Robert Smith-Gillespie
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SUMMARY OF QUALIFICATIONS

Product development engineer with electro-optical and mechanical systems background. Experienced new product development leader with design, analysis and manufacturing experience in high-complexity products integrating illumination and imaging components across a broad range of applications including medical devices, avionics controls and displays, area illumination and illuminated consumer products. Experience in patent litigation support spans over 20 cases and 15 years.

PROFESSIONAL EXPERIENCE

FPD Design & Consulting LLC, Eugene, Oregon 20 years concurrent
Principal Engineer July 2021 - Present
Product design and development consultancy specializing in new product introduction. Projects include design of folded optics, CMOS-based imaging microscope for optical scanning of biological samples. Provided litigation expert services on 20+ LCD/LED display related patent and trade dispute lawsuits. Currently engaged part-time on diagnostic medical device for COVID-19 testing.

Magstim-EGI, Eugene, Oregon (*same business entity as Philips Neuro*) Jul. 2020 – Dec. 2021
Philips Neuro, Eugene, Oregon Sep. 2018 – Apr. 2020
Systems Engineer
Medical device hardware systems engineer for high-density EEG products. Focused on systems requirements development, HW specification and systems compliance verification for a network-based EEG system for clinical diagnosis of brain disorders. Specific competencies include:

Riverwood Solutions, Inc., San Francisco, California Jan. 2013 – Sep. 2018
Sr. Technical Specialist
Provided NPI and manufacturing development support for consumer products companies including project management, design for manufacturing & assembly (DFX) analyses, manufacturing planning and support and start-up / scale-up troubleshooting. Led client team design reviews and performed DFMEA, PFMEA and competitive product analyses. Long-term assignments include:

- Technical project manager for automated high-speed fluid dosing line for FDA controlled consumable. Responsible for factory and site acceptance testing and configuration management for eight (8) $2.3M filling lines.
- Directed CM's quality team in variation reduction investigation on high-speed filling line resulting in 20% yield improvement and a $5.8M PBT increase per month. Solved supplier quality issue via RCCA investigation on precision pump component.
- Procurement engineer for $70M glass coating line for US owned Asian factory covering 8 custom process machines.
- DFX analyses and BOM optimization for specialty products including board-level CMOS cameras, LED illumination and injection molded optical components. Supported client engineering team developing LCD /e-Paper license plate system.

E3 Displays, LLC, Phoenix, Arizona Aug. 2007 - Apr. 2013
Chief Technologist
Led technology development and design for ruggedized LCD components for military, avionics, medical and specialty products. Worked closely with domestic supplier of custom optical adhesive and with Asian suppliers of optical components for LCD backlights, optical filters and touch panels. Other roles include:

- Managed process development and qualification of basic materials for touch panel and EMI filter optical bonding to LCDs.
- Designed and implemented UV-cured bonding system and semi-automated assembly line.
- Performed FEA and spreadsheet thermal analyses for improved lighting performance at high temperatures. (See paper/presentation #7 in publications list – available upon request)
- Developed mechanical tolerance analysis tool including temperature impacts at system level.
- Led design team for large-format, military LCD including CCFL-to-LED conversion, optically bonded EMI filter & heater, and thermal and optical feedback control system.
- Applied for patent on dual-mode night vision compatible LED backlight system (U.S. patent Pub. No.: US 201410036533 A1, withdrawn).

ADDITIONAL EXPERIENCE

Rosen Products LLC, Eugene, Oregon 1999 - 2002
Technical Staff Engineer
Member of senior technical staff reporting to engineering V.P. Roles included management of LCD display technology, strategic planning and product benchmarking for automotive and aircraft entertainment systems. Conceived and directed "Technology Platform Champion" team for advancing knowledge base in product critical technology areas. Product engineering manager for business aviation Cabin Entertainment Display Systems. Performed environmental (thermal & mechanical) and EMI testing of airborne electronics systems.

Three-Five Systems, Inc., Tempe, Arizona 1997 - 1999
Technical Specialist, Displays
Cross-functional specialist working with LCD mechanical and electrical design teams integrating custom LCDs into consumer products. Designed COB LED backlights for early handheld products. Developed Asian suppliers for injection molded mechanical parts polycarbonate light guides. Provided guidance for lighting design, photometry, colorimetry and optical films.

Honeywell, Air Transport Div., Phoenix, Arizona 1987 - 1997
Project Engineer thru Principal Engineer
Responsible for mechanical/optical/thermal design of the primary displays Boeing 777 airplane including aircraft integration and lighting design to optimize display system performance. Developed novel, active thermal management system for high-power fluorescent backlight system.

