

Introduction

Welcome to *Pro HTML5 Games*.

In writing this book, I wanted to create the resource that I wish someone had given me when I was starting out learning game programming.

Unlike other books with abstract examples that you will never ever use, this book will show you firsthand how HTML5 can be used to make complete, working games.

I specifically chose a physics engine game and a real-time strategy game as examples because between the two, these genres encompass all the elements needed to build most of the game types that are popular today.

As you follow along, you will learn all the essential elements needed to create games in HTML5 and then see how these elements come together to form professional-looking games.

By the end of this book, I hope you will walk away with the confidence and the resources to start making amazing games of your own in HTML5.

Who This Book Is For

Pro HTML5 Games is meant for programmers who already have some HTML and JavaScript programming experience and who now want to learn to harness the power of HTML5 to build amazing-looking games but don't know where to begin.

Readers who have experience making games in other languages such as Flash and would like to move to HTML5 will also find a lot of useful information in this book.

If you do not feel confident about your game programming skills, don't worry. This book covers all the essentials needed to build these games so you can follow along and learn to design large, professional games in HTML5. The book will also point to resources and reference material for supplemental learning in case you are having trouble keeping up.

With dedicated chapters on HTML5 basics, the Box2D engine, pathfinding and steering, combat and effective enemy AI, and multiplayer using Node.js with WebSockets, you should get a lot from this book no matter how much game programming experience you have.

How This Book Is Structured

Pro HTML5 Games takes you through the process of building two complete games over the course of 12 chapters.

In the first four chapters, you will build *Froot Wars*, a Box2D engine-based physics game similar to the very popular *Angry Birds*.

Chapter 1 discusses the basic elements of HTML5 needed to build games, such as drawing and animating on the canvas, playing audio, and using sprite sheets.

Chapter 2 covers building a basic game framework with splash screens, game menus, an asset loader, and a basic level with parallax scrolling.

Chapter 3 is a detailed introduction to the Box2D physics engine and shows how Box2D can be used to model a game world.

Chapter 4 shows how to integrate the game framework with the Box2D engine, add sounds, and add music to create a complete working physics game.

The second game in the book is an RTS game with both a single-player campaign mode and a multiplayer mode. You will build the single-player campaign over the next six chapters.

Chapter 5 covers building a basic game framework with splash screens, game menus, an asset loader, and a basic level with panning using the mouse.

Chapter 6 adds different entities such as vehicles, aircraft, and buildings to the game.

Chapter 7 shows how to add intelligent unit movement to the game using a combination of pathfinding and steering steps.

Chapter 8 adds some more elements such as an economy and a trigger-based system that allows scripting events.

Chapter 9 covers implementing a weapons and combat system in the game.

Chapter 10 wraps up the single-player by showing how to create several challenging single-player levels using the framework developed so far.

Finally, in the last two chapters, you will look at building the multiplayer component of the RTS game.

Chapter 11 discusses the basics of using the WebSocket API with Node.js and creating a multiplayer game lobby.

Chapter 12 covers implementing a framework for multiplayer gameplay using the lock-step networking model and compensating for network latency while maintaining game synchronization.

Downloading the Code

The code for the examples shown in this book is available on the Apress web site, www.apress.com. You can find a link on the book's information page on the Source Code/Downloads tab. This tab is located underneath the Related Titles section of the page.

Contacting the Author

Should you have any questions or feedback, you can contact the author through the dedicated page on his web site at www.adityaravishankar.com/pro-html5-games/. He can also be reached via e-mail at prohtml5games@adityaravishankar.com.