

WIND RIVER

Telco Systems Enhances Products, Enters New Market with Wind River Linux

Global Leader of Carrier-Grade Ethernet Solutions Selects Wind River for Linux-Based Operating Systems



Telco Systems, a BATM Advanced Communications company, specializes in telecommunications and data communications technologies and advanced networking solutions that put its customers' products on the map.

Since 1992, Telco Systems has designed and manufactured innovative, high-performance communications equipment using leading-edge technologies such as fiber optic networking; multiservice transport; access solutions; and integrated IP voice, video, and data services. Telco Systems develops and produces an extensive line of layer-routing IP switches and multiplexers. Advanced optical solutions are integrated into many of the switches.

Headquartered in Kfar Netter, Israel, Telco Systems operates several offices in the United States, France, Germany, and Asia-Pacific. The company employs more than 400 people worldwide and maintains a highly integrated research and development program with its subsidiary companies.

Telco Systems' customers include many Fortune 100 companies and almost all the major telecommunications and data communications companies, including Nokia, IBM, AT&T, Verizon, Tata Communications, BT, COLT, SK Telecom, Korea Telecom, 3M, Alcatel-Lucent, Elbit, IAI, and SBC. BATM has globally deployed more than \$1.5 billion in products.

Wind River Linux Provides Foundation for Proprietary OS

Telco Systems began using Wind River Linux several years ago, when the company noticed an industry shift toward Linux operating systems (OSes) and real-time operating systems (RTOSes). The company decided to develop an OS to operate its own line of products, including routers, switches, and demarcation devices.

"By using Wind River Linux, we are able to run our own proprietary BiNOS and BiNOX systems on virtually any needed hardware. All we need is LSP [label switched path] or a board support package and kernel for the central processing unit, regardless of what type of hardware we use."

—David Moses, Vice President of R&D
Telco Systems

Company Profile: Telco Systems, a BATM Company

- Develops solutions for carrier grade Ethernet access and Voice over Internet Protocol (VoIP)
- Headquarters in Kfar Netter, Israel
- More than 400 employees worldwide

Industry

- Carrier Ethernet and transport solutions or networking

Solutions

- Wind River Linux 3.0
- Wind River Workbench 3.0

Results

- Reduced time-to-market by 33% (two years instead of three)
- Expanded hardware product portfolio and added software solutions offering
- Shortened product development life cycle by 30%–40%
- Enhanced security features, stability, and scalability

Soon after developing its own OS, Telco Systems realized that its customers were eager to use the Wind River Linux-based OS for their own products as well. This generated a new demand in the market—and a new software-based solution and service were born.

First the company developed a proprietary OS called BiNOS (BATM Inter Networking Operating System). BiNOS, the result of more than six years of development by more than 150 engineers, is an open architecture system offering high stability, reliability, and ease of use. It's also highly secure, with a high-performance platform that operates all of Telco Systems' broadband products, and is sold as an RTOS solution for third-party original equipment manufacturers (OEMs).

To further improve BiNOS, Telco Systems opted to use Wind River Linux as the basis for a second OS called BiNOX (BATM Inter Networking Operating System Linux). BiNOX is a BiNOS-based OS that represents 10 years of consolidated networking experience and the maturity of BiNOS.

"BiNOX is a BiNOS-based OS with improved features and applications," says David Moses, Vice President of R&D at Telco Systems. "The new carrier grade solution allows real-time multitasking and support protection mode and enhanced user security. It also has online patch support and component-based development, which enable our clients to speed their products' development cycle and improve time-to-market."

For example, BiNOX features an improved modular design, a unique management framework, support for component-based development, Extensible Markup Language (XML), NETCONF and YANG, and an extremely fast startup time.

"By using Wind River Linux, we are able to run our own proprietary BiNOS and BiNOX systems on virtually any needed hardware. All we need is LSP [label switched path] or a board support package and kernel for the central processing unit, regardless of what type of hardware we use," Moses says. "We chose Wind River Linux platform 3.0 because our clients requested a Linux-based OS, the world seems to be moving onto Linux-based RTOSes, and most of our clients' products fully support Linux real-time solutions."

"Wind River is more than just a supplier to us. Wind River is a partner, since a large part of our software solutions are based on Wind River Linux."

*—David Moses, Vice President of R&D
Telco Systems*

The Bottom Line

Telco Systems Ethernet access solutions enable customers to introduce new services to capture additional revenue by supporting mixed services across a Carrier Ethernet network.

The Wind River Linux-based BiNOS and BiNOX solutions have made Telco Systems products more scalable and easier to deploy, manage, control, and improve—according to customer demands and needs. As proof, BATM customers often choose BiNOX for their own products due to its robustness, stability, and performance.

"Both BiNOS and BiNOX allow our devices to run faster and more reliably," Moses says. "Wind River has enabled us to create and offer software solutions in addition to hardware products, which enables us to appeal to a wider market. And it enables us to develop better and faster products."



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

www.windriver.com
www.telco.com

WIND RIVER

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