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JANUARY 29, 2009

SANTA CLARA



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computing conference**

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 **The MathWorks**

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**Real-Time & Embedded
computing conference**

**FOR DESIGNERS, MANAGERS & ENGINEERING TEAMS OF
COMPUTING SYSTEMS AND TIME-CRITICAL APPLICATIONS FOR:**

Military & Aerospace

Industrial Control

Process Control

Data Communication

Telephony

Consumer Electronics

Medical Instrumentation

Vehicular Control/Maintenance

Instrumentation

Embedded Appliances, and more

REGISTER TODAY www.rtecc.com

COMPLIMENTARY (free to attend)

Keynote • Panel Discussion

Technical Seminars & Workshop • Products Showcase • Lunch
Parking • Drawing! Garmin nüvi 750 4.3" Touch Screen GPS



EVENT

LOCATION

JANUARY 29

SANTA CLARA, CA

SANTA CLARA CONVENTION CENTER

5001 Great America Parkway

Exhibit Hall A

Santa Clara, CA 95054

408.748.7000

Register today: www.rtecc.com/santaclara2009

Registration (all complimentary)	8:00 am – 3:30 pm
Exhibition Hall Open	8:30 am – 3:30 pm
Technical Seminars / breakouts	9:15 am – 10:00 am
Technical Seminars / breakouts	10:15 am – 11:00 am
Hands-on Training Workshop	10:15 am – 12:15 pm
NEW Tools–Upclose & personal	10:30 am – 12:00 pm
Panel Discussion–Open Source	11:00 am – 12:15 pm
Technical Seminars / breakouts	11:30 am – 12:15 pm
Lunch (be our guest)	12:15 pm – 1:15 pm
Keynote Address	12:40 pm – 1:15 pm
Technical Seminars / breakouts	1:30 pm – 2:15 pm
Hands-on Training Workshop	1:30 pm – 2:15 pm
Technical Seminars / breakouts	2:30 pm – 3:15 pm
Drawing / Giveaway	3:20 pm
Event Concludes	3:30 pm





CONFERENCE PROGRAM

9:15 am – 10:00 am

Systems Packaging for the Rugged Embedded Market

presented by David O'Mara, Product Manager- Conduction Cooled Products, AP Labs

The world of military systems packaging is evolving away from true "off-the-shelf" products (COTS) to more application specific implementations. We'll explore current engineering solutions and provides examples of conventional & "out of the box" approaches.

Exploring Windows Embedded CE 6.0

presented by BSquare

For all interest levels, this is an introduction to Windows Embedded CE 6. As a follow-on to this session, we invite you to a Hands-on Training Lab: Exploring Windows Embedded CE 6.0 from 10:15 am – 12:15 pm.

Overview of Static Analysis

presented by Mark Zarins, Vice President-Products, GrammaTech

Static-analysis tools are good at catching some types of defects but not others. We will help you understand both the strengths and limitations of static tools; and common static-analysis jargon will be demystified.

Using FPGAs to Increase the Capability of Sensor Processing Systems

presented by Vic Alfano, Field Applications Engineer, Nallatech

We will discuss the challenges of developing SIGINT applications and demonstrate how the flexibility and performance of COTS FPGA products is enabling a significant increase in the capability of sensor processing systems.

Building Mobile Devices using Android

presented by Jegan Arthanari, Wind River

The mobile device market is evolving at a pace like no other technology market before. Exciting new form factors are opening the door to new opportunities for OEMs and original design mfgs. (ODMs) and carriers alike. Join us as we walk thru our comprehensive, Linux compliant mobile platform with tightly integrated tools and see the open-solutions approach as advocated by Moblin, the LiMo Foundation, and the Open Handset Alliance(Android).

10:15 am – 11:00 am

Prototyping Real-Time Controls Using Simulink, Stateflow, and xPC Target

presented by Sari Germanos, Partner Programs Manager, and Doug Eastman, Applications Engineer, The MathWorks

We will demonstrate how to develop, test, and validate real-time control algorithms without needing to acquire development tool chains, building device drivers, or board support packages. We'll also show how to deploy your algorithms to a real-time system using an x86 compatible embedded platform, Real-Time Workshop, and xPC Target.

