C U R R I C U L U M V I T A E

Joe Grand aka Kingpin

May 23, 2026

1993-1997
B.S., Computer Engineering, Boston University, Boston, Massachusetts.

1993-2000
Director and Design Engineer, L0pht Heavy Industries, Watertown, Massachusetts.

1998-2000
Electrical Engineer, Design Continuum, West Newton, Massachusetts.

2000-2002
Co-Founder and Research Scientist, @stake, Cambridge, Massachusetts.

2007-2008
Co-Host and Electrical Engineer, Prototype This, Discovery Channel.

2010
Hon.DTech, University of Advancing Technology, Tempe, Arizona.

2002-present
Founder and Principal Engineer, Grand Idea Studio, Portland, Oregon.

OUTSIDE BOARDS

2004-2013
Technical Advisor, MAKE Magazine, Sebastopol, California.

2010-2013
Technical Advisor, MakerBot Industries, Brooklyn, New York.

2014-2018
Advisor, Crowd Supply, Portland, Oregon.

AWARDS

2023
DEFCON Uber Lifetime Achievement Award.

SELECTED PRODUCTS

(Q1) A.T. Cross iPen : Battery-powered electronic stylus and drawing tablet for use with a desktop PC, Contributed to design modifications of the pre-production units, June 1997.

(Q2) FluidSense FS-01 Infusion Pump : Handheld, battery-operated infusion pump, Features include user authentication, precision fluid control, data collection, infrared data transfer capabilities, and 96-hour battery life, Co-designer, Featured in Inventions of the Year, Time Magazine December 2000.

(Q3) Bio-Rad Moto Alpha Unit : Motorized, heated lid unit for Bio-Rad's family of DNA Engine Thermal Cyclers, Features include automated lid control and accurate pressure sensor feedback, Co-designer, December 2000.

(Q4) SCSIcide : Cartridge-based video game for the Atari 2600 VCS console, August 2001.

(Q5) pdd : Memory imaging tool for forensic analysis of Palm-based PDAs, November 2001.

(Q6) Redemption 5200 : Videogame controller adapter which allows the use of Atari 2600, Atari 7800, Sega Genesis, and PC controllers on the Atari 5200, July 2003.

(Q7) thesmartgolfer Laser Putting Alignment System : Laser training aid for golf putting providing instant feedback on targeting, clubface orientation, and the ball impact zone, September 2003.

(Q8) Emic Text-to-Speech Module : Fully integrated unit that converts a stream of digital text into a high-quality English-speaking voice, September 2003.

(Q9) Stelladaptor : Atari 2600 controller-to-USB interface, Allows classic-style joysticks, paddles, and driving controllers to be used on modern PCs, March 2004.

(Q10) Safety 1st SmartLight Stair Gate : Child safety gate containing motion-activated lights that illuminate the stairway and landing upon approach, Developed the initial proof-of-concept prototype, August 2004.

(Q11) Gamecaster Cybercam Controller : Revolutionary camera that connects to live multiplayer video game matches, enabling pro-sports cameramen to shoot the virtual action from "within" the game, August 2004.

(Q12) Parallax RFID Reader Module, Serial Interface : Low-cost module for radio frequency identification (RFID) applications, Reads 125kHz passive RFID tags from up to four inches away, May 2005.

(Q13) Atari FlashBack 2 Classic Game Console : Dedicated console with 40 built-in games, Modeled after the 1977 release of the Atari 2600 Video Computer System (VCS), Developed the paddle detection algorithms used in selected games, August 2005.

(Q14) Optical Dance Pad : Contactless dance pad controller for video game systems, August 2005.

(Q15) StenoCast X7 : Bluetooth-enabled device that provides realtime, point-to-multipoint transmission of a court reporter's transcription data, September 2005.

(Q16) DEFCON 14 Conference Badge : Event badge for the largest and oldest continuously running hacker and computer security convention in the world, Contains active electronics mounted on an artistically designed printed circuit board, August 2006.

(Q17) chumby : Wi-Fi enabled content delivery device designed to be used around the home to display real-time, user-customizable information, August 2006.

(Q18) Parallax GPS Receiver Module : Low-cost module for global positioning system (GPS) applications, September 2006.

(Q19) DEFCON 15 Conference Badge : Event badge for the largest and oldest continuously running hacker and computer security convention in the world, Contains active electronics to scroll custom text messages on a 95 LED matrix, Other features include capacitive sensing buttons and support for accelerometer and wireless functionality, Top Ten Finalist of the Freescale Black Widow Design Challenge, August 2007.

(Q20) Perseus Athletics Posture-Tek : System and mechanism to detect and silently alert the user when poor posture occurs, Designed to ensure proper, user-defined posture during exercise or everyday life, December 2007.

(Q21) DEFCON 16 Conference Badge : Event badge for the largest and oldest continuously running hacker and computer security convention in the world, Contains active electronics to transmit and receive data via infrared, Other features include SecureDigital memory card support, LED animations, and artistic elements, August 2008.

(Q22) BSODomizer : Covert electronic device that injects a fake BSOD (Blue Screen of Death) onto a computer monitor at random time intervals, Interfaces between a target computer and a VGA monitor, August 2008.

(Q23) Parallax RFID Reader Module, USB Interface : Low-cost module for radio frequency identification (RFID) applications, Reads 125kHz passive RFID tags from up to four inches away, Easy connection to host computer via bus-powered USB interface, August 2008.

