

# Jeff Mullins

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**Summary** Senior engineering manager with hands-on technical leadership role in developing communications products and consumer devices.

- Work experience**
- 2002 - Present**                      **Rift Zone Technologies, LLC**                      **Cupertino, CA**  
**Managing Member / Software Consultant**
- ◆ Created a three-person partnership to provide consulting services in all areas of embedded software ranging from dedicated state machines to Windows CE personal digital assistants.
  - ◆ Developed an entire embedded software system on a Texas Instruments DSP for driving four digital-servo flap actuators synchronously over a CAN bus for the Eclipse 500 Jet. This Eclipse 500 Jet is still in the prototype phase. <http://www.eclipseaviation.com>
  - ◆ Developed the DO-178B document set detailing the coding standards, checklists, requirements and design of the flap system required for FAA certification.
- 2000 - 2002**                      **Bsquare, Inc.**                      **Sunnyvale, CA**  
**Senior Engineering Manager / Senior Software Engineer**
- ◆ Managed small team developing different versions of a wireless PDA for use in a metropolitan area network. Specification completed for all device hardware, driver level software, and radio module interface.
  - ◆ Joined startup as a Senior Software Engineer developing a Web telephone based on Windows CE and an ARM7 processor. Designed and implemented telephony hardware drivers required for interaction with DAA, caller ID hardware, DTMF dialer, keypad, keyboard, and indicator lighting. Managed specification, interaction, and release schedule to customer. Released software for Web Telephone to customer on schedule. <http://www.smilephone.com>
  - ◆ Within two months, moved Engineering Lead position for the Web phone to Engineering Manager of three different Windows CE based products while continuing technical contribution to the Web phone product.
- 1997 - 1999**                      **Motorola, Inc.**                      **Libertyville, IL**  
**Senior Engineering Manager / Principal Staff Engineer**
- ◆ Managed a team of 20-30 software engineers in the development of a TIA/EIA 136 compliant TDMA cellular phone based on the StarTAC form factor. Included management of DSP software, call processing, user interface, and system test personnel. Recovered an understaffed and poorly run project by identifying resource needs, acquiring them, and addressing appropriate quality and schedule problems. Shipped StarTAC ST7790 cellular phone on schedule. <http://www.startac.com>
  - ◆ Provided technical expertise and served as primary contact for large account customers for the StarTAC and other TDMA products. Developed a new process to get customer complaints and new feature requests documented, prioritized and combined into a common roadmap used by marketing and engineering. Personally updated customers on status of the roadmap and their requests on a quarterly basis in conjunction with marketing.
  - ◆ Identified key problems with code base as a staff-level technical contributor. Assigned additional resources to tackle these issues early in the development

cycle and significantly improved the product quality. Resulted in a significantly more reliable product for the StarTAC ST 7790 than any previous TDMA product.

**1990 - 1997                      Apple Computer, Inc.                      Cupertino, CA**  
**Engineering Manager, Communication Products (1995 – 1997)**

- ◆ Managed a team of 8-14 digital hardware, software, firmware, and radio design engineers in the development of a 2.39 GHz Ethernet-like wireless LAN. Included project management of 60K gate ASIC/DSP development, detailed hardware and radio specifications; media access protocol specification; driver software for Macintosh Desktops, PowerBook and Newton; and all application software necessary for use on Apple platforms. Implemented PC Card, PCI card, and Access Point product designs in conjunction with a third party manufacturer.
- ◆ Co-wrote digital hardware, software and radio design specifications for media access and over the air performance. All products were compatible with TCP/IP and AppleTalk.
- ◆ Attempted spinout of core engineering team with support from Apple Corporate Development department. Personally held team together for 6 months during negotiation with two different funding sources. Began operating under the name SpeedAir for two months before closing due to inadequate funding.

**Engineering Manager, Advanced Technology (1991 – 1995)**

- ◆ Managed a team of 3-10 digital hardware, software, firmware, and RF engineers in the development of a 2.4 GHz ISM band wireless LAN prototype. Included project management of 22K gate ASIC, embedded controller hardware design, forward error correction design, media access design and specification, radio specifications for third party, and all software necessary for use on Apple platforms. Terminated project after 200 seed prototypes were built and technology was successfully licensed to a third party developer.
- ◆ Managed digital designer in development of a 10K gate baseband ASIC used in PowerBook infrared modules for modulation and demodulation of IrDA and other protocols.

**Senior Engineer, Advanced Technology (1990 – 1991)**

- ◆ Independently developed software necessary to provide a driver level interface and direct radio hardware control for 900 MHz wireless LAN prototypes. Successfully demonstrated proof of concept and used the project as the basis for a 2.4 GHz wireless LAN noted above.

**1983 - 1990                      Motorola, Inc.                      Schaumburg, IL**  
**Software Group Leader (1989 - 1990)**

- ◆ Managed a team of 8 software engineers in the development of software architecture, display and keyboard management for highly successful Motorola Micro-TAC cellular phone. Scope included management and development of all user interface, call processing, and test interfaces

**Software Engineer (1983 – 1989)**

- ◆ Designed embedded software for all versions of the Motorola Mini-TAC mobile and Dyna-TAC portable cellular phones. Developed real-time executive architecture, call processing subsystem, interrupt structure, and user interface. Architecture still in use as of June 1999 in shipping products.

<b>Patents</b>	4,905,301	Selective System Scan for Multizone Radiotelephone Subscriber Units
	4,972,355	Method for Radiotelephone Autonomous Registration
	4,972,432	Multiplexed Synchronous/Asynchronous Data Bus
	5,020,091	Automatic New Radiotelephone System Registration Notification
	5,150,359	Multiplexed Synchronous/Asynchronous Data Bus
	5,404,374	Method and Apparatus for Transmitting and Receiving Encoded Data Using Multiple Frequency Coding
	5,745,699	Dynamic Address Assignment in an Arbitrarily Connected Network
	6,069,887	Method and System for Synchronization in a Wireless Local Area Network

<b>Education</b>	<b>1983 - 1989</b>	<b>University of Illinois, Chicago</b>	<b>Chicago, IL</b>
	<b>MSEE Coursework – 90% completion of on-site Motorola program</b>		
	<b>1978 - 1983</b>	<b>University of Cincinnati</b>	<b>Cincinnati, OH</b>
	<b>BSEE Degree</b>		