



ACHIEVING A FIRST MOVER ADVANTAGE USING ZEPHYR RTOS

Find New Market Success Using Open Source

THE SITUATION

A multinational corporation specializing in routers, switches, gateways, and other wide-ranging network infrastructure equipment wanted to enter the in-vehicle network infrastructure market. Company leaders saw an opportunity to gain significant market share with a first-mover strategy. However, their existing product line was based on proprietary technology that ran on optimized X86 Linux. To win market share, they needed to deliver the increased computational power, heterogeneous data exchange, and ironclad security required for emerging in-vehicle network architectures on a smaller hardware architecture. The software development team decided the best way to do this was to redesign the current technology to work on a lower-cost, microcontroller-based platform.

The first-mover strategy was highly dependent on the team's ability to get new in-vehicle network infrastructure products to market within 18 months. Failure to deliver a solution in this timeframe would mean missing automotive OEMs' window for finalizing their next-generation architectures and component supplier selections.

ZEPHYR RTOS A GOOD FIT, BUT CUSTOMIZATIONS NEEDED

After an initial project evaluation, the team members determined that existing commercial-based microcontroller operating systems were not conducive to the retooling of company technology, and certainly not given the market timing requirements. They started investigating potential open source solutions and found that the Zephyr RTOS appeared capable of meeting their technical needs but required modification. The workload created by transitioning from proprietary to an open source solution plus the team's limited in-house experience with Zephyr combined to create a significant risk to the project goals. Any unforeseen challenges could have a significant impact on the schedule.

In addition, entering a new market segment required finding and hiring experts to understand and support both the legacy enterprise and new in-vehicle businesses. The team had to extend its current staffing levels to include highly specialized microcontroller and real-time developers, while bolstering its skills to handle lifecycle management capabilities.

WIND RIVER: AN IDEAL ZEPHYR DEVELOPMENT PARTNER

The company was using Wind River® technology for several of its other product lines. The development team was aware of Wind River software and professional services solutions in the automotive industry and knew it could leverage this deep experience for the new project. Wind River proposed its Zephyr Lifecycle Services as a solution to help ease the transition from proprietary to open source and to provide the real-time design expertise needed to meet the unique needs of the automotive industry. Wind River proposed an architecture and design for the company's new technology stack that minimized the effort of retooling the proprietary technology. The development team learned how legacy and new products could be developed from the same code base, significantly saving time and delivering a higher return on investment. The company also took advantage of the value provided by the community-focused approach of Wind River, which could result in ongoing community support for its own Zephyr changes.

TIME-TO-MARKET ACHIEVED WITH LESS RISK

With Wind River Zephyr Lifecycle Services, the company significantly lowered the risk of its project effort, solidified a roadmap, and accelerated time requirements to deliver a winning solution within the OEM vendor selection period. In addition, the customer responded to OEM requests for information with the confidence that it could turn to Wind River for the design experience and help needed to close the in-house skills gap and offset any immediate staff needs.

Learn more about how Wind River can be your open source partner. Our team of embedded experts can help you develop, design, and deploy projects using the Zephyr RTOS or Linux operating system.

Find out which operating system is right for your project. [Contact us.](#)

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