(Q24) DEFCON 17 Conference Badge : Event badge for the largest and oldest continuously running hacker and computer security convention in the world, Contains active electronics to affect the state of a multicolor LED based on audio input, Other features include multi-badge communication and artistic elements, July 2009.

(Q25) AVRSimon : Educational kit designed to introduce students to electronics, soldering, and hands-on assembly, February 2010.

(Q26) Parallax RFID Read/Write Module : Low-cost module for radio frequency identification (RFID) applications, Reads and writes 125kHz passive RFID tags with support for up to 116 bytes of user data storage and optional security features, March 2010.

(Q27) DEFCON 18 Conference Badge : Event badge for the largest and oldest continuously running hacker and computer security convention in the world, Contains active electronics mounted on an artistically designed, aluminum substrate, laser engraved printed circuit board, Features include a miniature liquid crystal display (LCD), USB connectivity, seamless power switching, and hidden functionality for a variety of contests held at the conference, July 2010.

(Q28) Mobile Monitor Technologies Field Monitor Pro / Monitor2Go : The world's first portable monitor that provides an immediate secondary display through a simple USB connection, August 2010.

(Q29) Laser Range Finder Module : Low-cost distance measuring instrument that uses laser light and a camera to determine distance to a targeted object, September 2011.

(Q30) Emic 2 Text-to-Speech Module : Fully integrated, multi-language voice synthesizer that converts a stream of digital text into natural sounding speech output, July 2012.

(Q31) Philips Color Kinetics OLED Tile : Light fixture concept created to explore the use of organic light-emitting diode (OLED) technology in a modular and interactive manner, Features include a removable 6.8-inch OLED panel, individual addressing and control via WiFi or Ethernet, tilt sensing, and on-board Li-Ion battery and charging, November 2012.

(Q32) JTAGulator : Engineering research and development tool that assists in identifying on-chip debug (OCD) and/or programming connections from test points, vias, or component pads on a target electronic device, April 2013.

(Q33) Solidoodle Press : Entry-level 3D printer with 8 x 8 x 8-inch build volume, heated build platform, and auto-calibration technology, Contributed to the design of the LED ring and button interface, January 2015.

(Q34) OpticSpy : A suite of optical receiver modules that provide an easy-to-use platform for exploring, evaluating, and experimenting with optical data transmissions, October 2016.

(Q35) Parallax RFID Read/Write Module, USB Interface : Low-cost module for radio frequency identification (RFID) applications, Reads and writes 125kHz passive RFID tags with support for up to 116 bytes of user data storage and optional security features, Easy connection to host computer via bus-powered USB interface, February 2018.

(Q36) DEFCON China 1.0 Conference Badge : Event badge for the first international edition of DEFCON, the largest and oldest continuously running hacker and computer security convention in the world, Contains active electronics mounted on an artistically designed, flexible circuit board, Features include 32 individually-addressable LEDs, motion sensing, USB connectivity, and game functionality for use at the conference, May 2019.

(Q37) DEFCON 27 Conference Badge : Event badge for the largest and oldest continuously running hacker and computer security convention in the world, Combines natural elements with active electronics, Features include handcrafted Brazilian quartz gemstone, near-field magnetic induction wireless communication, and game functionality for use at the conference, August 2019.

(Q38) Pizza Compass : Handheld device that directs the user to the nearest pizza place no matter where they are in the world, Combines GPS, digital compass, Internet connectivity, visual indicators, and an artistically designed circuit board, December 2020.

(Q39) The World's Thinnest Boombox : Retro-style portable sound system, Features ultra-thin piezo speaker elements, capacitive touch sensing buttons, visual indicators, and an artistically designed circuit board, November 2022.

Hobbyist and experimental products not included.

PATENTS

(I1) U.S. Patent No. 7,181,560 : Method and Apparatus for Preserving Computer Memory Using Expansion Card

Inventor(s):
Grand; Joseph (Brookline, MA)
Carrier; Brian (Bow, NH)

Filed / Issued Dates:
Dec. 21, 2001 / Feb. 20, 2007

(I2) U.S. Patent No. 7,403,220 : Apparatus, Methods, and Systems for Viewing and Manipulating a Virtual Environment

Inventor(s):
MacIntosh; David (San Diego, CA)
Morelock; David M. (Santee, CA)
Grand; Joseph (San Diego, CA)

Filed / Issued Dates:
Aug. 23, 2004 / Jul. 22, 2008

(I3) U.S. Patent No. 7,249,846 : Eyewear with an Image Projected off of an Unassisted Eyewear Lens to the User

Inventor(s):
Grand; Joseph B. (San Diego, CA)
Morelock; David M. (Kenmore, WA)

Manalo; Gil David (Redmond, WA)
Cruz; Ricardo Antonio (San Diego, CA)

Filed / Issued Dates:
May 3, 2005 / Jul. 31, 2007

(I4) U.S. Patent No. D592,678 : Audiovisual Device

Inventor(s):
Adler; Steven M. (San Diego, CA)
Grand; Joseph B. (San Francisco, CA)
Huang; Andrew S. (Cardiff-by-the-Sea, CA)
Maxwell; Duane S. (San Diego, CA)
Meyerhoffer; Thomas Erik (Montara, CA)
Steele; Kenneth E. (Del Mar, CA)
Tomlin; Stephen L. (San Diego, CA)