Led effort to improve backlight aging performance and performed sensitivity analyses with LCD manufacturer to reduce LCD color variation (see publications). Led design and supplier development for integrated switch panel for 737-700 MCP using high-luminance LCDs and annunciators.

Recipient of Honeywell's prestigious Technical Achievement Award recognizing significant technical contributions leading to a >2X backlight life improvement for the Boeing 777 LCD display program.

Sperry Corp. (Honeywell ATSD), Phoenix, Arizona 1985 - 1987
Manufacturing Engineer

EDUCATION

Embry-Riddle Aeronautical University	Master of Systems Engineering	2021
Arizona State University, Tempe, Arizona	BS Mechanical Engineering	1989
State University of New York, Plattsburgh, NY	BA Physics	1981

PROFESSIONAL MEMBERSHIPS

International Council on Systems Engineering (INCOSE)
Project Management Institute (PMI)
Society for Information Display (SID) – Conference organizing/paper review committee
Society for Automotive Engineers (SAE) Automotive FDP Metrology Working Group
Professional Ski Instructors of America (PSIA) – Certified Level III Instructor

PATENTS, PUBLICATIONS AND AWARDS

1) **U.S. Patent 7,660,040 - Diffuse Reflective Article,** Feb. 9, 2010**.** To E.I. DuPont de Nemours & Co., Wilmington, DE.
2) **U.S. Patent Pub. No.: US 201410036533 A1 - Dual Mode LCD Backlight** Filed 1 Aug. 2012. NVIS compatible, single rail LED backlight with optical device for improved uniformity in night mode. [Withdrawn]
3) **Don't Skimp on Your PRD.** EPP Europe; Oct. 2013.
4) **2008 LCD Backlight Report: Including LCD-TV, Monitor & Notebook PC Displays, An Opportunity Analysis.** Insight Media, Inc., Norwalk, CT; May 2008
5) **Ruggedized flat panel displays using COTS components. 2008 SPIE Defense and Security Conference,** Paper #6956-17, Orlando, FL; March 2008
6) **Advanced flat panel display backlighting techniques. 2008 SPIE Defense and Security Conference,** Paper #6956-21, Orlando, FL; March 2008
7) **LCD Backlight Design Tutorial.** SID 2008 Symposium Applications Session**,** L.A.; CA. May 2008
8) **Design Considerations for LED Backlights.** SID Display Applications Conference; Oct. 2007
9) **Display Technology Overview,** National Association of Science Teachers annual meeting, Costa Mesa, CA; April 6, 2006.
10) **LCD Ruggedization in Displays with Optically Bonded AR Cover Glass.** Americas Display Engineering Applications Conference (ADEAC) – Society for Information Display; Oct. 2006
11) **Design Considerations for LED Backlights in Large Format LCDs.** LEDs in Displays - SID Technical Symposium; Jan. 2006
12) **Characterization of Reflective Properties of Displays using Optical Fourier Transform Photometry.** Aerospace Lighting Institute; Feb. 2004
13) **Design Requirements for Automotive Entertainment Displays**. 8th Annual Symposium on Vehicle Displays, Soc. for Information Display; Oct. 2001.
14) **Widescreen Formats – A Sharper Image.** Discussion of entertainment video formats published in business aviation industry newsletter Velocity; Nov. 2001.
15) **Development of a High Luminance, High Contrast Fixed Format LCD.** Aerospace Lighting Institute Advanced Symposium; Feb. 1996.
16) **Fixed Format Liquid Crystal Display Readability in Bright Ambient Environments.** IEEE 13th Digital Avionics Systems Conference; Nov. 1994.
17) **777 LCD Backlight Life.** SPIE Cockpit Displays Conference; April 1994.
18) **Honeywell Technical Achievement Award.** Awarded by Corporate Fellows Committee for outstanding technical contribution in the field of flat panel display backlighting. Feb. 1997.

LITIGATION SUPPORT CASE SUMMARY

Bayes PLCC [Patent infringement – 3/2020 – 12/2020]
Ultravision Technologies, LLC v. **Ledman Optoelectronics, Ltd.** Case No. 2:18-cv-00101-JRG-RSP

Orrick, Herrington & Sutcliffe, LLP [Patent infringement – 6/2020 – 1/2021]
Ultravision Technologies, LLC v. **Yaham Optoelectronics Co., Ltd. & Ledman Optoelectronics Co., Ltd.**, et. al.
337-TA-1114; 2:18-cv-00100, 2-18-cv-00118, USDC - Marshall, TX

Covington & Burling, LLP [Patent infringement – 3/2020 – present]
LG Electronics, Inc. v. **Hisense Electronics Mfg Co. of America,** Civil Case No. 2:19-cv-9474 (C.D. Cal.); Also, IPR support.

