# MICK WOLLMAN   *Silver Spring, MD*

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## SUMMARY

I am an experienced embedded systems engineer who has developed and shipped products at companies large and small. Through strong technical leadership, deep product ownership, and proactive cross-functional collaboration, I steer technical efforts for management to meet business objectives.

## INDUSTRY EXPERIENCE

### BASENOTE — Los Angeles, CA
**Cofounder and CEO** — *Jan 2021 – Dec 2022*

BaseNote was a music tech startup working to redefine how artists fund their work. We built and launched an SEC-registered app-based platform that let artists sell shares of future royalties to fans. As CEO I set product direction to navigate the technical/regulatory landscapes and led partnership development to sign artists.

- Successfully signed a launch cohort of 6 artists constituting $400k+ deal volume.
- Directed the efforts of external resources providing branding, marketing, design, and PR services.

### ASTROHAUS — Royal Oak, MI
**Lead Firmware Engineer** — *Feb 2019 – Oct 2020*

I owned the electronics, firmware, and software of Astrohaus's products. I brought **Traveler**, a portable smart typewriter, from a works-like prototype to product launch despite multiple vendor-support hurdles.

- Saved several dollars of BoM cost by developing custom drivers and hardware to unlock unsupported functionality of low-cost Wi-Fi module.
- Prevented a major launch delay after the PMIC vendor de-committed by devising a method for in-situ customization on the factory line, avoiding a late-stage redesign.
- Modified embedded Linux firmware and JavaScript application to deliver lower power consumption, performance improvements, and new features to customers of **Freewrite**, Astrohaus's existing product.

### LEIA INC. — Menlo Park, CA
**Firmware Engineer** — *Mar 2018 – Jan 2019*

I extended the Android HAL to support Leia 3D display technology for the launch of the **RED Hydrogen One** smartphone. I also prototyped and evaluated future strategies for Leia's technology.

- Created new product prototypes and demos, including the **Lume Pad** 3D tablet, by specifying and bringing up new hardware, reworking existing hardware, and creating custom firmware.
- Augmented Android framework and created APIs providing 3D display to developers to enable a robust app ecosystem to showcase display capabilities.
- Implemented and verified Linux drivers to evaluate new LCD panels and LED driver chips.

### SNAP INC. — Los Angeles, CA
**Firmware Engineer** — *Mar 2015 – Mar 2018*

I was a tech lead of the SnapLab hardware division ideating and developing **Spectacles**.
I interfaced with design, supply chain, and other engineering teams to support effective product decisions.

- Architected key features of **Spectacles** firmware, bringing V1 from concept to launch and laying groundwork for V2 development.
- Implemented bare-metal, RTOS, and embedded Linux firmware features including device drivers, task schedulers, power management, ICC protocols, networking implementations, and logging framework.
- Prevented product from missing key milestones by working directly on-site with vendors in Taiwan and China to root-cause and resolve issues.

## SKILLS

**Languages:** Expert in C/C++ | Experienced in Java, Verilog, Python, ARM assembly, Perl | Familiar with Javascript/Typescript, Next.js, ChakraUI, Dart, Flutter, ObjectiveC, Swift.

**Technical Specialties:**

- Application firmware design, implementation, and verification for bare-metal SoC, RTOS, and embedded Linux platforms.

- Developing hardware bringup plans, executing bringup and validation of new hardware, and creating solutions for hardware issues/limitations.

- Targeted root-cause failure analysis and hardware rework.

- Debugging hardware/firmware issues by tracing firmware behavior over JTAG/SWD or with logging frameworks, reading datasheets/schematics, and observing behavior with scopes and logic analyzers.

- Characterizing and optimizing power consumption and thermal performance.

- Bootloader (e.g.- uboot) design for secure boot, firmware update, and recovery.

- Rapid prototyping for evaluation of new features.

- Coordinating with other engineering disciplines as well as with design and management teams to make effective technical decisions.

**Protocols:** I2C, SPI, UART, USB, MIPI, BLE/Bluetooth, SDIO, eMMC

**Toolchains/Environments:** Experience with generic gcc/clang toolchain, vendor-specific (ST, TI, etc.) toolchains, make/cmake and buildroot build systems. Comfortable with Linux / Mac CLI development environments as well as Windows GUI IDEs such as KEIL.

**Collaboration:** Proficient with Agile work management and JIRA task tracking. Proficient in git.

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## EDUCATION

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| UNIVERSITY OF MICHIGAN | ANN ARBOR, MICHIGAN |
| **Master of Science**, Computer Engineering | *Sep 2013 – Dec 2014* |

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| UNIVERSITY OF MARYLAND | COLLEGE PARK, MARYLAND |
| **Bachelor of Science**, Electrical Engineering | *Sep 2009 – May 2013* |
| **Minor**, Computer Science | |

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## PATENTS & PUBLICATIONS

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|---|---|---|
| WarpPool: Sharing Requests with Inter-warp Coalescing for Throughput Processors | Published in MICRO-48 | |
| Temperature Management in Wearable Devices | U.S. Patent | 12,599,171 |
| Adaptive Power Estimation System | U.S. Patent | 10,809,304 |
| Vehicle Computing Systems and Methods for Delivery of a Mobile Device Lockout Icon | U.S. Patent | 9,998,547 |
| Password Topology Monitoring and Enforcement | U.S. Patent | 9,230,095 |

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## INTERESTS

Cooking, trying new foods, knitting, martial arts, building guitars, piano, hiking, reading.