Filed / Issued Dates:
May 19, 2008 / May 19, 2009

(I5) U.S. Patent No. D665,551 : Heat-Sealed Waste Disposal

Inventor(s):
Grand; Joseph B. (San Francisco, CA)
Fiegener; John D. (Marblehead, MA)
Wald; Samuel (Marblehead, MA)
Gernetzke; Thomas (Charlestown, MA)
Vespa; William (Salem, MA)
Liteplo; William (Wakefield, MA)
McDaid; Cornelius (Randolph, MA)
Berg; Brenda G. (Raleigh, NC)

Filed / Issued Dates:
Sep. 19, 2011 / Aug. 14, 2012

(I6) U.S. Patent No. 8,839,224 : System and Method for Automatically Updating the Software of a Networked Personal Audiovisual Device

Inventor(s):
Adler; Steven M. (San Diego, CA)
Grand; Joseph B. (San Francisco, CA)
Huang; Andrew S. (Cardiff, CA)
Maxwell; Duane S. (San Diego, CA)
Steele; Kenneth E. (San Diego, CA)
Tomlin; Stephen L. (San Diego, CA)

Filed / Issued Dates:
August 24, 2007 / September 16, 2014

(I7) U.S. Patent No. 9,654,589 : Configurable Personal Audiovisual Device for use in Networked Application-Sharing System

Inventor(s):
Adler; Steven M. (San Diego, CA)
Grand; Joseph B. (San Diego, CA)
Huang; Andrew S. (Cardiff-by-the-Sea, CA)

Maxwell; Duane S. (San Diego, CA)
Steele; Kenneth E. (San Diego, CA)
Tomlin; Stephen L. (San Diego, CA)

Filed / Issued Dates:
Aug. 24, 2006 / May 16, 2017

Patent applications not shown.

PUBLICATIONS

(1) Kingpin (Grand J) : Cellular Phone Biopsy, 2600 Magazine 10(4):6-8, Winter 1993.

(2) Kingpin (Grand J) : Cellular Hardware and Electronics, 2600 Magazine 11(4), Winter 1994.

(3) Kingpin (Grand J) : Red Box Detection Circuit, 2600 Magazine 14(1):54-57, Spring 1997.

(4) Kingpin (Grand J) : Moody Furballs and the Developers Who Love Them: Happy Hacking, Sidebar, Wired 6(9):143, September 1998.

(5) Kingpin (Grand J) : Touch Memory Primer, 2600 Magazine 15(4):6-11, Winter 1998.

(6) Kingpin (Grand J) : Attacks on and Countermeasures for USB Hardware Token Devices, Proceedings of the Fifth Workshop on Secure IT Systems (NORDSEC) 35-37, Reykjavik, Iceland, October 12, 2000.

(7) Kingpin (Grand J) : Security Threats to Palm OS Devices, Internet Security Advisor 4(1):19-22, January/February 2001.

(8) Kingpin (Grand J) & Mudge : Security Analysis of the Palm Operating System and its Weaknesses Against Malicious Code Threats, Proceedings of the 10th USENIX Security Symposium 135-151, Washington, D.C., August 16, 2001.

(9) Russell R (Editor), Grand J, et al. : Hack Proofing Your Network (Second Edition), Syngress Publishing, Rockland, Massachusetts, ISBN 1928994709, March 2002.

(10) Grand J : pdd: Memory Imaging and Forensic Analysis of Palm OS Devices, Proceedings of the 14th Annual Computer Security Incident Handling Conference, Waikoloa, Hawaii, June 26, 2002.

(11) Grand J : Digital Dangers, eBusiness Advisor 20(7):62-65, September/October 2002.

(12) Grand J : Retro Game Postmortem: Pixels Past's SCSIcide, Gamasutra, February 26, 2003.

(13) Russell R (Editor), Grand J, et al. : Stealing The Network: How to "Own the Box", Syngress Publishing, Rockland, Massachusetts, ISBN 1931836876, March 2003.

(14) Grand J : Emic: Portable Hardware-Based TTS for Budget Sensitive Environments, Proceedings of the Applied Voice Input/Output Society (AVIOS) Speech Developers Conference 2003, San Jose, California, April 2, 2003.

(15) Grand J : The SCSIcide Experience: Developing a Modern Game for a Classic System, Austin Gaming Exposition 2003 program, Austin, Texas, July 26, 2003.

(16) Grand J, et al. : Hardware Hacking: Have Fun While Voiding Your Warranty, Syngress Publishing, Rockland, Massachusetts, ISBN 1932266836, January 2004.

(17) Carrier B.D. & Grand J : A Hardware-Based Memory Acquisition Procedure for Digital Investigations, Digital Investigation Journal 1(1):50-60, ISSN 1742-2876, February 2004.

(18) Grand J : Practical Secure Hardware Design for Embedded Systems, Proceedings of the 2004 Embedded Systems Conference, San Francisco, California, April 1, 2004.

(19) Russell R (Editor), Grand J, et al. : Stealing The Network: How to Own a Continent, Syngress Publishing, Rockland, Massachusetts, ISBN 1931836051, April 2004.

(20) Grand J : Understanding Embedded Security, Circuit Cellar 169:22-25, August 2004.

(21) Grand J : Don't Believe Everything You Hear: A Commentary on Adopting Security Technologies, The Security Journal 9:30-31, Fall 2004.

(22) Grand J, et al. : Game Console Hacking: Xbox, PlayStation, Nintendo, Atari, & Gamepark 32, Syngress Publishing, Rockland, Massachusetts, ISBN 1931836310, October 2004.