10:15 am – 12:15 pm

Training LAB: Hands-on Exploring Windows Embedded CE 6.0

presented by BSquare Solution Architect

You will build an OS image using Platform Builder and Visual Studio 2005 and see how the developed image can be used with a panner scanner robot. Plus, you'll receive an evaluation copy of Platform Builder with Visual Studio 2005.

11:00 am – 12:15 pm

Panel Discussion: Embedded Linux Turns 10; How's Its Mojo?

Moderated by Rick Lehrbaum, Consultant / Independent Blogger, deviceguru.com

Embedded Linux has been around for nearly a decade and ranks as one of the top OS choices for device development -- but does it still have its mojo? Find out as four distinguished panelists look at Linux indepth.

Panelists:

- Jim Ready, Founder and Chief Technology Officer, MontaVista Software
- Bill Weinberg, independent analyst/consultant, linuxpundit.com
- John Grana, Sr. Vice President and General Manager, Performance Technologies
- Glenn Seiler, Sr. Director, Telecom Market Development, Wind River



CONFERENCE PROGRAM

11:30 am – 12:15 pm

Embedded Database – Pushing the Application Envelope

presented by Srdjan Holovac, Director of Product Development, Empress Software

What does the next generation of embedded databases have in store for you? Find out for yourself -- learn how an efficient and cost-effective embedded database encryption solution can help you achieve security for all your data and provide ease of integration, little maintenance and low overhead.

Memory Management for Embedded Systems

presented by Steven Graves, Chief Executive Officer, McObject

This seminar delivers memory management techniques to optimize code for performance and reliability. Its practical, hands-on advice and examples range from alternatives to dynamic memory allocation, to the role of highly efficient custom memory allocators for specific program tasks.

FPGAs Offer New Solutions for Radar and Communications

presented by Paul Bilotti, Regional Manager, Pentek
Digital Down Converters have become a cornerstone technology in communication system. This seminar, through practical examples, discusses how to greatly simplify critical tasks using IP cores, explores key advantages of implementing DDC designs in FPGAs and more.

Eliminating Fatal Errors in Embedded Code

presented by Jeff Chapple, Applications Engineer, The MathWorks

Learn how formal methods based abstract interpretation is quickly becoming the solution of choice, because it proves the absence of a defined set of run-time errors in code. By verifying code to be free of fatal run-time errors such as under/overflows, out-of-bounds array index, illegal pointer de-referencing and other run-time errors, software and quality engineering teams are able to improve the overall reliability of software

12:15 pm Complimentary Lunch

1:30 pm – 2:15 pm

Latest Generation of FPGA technology – Boards and Tools

presented by Joseph Primeau, Embedded Board Group, Dir. Sales and Marketing, Acromag

Developing custom board-level solutions for specialized embedded computing and signal processing functions is often costly and time-prohibitive. We'll discuss how to put the latest generation of FPGA technology to work in a wide array of applications including image processing, DSP processing, signal intelligence and control strategies.

The Advantages of an Absolutely Secure Operating System

presented by Edward Richards, Sr. Field Applications Engineer, Green Hills Software

Products losing market share, or causing missions to fail, because they use too much Space, Weight, and/or Power (SWaP)? High IT costs because multiple computers sit on your developers or operators desks to process data at different levels of classification, e.g. Unclassified, Secret, Top Secret? Servers in your organization being hacked, costing unsustainable losses in productivity, reputation, dollars, or mission risk?

Learn how an absolutely secure operating system will benefit you and your team.

Increasing Embedded Software Quality and Reliability with Integrated Static and Dynamic Analysis

presented by Bill St.Clair, Technical Evangelist, LDRA Technology

We have seen the emergence of static and dynamic analysis techniques as accepted methods of increasing embedded software quality, security, and reliability. We'll take a close look at various static analysis techniques and dynamic analysis techniques and show how applying the results of both provides far more value than either one alone.



CONFERENCE PROGRAM

Training Workshop: Hands-on Embedded Design with LabVIEW Real-Time, LabVIEW FPGA, and Single-Board RIO

presented by Zach Olson, Instructor, National Instruments

Learn how to design, prototype, and deploy embedded systems using off-the-shelf tools and rapid prototyping hardware in a hands-on environment. Explore leading-edge control design tools and techniques to develop embedded systems and much more.

