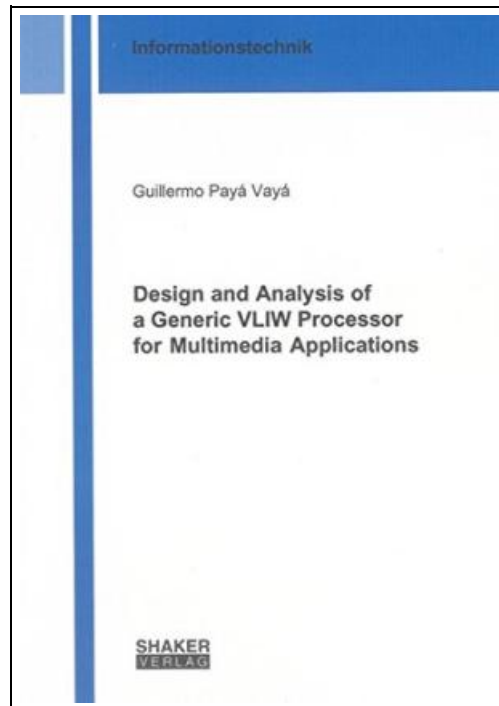


## Design and Analysis of a Generic VLIW Processor for Multimedia Applications



Filesize: 6.4 MB

### **Reviews**

*Extensive information for publication fanatics. We have go through and that i am confident that i am going to likely to read through once more again in the foreseeable future. I am just very happy to inform you that here is the very best publication i have got go through in my individual lifestyle and might be he greatest ebook for ever.*

*(Luciano Von III)*

## DESIGN AND ANALYSIS OF A GENERIC VLIW PROCESSOR FOR MULTIMEDIA APPLICATIONS

[DOWNLOAD](#)

Shaker Verlag Mai 2011, 2011. Taschenbuch. Condition: Neu. Neuware -  
Continuous improvements in video/image application research require increasingly sophisticated multimedia algorithms, demanding a rising amount of processing performance. Current video coding standards, e.g. MPEG-4, VC-1, or H.264/AVC, are reaching the limits of existing media-processors for high definition quality. In addition, this demand for performance has a direct influence on the power consumption, becoming an important issue in portable multimedia devices. Therefore, efficient media-processor implementations are mandatory, considering the trade-offs between processing performance, silicon area, and power consumption. This work analyzes architectural alternatives of the design of application-specific VLIW processors for multimedia applications by using a comprehensive design space exploration environment. This environment provides a generic VLIW architecture template, which includes a configurable pipeline architecture simulator, an enhanced instruction scheduler, and a parameterized HDL description of the architecture template. By using this environment, the architecture template can be optimized in terms of performance and hardware cost for a set of multimedia applications. The combination of new enhanced hardware architecture mechanisms and the corresponding instruction scheduler improvements plays an important role to overcome the architecture bottlenecks. Based on this concept, different application-independent data/instruction parallel mechanisms are exhaustively described and analyzed in this work, e.g. an area-efficient partitioned register file organization, a novel instruction merging mechanism, or a new forwarding-based instruction scheduling. In addition, application-dependent mechanisms are also proposed, e.g. an enhanced DMA controller. Finally, two case studies are analyzed, where the generic VLIW architecture is optimized for a set of video coding tasks. The results demonstrate that highly efficient VLIW architecture configurations can be obtained by implementing the proposed application-independent mechanisms, reaching up to 29% of silicon area reduction and up to 45% of power saving of the VLIW processor core for an equivalent processing performance. In addition, for specific applications, higher performances (up to 52%) can also be obtained...

[Read Design and Analysis of a Generic VLIW Processor for Multimedia Applications Online](#)[Download PDF Design and Analysis of a Generic VLIW Processor for Multimedia Applications](#)

## Other PDFs



### The genuine book marketing case analysis of the the lam light. Yin Qihua Science Press 21.00(Chinese Edition)

paperback. Book Condition: New. Ship out in 2 business day, And Fast shipping, Free Tracking number will be provided after the shipment.Paperback. Pub Date :2007-01-01 Pages: 244 Publisher: Science Press Welcome Our service and quality...

[Download PDF](#)

»



### Baby Names

Whitaker House. PAPERBACK. Book Condition: New. 1603745041 Feed My Sheep Books: A Family Ministry, Competing For YHWH Online Since 2001. Support the Assembly Before Buying Big Box-store Books. We Shrink Wrap & Carefully Package Your...

[Download PDF](#)

»



### ASPCA Kids: Rescue Readers: I Am Picasso

Studio Fun International, United States, 2015. Paperback. Book Condition: New. Debra Melman (illustrator). 216 x 152 mm. Language: English . Brand New Book. Fourth in the ASPCA Rescue Readers series, this Level 2 reader follows...

[Download PDF](#)

»



### The Web Collection Revealed, Premium Edition: Adobe Dreamweaver CS6, Flash CS6, and Photoshop CS6 (Stay Current with Adobe Creative Cloud)

Cengage Learning, 2012. Book Condition: New. Brand New, Unread Copy in Perfect Condition. A+ Customer Service! Summary: You can now maximize and integrate the design and development power of Adobe Creative Suite 6 with WEB...

[Download PDF](#)

»



### Silverlight 5 in Action

Manning Publications. Paperback. Book Condition: New. Paperback. 1000 pages. Dimensions: 9.2in. x 7.3in. x 2.0in.Summary A thorough revision of the bestselling Silverlight 4 in Action. This comprehensive guide teaches Silverlight from the ground up, covering...

[Download PDF](#)

»