(23) Grand J : Primer: Soldering & Desoldering, MAKE Magazine 1:162-169, February 2005.

(24) Grand J : Embedded Security Design (Part 1), Circuit Cellar, 176:28-32, March 2005.

(25) Grand J : Embedded Security Design (Part 2), Circuit Cellar, 177:34-38, April 2005.

(26) Grand J : Retro Game Heaven: The Atari 2600PC, MAKE Magazine 2:50-84, May 2005.

(27) Grand J : Peace and Quiet With the Flip of a Switch: Adding a Power Switch to an External Drive, MAKE Magazine 2:141-143, May 2005.

(28) Grand J : Getting Back to Our (Hardware Hacking) Roots: Building Robots with Vintage Computer Parts, Computer Collector Newsletter, 4(23), June 13, 2005.

(29) Grand J : Replace Your iPod's Battery, PC Magazine 24(13):80-81, August 9, 2005.

(30) Grand J : Primer: Reading & Drawing Schematics, MAKE Magazine 3:151-152, July 2005.

(31) Grand J : Protecting Your Crown Jewels: An Introduction to Embedded Security for Hardware-Based Products, Computer Fraud & Security Journal 13-20, October 2005.

(32) Grand J : Full Mast Reception, MAKE Magazine 5:150, February 2006.

(33) Grand J : RFID for Makers, MAKE Magazine 6:160-163, May 2006.

(34) Grand J : Research Lessons from Hardware Hacking, Communications of the ACM 49(6):44-49, June 2006.

(35) Grand J, et al. : Joe Grand's "Best of" Hardware, Wireless & Game Console Hacking, Syngress Publishing, Rockland, Massachusetts, ISBN 1597491136, June 2006.

(36) Grand J : Behind the Scenes of the DEFCON Badge...A Short Story, DEFCON 14 program, Las Vegas, Nevada, August 2006.

(37) Grand J : 1966: A Big Year for Games (An afternoon with Ralph Baer, the "Father of Video Games"), MAKE Magazine 8:62-63, November 2006.

(38) Grand J : Propeller Chip: Silicon from Scratch (Sidebar), MAKE Magazine 10:81, May 2007.

(39) Grand J : Primer: Voltage, Current, & Resistance, MAKE Magazine 10:164-166, May 2007.

(40) Grand J : Making the DEFCON 15 Badge, Nuts & Volts 29(7):52-59, July 2008.

(41) Brooks A.G. & Grand J : Engineered Reality: Prototyping Inventions for Television, IEEE Pervasive Computing, Special Issue on The Hacking Tradition 7(3):24-31, July-September 2008.

(42) Grand J : Making the DEFCON 16 Badge, Nuts & Volts 30(3):54-58, March 2009.

(43) Russell R (Editor), Grand J, et al. : Stealing the Network: The Complete Series Collector's Edition, Final Chapter, and DVD, Syngress Publishing, Burlington, Massachusetts, ISBN 159749299X, May 2009.

(44) Grand J : AVRSimon: A Do-It-Yourself Game Kit, Nuts & Volts 31(3):42-46, March 2010.

(45) Grand J : The Projects of Prototype This: PyroPack, Nuts & Volts 31(6):40-43, June 2010.

(46) Grand J : Making the DEFCON 17 Badge, Nuts & Volts 31(7):44-50, July 2010.

(47) Grand J : The Projects of Prototype This: Virtual Sea Adventure, Nuts & Volts 31(9):50-53, September 2010.

(48) Grand J : The Projects of Prototype This: Wristband GPS Transmitter, Nuts & Volts 31(12):48-52, December 2010.

(49) Grand J : A Hacker's Perspective: Is the Industry Prepared for Smart Technologies?, The Parker, Canadian Parking Association, Q2:26-29, July 2011.

(50) Grand J : Making the DEFCON 18 Badge, Nuts & Volts 32(9):44-50, September 2011.

(51) Grand J : Designing a Low-Cost Laser Range Finder - Part 1, SERVO 9(10):56-61, October 2011.

(52) Grand J : Designing a Low-Cost Laser Range Finder - Part 2, SERVO 9(11):40-47, November 2011.

(53) Grand J : Printed Circuit Board Deconstruction Techniques, Proceedings of the 8th USENIX Workshop on Offensive Technologies (WOOT '14), August 2014.

(54) Grand J : Introduction to Delayering and Reversing PCBs, International Journal of PoC||GTFO 6:37-40, November 25, 2014.

(55) Grand J : Foreword in Dahl Ø : Electronics for Kids: Play with Simple Circuits and Experiment with Electricity!, No Starch Press, ISBN 1593277253, July 2016.

(56) Ng KT (Editor), Grand J, et al. : PCB-RE: Tools & Techniques, ISBN 1979331383, December 2017.

(57) Grand J : The DIP Flip Whixr Trick: An Integrated Circuit That Functions in Either Orientation, International Journal of PoC||GTFO 17:32-33, December 2017.

(58) Grand J : Foreword in Ng KT : Manual PCB-RE: The Essentials, ISBN 9798716998513, August 2021.

(59) Grand J : Foreword in van Woudenberg J & O'Flynn C : The Hardware Hacking Handbook: Breaking Embedded Security with Hardware Attacks, No Starch Press, ISBN 9781593278748, November 2021.

(60) Grand J : Hiding in Plain Sight: Send Secret Messages Invisibly Over Light Waves With Your Own Optical Covert Channel, MAKE Magazine 87:30-35, November 2023.