Leveraging an Advanced HMI in a Hardened Environment

presented by Dave Bott, Field Applications Engineer, QNX Software Systems

Creating beautiful, eye-catching content can be created with a tool like Adobe Creative Suite 4 to run in an embedded environment using the Adobe Flash Lite 3 player. Join us as we explore how to achieve a hardening of your Adobe HMI, both by best practices for your Flash and ActionScript code, and by judicious application of QNX provided technologies like OpenGL-ES, adaptive partitioning, and high availability toolkit.

2:30 pm – 3:15 pm

When Software Failure is Not an Option...

presented by DDC-I

Learn about currently available software languages, operating systems, and certification tools that offer a high level of design assurance for safety-critical applications. We discuss real-time, time & space partitioned RTOSes, POSIX-based RTOSes that are fast and well featured, high performance Java and Safety-Critical Java solutions, and code coverage & qualification tools.

CAN Workshop

presented by Andrew Ayre, Embedded Systems Academy, esd electronics

The Controller Area Network workshop will present detailed information about this serial network (originally designed for the automotive industry). CAN is also a popular bus in industrial automation as well as other applications. You will have the opportunity to learn the basics of CAN as well as all aspects of implementation and development.

New Functionality for Embedded Computing

presented by Greg Bauer, Sr. Systems Application Engineer, Mercury Computer Systems

This seminar introduces two entirely new classes of solutions for embedded computing. First, ultra-compact, rugged systems delivering more than 100 GFLOPS to size-, weight-, and power- constrained applications. Second, a multi-fabric Gateway delivering transparent and seamless data movement between 10 Gigabit Ethernet and RapidIO.

MicroTCA and Linux - A Holistic and Effective Approach to Integrated Application-Ready Platforms

presented by Tony Romero, Senior Product Manager, Performance Technologies

MicroTCA and Linux have matured in their capabilities and together, have become a viable embedded platform solution for multiple markets and applications. Where resources are tight and delays can negatively impact revenues, understand how to effectively manage both software and hardware integration can mean the difference between failure and success.

Static Analysis of Linux Kernel Device Driver Modules

presented by David Beberman, Senior Field Applications Engineer, Programming Research

There are several 100 drivers and modules in the Linux kernel distribution. Learn exactly how static source code analysis can help improve the quality and reliability of these (and your) modules. Come find out what static source code analysis is and see examples of analyzing Linux device driver sources.

3:20 pm DRAWING! Exhibition Hall

For more conference seminar and event details, visit: www.rtecc.com/santaclara2009

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FEATURED EXHIBITORS



www.aaeon.com

AAEON designs and manufactures single board computers in form factors from PC/104, full-size CPU cards to COM modules. We also feature domestic hardware and OS support.



www.absoluteanalysis.com

We are a leading provider of computer bus analyzer equipment through its Explorer Series of analyzers and traffic generators.



www.acromag.com

Providing measurement and control solutions; Embedded I/O boards including VME, PCI, CompactPCI, Industry Pack, and PMC I/O modules.



www.adlogic-pc104.com

Advanced Digital Logic is a provider of industrial single board computers, systems, peripherals and accessories for "embedded" and "stand alone" applications with excellent service.



www.advantech.com/epc

Founded in 1983, Advantech is a global leading ePlatform service provider integrating web-based technology, computing platforms and customization services that empower the connected eWorld.



www.aicas.com

aicas is a leading vendor of hard realtime capable Java Virtual Machines for embedded applications.



www.ampro.com

A leading supplier of long lifecycle & standards-based embedded computers, presents our updated PC/104, PC/104-Plus, EPIC, EBX and ETX products.



www.aplabs.com

With over 20 years experience AP Labs is a premier supplier of rugged enclosures, rugged and real-time systems, and contract manufacturing services.



www.avalue.com.tw

Designs and manufactures a complete line of single board computers to meet your embedded computing requirements.



www.bsquare.com

Device makers with solutions for designing, developing, and testing innovative products quickly and cost effectively.



www.gocct.com

Design and development leader of high performance single board computer products for VME and CompactPCI open systems.



www.congatec.com

An innovative and experienced manufacturer of COM Express, XTX and ETX embedded computer boards



www.connecttech.com

We add new options for your embedded communications: the Xtreme/104-Plus with 4 or 8 PC/104-Plus serial ports; Xtreme/104-Isolated offering 12 electrically isolated ports and more.



www.datalight.com

Develops technologies that manage data in embedded devices.



