

Curriculum Vitae of

Michael N. Gershowitz, PE

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Professional Summary

Electronic product design and semiconductor applications engineering experience since 1977. Solid State Lighting (SSL), LED technology, forensics, and photometric measurement experience since 2010. Areas of expertise include LED applications engineering, embedded microcontroller system design, analog and digital video image processing, wired and wireless control network technologies. Granted fifteen US patents, licensed Professional Engineer, voting member of the Underwriters Laboratory UL8750 Standards Technical Panel for LED Devices, and prior Chairman of the Board for the IEEE-CNSV. Expert witness experience for both plaintiff and defendant in twenty-two cases including eighteen patent infringement cases; fifteen in United States District Court, two before the United States International Trade Commission, and one in the United Kingdom High Court of Justice, three IPR matters and one civil case in superior court. Fact witness in two civil cases, retained and used experts from the employer/client perspective.

Career Highlights

From: 2008 **Michael N. Gershowitz, PE; Gershowitz Consulting, LLC**

To: Present

Position: Owner

- Retained in more than twenty LED patent litigation cases, both for the plaintiff and the defendant
- Performed technical due diligence on a major LED component manufacture acquisition
- Provided expert opinions and insights to multiple clients on LED Luminaire manufacturing, applications, materials and processes.
- Re-designed and upgraded capabilities for an industrial flow measurement device, commercial ice-cream processing machine, and several other commercial, medical, and industrial products
- Multiple projects with ARM Cortex, Microchip PIC and Atmel ATmega MCUs, Raspberry-Pi and Arduino Single Board Computers - both hardware and firmware (C language)

From: Jan 2016 **Enlighted**

To: Present

Position: Vice President of Lighting and IoT Solutions

- Oversee and develop wireless sensor network equipment enabling deployment of large-scale building sensor networks providing lighting controls and indoor location services.

From: Feb 2015

Rensselaer Polytechnic Institute – Lighting Research Center

To: July 2015

Position: Sr. Research Scientist

- Developed apparatus and measurement procedure for color tunable LED products
- Analyzed the architecture and color tuning performance of more than a dozen commercially available LED light sources
- Evaluated the performance of commercially available wireless lighting solutions and incorporated findings into course syllabus and laboratory requirements (ZigBee, Wi-Fi and Bluetooth)
- Extensive programming experience in LabVIEW

From: 2010

Bridgelux

To: 2015

Position: Vice President of Integrated Solutions

- Implemented an applications engineering laboratory, which includes accredited LM-79 and LM-82 testing capabilities with NIST proficiency verification and EPA recognition
- Defined “Smart Lighting” system architecture and implemented proof of concept prototypes to secure program development commitment, including patent applications filed on fundamental technologies
- Developed and performed luminaire system level evaluation methods to confirm product performance to specification/application requirement
- Developed and performed forensic analysis techniques to determine root cause of system level product failures of LED luminaires
- Defined near field testing methods for improved Color Angular Uniformity (CAU), Luminous Intensity Uniformity, High Flux Density and minimized self-absorption.
- Engineered key features to enhance manufacturability and reduce production costs of the Outdoor Lighting Module (OLM) product family.

From: 2004

To: 2007

Oki Semiconductor

Position: Senior Director of Marketing and Applications

- Guided Japan based Business Unit development teams to bring three new ARM based ASSP devices rapidly through development and into customer hands.
- Defined and oversaw US development of low cost broadly deployed ARM MCU development kits (AME-51)
- Defined and oversaw US development of low cost broadly deployed ZigBee development kit (ZNED)

From: 1999

To: 2004

Zilog

Position: Director, MicroDevices Business unit

- Defined and oversaw the development and launch of the Encore and Acclaim Flash microcontroller families, with over 100 new products. That achievement was recognized with awards from EE Times (Top 10 processors) and Frost and Sullivan (Market Penetration)
- Defined and oversaw the cost reduction and feature enhancement of development tools cost by 75%, to under \$50/unit
- Established an in-house EMI laboratory, used to verify compliance of MCU on PCB design to FCC Part 15 limits
- Established customer support help desk and developed and presented “hands-on” training programs for eZ80 ‘Acclaim’ and Z8 ‘Encore’ product

From: 1982

To: 1999

Philips Semiconductors

Position: Sr. Field Applications Engineer

- Developed multiple hardware reference designs with digital video encoder and decoder products
- Developed multiple system designs (HW and firmware) based on 8051 microprocessor based systems
- Developed multiple system designs based on programmable logic devices (PLD/CPLD)
- Developed hyper-accurate SPICE simulation models for high speed digital logic product families

From: 1977

Grumman Aerospace Corporation

To: 1982

Position: Digital Design Engineer

- Responsible for the design of flight and Electronic Counter Measures training simulation systems utilizing MSI, LSI and Microprocessor devices
- Developed advance computer image generation systems for use in flight simulator applications
- Co-inventor of one US patents related to “Computer Image Generation” technology (4,677,756)
- Instructor – Introduction to Microprocessor system Design, and Advanced Microprocessor system Design professional development courses