SELECTED PRESENTATIONS

(P1) Kingpin (Grand J) & L0pht Heavy Industries : Weak Computer Security in Government: Is the Public at Risk?, Testimony, United States Senate Committee on Governmental Affairs, Washington, D.C., May 19, 1998.

(P2) Kingpin (Grand J) & Tan : Discussions of the Computer Underground and Security Issues, Boston College MBA Hi-Tech Club, Chestnut Hill, Massachusetts, April 7, 1999.

(P3) Kingpin (Grand J) & Tan : Topics in Internet Security, Boston University, Boston, Massachusetts, December 6, 1999.

(P4) Kingpin (Grand J) & Tan : Technology and Human Values, Northeastern University, Boston, Massachusetts, December 8, 1999.

(P5) Kingpin (Grand J) & Oblivion B : Secure Hardware Design, Black Hat USA 2000 Briefings and Training, Las Vegas, Nevada, July 26, 2000.

(P6) Kingpin (Grand J) & Mudge : Analysis of Portable Devices and Their Weaknesses Against Malicious Code Threats, RSA Conference 2001, San Francisco, California, April 11, 2001.

(P7) Kingpin (Grand J) : Attacks on and Countermeasures for USB Hardware Token Devices, RSA Conference 2001, San Francisco, California, April 12, 2001.

(P8) Kingpin (Grand J) : Palm Device Security Weaknesses, IBM Thomas J. Watson Research Center, Hawthorne, New York, May 1, 2001.

(P9) Grand J : pdd: Memory Imaging and Forensic Analysis of Palm OS Devices, The Conference & Expo on Mobile & Wireless Security 2002, Atlanta, Georgia, September 11, 2002.

(P10) Grand J : Introduction to Embedded Security, Black Hat Europe 2004 Briefings and Training, Amsterdam, Netherlands, May 19, 2004.

(P11) Kingpin (Grand J) : Advanced Hardware Hacking Techniques, DEFCON 12, Las Vegas, Nevada, July 30, 2004.

(P12) Grand J : Practical Secure Hardware Design for Embedded Systems, Embedded Security Seminar, Boston, Massachusetts, September 14, 2004.

(P13) Grand J : Understanding Embedded Security, Black Hat Asia 2004 Briefings and Training, Tokyo, Japan, October 15, 2004.

(P14) Grand J : Hands-on Hardware Hacking and Reverse Engineering Techniques, Black Hat USA 2005 Briefings and Training, Las Vegas, Nevada, July 23 and 24, 2005.

(P15) Grand J : Trusting Hardware: Exploring Security Problems in Hardware Devices, Association of Computing Machinery (ACM) San Diego Chapter Meeting, San Diego, California, September 15, 2005.

(P16) Grand J : Hardware Hacking, Tweaking, and Bending: Making Technology Do Things It Was Never Intended To Do, University of Advancing Technology (UAT) 2005 Technology Forum, Tempe, Arizona, November 2, 2005.

(P17) Grand J : Look Before You Leap: Understanding RFID and its Inherent Security Risks, The Conference & Expo on Mobile & Wireless Security 2005, Orlando, Florida, November 15, 2005.

(P18) Kingpin (Grand J) : Behind the Scenes of the DEFCON Badge, DEFCON 14, Las Vegas, Nevada, August 4, 2006.

(P19) Kingpin (Grand J) : Making of the DEFCON 15 Badge, DEFCON 15, Las Vegas, Nevada, August 3, 2007.

(P20) Kingpin (Grand J) : Making the DEFCON 16 Badge, DEFCON 16, Las Vegas, Nevada, August 8, 2008.

(P21) Kingpin (Grand J) & Zoz : BSODomizer, DEFCON 16, Las Vegas, Nevada, August 9, 2008.

(P22) Grand J : Turning Science into Sound Bites: Lessons from Prototype This, SOURCE Conference, Boston, Massachusetts, March 11, 2009.

(P23) Grand J, Appelbaum J, & Tarnovsky C : "Smart" Parking Meter Implementations, Globalism, and You, Black Hat USA 2009 Briefings and Training, Las Vegas, Nevada, July 30, 2009.

(P24) Kingpin (Grand J) : The Making of and Hacking the DEFCON 17 Badge, DEFCON 17, Las Vegas, Nevada, July 31, 2009.

(P25) Kingpin (Grand J) & Zoz : The Projects of Prototype This!, DEFCON 17, Las Vegas, Nevada, August 1, 2009.

(P26) Grand J : Hardware is the New Software (Keynote), Hack in the Box Malaysia 2009, Kuala Lumpur, Malaysia, October 7, 2009.

(P27) Grand J : Lessons from Prototype This, University of Advancing Technology (UAT) 2009 Technology Forum, Tempe, Arizona, November 4, 2009.

(P28) Grand J : Perspectives from the L0pht (Keynote), ITWeb Security Summit 2010, Johannesburg, South Africa, May 12, 2010.

(P29) Grand J : Evolution of Malware: How hardware is becoming the new domain for software hackers, Department of Defense, Washington, D.C., May 27, 2010.

(P30) Kingpin (Grand J) : Behind the Scenes of the DEFCON 18 Badge, DEFCON 18, Las Vegas, Nevada, July 30, 2010.

(P31) Grand J : A Five-Year History of DEFCON's Electronic Badges, DakotaCon, Madison, South Dakota, April 15, 2011.

(P32) Grand J : Development Diary: The Parallax Laser Range Finder, Unofficial Propeller Expo West 2011, Rocklin, California, May 21, 2011.

