



Fast Footwork

Heeltoe's Notes on the Embedded World

Spring 2005

News...

Heeltoe provided engineering services to many new companies in 2004. We worked on a wide range of products from automotive diagnostics to cell phones. This year continues on that trend with new ARM and DSP projects.

During 2004 Heeltoe and Echo Engineering joined forces on several strategic projects. Several projects required larger teams and we asked the folks at Echo Engineering to help out. This partnership worked well and we have continued into 2005 with several joint projects. Their web site is echoengineering.com

Interesting New Hardware:

- Atmel AT91SAM7S
- Sharp's BlueStreak ARMs - LH79525
- TI's OMAP ARM's - 2420
- TI's MSP430 MCU
- Philips LPC213x
- Intel Xscale PXA27x
- Microchip 18F6390 series

Interesting New Software:

- MontaVista Software - Consumer Electronics Linux (CEE)
- Abatron - ARM11 support
- Linux 2.6 - it's ready for prime time
- Other PPC Linux distros - UBUNTU, CRUX

What we do...

Heeltoe Consulting provides hardware, software services and consulting for embedded systems. We specialize in Linux on a variety of platforms and CPUs such as the Motorola PowerPC, Intel ARM, MIPS and x86. Many projects involve small portable devices. We also design and develop embedded applications on small microprocessors such as PIC and Atmel.

Heeltoe uses flexible design and development teams with an interdisciplinary approach. We can help with any software and hardware design and system level issue.

Heeltoe provides design services to take a product from concept to manufacturing. We have relationships with local contract manufacturing houses and national PCB board manufacturers. We have the expertise to help you bring your product to market quickly and reliably.



Sharp A400 ARM design by Heeltoe

What does 'Heeltoe' Mean?

The phrase "heel-toe" is a term used in automobile racing when a driver shifts the transmission and uses both feet to synchronize the gears and engine. It's used to move quickly through the gears while going as fast as possible. See our web site (<http://www.heeltoe.com>) for more details.

Recent Projects

- *Power Management*

Heeltoe helped MontaVista Software add power management capabilities to two new cell phone CPU's. Heeltoe's expertise with hardware integration, low level hardware issues and ARM processors helped MV provide a quality solution to it's customers.

- *USB*

We helped several customers with PPC 8xx USB host and function controller designs.

- *Hand-held Computer*

During 2003 and 2004 we helped with a large hand held computer that utilized several Alchemy Au1100 MIP chips.

- *Automotive*

We executed several projects using PIC microprocessors and automotive protocols J1850 and CAN.

- *Emulation*

As an experiment we wrote a microcode emulator for the original MIT Lisp Machine (the 'CADR') that allowed the old lisp machine code to be run on modern hardware.

- *Monitoring*

Heeltoe helped SiteWatch Technologies LLC bring Linux to their monitoring product. We helped with hardware bring-up and debugging, boot ROM, kernel and file system development.

- *Support*

Heeltoe created a support board for a Serial RapidIO evaluation board. Based on the Atmel AT91SAM7S ARM chip it provides a serial and TCP/IP interface for controlling the board.

YOUR PROJECT HERE

Contact Information:

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