

Bluesocket Replaces Roll-Your-Own Linux with Wind River Solution

Wireless and Mobility Solutions Company Opts for Revenue-Generating Linux Expertise



Bluesocket provides open, standards-based enterprise mobility solutions. Their products enable customers to deploy secure wireless local area networks (WLANs) and open-source Session Initiation Protocol (SIP)-based unified communications solutions that provide wireless data and voice access for thousands of mobile workers. Bluesocket customers include universities, enterprises, healthcare organizations, government institutions, and libraries.

In 2006, Bluesocket was developing a product called the BlueSecure Access Point 1700, an enterprise-class, Wi-Fi certified multiple-input, multiple-output (MIMO) access point. BlueSecure Access Points are intelligent networked devices running embedded Linux systems, deployed throughout an enterprise to provide secure wireless coverage. This product offers a six-antenna array that combines multiple signal paths to improve indoor wireless coverage and throughput performance.

The Real Costs of Roll-Your-Own (RYO) Linux

"To centrally manage and configure the access points, we needed a cross-platform embedded system focused on Broadcom MIPS technology," says Tom Guevin, Chief Technology Engineer, Bluesocket. "We initially tried to use open-source toolchains, libraries, and Linux kernels, but we ran into problems. We were spending valuable development time working on these open-source toolchains instead of working on the features needed to ship our access points and controllers."

"In our first year, we've already seen a complete return on our investment and more. Wind River offers a three-for-one return on the money."

—Tom Guevin, Chief Technology Engineer, Bluesocket

Company Profile: Bluesocket

- Develops enterprise mobility solutions, including secure WLAN and SIP VOIP
- Privately held
- Headquarters in Burlington, MA

Industry

- Wireless network infrastructure and unified communications

Solutions

- Wind River Platform for Network Equipment, Linux Edition
- Wind River Workbench, On-Chip Debugging Edition

Results

- Three-times return on investment to date
- Accelerated time-to-market
- Stable, reliable, highly differentiated products
- On-schedule, under-budget projects

As time went on, Bluesocket became increasingly aware of the real costs of its RYO solution. Not only did the company have fewer resources available for feature advancement, but the development cycle was getting longer and R&D expenditures were rising.

"We had spent the first three months working with the toolchain trying to get the board to come up," says Jim Finucane, Vice President of Engineering. "Our development window to deliver an access point and controller on the MIPS platform was closing."

Wind River Offers Time-to-Market Advantage, Support

Bluesocket initially considered other solutions, but ruled them out because they didn't support the Linux 2.6 kernel and they didn't offer a pre-compiled binary reference design, which would translate into longer times between builds.

Wind River Platform for Network Equipment, Linux Edition, offered the software development solution Bluesocket needed. The platform includes the Eclipse-based Wind River Workbench development suite and is backed by 24/7 global technical support. Bluesocket was also interested in the Workbench debugging toolset, such as JTAG debugging tools Wind River ICE and Wind River Probe.

"Wind River offered a cross-compiler and build system that would allow us to do embedded builds very, very quickly," Guevin says. "We knew this speed, combined with support for the new Linux 2.6 kernel, would give us a competitive edge and allow us to advance our product line."

Soon after the relationship was established, a Wind River support engineer traveled onsite to help Bluesocket troubleshoot a driver problem the company had been unable to solve.

"The Wind River support person walked our team through the problem and solution using Workbench," Finucane recalls. "Within three weeks the issue was resolved, and Bluesocket has had a stable driver ever since."

"It's nice to receive a high level of support from our vendors," Guevin says. "The fact that we were able to get a resource onsite to help us troubleshoot this problem was huge."

Several months later, Bluesocket was working on a next-generation controller when it ran into an issue related to its MIPS architecture. Wind River support again stepped in to help.

"Three weeks later, bingo, the fix came back," Guevin says. "In the meantime, instead of focusing our efforts on trying to fix a bug, we continued to focus on feature development."

"Wind River has helped us make a quantum leap in our development efforts."

—Tom Guevin, Chief Technology Engineer, Bluesocket

Successful Results

Because it operates in a fast-moving, competitive market, Bluesocket must focus its time and energy on developing powerful products and differentiating features, not worrying about performance and stability.

"If you spend your time on toolchains, you're not spending time on your products," Guevin says. "Wind River has enabled us to focus nearly all of our time on our own code."

In addition to reduced development time, Bluesocket has achieved savings in testing and qualification costs. The company now delivers products on time and under budget.

"In our first year, we've already seen a complete return on our investment and more," Guevin says. "Wind River offers a three-for-one return on the money."

Since using Platform for Network Equipment, Bluesocket's development team has upgraded its entire multi-product controller line and launched a new high-end access point in only one year.

"In the past year we've launched more than one product a quarter," Finucane says. "This accelerated release schedule would be impossible without an extremely good platform and build environment."

With Wind River at its side, Bluesocket plans to continue this success.

Guevin offers this analogy: "If you're a news anchor, you can't read every newspaper out there to find out what you need to know. You require one reliable source to get the information you need. It's the same in the open-source Linux arena, and that reliable source is Wind River. Wind River has helped us make a quantum leap in our development efforts."

Learn More



For additional information about the products mentioned in this case study, please visit:

www.windriver.com
www.bluesocket.com

WIND RIVER

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