(P33) Grand J : Hardware Hacking for Kids, DEFCON Kids, Las Vegas, Nevada, August 7, 2011.

(P34) Grand J : Breaking San Francisco's "Smart" Parking Meter, dorkbot-sf, San Francisco, California, October 12, 2011.

(P35) Grand J : Thinking Differently: Bringing the Hacker Mindset to the Corporate Environment (Keynote), SecTor 2011, Toronto, Canada, October 18, 2011.

(P36) Grand J : The Current State of Hardware Hacking: Like Shooting Fish in a Barrel, DESIGN West, San Jose, California, March 26, 2012.

(P37) Grand J : Talking, Singing, and Game Boy Printing, Parallax Robotics & Microcontroller Expo 2012, Rocklin, California, April 13, 2012.

(P38) Kingpin (Grand J) & Zoz : More Projects of Prototype This!, DEFCON 20, Las Vegas, Nevada, July 28, 2012.

(P39) Grand J : Stories and Stuff (Keynote), ToorCamp 2012, Neah Bay, Washington, August 9, 2012.

(P40) Grand J : JTAGulator: Assisted discovery of on-chip debug interfaces, DESIGN West, San Jose, California, April 24, 2013.

(P41) Grand J : Using Superpowers for Hardware Reverse Engineering, EE Live! 2014, San Jose, California, April 3, 2014.

(P42) Kingpin (Grand J) : Deconstructing the Circuit Board Sandwich: Effective Techniques for PCB Reverse Engineering, DEFCON 22, Las Vegas, Nevada, August 10, 2014.

(P43) Grand J : Tools of the Hardware Hacking Trade, RSA Conference 2015, San Francisco, California, April 22, 2015.

(P44) Grand J : Making Magical Mustaches with Mustache Mayhem, DorkbotPDX, Portland, Oregon, May 4, 2015.

(P45) Grand J : Stories from the Hardware Startup World, Hardware Massive, Portland, Oregon, May 11, 2016.

(P46) Grand J, Grand B, & Grand M : Activate Engineer Powers! Creating a Real-Life Creaturepod, ToorCamp 2016, Orcas Island, Washington, June 11, 2016.

(P47) Kingpin (Grand J) & Zoz : BSODomizer HD: A mischievous FPGA and HDMI platform for the (m)asses, DEFCON 24, Las Vegas, Nevada, August 5, 2016.

(P48) Kingpin (Grand J) & FitzPatrick J : 101 Ways to Brick Your Hardware, DEFCON 24, Las Vegas, Nevada, August 5, 2016.

(P49) Grand J : Experiments with Optical Covert Channels, BSidesPDX 2016, Portland, Oregon, October 14, 2016.

(P50) Grand J : Hacking a Tooth Tunes Toothbrush for a Positive Dental Outlook, BSidesPDX 2017, Portland, Oregon, October 21, 2017.

(P51) Grand J : Turning Science into Startups: Lessons from Television and the Real World, DARPA Bay Area SDR Hackfest, Moffett Field, California, November 16, 2017.

(P52) Grand J : Hacking, Phreaking, and Juvenile Delinquency (Keynote), CypherCon 3.0, Milwaukee, Wisconsin, April 12, 2018.

(P53) Kingpin (Grand J) & L0pht Heavy Industries : A Disaster Foretold - And Ignored: Revisiting the First-Ever Congressional Cybersecurity Hearing, Testimony, Congressional Internet Caucus Academy, Washington, D.C., May 23, 2018.

(P54) Grand J : Searching for the Light: Adventures with OpticSpy, DEFCON 26, Las Vegas, Nevada, August 12, 2018.

(P55) Grand J : Passion Before Fashion: Stories From a Life of Hacking (Keynote), Roadsec, São Paulo, Brazil, November 10, 2018.

(P56) Kingpin (Grand J) : Creating the DEFCON China 1.0 Badge, DEFCON China 1.0, Beijing, China, May 31, 2019.

(P57) Kingpin (Grand J): Behind the Scenes of the DEFCON 27 Badge, DEFCON 27, Las Vegas, Nevada, August 9, 2019.

(P58) Grand J : When Hacking and Engineering Collide (Keynote), AltiumLive 2019, San Diego, California, October 9, 2019.

(P59) Grand J : That time I hacked a hardware wallet and recovered $2 million..., ISACA Sweden Spring Conference 2022, Stockholm, Sweden, March 27, 2022.

(P60) Grand J : Never Mind the Bollocks, Here's Joe Grand (Keynote), Kernelcon, Omaha, Nebraska, April 1, 2022.

(P61) Grand J : Adventures of Wallet Hacking (Keynote), hardwear.io USA 2022, Santa Clara, CA, June 9, 2022.

(P62) Grand J : Sneaky Circuits: An Overview of Hardware-Based Espionage, AT&T Security Conference 2022 (Online), October 4, 2022.

(P63) Grand J : Fresh Beats: Creating The World's Thinnest Boombox (Keynote), Hackaday Superconference 2022, Pasadena, California, November 5, 2022.

(P64) Grand J : Through the Eyes of a Hardware Hacker, Gulf Information Security Expo & Conference (GISEC) 2023, Dubai, United Arab Emirates, March 14, 2023.

(P65) Grand J : The Upside of Falling Down: Embracing Failure to be a Better ~~Hacker~~ Human (Keynote), Hack in the Box Phuket 2023, Phuket, Thailand, August 24, 2023.

