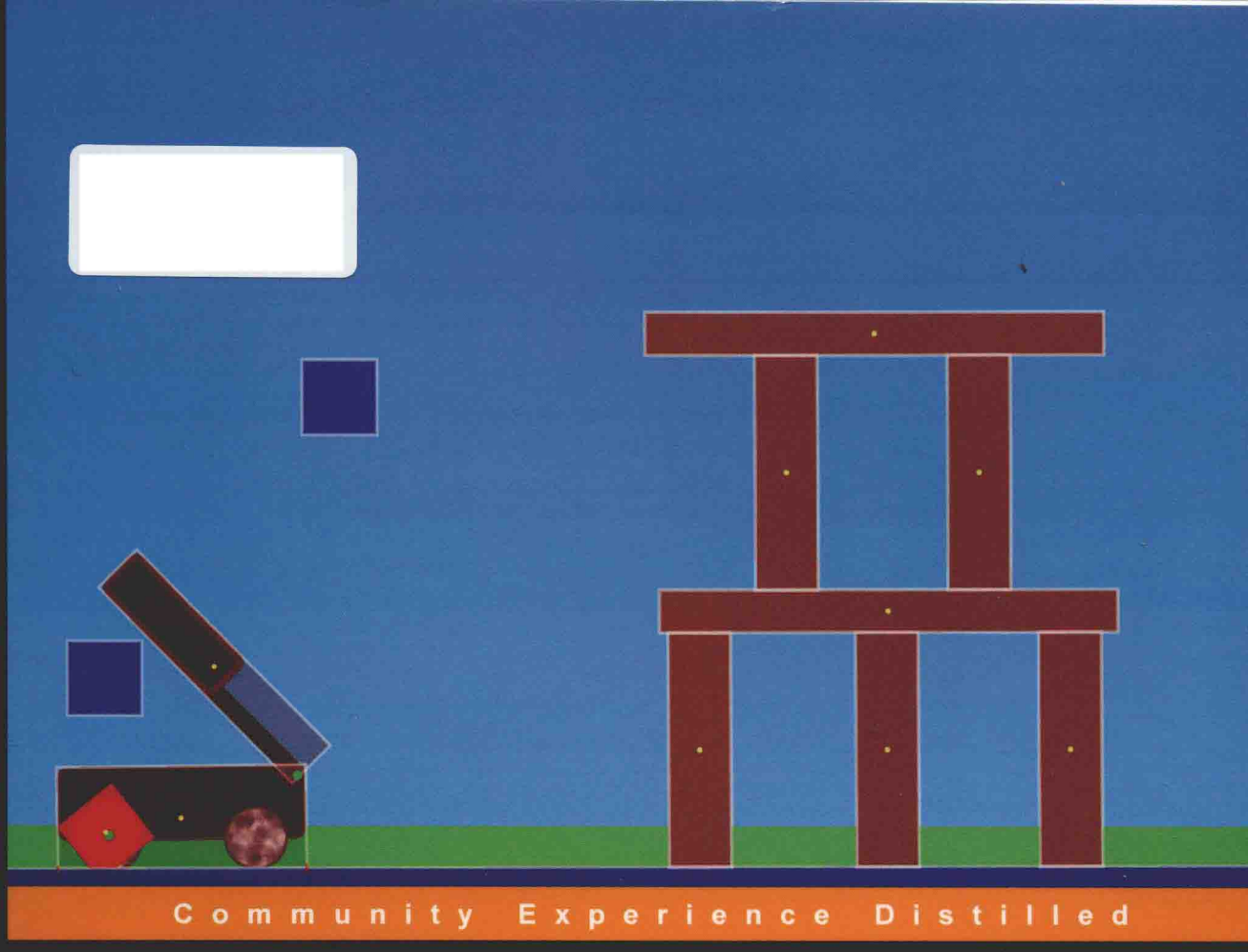

Cocos2D Game Development Essentials

Bring your mobile game ideas to life with Cocos2D

Ben Trengrove

[PACKT] PUBLISHING open source* community experience distilled

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BIRMINGHAM - MUMBAI

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First published: January 2015

Production reference: 1190115

Published by Packt Publishing Ltd.
Livery Place
35 Livery Street
Birmingham B3 2PB, UK.

ISBN 978-1-78439-032-7

www.packtpub.com

Cover image by Ben Trengrove (ben@nybbles.com.au)

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About the Author

Ben Trengrove is an experienced iOS developer who started developing with the release of the first iOS SDK. He spent 3 years as the senior developer at Shiny Things (`http://getshinythings.com`), where he lead the creation of all Shiny Things games using Cocos2d. These apps have been featured as the editor's choice by Apple around the world. Today, Ben runs a mobile app agency that is based out of Canberra, Australia—Stripy Sock (`http://stripysock.com.au`).

I would like to thank my gorgeous wife for her patience during several weekends that I spent writing.

About the Reviewers

K. Aava Rani is the cofounder of CulpzLab Pvt Ltd, a software company, with 10 years of experience in game technologies. A successful blogger and a technologist, she switched her focus to game development in the year 2004. Since then, she has produced a number of game titles and has provided art and programming solutions to Unity developers across the globe. She is based in New Delhi, India. Aava Rani has been the recipient of several prestigious awards, including Adobe for Game Technology Expert 2012 and SmartFoxServer, for her articles. She has immense experience in different technologies and has reviewed *Creating E-learning games with Unity3D, Packt Publishing.*

Founded in 2010, CulpzLab has proven itself to be a reliable technology partner for its clients. Currently, CulpzLab employs over 50 people and has its office based out of New Delhi in India. CulpzLab is a leading-edge custom-process-driven software solutions provider that has helped and partnered with many reputed brands, start-up ventures, and offshore IT companies. It has helped them realize and deliver effective, efficient, and on-time digital solutions. Thanks to its diverse technology background, industry expertise, and a client footprint that extends to more than 14 countries, CulpzLab has worked with a plethora of clients on a global platform. It is well positioned to help organizations derive maximum value from their IT investments and fully support their business aims. CulpzLab's core business purpose is to invent, engineer, and deliver technology solutions that drive business value, create social value, and improve the lives of customers.

