

SELECTING AN EMBEDDED RTOS



FEATURED INTERVIEW:

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HIGHTEC EDV-SYSTEME GMBH - RTOS PRODUCTS & SERVICES, 2009

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Q. Can you tell us something about yourself and your responsibilities at HighTec EDV-System GmbH?

A. I started in 2008 as Marketing Manager.

Q. Would you mind giving us a very brief outline of your products? What sorts of real-time operating systems (RTOS), tools, and/or services does your company offer?

A. *PXROS-HR* is an enhanced version of the existing real-time operating system *PXROS*. This system supports the Memory Protection Unit (MPU) of the TriCore family, which allows safe integration of function while at the same time reducing complexity and improving the testability of applications. Hardware-based memory protection is essential for safety-critical applications since it makes partial SIL-certification of components possible. HighTec offers a *PXROS-HR* toolbox for the TriCore, including standard components for creating safety-critical applications. Additional graphic functionalities are provided by the IEC 61508 Toolbox Designer (Eclipse based).

Q. What is HighTec EDV-System GmbH's "unique value proposition" for the embedded systems engineer or programmer considering an embedded RTOS? What do you and your products do to help him get his product to market faster, cheaper, better?

A. The first "unique value proposition" is the fact that our RTOS does not induce additional latencies if hardware interrupts occur. The *PXROS-HR* kernel never blocks an interrupt. The second "unique value proposition" is the use of the MPU for protected task communication and avoidance of software error propagation. The advantage of the MPU in comparison to a MMU is that the former's fine granularity helps avoid fragmentation.

Q. In which way is your company different from its competitors? What is it that sets your products apart from those of other RTOS companies?

A. Support for the developers, no interrupt locks, flexible tracing within the OS and the management of MPU by *PXROS-HR*. Our real-time OS is based on microkernel architecture.

Q. Which embedded architectures do you support - e.g., Intel architecture, MIPS, ARM, PowerPC, etc.?

A. *PXROS* supports Intel architecture, C16x, ARM, PowerPC; *PXROS-HR* supports TriCore.

Q. Which additional software applications do you offer such as networking, file systems, TCP/IP, security, IDE, GUIs etc.? What about development tools? Are there particular partnerships with other software companies that are particularly helpful?

A. We provide IDE Code: Blocks and Eclipse for developing. For real-time OS, extension modules such as TCP/IP, file system, NFS, FTP and USB are available. We cooperate with PLS, a supplier of high-end debugger solutions.

Q. How do you sell your products? What are the typical fees? How are royalties handled?

A. We have different suppliers who distribute our products in Europe and the USA. The price of one development license including the compiler, IDE and *PXROS*, is 4,500 euros. This price includes one-year support. The royalties are per unit, yet the customers can also have a buyout.

Q. Finally, what are your “try before buy” schemes? Do you offer any free demo downloads, webinars, or seminars? Which web URLs can you point out in case someone is looking for more information?

A. Evaluation versions of our toolchains are available at <http://hightec-rt.com/downloads/>. We provide online tutorials and user trainings on our website.

Q. Thank you for this product interview.