

Embedded Live 2010

**Bringing Together the EE Times Groups' Embedded
Systems Conference and Reed Business Information's
Electronics Weekly Live**

**London, United Kingdom
19-21 October 2010**

Volume 1 of 2

ISBN: 978-1-61839-082-0

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2010) by EE Times Group
All rights reserved.

Printed by Curran Associates, Inc. (2011)

For permission requests, please contact EE Times Group
at the address below.

EE Times Group
600 Harrison Street
5th Floor
San Francisco, CA 94017

Phone: (415) 947-6929

david.blaza@ubm.com

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2634
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

Volume 1

Introduction to Real-Time Operating Systems	1
<i>David Kalinsky</i>	
Architectural Design of Software for Multicore Systems	54
<i>David Kalinsky</i>	
Embedded Linux Application Development: A Modular Approach	120
<i>Andrew W. Elias</i>	
Embedded Programming for Robotics Applications: Approaches to Robotics and Robot Application Development Ranging from Simple and Small Robots to Large and Complex Robots	167
<i>Andrew W. Elias</i>	
Embedded Programmers' Guide to the Arm Cortex-M Architecture	223
<i>Niall Cooling</i>	
What Else Can You Do with Android?	271
<i>Chris Simmonds</i>	
How to Select a Multicore Programming API	320
<i>Max Domeika</i>	
Migrating to Multicore Architectures: Options & Challenges-Multicore & Virtualization	371
<i>Paul Tingey</i>	
How to Make a GNU/Linux Kernel Patch?	398
<i>Robert Berger</i>	
Reducing Boot Time in Linux Devices	434
<i>Chris Simmonds</i>	
How to Do Real-Time Without an RTOS	457
<i>David Kalinsky</i>	
Top Productivity Tips for Using Eclipse for Embedded C/C++ Development	496
<i>Garry Bleasdale</i>	
Dynamic Verification of Non-functional Properties for High Integrity Systems	520
<i>A. C. Coombes, R. I. Davis</i>	

Volume 2

Static Code Verification: Issues, Problems and Current Technologies	554
<i>Roderick Chapman</i>	
Understanding Mutual Exclusion - Not All Mutexes Are Created Equal	584
<i>Niall Cooling</i>	
An Introduction To Hardware Interfacing and Device Driver Development	620
<i>Ian Willats</i>	
Model Based Design for FPGA Development	648
<i>Charles Fulks</i>	
Audio and Control: Simulation to Embedded in Seconds	706
<i>N. Bentall</i>	
Practical Fixed-Point Processing	720
<i>Charles Fulks</i>	
Real-Time Operating Systems for Systems on a Chip	756
<i>Bob Zeidman</i>	
Anti-malware Techniques for Resource-Constrained Embedded Systems	822
<i>Peter Heyes</i>	
Detecting Software IP Theft	849
<i>Bob Zeidman</i>	
Everything Software Developers Want to Know About Hardware (But Are Too Afraid to Ask)	909
<i>Clive (Max) Maxfield</i>	
Author Index	