Time-Predictable Embedded Software on Multi-Core Platforms

Description: Multi-core architectures have recently gained in popularity due to their high-performance and low-power characteristics. Most modern desktop systems are now equipped with multi-core processors. Despite the wide-spread adaptation of multi-core processors in desktop systems, using such processors in embedded systems still poses several challenges. Real-time, embedded systems often need to satisfy several extra-functional constraints, such as timing. In particular, for hard real-time systems, such timing constraints are strictly enforced. Violation of these timing constraints may have serious consequences, potentially costing human lives. Therefore, static timing-analysis of hard real-time systems has emerged as a critical problem to solve. This monograph first discusses the challenges imposed by multi-core architectures in designing time-predictable embedded systems. It goes on to describe, in detail, a comprehensive solution to guarantee time-predictable execution on multi-core platforms. It also discusses various techniques and surveys the state-of-the-art in terms of available solutions. Throughout the text, the aim is to provide a solid background on recent trends in research towards achieving time-predictability on multi-cores. It also highlights the limitations of the state-of-the-art and discusses future research opportunities and challenges to accomplish time-predictable execution on multi-core platforms. The monograph is an ideal reference for embedded systems designers and researchers interested in having a foundation for building time-predictable software on multi-core platforms. It will also help the research community to address the existing challenges in this area.

Contents: 1. Introduction  
2. Wavelet Transform Coding Systems  
3. Generic Wavelet-Based Coding Systems  
4. Compression Methods in Wavelet-Based Systems  
5. Block-Based Wavelet Transform Set Partition Coding  
6. Tree-Based Wavelet Transform Coding Systems  
7. Rate Control for Embedded Block Coders  
8. Conclusion.  
References

Order by Fax - using the form below
Order by Post - print the order form below and send to

Research and Markets,  
Guinness Centre,  
Taylors Lane,  
Dublin 8,  
Ireland.
Fax Order Form
To place an order via fax simply print this form, fill in the information below and fax the completed form to 646-607-1907 (from USA) or +353-1-481-1716 (from Rest of World). If you have any questions please visit http://www.researchandmarkets.com/contact/

Order Information
Please verify that the product information is correct and select the format(s) you require.

Product Name: Time-Predictable Embedded Software on Multi-Core Platforms
Web Address: http://www.researchandmarkets.com/reports/3135175/
Office Code: SCD23HJH

Product Formats
Please select the product formats and quantity you require:

<table>
<thead>
<tr>
<th>Product Format</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hard Copy - Single User</td>
<td>USD 99 + USD 29 Shipping/Handling</td>
</tr>
<tr>
<td>E-Book - Single User</td>
<td>USD 240</td>
</tr>
</tbody>
</table>

* Shipping/Handling is only charged once per order.

Contact Information
Please enter all the information below in BLOCK CAPITALS

Title: [ ] Mr [ ] Mrs [ ] Dr [ ] Miss [ ] Ms [ ] Prof
First Name: ____________________________ Last Name: ____________________________
Email Address: * ____________________________
Job Title: ____________________________
Organisation: ____________________________
Address: ____________________________
City: ____________________________
Postal / Zip Code: ____________________________
Country: ____________________________
Phone Number: ____________________________
Fax Number: ____________________________

* Please refrain from using free email accounts when ordering (e.g. Yahoo, Hotmail, AOL)
Payment Information

Please indicate the payment method you would like to use by selecting the appropriate box.

☐ Pay by credit card: You will receive an email with a link to a secure webpage to enter your credit card details.

☐ Pay by check: Please post the check, accompanied by this form, to:

Research and Markets, Guinness Center, Taylors Lane, Dublin 8, Ireland.

☐ Pay by wire transfer: Please transfer funds to:

<table>
<thead>
<tr>
<th>Account number</th>
<th>833 130 83</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sort code</td>
<td>98-53-30</td>
</tr>
<tr>
<td>Swift code</td>
<td>ULSBIE2D</td>
</tr>
<tr>
<td>IBAN number</td>
<td>IE78ULSB98533083313083</td>
</tr>
<tr>
<td>Bank Address</td>
<td>Ulster Bank, 27-35 Main Street, Blackrock, Co. Dublin, Ireland.</td>
</tr>
</tbody>
</table>

If you have a Marketing Code please enter it below:

Marketing Code: ________________________________

Please note that by ordering from Research and Markets you are agreeing to our Terms and Conditions at http://www.researchandmarkets.com/info/terms.asp

---

Please fax this form to:

(646) 607-1907 or (646) 964-6609 - From USA
+353-1-481-1716 or +353-1-653-1571 - From Rest of World