

## Wind River Helps Siemens Hit Market Window

### VxWorks Solution Enables Leading Electronics Company to Focus on Core Expertise

Mobile telecommunications is in a headlong race toward higher bandwidths and new technologies. Driven by continual pressure to one-up the competition with new and innovative products, this aggressive environment emphasizes time-to-market.

When Siemens AG, one of the world's largest and most innovative technology firms, began development of high-bandwidth IP routers for 2.5G and 3G wireless networks, the company recognized that it needed an approach to software development as intelligent as the end device would be.

The crux of the development problem was the steady growth of software embedded in the device. Siemens decided to accelerate its software development by acquiring a core of predeveloped, preintegrated components from Wind River—software already proven to work in high-bandwidth environments.

"For us, time-to-market is crucial," says Klaus Hjorth, Director of Development, Siemens Information and Mobile Division. "Wind River has a very broad line of technically advanced embedded technology products, so we can get the components we want from one place, already integrated together. It would be much more difficult to meet our deadlines if we had to gather components from multiple vendors and integrate them one by one."

#### Answering the Software Development Cycle Challenge

Today, it is not unusual for a device to have several hundred thousand lines or more of embedded code. A large portion, perhaps as much as 70 percent, is available commercially as prewritten drivers, protocol stacks, and other core components. But acquiring prewritten components that meet technical specifications is not enough to fully accelerate development. Proven integration of the components is equally important.

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#### Company Profile: Siemens AG

- One of the world's largest electrical engineering and electronics companies
- Provides innovative technologies and comprehensive know-how to benefit customers in 190 countries
- Headquarters in Berlin and Munich, Germany

#### Industry

- Electronics

#### Solutions

- Wind River's VxWorks
- Wind River security and networking applications

#### Results

- Expedited software development
- Launched products on time to capture market share in the emerging global marketplace for 2.5G and 3G wireless networks
- Achieved fast time-to-market without sacrificing quality or technical innovation

*"In order to get our product to market ahead of the competition and at a lower cost, we needed a strong, robust, off-the-shelf solution that would allow us to be up and running quickly and easily. With Wind River's proven technology, we were able to concentrate on our core expertise and bring an innovative product to market."*

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### Meeting Market Demands On Time

Siemens' IP routers are used to support high-bandwidth data transfer for General Packet Radio Service (GPRS), or 2.5G; and Universal Mobile Telecommunications System (UMTS), or 3G, wireless networks. They are installed as server cards in network base stations and are fully integrated into industry-standard network-management systems, creating a new standard of performance and manageability for the mobile world.

During development, a two-way collaboration between Siemens and Wind River involved adapting VxWorks technology to ensure the performance required for the end products.

"The working relationship was very close," Hjorth says. Wind River regularly adjusted its priorities and resources to ensure the project remained on schedule.

The products, now on the market as the GGSN@dvantage CPG-3000, and SGSN@dvantage CPX-5000 routers, were finished on time and included the performance, remote management capabilities, and other required functionality.

This project is a classic example of how fundamental Wind River technology—including tools, a real-time operating system (RTOS), and networking protocols—can accelerate development of innovative products and help companies hit their market windows.

"In order to get our product to market ahead of the competition and at a lower cost, we needed a strong, robust, off-the-shelf solution that would allow us to be up and running quickly and easily," says Ekkehard Pott, Vice President of Siemens Mobile Core Networks. "With Wind River's proven technology, we were able to concentrate on our core expertise and bring an innovative product to market."

### Learn More

# SIEMENS

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[www.siemens.com](http://www.siemens.com)

[www.windriver.com](http://www.windriver.com)

## WIND RIVER

Wind River is the global leader in Device Software Optimization (DSO). We enable companies to develop, run, and manage device software faster, better, at lower cost, and more reliably. [www.windriver.com](http://www.windriver.com)

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