McGuire Woods [Patent infringement – 8/2019 – 11/2019]
Global Value Lightning, LLC et al. v. **Current Lighting Solutions**

Orrick, Herrington & Sutcliffe, LLP [Patent infringement – 9/2018 – 12/2018]
Ultravision Technologies, LLC v. **Yaham Optoelectronics Co., Ltd.** ITC Investigation No. 337-TA-1114 (ITC case)

Sterne, Kessler, Goldstein & Fox P.L.L.C. [Patent infringement – 9/2016 – 10/2017]
MiiCs & Partners America, Inc. v. **Funai Electric Co. Ltd.**

Dorsey & Whitney LLP [Patent infringement – 9/2016 – 12/2017]
MiiCs & Partners America, Inc. v. **Toshiba America, Inc.** LCD panel designs & structures

Chen & Malin LLP [Patent infringement – 8/2016 – 4/2017]
LakeSouth Holdings, LLC v. **Home Depot** IPR/Lititgation support

Latham & Watkins LLP [Patent infringement – 1/2015 – 9/2015]
Samsung Electronics Co., Ltd. et al. v. **NVIDIA Corp.** Electro-mechanical design of computer chassis

Foley & Lardner LLP, Milwaukee, WI [Patent infringement – 4/2015 – 6/2015]
Innovative Display Technologies, LLC v. **Sprint**

Dykema Gossett PLLC [IPR 10/2014 – Present]
LakeSouth Holdings, LLC v. **Wal-Mart Stores, Inc.**

Mayer-Brown LLP, Chicago, IL [Patent infringement – 8/2014 – 2/2015]
Innovative Display Technologies, LLC v**. Acer et. al**.

Erise IP, P.A., Overland Park, KS [Patent infringement – 3/2014: Settled]
Innovative Display Technologies, LLC v. **Garmin International, Inc**. et al. LCD backlight patent infringement

Kenyon & Kenyon LLP, New York, NY [Patent infringement – 5/2013 to 1/17/2014]
Techknowledge Law Group LLP, San Francisco, CA
Round Rock Research v. **Lenovo & Acer**. Thermal mgmt in LCD panel

Foley & Lardner LLP, Washington, DC [Patent Re-exam support – 1/2013 to 12/2013]
Xilinx Inc. v. **Intellectual Ventures** I LLC (Two IPRs); Depo 1.5 days

Klein, O'neill, Singh LLP, Santa Ana, CA [Trade secret & patent infringement – 7/11 to 9/12]
LCD shutter 3-D glasses manufacturing and product design dispute
Expert support on behalf of **Li-Tek Corp.** and **GDC Technology of America LLC**

Finnegan, Henderson, Wash., D.C. [Patent Re-exam support – 3/11 to 4/12]
Provide technical support for **LG Display, Inc.** re-exam request on U.S. Patent No. 7,125,157 et.al. (4 total)

McKenna Long & Aldridge, Wash., D.C. [Patent infringement – 8/08 to 7/10]
LG Display v. AUO & CMO. LCD backlight and structures litigation. Depo 3 days; Trial 1 day

Shook Hardy & Bacon LLP, Kansas City. MO [Patent infringement – 1/08 to 4/08: Settled]
Mobile Traffic Systems., v. Cobra Elec., **Garmin USA**; U.S. District Court, No. District of Alabama.

Oblon, Spivak, McClelland, Maier & Neustadt, P.C. [Patent Infringement, Settled]
Optrex USA v. Honeywell, Inc. (Deposed, no trial)

Morgan Lewis & Brokious LLP, Wash. D.C. [Patent infringement – 7/05 to 9/06: Settled]
LG Philips LCD Co. Ltd., v. Chungwa Picture Tubes, Inc.; U.S. District Court, So. District of California.
Deposed 3 days; No trial

Jacobson Holman LLP, Washington D.C. [Patent infringement – 5/05 to 7/05: Settled]
Audiovox v. **Epsilon Electronics, Inc.** Civil Action No. 03 Civ 6235, Eastern District of N.Y.

Shaw Pittman LLP and Bingham McCutchen LLP [Patent infringement – 6/04 to 7/05: Settled]

Richard Ditzik v. **ViewSonic Corp.,** et. al., filed in the U.S. District Court, Eastern District of Michigan, Southern Division; Case No. 03-74043. Deposed 2 days, No trial

Alschuler Grossman Stein & Kahn LLP [Patent infringement – 12/04 7/05: Settled]

Sharp Corporation v. **AU Optronics Corporation**, et. al., Case No. C03-04244 MMC filed in the United States District Court, Northern District of California. Deposed 2 days, No trial

Note: Parties for whom expert services were provided are in listed bold font.