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Android on x86

An Introduction to Optimizing for Intel® Architecture

Iggy Krajci and Darren Cummings

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Introduction

We wrote *Android on x86: an Introduction to Optimizing for Intel® Architecture* to provide a one-stop, detailed resource for the topic's best practices and procedures. The book encompasses the installation issues, hardware optimization issues, software requirements, programming tasks, and performance optimizations that emerge when you consider programming for x86-based Android devices. Having worked on related projects ourselves, we committed to collecting our experience and information into one book which could be used as a guide through any project's specific requirements. We dove into fine-tuned optimizations, native code adjustments, hardware acceleration, and advanced profiling of multimedia applications.

The book is not dedicated solely to code, although you'll find plenty of code samples and case studies inside. Instead, we've filled *Android on x86* with the information you need in order to take advantage of the x86 architectures. We will guide you through installing the Android Software Development Kit for Intel Architectures, help you understand the differences and similarities between the processors available for commercial Android devices, teach you to create and port applications, debug existing x86 applications, offer solutions for NDK and C++ optimizations, and introduce the Intel Hardware Accelerated Execution Manager. The information we've pulled together provides the most useful help for getting your development job done quickly and well.

Why Android on x86?

In 2011, we experienced a paradigm shift in how we communicate. Smart device sales outpaced personal computer sales for the first time. This changing of the guard emerged from three sources:

- Our increasing professional and social need for open, constant communication
- The lower cost and compelling new features of smartphones and tablets
- The increased ease of use and availability of mobile apps

In the next few years, mobile access to the Internet is likely to exceed access via laptops and desktops; the hardware we use to communicate may change, but our passion for connectivity anytime, anywhere is sure to continue.

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