(P66) Grand J : Troublemakers and Superpowers (Keynote), BSidesPDX 2023, Portland, Oregon, October 6, 2023.

(P67) Grand J : The Hacker in All of Us (Keynote), SAINTCON 2023, Provo, Utah, October 24, 2023.

(P68) Kingpin (Grand J) & Krauß B : Joe and Bruno's Guide to Hacking Time: Regenerating Passwords from RoboForm's Password Generator, DEFCON 32, Las Vegas, Nevada, August 9, 2024.

(P69) Grand J : Shot Through the Heart: An Introduction to Fault Injection, SecKC, Kansas City, Missouri, June 10, 2025.

(P70) Grand J : Joe Grand's Life of Badges, Teardown 2025, Portland, Oregon, June 21, 2025.

(P71) Grand J : Adventures of Wallet Hacking: Chapter 2, Balkan Computer Congress (BalCCon2k25), Novi Sad, Serbia, September 20, 2025.

(P72) Grand J : A Lifetime of Disobedience, Disobey 2026, Helsinki, Finland, February 13, 2026.

(P73) Grand J : Reverse Engineering a Ledger Nano X Hardware Implant, TROPICON 2026, Cozumel, Mexico, April 18, 2026.

(P74) Grand J & Wouters L : Failure Is Not an Option: A Reliable Process to Exploit STM32F2/F4 Microcontrollers, REcon 2026, Montreal, Canada, June 20, 2026.

MISCELLANEOUS

(M1) Kingpin (Grand J) : Answering Machine Remote Accessibility of Supervisory Functions, L0pht Heavy Industries Security Advisory, September 8, 1998.

(M2) Kingpin (Grand J) : MAC Address Cloning, Published on L0pht Heavy Industries website, December 1998.

(M3) Winner of the PalmGear H.Q. scholarship, given to influential developers within the Palm OS development community, PalmSource '99, Santa Clara, California, October 21, 1999.

(M4) Kingpin (Grand J) : A Practical Introduction to the Dallas Semiconductor iButton, Published on @stake website, February 2000.

(M5) Kingpin (Grand J) & DilDog : CRYPTOCard PalmToken PIN Extraction, @stake Security Advisory, April 10, 2000.

(M6) Kingpin (Grand J) : eToken Private Information Extraction and Physical Attack, @stake Security Advisory, May 4, 2000.

(M7) Kingpin (Grand J), DilDog, & Brian Carrier : Rainbow Technologies' iKey 1000 Administrator Access and Data Compromise, @stake Security Advisory, July 20, 2000.

(M8) Kingpin (Grand J) & DilDog : PalmOS Password Retrieval and Decoding, @stake Security Advisory, September 26, 2000.

(M9) Kingpin (Grand J) : SafeWord e.iD Palm Authenticator PIN Extraction, @stake Security Advisory, December 14, 2000.

(M10) Kingpin (Grand J) : DS1991 MultiKey iButton Dictionary Attack Vulnerability, @stake Security Advisory, January 18, 2001.

(M11) Kingpin (Grand J) & Mudge : Initial Cryptanalysis of the RSA SecurID Algorithm, Published on @stake website, January 18, 2001.

(M12) Briefed the United States Special Assistant for Global Affairs, National Coordinator for Security and Counterterrorism, and Special Advisor for Cybersecurity on discovered security weaknesses of PDA devices. Resulted in governmental policy changes regarding the use of PDAs for sensitive information storage, January 2001.

(M13) Kingpin (Grand J) : Palm OS Password Lockout Bypass, @stake Security Advisory, March 1, 2001.

(M14) Panelist, Programming the Atari 2600, Classic Gaming Expo, Las Vegas, Nevada, August 12, 2001.

(M15) Guest Speaker, The French-American International School of Boston, Computer security, technology, and privacy issues, Cambridge, Massachusetts, May 13, 2002.

(M16) Received Honorable Mention for "Tribble: A hardware forensics tool for memory image retrieval" product concept at the 2004 Invent Now America! Exposition, an invention search aimed to discover outstanding examples of the ingenuity present throughout all facets of society, March 2004.

(M17) Provided comments and research for the National Institute of Standards and Technology Special Publication 800-72, Guidelines on PDA (Personal Digital Assistant) Forensics, which was developed to help organizations evolve appropriate policies and procedures for the forensic acquisition and analysis of mobile devices, August 2004.

(M18) Adjunct Professor, University of Advancing Technology, Tempe, Arizona, October 2004.

(M19) Maker Fair, Invited Contributor, O'Reilly Emerging Technology Conference 2005, San Diego, California, March 16, 2005.

(M20) Guest Speaker, United States Military Academy at West Point, Computer security and hardware hacking, New York, March 2008.

(M21) Grand J & Northen M : General Session Surprise Guest, SolidWorks World 2009, Orlando, Florida, February 11, 2009.

(M22) Judge, Department of Electrical Engineering and Computer Science Capstone Design Project Competition, United States Military Academy at West Point, April 30, 2009.

(M23) Discovered security vulnerabilities related to the smartcard interface of San Francisco's smart parking meter implementation allowing unlimited card value, Provided details and suggestions to the San Francisco Municipal Transportation Agency to help prevent fraudulent attacks, August 2009.

(M24) Featured in When Gadgets Betray Us: The Dark Side of Our Infatuation With New Technologies, Chapter 5, Basic Books, New York, ISBN 9780465019588, March 2011.