Patents

<u>Patent Number</u>	<u>Issue Date</u>	<u>Title</u>
11,476,703	10/18/2022	Emergency Lighting Control Bypass
10,397,996	08/27/2019	Inrush energy control for a light emitter
10,375,798	08/06/2019	Self-determining a configuration of a light fixture
9,863,616	01/09/2018	Circuit Board for LED applications
9,769,909	09/19/2017	Current steering and dimming control of a light emitter
9,730,284	08/08/2017	LED array member and integrated control module assembly with built-in switching converter
9,468,052	10/11/2016	LED array member and integrated control module Assembly having active circuitry
9,420,658	08/16/2016	Inrush energy control for a light emitter
9,351,358	05/24/2016	LED array member and integrated control module Assembly with built in switching converter
9,247,594	01/26/2016	LED array member and thermally decoupled integrated control module assembly
9,164,001	10/20/2015	Using LED die to measure temperature inside silicone that encapsulates an LED array
9,155,145	10/06/2015	LED array member and integrated control Module assembly having active circuitry
8,975,821	03/10/2015	LED array member and integrated control Module assembly with built-in Switching converter
8,941,129	01/27/2015	Using an LED die to measure temperature inside silicone that encapsulates and LED array
4,677,576	06/30/1987	Non-edge Computer Image Generation System

Publications & Lectures

"Telecommunications Circuit Switching in a University Environment," IEEE, Vol. 65, No. 9
CES 2001 Panelist – 01CES-N3 – “Smart Appliances: You Have Toast!”

Education & Licensing

<u>Year</u>	<u>University/Authority</u>	<u>Degree/License/Certification</u>
1976	Rensselaer Polytechnic Institute	B.S. in Electrical Engineering
1977	Rensselaer Polytechnic Institute	M.E. in Electrical Engineering
1982	NY: 059118-1	Professional Engineering License - NY
2015	CA: 21449	Professional Engineering License – CA
2011	Lighting Research Center	LED Lighting Institute
2012	Lighting Research Center	2-day Photometry Institute
2015	PDH Center	Engineering Ethics – Course R102
2015	IEEE	4G Broadband LTE

Expert Witness Experience

1. Plaintiff – US District Court, Texas, Jan 2023 – July 2023
2. Defense - US District Court, California, June 2023 – Date
3. Inter Partes Review – Expert in support of patent owner, Jan 2023 – Date
4. Inter Partes Review – Expert Declaration in support of patent owner, Feb 2022
5. Plaintiff – US District Court, Texas, May 2021 - Nov 2022
Settled out of court
6. Plaintiff – US District Court, Delaware, Feb 2021 – Oct 2021
Settled out of court
7. Plaintiff – US District Court, California, Jan 2021 – Jan 2023
Testified at trial on Infringement
8. Defense – US District Court, California, Sept 2020 – Sept 2021
Case Dropped

9. Plaintiff – US District Court, Delaware, Aug 2020 – Sept 2021
Settled out of court
10. Defense – US District Court, Texas Aug 2020 – Sept 2021
Settled out of court
11. Defense – US District Court, California, March 2020 – August 2020
Summary Judgement
12. Plaintiff – US District Court, Texas, March 2020 – Sept 2020
Settled out of court
13. Plaintiff – Superior Court, New Jersey, Jan 2020 – Date
14. Plaintiff – US District Court, Texas, Dec 2019 – Jan 2022
Settled out of court
15. Plaintiff – US District Court, New York, Dec 2019 – Jan 2022
Settled out of court
16. Defense – US ITC, Washington DC, June 2019 – Sept 2019
Patent dropped from case
17. Plaintiff – US District Court, Ohio, April 2019 – July 2019
Settled out of court
18. Inter Partes Review – Expert Declaration in support of petition, June 2018
Client withdrew petition
19. Plaintiff – US District Court, California, March 2018
Settled out of court
20. Plaintiff – US District Court, Massachusetts, January 2017 – March 2017
Settled out of court
21. Plaintiff – US ITC, Washington DC, January 2017 – August 2018
Testified at trial on both Infringement and Validity
22. Plaintiff – High Court of Justice, United Kingdom, December 2016 – August 2018
Settled out of court

Litigation Support Experience

Plaintiff – BHOA vs Central Coatings Co. Case 1-07-CV-079565 Breach of Contract/Warranty

Fact witness, deposed, arbitrated settlement in favor of BHOA (plaintiff)

Defense – Grumman Aerospace vs US Government (arbitrated via DoD tribunal)

Fact witness, deposed, settlement in favor of Grumman Aerospace (defendant)

Affiliations

IEEE - Institute of Electrical and Electronic Engineers – Life Member

UL – Underwriters Laboratory -UL8750 Standards Technical Panel (STP) – Voting Member

IES – Illumination Engineering Society – Member

USNC/IEC – US National Committee of the IEC -Technical Advisory Committee Member TC34
2020-2022

IEEE-CNSV – Consultants’ Network of Silicon Valley – Member; Board member 2015-2022,
Chairman of the Board 2016

BHOA - Branham Homeowners Association – San Jose, CA, President, 2004 to 2012

AHAM – Association for Home Appliance Manufacturers – Smart Appliance Task Force, 2002
to 2004