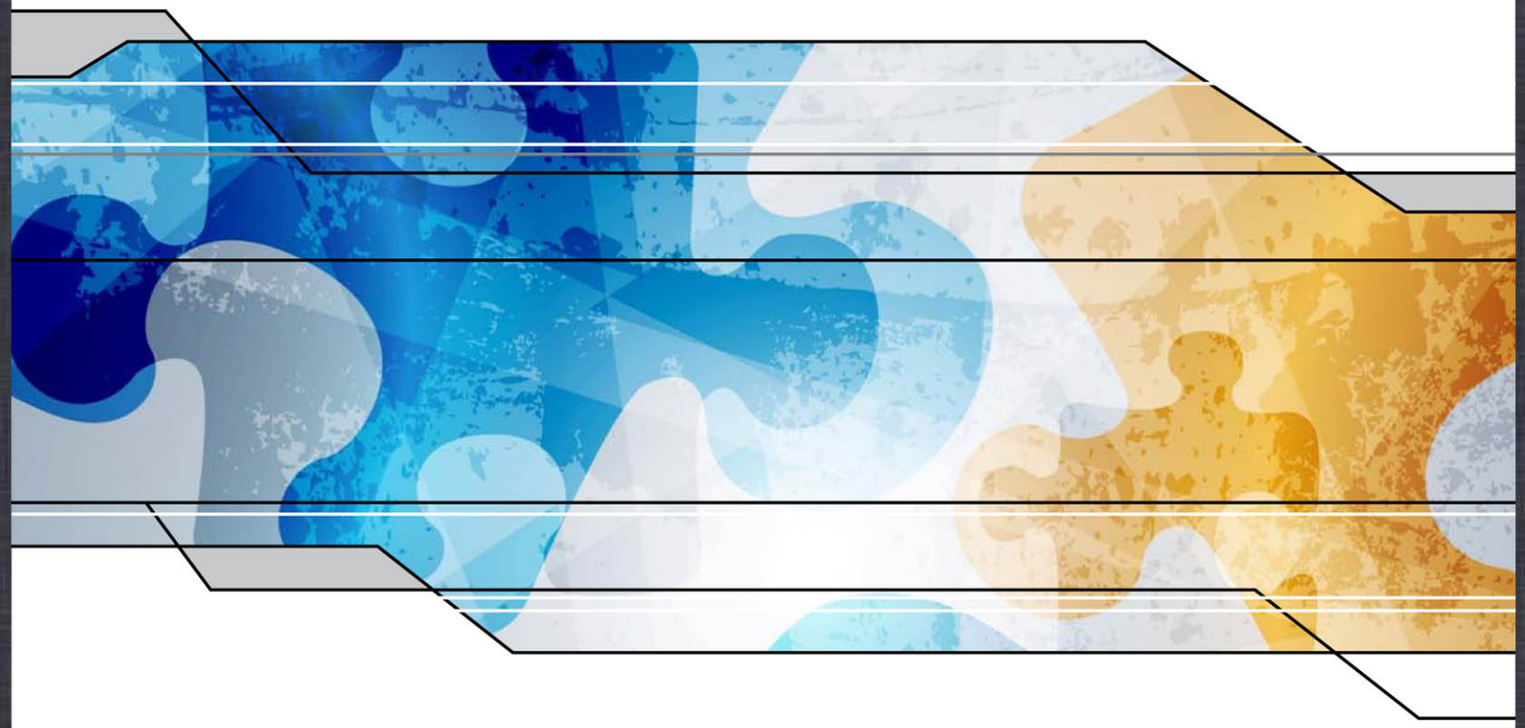
Fundamentals

of Puzzle and Casual Game Design



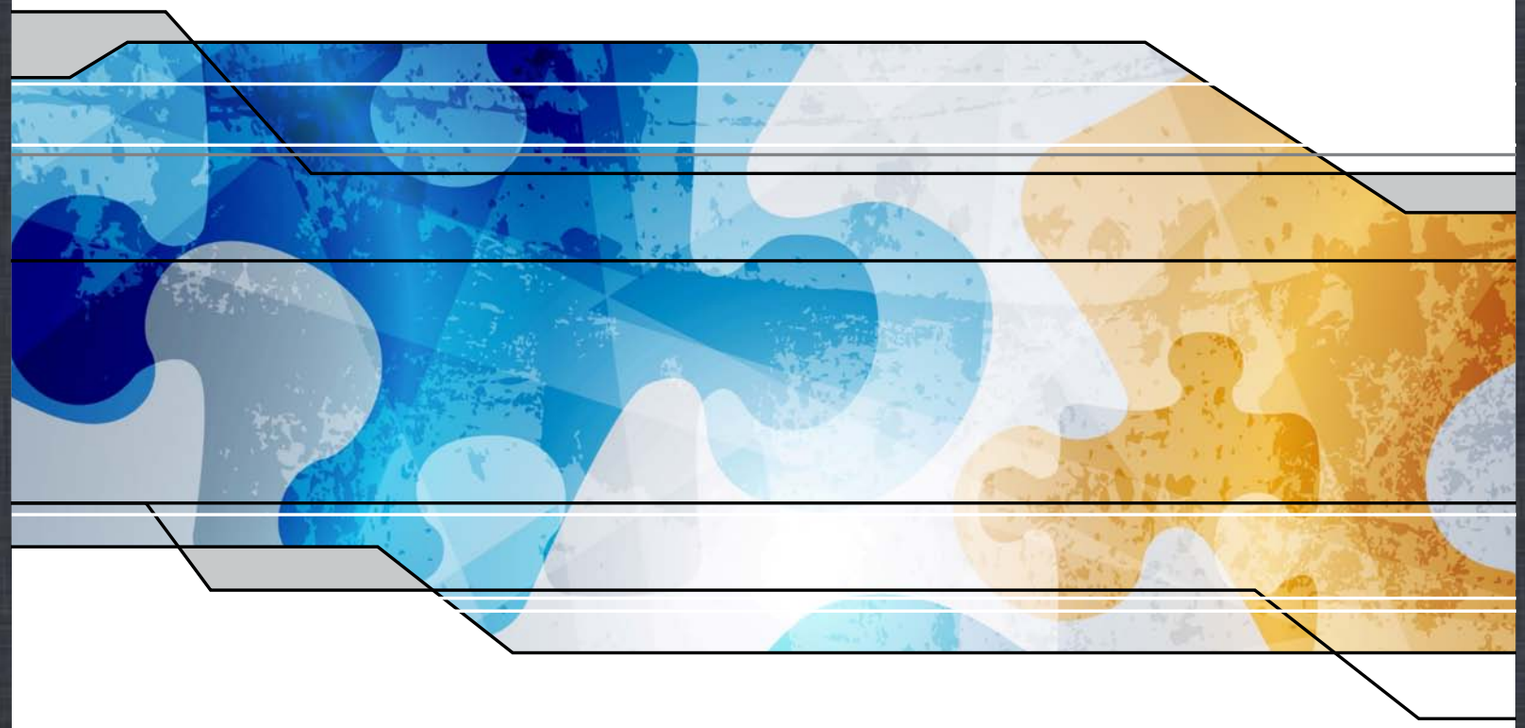
Ernest Adams

Founder of the IGDA

New Riders

Fundamentals

of Puzzle and Casual Game Design



Ernest Adams

Founder of the IGDA

New Riders

Ernest Adams

About the Author

Ernest Adams is a game design consultant and part-time professor at the University of Uppsala Campus Gotland in Sweden. He lives in England and holds a Ph.D. in computer science from Teesside University for his contributions to the field of interactive storytelling. Dr. Adams has worked in the interactive entertainment industry since 1989, and he founded the International Game Developers' Association in 1994. He was most recently employed as a lead designer at Bullfrog Productions, and for several years before that he was the audio/video producer on the *Madden NFL* line of football games at Electronic Arts. His professional website is at www.designersnotebook.com.

Fundamentals of Puzzle and Casual Game Design

What Are Puzzle and Casual Games?

Puzzle Games

Classes of Puzzle Games 8

Scott Kim's Eight Steps 11

What Computers Bring to Puzzles 16

Checking the Victory Condition 20

Casual Games

Qualities of Casual Games 22

Mid-Core Games 25

Summary

Design Practice Case Study 30

About the Fundamentals of Game Design E-books ... 31

Copyright 33

Summary

Puzzle games provide the player with moments or hours of strategy and problem solving. You'll need to provide a game that combines high-quality presentation with well-thought-out game mechanics and interaction. Players can be very opinionated about puzzle games, but the individuals who enjoy puzzle games are often also very loyal.

Casual games are not a genre but a kind of game that is designed to appeal to a particular market: the casual player. These players want an experience they can get into and out of quickly, that is easy to learn and easy to control, and that doesn't require a large commitment of either time or money. These games are usually found on mobile devices and don't have to cost a lot to develop.

Design Practice Case Study

Choose a puzzle game that you believe, from your own experience of playing it, is an excellent example of the genre (or use one your instructor assigns). It should be a solitaire (single-player) game where puzzle solving is the primary activity. Write a report documenting this simulation. Be sure to cover at least the following areas:

- Describe the gameplay and game mechanics. Describe the presentation of the game and interaction of the player. How long is a gameplay session?

