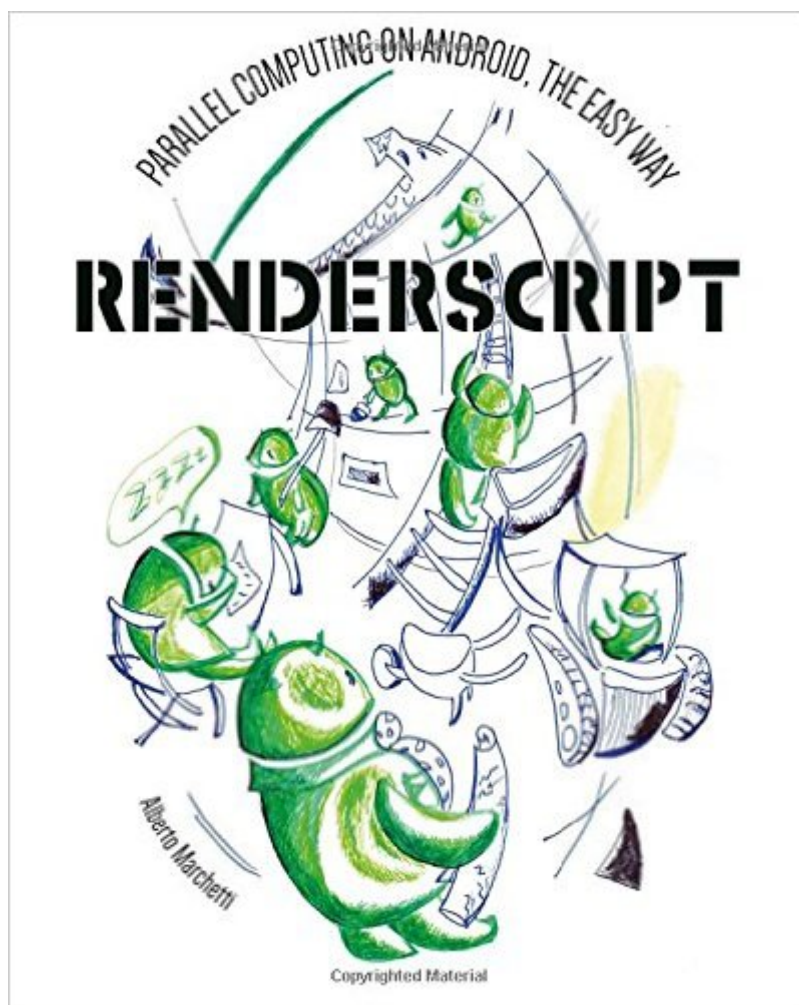# RenderScript: Parallel Computing On Android, The Easy Way

Synopsis

RenderScript: parallel computing on Android, the easy way provides a straightforward way to learn how to use the RenderScript parallel computing framework. This is the first book on the market that covers as many RenderScript related topics as possible! Basic and advanced topics are treated, ranging from parallel computing Kernels to the Android NDK integration, covering many aspects of RenderScript and targeting both newcomers and experienced users. A general list of the treated topics is as follows: What is RenderScript, a general description of the framework. RenderScript components, like Kernels and Allocations. Performance notes, where different ways to perform calculations are benchmarked. Native analysis, or "what is under the hood". RenderScript and NDK, how to use the Android NDK together with RenderScript. Use cases, some examples of RenderScript usage. Porting case - FAST features detection, a big example that shows how to port a C++ library to work inside RenderScript kernels. RenderScript gives users the chance to unleash the true computing power of Android-based devices, helping them to develop calculation-intensive apps: the objective of this book is to spread the word about this beautiful framework, by showing how easy it is to transform the common CPU-intensive code to the more useful parallel one. Some possible applications of RenderScript are: Wearable devices raw signals analysis, like Electromyography data and Electroencephalography data. Advanced image processing, like Multi Face Detection and Recognition and visual features extraction. Neural networks testing on mobile-phones, which requires a large number of parallel processes. Digital Signal Processing (e.g. sound analysis). Alberto Marchetti is a hard-times developer, born to solve coding problems. He started working in the software development field when he was a child. Since then, learning to find solutions to every possible development problem, has become his way of living life. When he discovered RenderScript, he found a beautiful tool that could help every developer to solve even more problems. Thatâ ™s why he decided to write this book.

Book Information

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Customer Reviews

I'm a former CUDA developer, and got interested about the book because the parallel computing on Android topic is not well known around. This book let me understand tons of differences between parallel computing on desktop and mobile architectures. There is something new to discover every day. If you are a parallel computing developer and you want to find out new approaches to your daily topics, give a read to this book!

This book covers all basic principles of parallel computing, independently of the Android platform. Also, the book provides an immediate approach to the RenderScript framework, giving the reader the chance to perform experiments on it, starting from the very first pages. I really loved this approach, and I want really to recommend the book to everyone that wants to learn parallel computing basics from scratch.

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