Layer Seven Network Processor Accelerator Using Reconfigurable Logic," presented at IEEE Symposium on FPGAs for Custom Computing Machines, 2002.
42. G. Memik and W. Mangione-Smith, "A Flexible Accelerator for Layer 7 Networking Applications," presented at Design Automation Conference, 2002.

43. Y. Cho, S. Navab, and W. Mangione-Smith, "Specialized Hardware for Deep Network Packet Filtering," presented at International Conference on Field Programmable Logic and Application, 2002.
44. G. Memik and W. Mangione-Smith, "Improving Power Efficiency of Multi-Core Network Processors Through Data Filtering," presented at International Conference on Compilers, Architecture and Synthesis for Embedded Systems, 2002.
45. G. Memik, G. Reinman, and W. Mangione-Smith, "Just Say No: Benefits of Early Cache Miss Determination," presented at International Symposium on High Performance Computer Architecture, 2002.
46. G. Memik and W. Mangione-Smith, "NEPAL: A Framework for Efficiently Structuring Applications for Network Processors," presented at NP-2: The Second Workshop on Network Processors, Anaheim, CA, 2003.
47. G. Memik, G. Reinman, and W. H. Mangione-Smith, "Reducing Energy and Delay Using Efficient Victim Caches," presented at International Symposium on Low Power Electronics and Design, Seoul, Korea, 2003.
48. Young Cho and William H. Mangione-Smith, "Programmable Hardware for Deep Packet Filtering on a Large Signature Set." First Watson Conference on Interaction between Architecture, Circuits, and Compilers (P=ac 2), Yorktown, NY, Oct. 6-8, 2004
49. Young Cho and William H. Mangione-Smith, "Deep Packet Filter with Dedicated Logic and Read-Only-Memories." IEEE Symposium on Field-Programmable Custom Computing Machines (FCCM), Napa Valley / CA, April 2004.

Book Chapters

1. W. H. Mangione-Smith, "Register Requirements for High Performance Code Scheduling," in *The Interaction of Compiler Technology and Computer Architecture*, D. Lilja and P. Bird, Eds.: Kluwer Academic Press, 1994, pp. 51-84.
2. W. H. Mangione-Smith, "Performance Bounds for Rapid Computer System Evaluation," in *Fast Simulation of Computer Architectures*, T. Conte and C. Gimarc, Eds.: Kluwer Academic Press, 1995.
3. G. Memik and W. H. Mangione-Smith, "NEPAL: A Framework for Efficiently Structuring Applications for Network Processors," in *Network Processor Design: Issues and Practices*, vol. 2, P. Crowley, M. A. Franklin, H. Hadimioglu, and P. Z. Onufryk, Eds.: Morgan Kaufman, 2003.

Magazine Articles

1. W. H. Mangione-Smith, S. G. Abraham, and E. S. Davidson, "A Performance Comparison of the IBM RS/6000 and the Astronautics ZS-1," in *IEEE Computer*, vol. 24, 1991.
2. W. H. Mangione-Smith, B. Hutchings, D. Andrews, A. DeHon, C. Ebeling, R. Hartenstein, O. Mencer, J. Morris, K. Palem, V. K. Prasanna, and H. A. E.

Spaanenburg, "Seeking Solutions in Configurable Computing," in *IEEE Computer*, vol. 30, 1997, pp. 38-43.
3. W. H. Mangione-Smith, "Application Design for Configurable Computing," in *IEEE Computer*, vol. 30, 1997, pp. 115-17.
4. J. Villasenor and W. H. Mangione-Smith, "Configurable Computing," in *Scientific American*, vol. 276, 1997, pp. 54-9.
5. W. H. Mangione-Smith, "Mobile Computing and Smart Spaces," in *IEEE Concurrency*, vol. 6, 1998, pp. 5-7.
6. W. H. Mangione-Smith, "'Beauty Depends on Size'-Aristotle," in *IEEE Concurrency*, vol. 6, 1998, pp. 8-10.