

RTS Hypervisor V2.2 enables MSI Support for all Operating Systems

Date: 02-05-2010 10:41 AM CET

Category: [IT, New Media & Software](#)

Press release from: [Real-Time Systems GmbH](#)

Agency: **Agentur Lorenzoni GmbH, Public Relations**

Real-Time Systems, the leader in embedded virtualization and real-time hypervisor technology announced today the general availability of its new release 2.2 of the RTS Hypervisor, a Bare Metal (Type 1) hypervisor allowing the execution of Real-Time Operating Systems (RTOS) in parallel to operating systems like Linux or Microsoft Windows XP without adding any latencies to their native real-time performance. Deterministic behavior remains fully intact.

Because embedded Hypervisors and real-time extensions for Linux or Windows typically require interrupts to be assigned exclusively to the different operating systems, system configuration can be very difficult and sometimes even impossible. To avoid conflicts due to shared interrupts, Version 2.2 of the RTS Hypervisor now allows the use of MSI (Message Signaled Interrupts) for all operating systems, even if these operating systems inherently do not provide support for MSI.

As an industry first, in Version 2.2 it is now possible with the RTS Hypervisor to automatically analyze the CPU and cache topology of e.g. the Intel Atom, Core, Xeon or Nehalem processor architectures and intelligently assign CPUs to individual Operating Systems like Windows or an RTOS. This feature assures that operating systems running in parallel cannot negatively affect each other due to a shared cache topology. Furthermore, in order to expand support for deterministic operating systems, Version 2.2 now features an open control module that provides a high-performance virtual network interface, shared memory and other virtualization components. Customers or operating system vendors can use this control module's straightforward paravirtualization interface to integrate their own operating system or any other real-time code into their RTS Hypervisor-based system.

By partitioning processor cores, memory and I/O devices into individual independent computers, the RTS Hypervisor facilitates hardware consolidation and fosters an uncompromised reduction in overall system costs. Devices or machines that currently use an embedded hardware board in parallel to a computer executing Windows XP can now safely be merged onto a single Intel multi-core hardware, thus greatly reducing, at once, design, manufacturing and maintenance costs. With just one dual core CPU, any RTOS can now execute in parallel to and completely independently from e.g. Microsoft Windows. Using the RTS Hypervisor, the number of operating systems that can execute simultaneously is limited only by the number of available CPU cores. There is no requirement that supported operating systems be identical or dissimilar. For example, using the RTS Hypervisor, it is just as easy to run four instances of the same RTOS on a Quad-Core processor as to execute four different operating systems. The RTS Hypervisor technology does not restrict the many possibilities.

Thanks to strict separation of individual operating systems, any OS in the system can be independently booted in a user-defined order. The RTS Hypervisor even makes it possible to reboot one operating system while the others continue to run. Using a shared memory mechanism as well as a TCP/IP virtual network, communication between operating systems is straightforward.

Out of the box, the RTS Hypervisor currently supports Windows XP, Windows CE, VxWorks, QNX, Microware OS-9, On Time RTOS-32, Linux and preemptive Linux in any combination.

* * *

About Real-Time Systems GmbH (www.real-time-systems.com)

The Real-Time Systems GmbH is a leading supplier of products and solutions for operating system virtualization and precision time synchronization in the embedded and real-time markets. Besides marketing its own products, Real-Time Systems also offers consulting and engineering services to their customers. Real-Time Systems GmbH is privately held and maintains its corporate headquarters in Ravensburg, Germany with partners in Europe, USA and Asia.

Contact:

Real-Time Systems GmbH,

Gartenstr. 33
88212 Ravensburg
www.real-time-systems.com

Press Contact:
Real-Time Systems GmbH, Gerd Lammers, Ph: +49 (0) 751 359 558 – 0,
Email: Gerd.Lammers@real-time-systems.com

[You can find this press release here](#)