

# SELECTING AN EMBEDDED RTOS



## FEATURED INTERVIEW:

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## MAPUSOFT - RTOS PRODUCTS & SERVICES, 2009

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- Q. First of all, tell us a little bit about yourself and your responsibilities at MapuSoft.**
- A. After being an embedded developer for more than 10 years I had seen firsthand the many difficulties that can occur when migrating existing code to the next generation. I founded MapuSoft in 2001, with the goal to offer developers a simple solution to quickly port code to multiple OS platforms.  
 At MapuSoft I am responsible for the growth and development of the company. I aim to maintain MapuSoft's success as the leader in the embedded market, offering innovative code reuse products and services.
- Q. If you would, please give us a very brief, bulleted outline of your products. What sorts of real-time operating systems (RTOSes), tools, and/or services does your company offer?**
- A. MapuSoft offers products to help developers streamline development processes and reuse their embedded software on one or more operating systems. MT offers porting, integration, support, and training services to help developers easily migrate from legacy platforms to the next generation. All of MT's products are highly optimized for performance and have been use throughout many different industries, including critical Mil/Aero applications. Our solutions support many operating systems including VxWorks® 5x & 6x, Linux® 2.4 & 2.6, LynxOS®, LynxOS-SE®, Windows CE®, Windows XP®, Solaris®, Unix®, eCOS®, Nucleus®, ThreadX®, MQX®, QNX®, T-Kernel® and uITRON®. In addition our products can be customized for proprietary operating systems.
- *OS Changer* allows developers to reuse legacy software on a different OS platform
  - *OS Abstractor* allows for the development of portable code and provides both BASE common commercial APIs and POSIX APIs for development
  - *OS PAL* (OS Porting and Abstraction Lab) integrates *OS Changer* and *OS Abstractor* in an Eclipse-based IDE for host development, porting and optimization and provides code generation for multiple target operating systems to run the same code on different OS platforms
  - In line with our software reuse philosophy, MT also offers these third party products:
    - *AdaMagic* gives developers the ability to automatically convert software written in Ada to the C/C++ programming language

- *WinDriver* enables driver development across multiple operating systems

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

A. All of our products are designed to provide flexibility and freedom from a single OS vendor. We make it easy for developers to reuse existing code, and to write code that is compatible across multiple OS. We also have simulation and application profiling capabilities. All of these things combine for the optimum project scenario in any organization: developers can easily run the same code base on different real-time operating systems for comparison when choosing an OS. They can complete a porting project quickly and easily, without a code rewrite, to achieve a faster time to market with fewer resources.

**Q. How are you different as a company from competitors? What sets your products apart from those of other RTOS companies?**

A. MapuSoft focuses on offering our customers products that will provide maximum design flexibility as opposed to tying them down to a single OS. We give the ability to move code to different RTOSs as well as write code that will work on multiple RTOSs and is easily adaptable for future OS versions. Our customers enjoy top-of-the-line products and freedom from any single OS vendor.

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

A. MapuSoft's products support all architectures that are supported by the target operating systems.

**Q. What additional software 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 especially helpful?**

A. Our *OS PAL* (OS Porting and Abstraction Lab) solution is a cross-OS development tool. *OS PAL* provides easy-to-use GUIs, which are integrated with the Eclipse® based CDT environment, to generate code for different operating systems quickly and easily. In addition, it offers a Profiler which provides performance feedback concerning the utilization of MapuSoft's APIs in the project and data about the performance of the application's APIs. Our valuable partnerships with RTOS vendors allow us to provide solutions which are optimized for each RTOS platform.

**Q. How are your products sold? What is a typical fee arrangement? Is it royalty free? Per unit royalty?**

A. All of our products are absolutely royalty free and provided with full source code. Our *OS PAL* product combines *OS Changer* and *OS Abstractor* for host development and porting

in an Eclipse-based IDE. We also offer *OS Changer* and *OS Abstractor* separately as standalone libraries in source code format for use outside of *OS PAL*.

**Q. Finally, what sort of “try before buy” experiences does your company offer? Are there free demo downloads, webinars, seminars? What web URL’s can you point us to for more information?**

A. MapuSoft offers free software evaluations and 30-day trials to give customers a glimpse of how our products can simplify any migration or development project. For a free download visit <http://www.mapusoft.com/downloads>

We also hold weekly free webinars, every Wednesday on topics such as VxWorks porting and demonstrations of *OS Abstractor*. For an up-to-date schedule of our webinars and to register visit <http://www.mapusoft.com/webinar/257>

**Q. Thank you for this interview.**