



Wind River

Spearheading the DSO Wave

DINKER CHARAK
Technical consultant, Wind River

Wind River is one of the leading providers of device software in the world, and has clients in verticals as varied as aerospace, defence and consumer devices. In an exclusive interview with the LFY team, Dinker Charak, technical consultant—Wind River, shared the vision and future plans of his company.

LFY: When was Wind River established? Who heads it? What is the gamut of your operations?

Wind River was founded by Jerry Fiddler in 1981, in Berkeley, California. Since then, we have grown to become one of the leading providers of device software, worldwide, with operations in 16 countries. Ken Klein is the chairman of the board, president, and chief executive officer at Wind River. Ken is leveraging his extensive operations expertise to drive increased efficiencies throughout the company to further push Wind River's leadership position. A leader in Device Software Optimization (DSO), Wind River enables companies to develop and run device software better, at lower cost and reliably. Wind River technology is currently deployed in some 300 million devices worldwide, by industry leaders.

Wind River solutions are built around the two leading operating systems used for device software development—the VxWorks RTOS and Linux. The verticals that our solutions address are as varied as

aerospace and defence, networking equipment and consumer devices. Our services enable leading electronics vendors to design, develop and deploy innovative products.

LFY: What are the operations at the Linux division of Wind River? Who is on the team and who heads it? When was it founded?

Thanks to our flagship product VxWorks, Wind River has been a leader in the industry. In late 2003, we started to expand the range of possibilities by embracing Linux. We have a strong and focused Linux Products team that aims at delivering high value Linux platform products, at an accelerated time-line, leveraging our device software optimisation experience of over 20 years. Today, we have extended Linux-based solutions across our Market Specific Platforms and Hardware Assisted Tools (HAT).

LFY: What services and products for the Linux OS does Wind River offer? Which of these do you consider your forte?

Our customers develop and run the most sophisticated

devices in the world. Think of something as critical as a heart pacemaker. That is why our customers rely on us to rigorously test and validate Wind River platforms. To address this in the Linux business, Wind River Commercial-Grade Linux is our response. It is engineered, integrated, tested, validated and supported just as rigorously as our VxWorks products have always been.

Wind River Commercial-Grade Linux, built on pristine source code-based platforms can stand up to the development process, the production environment, and the rigours of deployment.

Adoption of open standards and standardisation are the keys to growth of Linux in device software. As these open standards are widely adopted, Linux-based solutions will get tuned to the needs of a particular vertical. This will only lead to a growth in the market share of commercial Linux in device software.

The Wind River Workbench is an Eclipse-based development suite that allows for the OS-agnostic approach with support for multiple operating systems. Our general-purpose platform is a base Linux distribution targeted at a wide variety of applications, and is available on a range of processors and architectures. The platform for consumer devices provides a minimal footprint, and initially supports the architectures that are commonly found in handheld devices. Further, the platform for network equipment is Carrier Grade Linux-registered and focuses on 32- and 64-bit X86 and PPC architectures, as well as ATCA hardware platforms.

LFY: One thrust area for Wind River is Device Software Optimisation Solutions (DSO) using Linux. Can you throw some light on the USP of your DSO offerings?

The shift of focus from embedded software to device software is a sign of the maturing of our industry. DSO is a holistic, enterprise-wide solution for the challenges generated by increasing complexity in developing and running device software. Wind River DSO solutions are matched to the needs of five distinct industries within the device world—aerospace and defence, networking infrastructure, automotive, consumer electronics and industrial and control equipment.

For each industry, we provide a platform that includes an Eclipse-based, end-to-end development suite, one or more operating systems, networking and security protocols, support for all relevant industry and open

source standards, support for a broad range of popular architectures, and an ecosystem of hardware and software partner technologies.

LFY: What companies compete with Wind River in this segment? What is your take on the competition?

The Device Software Optimisation (DSO) market is divided between RTOS, Commercial Linux and In-House Development, often called Roll-your-own (RYO) Linux. And in Commercial Linux, Wind River's share is now a hefty 39 per cent.

LFY: How do you see the future of Linux in the device software space in the years to come?

There are applications where open source is perfect for deployment and so is the Linux development environment. There are places where VxWorks is perfect. There are situations where these options can often be for the same device. As the device software industry grows, it will have to take this co-existence into account. There will be a growing need for development suites and tools, which will enable more and more device software to be written independent of the OS.

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LFY: Support is cited as one of the biggest problems with respect to switching to OSS/Linux? What's your take on this? What are Wind River's support offerings?

We want to be a global company, but we also want to provide local support because in this kind of market, in-time support and time-to-market are big issues. Wind River offers support in many forms. This includes person-to-person help lines, consulting services, training, and Web-based support to solve problems as they arise. Anyone who has licensed a platform seat can contact any portion of our world wide support infrastructure. The Wind River online support website provides new BSPs, updates to existing packages, patches, manuals, the latest errata, and other announcements about our platforms. Support requests are prioritised according to customer impact, and a categorised first technical response (a meaningful technical exchange—questions, clarification, or proposed solution) is usually provided within one business day.

LFY: Are there any tips that you would like to share with CTOs reading LFY on how to handle migration or deployment and the teething troubles involved?

Companies are making financial decisions at higher levels, and they are increasingly making more strategic decisions with respect to device software. A CTO should not make a one-off decision based on one company offering a

cheaper product. He should also want to know how the partnership is going to look long-term, how financially stable the company is, and how the roadmaps of both companies align with each other. Linux migration problems, as far as device software is concerned, can be minimised by going for a solution provider who addresses the various challenges involved in an efficient manner.

LFY: What kind of alliances does Wind River have? How do each of them help the company?

Wind River has established a good partner ecosystem in the DSO industry. Our partnerships with world-class technology companies enhance the value of our products through their fit with the standards-based solutions of other industry leaders. We envision and develop our products in tandem, then integrate and test them together. In addition to excellence, these companies share Wind River's long-term commitment to providing customers with the solutions they need to get to the market faster, at lower cost, and with a more reliable product. Wind River and our strategic partners optimise the development process, minimising basic operations and maximising the kind of engineering that makes your products superior and competitive in a fierce marketplace. The complementary products and services available from Wind River partners include hardware, board support packages, software, training and services.

LFY: How has your growth been over the years? What are your expansion plans for the next two to three years?

Wind River sees a lot of potential for growth in the device software industry in India. Our customers are moving their development to India, so it is natural for us to follow the same growth pattern. More and more of our customers

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are expanding to India and not just because of the cost factor. The talent pool is also a big draw. Our top management has extensive operations expertise and is driving increased efficiencies throughout the company. Wind River stock is traded on NASDAQ (WIND). Our market share is sizeable and we are leaders in revenues, as well. We took the downturn of 2000-02 well, and have seen a steady growth since 2003.

Wind River's investments in leading the industry shift to DSO are just beginning to produce measurable results, and our financial performance and progress on our product roadmap underscore our ability to deliver on our commitments—to our customers, to our stockholders and to our employees.  **END**

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