I would like to acknowledge the creators of Unity3D program, an amazing tool that allows ultimate digital experience and creative expression. I'd also like to thank my clients for being part of the fun! Many of you have become good friends through my creative successes. Finally, I'd like to thank R.K.Rajanjan who taught me how to fall in love with technologies.

Sergio Martínez-Losa Del Rincón is a computer engineer. He was fond of programming languages since his high school days, when he learned programming and computer interaction. He is always learning and discovering something new everyday.

He likes all kinds of programming languages, but his main area of focus is mobile development with native languages, such as Objective-C (iPhone), Java (Android), and Xamarin (C#). He also builds Google Glass applications, as well as mobile applications for iPhone and Android devices. Sergio also develops games for mobile devices with Cocos2d-x and Cocos2d. He also likes cross-platform applications and has reviewed *Learning Xamarin Studio, Packt Publishing*.

Sergio loves challenging problems and is always keen to work with new technologies. Visit `www.linkedin.com/in/sergiomtzlosa` for more details and information about his experiences.

Allen Sherrod is a lifelong gamer with a passion for programming and video game development, which he has been involved in for the past 10 years. When he is not helping people run raids on Destiny (video game) developed by Bungie, he is working hard by programming various tools and mobile video game applications. Currently, Allen is a mobile software engineer at Disney Interactive, which is one of the best companies to work for. He has also reviewed books such as *Instant New iPad Features in iOS 6 How-to* and *Instant Apple iBooks How-to, Packt Publishing.*

I'd like to thank Packt Publishing for giving me the opportunity to review this title. I would also like to thank the author for doing a great job in putting together this book. Book writing is no easy task, so it is always good to see something come together.

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Table of Contents

Preface

Cocos2d is a cross-platform game engine for iOS and Android devices. Coding in Objective-C and using the rich graphical editor, you can push your game to both iOS and Android devices without any extra work. Cocos2d is packed with features that make game development simple, including integrated physics, particle engines, and a graphical editor for laying out your scenes and designing animations. Game development is about working out how to solve unique problems using the tools in your *development toolbox*. This book will help you to build this tool box, cover essential skills, and provide a solid foundation on which to grow your game development talent.

This book will introduce and develop your understanding of the core concepts and tools involved in developing games using Cocos2d, including the graphical development environment, SpriteBuilder, the built-in physics engine, the skills to show smooth-flowing animations, and techniques to develop easy to use and functional user interfaces.

Each chapter will introduce you to a new core skill. To practice this skill, in each chapter, you will develop a mini game that runs on both Android and iOS devices. Your skillset will evolve as you move through each chapter, and develop increasingly complex games.

What this book covers

Chapter 1, Getting Started with Cocos2d, discusses how to build your first cross-platform app using Cocos2d. We will install Cocos2d and get you all set up to create Cocos2d games. We will then walk through the template code and look at how it works.

Chapter 2, Nodes, Sprites, and Scenes, discusses the fundamental knowledge required to build any Cocos2d app. You will learn how to display a variety of content on the screen and transition between scenes. Here, you will discover how to lay the foundations of your game.

Chapter 3, SpriteBuilder, discusses how to create apps using the graphical Cocos2d editor. We will lay out scenes and build animations in the graphical editor.

Chapter 4, Animation with SpriteBuilder, covers a comprehensive overview of animations and actions and how to create them in code. We will also look at how to ease the animations to create an attractive and professional look.

Chapter 5, User Interaction and Interface, discusses, and, takes a look at, how to accept input from the user in a variety of ways. We will look at touches and gestures, accelerometer and interface controls.

Chapter 6, Physics Engines, discusses the location where we combine all our knowledge so far, with working physics to create fun physics-based apps. We will look at some basic physics concepts such as forces and joints, and then put it altogether in a scene and see what effects physics have on an app.

What you need for this book

In order to create games in Cocos2D-Swift, you will need a Mac computer with Xcode installed. If you want to put apps on an iOS device, you will need a paid iOS developer account from Apple. To put apps on an Android device, you will need an Android device running (at least Android 4.0 or a paid Apportable account) that allows apps to be built for Android 2.0+.

Who this book is for

This book is for developers with experience in Objective-C and iOS development who are looking to create a game for iOS or Android in Objective-C. It assumes that you understand the basic concepts of game development and just need an understanding of the framework. It covers the essential topics on how to create a game with Cocos2d v3. This would be a good book for someone with previous experience in Cocos2d and wants to learn about the changes in v3.

Conventions

In this book, you will find a number of styles of text that distinguish between different kinds of information. Here are some examples of these styles, and an explanation of their meaning.

Code words in text are shown as follows: "The `contentSize` property is the bounding box of the node."

A block of code is set as follows:

```
// Apple recommend assigning self with supers return value
  self = [super init];
  if (!self) return(nil);
```

New terms and **important words** are shown in bold. Words that you see on the screen, in menus or dialog boxes for example, appear in the text like this: "Press the **Publish** button. Your app will now be published on Xcode".

Warnings or important notes appear in a box like this.

Tips and tricks appear like this.

Reader feedback

Feedback from our readers is always welcome. Let us know what you think about this book – what you liked or may have disliked. Reader feedback is important for us to develop titles that you really get the most out of.

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Errata

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