

Martin Fouts

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Expertise: Extensive recent experience adapting modern operating systems to battery powered embedded devices; specifically Linux and the BSD family on ARM processor based Palm, Sidekick, and Windows Mobile smart phones. Prior experience included instruction set design, processor bring up, and operating systems porting, on devices ranging from supercomputers to custom embedded signal processing systems.

Microsoft – Principal Software Development Engineer

Apr 2008 to present

Technical Lead for Connectivity

Responsible for OS connectivity layers, including WinInet, WinSock, and Connection Manager, in a hybrid Windows CE operating system for a new product.

- Ported Connection Manager and adjunct facilities from Windows Mobile 6 (WM6) to Windows CE 6 from windows CE 5.
- Gave presentations to Windows Mobile 7 (WM7) applications developers on how to port WM7 applications to WM6 connectivity model.
- Currently working with WM7 applications developers to port and debug WM7 application connectivity in hybrid Windows CE.

Danger – Principal Software Engineer

Nov 2005 - Mar 2008

Operating System Architect

Moved Danger's phone platform from proprietary real-time OS to NetBSD.

- Saw project through from inception to shipping of T-Mobile Sidekick LX 2009, based on NetBSD.
- Determined requirements, mapped out schedule and required work, and prototyped implementation of DangerOS platform on NetBSD kernel.
- Ported NetBSD to new generation of ARM processors intended for next Danger product.
- Oversaw projects to add features to NetBSD to meet telephony requirements, including device-side USB, power management, and NAND flash file system support.
- Implemented support tools, file system and device driver for NAND flash file system.
- Member of NetBSD Foundation – committer to NetBSD CVS repository.

PalmSource – Senior Software Engineer

2004 - 2005

Lead Linux Kernel Developer

Responsible for kernel and system architecture of *PalmOS for Linux* (POSFL) – PalmOS converted from using a custom kernel to being an application suite running on ARM Linux.

- Member of POSFL architecture team. Designed the file system layout and “mini-distribution” that comprise the Linux portion of POSFL. Implemented and maintained the mini-distribution.
- Selected by Aleph1 as co-developer of YAFFS files system. Committer to YAFFS development CVS repository.

- Maintainer of PalmSource ARM Linux for TI P2/OMAP-730. Provided keypad, NAND, and MMC/SD card drivers. Technical lead for kernel team, directing development of further drivers, including telephony, IRDA, USB device and USB host drivers.

Netli – System Architect

2002 - 2003

Software developer for distributed application

Developed and maintained billing data transport for NetLightning distributed service. Developed and maintained extensions to Pavuk, a web spider. Performed distributed performance analysis.

Dotcast – Director of Dotcaster Software/Architecture

1999 - 2001

- Developed the hardware and availability architecture of the Dotcaster, a server intended for use in TV broadcast studios to utilize Dotcast IP to multicast digital content superimposed on NTSC signals.
- Developed the multi-hop multi-cast datacasting component, including NOC to Dotcaster transmission and Dotcaster to Dotbox multicasting. This involved evaluating and prototyping various multicast methods, including IBM's DMD and Talarian's implementation of PGM. I directed the work of several engineers on this project.

Synopsis of prior work history:

Martin Fouts Consulting Consultant. Software architect and developer for multiprocessor, distributed and embedded systems.

Hewlett-Packard HP Labs Principal researcher in operating systems. Research emphasis on large scale distributed memory multicomputer operating systems.

Intergraph Advanced Processor Division: Managed Unix development for OEM customers and for new processor development. Responsible for two development teams with total of 15 software developers.

NASA Ames Research Center: Developed operating systems and distributed software for large scale distributed supercomputing facility. Managed NASA subcontractors developing Unix-derived software for this system.

GE Aerospace: Worked on NASA Numerical Aerodynamic Simulation Facility software design.

Montana Tech: developed software for state agencies and Montana University System. Managed student software developers. Managed computer facility for small college.

BS Mathematics—Montana College of Mineral Science and Technology (GPA 3.5)

References available upon request