DSP Software Development Techniques For Embedded And Real-Time Systems (Embedded Technology)
Synopsis

Today’s embedded and real-time systems contain a mix of processor types: off-the-shelf microcontrollers, digital signal processors (DSPs), and custom processors. The decreasing cost of DSPs has made these sophisticated chips very attractive for a number of embedded and real-time applications, including automotive, telecommunications, medical imaging, and many others—including even some games and home appliances. However, developing embedded and real-time DSP applications is a complex task influenced by many parameters and issues. DSP Software Development Techniques for Embedded and Real-Time Systems is an introduction to DSP software development for embedded and real-time developers giving details on how to use digital signal processors efficiently in embedded and real-time systems. The book covers software and firmware design principles, from processor architectures and basic theory to the selection of appropriate languages and basic algorithms. The reader will find practical guidelines, diagrammed techniques, tool descriptions, and code templates for developing and optimizing DSP software and firmware. The book also covers integrating and testing DSP systems as well as managing the DSP development effort. *Digital signal processors (DSPs) are the future of microchips! *Includes practical guidelines, diagrammed techniques, tool descriptions, and code templates to aid in the development and optimization of DSP software and firmware. *The accompanying companion website contains code from the design examples used in the book, so developers can easily use it in their own designs.

Book Information

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This book is tremendously vague. It is fairly thick, but in all its pages it never really manages to tell you anything you probably didn’t already know. Everything is at such a high level it is more like a broad overview of the subject. It is practically devoid of any mathematical details of DSP. Given its title, that is probably not what the reader was bargaining for. There are better books on DSP, better books on embedded systems, and better books on real-time systems. What about better books that integrate all three subjects? I can’t think of any, but that would include this book too. If you want an introduction to DSP and interfacing it to a microprocessor try "Digital Signal Processing and the Microcontroller". It talks about the basics of DSP, uses a little math but not calculus, and demonstrates how to build a DSP system using a M68HC16 16-bit microcontroller. Code examples are included. You’ll then be ready for more mathematical treatments of DSP in other books. In summary, don’t waste your money on this one.

I bought this book for work, hoping that my department would find it useful to lend to new grads. After reading it, I determined that there is nothing here a new grad couldn’t get more authoritatively from a TI manual or his own textbooks. I am out the cost of the book, because I am not going to submit it for reimbursement. By the way, I bought this book on the force of a review in one of those e-mail e-magazines for engineers. I have thus lost all faith in that process.

The Book offers a simple yet complete explanation of DSP techniques also includes a demo of a software to start designing with DSP’S

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