

# Michael Lerman

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## INVENTOR OF NETMORY & DREAMER

### OBJECTIVE

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My vision of the next generation computer and the internet, tells me that a revolution is around the corner. Computers will have an unlimited and persistent memory. These computers or devices will communicate faster. All this is achieved when those new computers consume only one fifth of the energy consumed in today's machines, and resulting in an amazingly longer battery life. I strongly believe that my invention NETMORY will reach this goal. After having worked many years in development, I am seeking now a role in Research to fulfill my dream.

### EDUCATION

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<b>Technion, Israel Institute of Technology</b>	Haifa, Israel
<i>BSC - Bachelor of Science in Computer Engineering</i>	1990

### EXPERIENCE

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<b>Xilinx</b>	San Jose , CA
<i>Staff Debug/Diagnostic Engineer</i>	2017-Now

Develop tools for debug and diagnosis of system function failures. Design and verification of DfX features with Vivado and Synopsys DVE.

<b>Micron</b>	Milpitas, CA
<i>Software Engineer - Senior</i>	2014-2017

Embedded Business Unit

SPI Secure Boot, ACRTM. Embedded Linux, Xilinx Zenq with the ARM Zedboard. Created a secure boot flow integrated in FSBL and Uboot. Created a tool for testing most secure features of an SPI device. Cryptographic hash mac, SHA256, key generation, root key, session key and digests. Linux Kernel : SPI protocol driver.

Android with Snapdragon platform. Full Android build and ADB. BSP from Intrinsyc Open-Q 820.

<b>INPHI</b>	Santa Clara, CA
<i>Senior Staff Engineer</i>	2013-2014

BIOS: Intel Memory Reference Code with AMI BIOS. DDR4, UEFI memory test, NVDIMM.

<b>AMD</b>	Sunnyvale, CA
<i>System Engineering - Manager</i>	2000-2013

Bring up and validation. Developed JTAG based debug tools. Support Debug chipset debug features. EC (Embedded Controller) 8051 with the Keil RTOS and middleware.

Hardware Debug Tools

**STMicroelectronics**

San Jose, CA

*Manager System Solution*

1994 – 2000

Managed a multi-disciplinary team. Developed hardware and software for a single chip PC & DVD device.

**Normerel**

Buc, France

*Hardware Design Engineer*

1990 – 1994

Design of desktop PC motherboards and digital electronic systems.

**SKILLS**

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- **Software development and hardware bring up**

- x86 PC chipset system architecture
- From the lowest level firmware and driver to the highest level Web UI
- ARM : Xilinx Zynq embedded Linux with Zedboard
- Linux kernel and drivers
- UEFI x64 Shell application
- Embedded firmware development for 8051 micro-controller with Keil
- Scripting with various languages: Perl, Batch, PHP, Python
- C/C++/C# Visual Studio
- Windows and LINUX
- Timing Signal Analysis and Usage model
- Keysight LA and scope
- DDR3, DDR4, SPI, NAND, UFS, NVMe

- **Full stack Web and Network development**

- Frontend HTML, CSS, Javascript
- Backend server side native CGI, PHP, Node.js
- Databases: MySQL, SQLite, MSAccess.
- JAVA applet with JNI
- Socket network programming
- WAMP, LAMP
- PDF with TCPDF PDFTK
- Imaging with ImageMagick
- Data parsing, BNF, XML, XSLT, RegEx
- Graphing with D2, Chartjs

- **Embedded**

- Beaglebone, RaspberryPi, Freedom board, Zedboard

- **Specialities**

- Embedded Linux
- SPI Secure boot
- JTAG
- Test automation
- Debug tools
- Web UI UX
- Memory

## **PATENTS AND AWARDS**

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### **Patents**

- NETMORY [US9697114B2](#)  
A revolutionary new computer architecture.
- SLEEP PROCESSOR: [US8683247B2](#)  
Method and apparatus for controlling power supply to primary processor and portion of peripheral devices by controlling switches in a power/reset module embedded in secondary processor.
- AUTO-SLEEP ARRAY: [US8370669B2](#)  
MEMORY DEVICE HAVING A MEMORY SLEEP LOGIC AND METHODS THEREFORE.
- EASY FLASH: [US9870220B2](#)  
MEMORY FLASH APPARATUS AND METHOD FOR PROVIDING DEVICE UPGRADES OVER A STANDARD INTERFACE.

### **Awards**

Spotlight Award on Aug 2010 for the outstanding contribution to the SB900 Bring up effort through the development of Register Explorer

## **OTHER**

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### **Languages**

- French, English, Hebrew, Arabic

US and EU citizen