www.dawnvme.com

An industry leader in the design and manufacture of VME, VME64x, cPCI, cPCI 2.16 and VXI backplanes, card cages, chassis and much more.



www.ddci.com

International supplier of industry leading compilers & debuggers, offering mixed language support for real-time embedded applications.



www.deviceguru.com

Special Sponsor
An independent blog devoted to new and emerging device technologies — including hardware, software, protocols, and standards — and their applications.



www.diamondsystems.com

We are proud to be the original supplier of PC/104 format data acquisition boards.



www.dtims.com

Designer / manufacturer of single board computers, embedded platforms, and rackmount systems in the industrial computing market for over 30 years.



www.ebsnetinc.com

Offering high perf. real-time operating system (RTOS), a TCP-IP network stack, a full suite of Application Protocol, a powerful HTML-based embedded GUI SDK, and more.



www.elma.com

We are a global mfg. of products for housing electronic systems, providing everything from components such as modular enclosures, cabinets & backplanes, and much more.



www.empress.com

A leading provider of embedded database software that allows application developers & system integrators to provide lower cost, richer functionality products with accelerated time-to-market.



www.esd-electronics.us

A leading supplier of CAN modules, and interfaces to other systems such as PLC, VME, PC and CompactPCI.



www.esolglobal.com

Offering robust embedded system software & development tools with core technologies in RTOS.

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FEATURED EXHIBITORS



www.fastwel.com

Reliable solutions for harsh environment and mission critical applications.



www.fte.com

A leading provider of PC-based protocol analyzers for special-purpose data communication networks.



www.grammatech.com

Develop and market static-analysis and program-transformation tools for C/C++ and Ada.



www.ghs.com

A technology leader in secure, royalty-free real time operating systems, compilers and software development tools for developers of 16 and 32-bit embedded systems.



www.iar.com

Provides a range of development tools for embedded systems: integrated development environments (IDE) with C/C++ compilers and debuggers, starter kits and more.



www.icoptech.com

Handles embedded SBC, processor module, and embedded system businesses development.



www.inhandelectronics.com

A leading provider of low-power embedded systems to original equipment manufacturers.



www.klocwork.com

Provider of static analysis software that detects and prevents software security vulnerabilities & software defects at "Time Zero."



www.ldra.com

The world's leading provider of automated software code analysis and testing tools.



www.lippert-at.com

We deliver single board computers in various form factors like PC/104, PC/104-Plus, PCI/104-Express EPIC, CoreExpress, COM Express, and more.



www.mobject.com

Develops and markets eXtremeDB, the tiny footprint in-memory embedded database system for real-time and embedded systems.



www.mc.com

We are a leading supplier of high-performance digital signal and image processing systems with principal areas of business to defense electronics, medical imaging, and commercial OEM solutions.



www.smxrto.com

We offer a large family of embedded system products and tools.



www.embeddedsys.com

Designer & mfg of embedded single board computers, microcontrollers, & expansion modules in PC/104, PC/104-Plus, EPIC, EBX, STD, and custom formats.



www.mvista.com

Helps embedded developers get the most from open source by providing commercial-grade quality, integration, hardware enablement, expert support.



www.nallatech.com

Providing professional, low risk, high performance FPGA computing solutions for customers' challenging applications.



www.ni.com

Leverages commercial technologies: industry-standard computers and the Internet, to deliver customer-defined automation, test and measurement.



www.naii.com

Designs and manufactures input/output (I/O) boards, military grade power supplies and instrumentation for the defense & aerospace industries.



www.onestopsystems.com

Designs and manufactures custom and semi-custom computing systems and components in CompactPCI, PCI/ISA and PCI Express architectures.



www.pentek.com

The most comprehensive source for COTS digital signal processing, software radio, FPGA, and data acquisition commercial & conduction-cooled system design products.



www.pt.com

A global supplier of integrated embedded systems for advanced comm. networks & computer system architectures, providing rapid time-to-market & accelerated end-product deployment.



www.phenixint.com

An ISO 9001:2000 certified SDVOSB offering rugged COTS mass storage systems from multi-terabyte RAID & Fibre Channel SANs to plug-in VME modules.



www.phytec.com

Develops and manufactures OEMable Single Board Computers and related hardware/software in support of 8051, C500, C166/ST10, embedded x86, PowerPC, ARM, XScale, and much more.



www.programmingresearch.com

Pioneered the use of static analysis technology to automatically enforce coding standards—so you can build better software.