(M25) Received commercial contract from DARPA's Cyber Fast Track for a project entitled Research and Analysis of PCB Deconstruction Techniques, which aims to research, test, characterize, and document a variety of techniques useful in the deconstruction of a printed circuit board (PCB), June 4, 2013.

(M26) Judge, The Hackaday Prize, A design contest that challenges hardware hackers to change their world by creating open, connected devices, April-October 2014.

(M27) Guest Speaker, Cyber Stars Camp, Dakota State University, A free camp funded by the National Science Foundation to introduce and educate high school students to computer security through hands-on activities and sessions, Madison, South Dakota, July 21-22, 2014.

(M28) Mustache Mayhem : Mixed media and electronics art project that challenges the paradigms of personal privacy and entertainment, Byte Me 4.0, AFRU Gallery, Portland, Oregon, February 2015.

(M29) Provided comments for the Department of Homeland Security's Office of Cyber and Infrastructure Analysis (OCIA) Future Considerations for Cyber-Physical Infrastructure in Smart Cities report, which examines and addresses potential future cybersecurity vulnerabilities in the transportation, energy, and water/wastewater sectors, March 2015.

(M30) Guest Speaker, Catlin Gabel School, Hacking, engineering, and entrepreneurship, Portland, Oregon, April 15, 2015.

(M31) Mentor, Proving Ground Speaker Development Program, BSidesLV 2015, Provide mentorship and guidance for first time national conference speakers, August 2015.

(M32) Program Committee, 9th USENIX Workshop on Offensive Technologies (WOOT '15), August 2015.

(M33) Moderator, Crowdbuilding: Building Hardware Here and There, South by Southwest (SXSW) Interactive, Austin, Texas, March 14, 2016.

(M34) Mentor, High School Senior Project, Portland Waldorf School, Provide mentorship and guidance on the creation of a USB HID keystroke injection tool, May 2016-March 2017.

(M35) Review Committee, REcon 2016, June 2016.

(M36) Panelist, Cyber Threats to Domestic Systems, Cyber Endeavour 2016, Monterey, California, June 22, 2016.

(M37) Served as subject matter expert consultant to independently evaluate technical claims related to St. Jude Medical v. Muddy Waters Consulting, et al., September-October 2016.

(M38) Mentor, High School Senior Project, Portland Waldorf School, Provide mentorship and guidance on the creation of an omnidirectional robot, June 2017-March 2018.

(M39) Review Committee and Manuscript Mentor, 43rd International Symposium for Testing and Failure Analysis (ISTFA), November 2017.

(M40) Guest Speaker, Coleman Elementary School, Prototyping and engineering, San Rafael, California, November 16, 2017.

(M41) Panelist, The L0pht Testimony: 20 Years Later (and Other Things You Were Afraid to Ask), DEFCON 26, August 10, 2018.

(M42) Panelist, Hardware Implant Panel, BSidesPDX 2018, Portland, Oregon, October 27, 2018.

(M43) Program Committee, 6th International Symposium on Research in Grey-Hat Hacking (GreHack 2018), November 2018.

(M44) Judge, BadgeLove by Hackster, A design contest for beautiful, weird, and artistic electronic circuit boards, November 2018-April 2019.

(M45) Judge, MacroFab Design Contest: Useless Machines, June-August 2019.

(M46) Panelist, Void If Removed: Securing Our Right to Repair, DEFCON 27, Las Vegas, Nevada, August 10, 2019.

(M47) Guest Speaker, Princeton University, Hardware espionage and supply chain security, April 20 and 22, 2020.

(M48) Webcast, Hardware Hacking Party Tricks: Techniques for Exploring, Manipulating, and Exploiting Embedded Systems, Black Hat, April 22, 2021.

(M49) Invited Participant, Kernelcon Hack Live, Presented with a hardware hacking challenge to solve in real time while attendees observe, and potentially sabotage, the process, April 30, 2021.

(M50) Review Committee, IEEE Transactions on Emerging Topics in Computing, June 2021.

(M51) Guest Speaker, Politecnico di Milano, Hardware hacking and embedded system security, Milan, Italy, November 8, 2021.

(M52) Guest Speaker, Lewis & Clark, Hacking, engineering, and entrepreneurship, Portland, Oregon, April 5, 2022.

(M53) Panelist, Brazil Redux: Short Circuiting Tech-Enabled Dystopia with the Right to Repair, DEFCON 30, Las Vegas, Nevada, August 13, 2022.

(M54) Guest Speaker, University of Maryland Baltimore County (Online), Hardware hacking and embedded system security, November 16, 2023.

(M55) Provided hacked Tooth Tunes toothbrush for Green Day + BRAIN's Dookie Demastered project, which features purposely lo-res, glitchy versions of the songs from Green Day's seminal 1994 release on obscure, obsolete, and inconvenient formats, October 2024.

(M56) Guest Speaker, University of Virginia (Online), Experiences in hardware design and reverse engineering, November 25, 2024.

(M57) Guest Speaker, Portland Winterhawks, The economy of hacking and cybercrime, Portland, Oregon, January 21, 2025.

(M58) Actor and Technical Consultant, Cold Wallet, February 2025.

(M59) Guest Speaker, University of Notre Dame, Discussion of hacker history, Notre Dame, Indiana, April 10, 2026.

(M60) Panelist, Silicon Under Attack: Physical Exploitation of Modern Chips, hardwear.io USA 2026, Santa Clara, CA, May 29, 2026.