- Which of the kinds of puzzle games described in this e-book is it (such as tile matching or navigation), or does it belong to another category entirely? Is it real-time or turn-based, with randomized or premade levels?

- If the game has a physical representation in the real world (solitaire card games, for example), what does the computer bring to the video game version? What rules or designs were changed for the new medium?

- Does the game have levels or increased difficulty? Is it clear to the player how the game progression works? In your opinion, does the game ramp up too quickly or not quickly enough? How does the game adapt to the player's ability?

- Address the combination of puzzles: Is there more than one type of puzzle in the game? Is the mechanism that is used to combine the puzzles into a single game clear to the player and does it make sense?

- Discuss whether the victory condition for any level or the overall game is clear to the player. How is progression indicated?

In your report, use screen shots to illustrate your points. End the case study with suggestions for improvement or, if you feel the game cannot be improved, suggestions for additional features that might be fun to have in the game.

Alternatively, choose a puzzle game that you believe is particularly *bad*. Do the same case study, explaining what is wrong and how it could be improved.

A case study is neither a review nor a design document; it is an analysis. You are not attempting to reverse-engineer the entire game but simply to explain how it works in a general way. Your instructor will tell you the desired scope of the assignment; I recommend from five to twenty pages.

About the Fundamentals of Game Design E-books

You understand the basic concepts of game design: gameplay, user interfaces, core mechanics, character design, and storytelling. Now you want to know how to apply them to individual game genres. These focused guides give you exactly what you need. They walk you through the process of designing for game genres and show you how to use the right techniques to create fun and challenging experiences for your players.

All of these e-books are available from the Peachpit website at www.peachpit.com/ernestadams.

Fundamentals of Shooter Game Design discusses designing for this huge and specialized market. It examines both the frenetic deathmatch style of play and the stealthier, more tactical approach.

Fundamentals of Action and Arcade Game Design is about the earliest, and still most popular, genre of interactive entertainment: action games. This genre may be divided into numerous subgenres such as fighting games, platformers, and others, which the chapter addresses in as much detail as there is room for. It also looks at the most popular hybrid genre, the action-adventure.

Fundamentals of Strategy Game Design discusses another genre that has been part of gaming since the beginning: strategy games, both real-time and turn-based.

Fundamentals of Role-Playing Game Design is about role-playing games, a natural outgrowth of pencil and paper games such as *Dungeons & Dragons*.

Fundamentals of Sports Game Design looks at sports games, which have a number of peculiar design challenges. The actual contest itself is designed by others; the trick is to map human athletic activities onto a screen and control devices.

Fundamentals of Vehicle Simulation Design addresses vehicle simulations: cars, planes, boats, and other, more exotic modes of transportation such as tanks.

Fundamentals of Construction and Simulation Game Design is about construction and management simulations in which the player tries to build and maintain something—a city, a theme park, a planet—within the limitations of an economic system.

Fundamentals of Adventure Game Design explores adventure games, an old and unique genre of gaming that continues to earn a great deal of critical attention by its strong storytelling and its visual aesthetics.

Fundamentals of Puzzle and Casual Game Design examines puzzle games and casual games in general.

Fundamentals of Puzzle and Casual Game Design
Ernest Adams

New Riders
www.newriders.com

To report errors, please send a note to errata@peachpit.com
New Riders is an imprint of Peachpit, a division of Pearson Education

Copyright © 2015 by Pearson Education, Inc.
Senior Editor: Karyn Johnson
Developmental Editor: Robyn G. Thomas
Production Editor: Tracey Croom
Technical Editor: Tobi Saulnier
Proofreader: Emily K. Wolman
Cover Design: Aren Straiger
Interior Design: Charlene Charles-Will
Composition: codeMantra, LLC

Notice of Rights
All rights reserved. No part of this book may be reproduced or transmitted in any form by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the publisher. For information on getting permission for reprints and excerpts, contact permissions@peachpit.com.

Notice of Liability
The information in this book is distributed on an "As Is" basis without warranty. While every precaution has been taken in the preparation of the book, neither the author nor Peachpit shall have any liability to any person or entity with respect to any loss or damage caused or alleged to be caused directly or indirectly by the instructions contained in this book or by the computer software and hardware products described in it.

Trademarks
Many of the designations used by manufacturers and sellers to distinguish their products are claimed as trademarks. Where those designations appear in this book, and Peachpit was aware of a trademark claim, the designations appear as requested by the owner of the trademark. All other product names and services identified throughout this book are used in editorial fashion only and for the benefit of such companies with no intention of infringement of the trademark. No such use, or the use of any trade name, is intended to convey endorsement or other affiliation with this book.

ISBN-13: 978-0-133-81194-0
ISBN-10: 0-133-81194-8
9 8 7 6 5 4 3 2 1

Printed and bound in the United States of America