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QNX SOFTWARE SYSTEMS

www.qnx.com

Superior realtime operating system (RTOS) software, development tools, and services for embedded design - for more than 23 years.



www.swellsoftware.com

The PEG™ product family from Swell Software offers developers of embedded graphical user interfaces (GUIs) a suite of solutions that fit a broad range of graphic applications.



www.mathworks.com

A leading developer and supplier of software for technical computing and Model-Based Design.



www.totalphase.com

A leading provider of embedded systems development tools for engineers all over the world.



www.tri-m.com

Hardware and turnkey solutions for embedded systems, specializing in PC/104 products.



www.trygtech.com

A Microsoft Windows Embedded Partner - we provide systems integration expertise to a broad range of peripherals, devices, and markets.



www.ultsol.com

USI provides developers with professional development tools and embedded solutions. USI offers BDM/JTAG emulators, compilers/debuggers and development boards, modules and small form factor CPU modules.



www.vectorcast.com

A leading independent provider of automated test tools for software developers.



www.wdlsystems.com

Distributing a wide range of embedded computing products and accessories, including: PC/104, PC/104+, EPIC, MiniITX, FPGA, DAQ, HMI, compact PCs and rugged storage.



www.wideband-sys.com

Manufacturer of sophisticated recording instruments for aerospace, communications, and intelligence marketplace.



www.windriver.com

A global leader in device software optimization (DSO) and enable companies to develop and run software faster, better, at a lower cost and more reliably.



www.xembedded.com

Established as Xycom-a leader in VMEbus processor & I/O design, xEmbedded expands the Xycom offering to include cPCI, PMC, prPMC, IP and PCI products.

11:00 AM - 12:15 PM

PANEL DISCUSSION

EMBEDDED LINUX TURNS 10; HOW'S ITS MOJO?



Moderated by Rick Lehrbaum, independent blogger/consultant, deviceguru.com

Embedded Linux has been around for nearly a decade and ranks as one of the top OS choices for device development -- but does it still have its mojo? In this session, four distinguished panelists look at Linux's strengths and weaknesses, examine its use in applications ranging from handheld consumer gadgets to automotive infotainment systems to carrier-grade telecommunications infrastructure, assess the quality and completeness of its development tools, and ponder the proliferation of Linux-based mobile phone stacks such as Android, LiMO, Moblin, and OHA.

Panelists / topics...



Jim Ready, Founder and Chief Technology Officer, MontaVista Software
"MIDs and Netbooks and Handsets, Oh My!"



Bill Weinberg, independent analyst/consultant, linuxpundit.com
"An Alphabet Soup of Mobile/Embedded Linux Consortia"



John Grana, Sr. Vice President and General Manager, Performance Technologies
"What's Happening in the Esoteric World of Carrier Grade Linux?"



Glenn Seiler, Sr. Director, Telecom Market Development, Wind River
"How Good are Linux's Development Tools?"

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and have your pre-printed badge waiting when you arrive

TOOLS SHOW & TELL



NEW PRODUCTS

Up Close & Personal

When you arrive at the Santa Clara Convention Center be sure to check out the schedule for the brand New Tools Showcase!

Several key vendors will give a 10-minute 'Show & Tell' With the latest, greatest new products so you can hear about it and check them out up close

**The New Tools Showcase will be located inside the exhibition hall.
Just grab a seat and take a good look for yourself**

You will be surprised at what you see!



EXHIBITOR PROFILE



Performance Technologies, a leading developer of communication platforms and systems, announces the availability of two new communication controllers. These new products, the AMC304 and AMC305, join the company's growing list of AdvancedMC (AMC) modules for deployments in telecommunications, aerospace and defense, as well as commercial markets needing time-division multiplexing (TDM) communication controllers in an AMC form factor. Both AMCs are fully integrated with the company's NexusWare, a robust Carrier Grade Linux OS and development environment, as well as a complete suite of integrated communications protocols including MTP2 (SS7), HDLC, ISDN, X.25, and Frame Relay.

Talk with the experts from Performance Technologies at the Real-Time & Embedded Computing Conference and find out more about their standards-based solutions for telecommunications, aerospace and defense, and commercial markets. www.pt.com