

# The Design Document

- Reference:  
Game Design: Theory and Practice, Second Edition, by Richard Rouse III, Chapter 19.

# Introduction

- Unlike Hollywood screenplays, there is no standard format for game design documents.
- (Of course, in some companies, there may be an agreed-upon format that all of the in-house designers must use for their documents.)
- A design document is all about communicating a vision for a game:
  - how will the game function?
  - what will players experience?
  - how will players interact with the game-world?
- Organizing and structuring all of this information into appropriate sections is one of the key challenges in writing a good design document.

# The Writing Style

- The design document is meant to be a reference tool, so you want to make it as easy for people to search and refer to as possible.
- You should break it up with lots of titles, headings, subheadings, etc.
- This will make it easier for readers to skim over the document and zoom in on the information they are seeking.
- Breaking your information into lists, either numbered or bulleted, wherever possible will further allow readers to easily realize what different attributes a given part of the game will need to include.
- Avoid repeating information as much as possible. If you need to refer to something said elsewhere, simply refer your reader to the page/section rather than duplicating the content.
- Duplication of content is a bad idea, since it makes updating the document more difficult (as you would need to update several places instead of one).
- You want your writing to communicate the information necessary in as concise and succinct a manner as possible.
- Although you can compare your game with others (and this may help your reader understand what you are saying), you must still fully explain your game! Do not rely on a comparison to save you the trouble of documenting some gameplay!

# Sections

- The following is a reasonable way to divide up your design document:
  - Table of Contents
  - Introduction/Overview
  - Game Mechanics
  - Artificial Intelligence
  - Game Elements
  - Story Overview
  - Game Progression
  - System Menus

# Table of Contents

- Make sure you have one!
- The Table of Contents must include subsections, sub-subsections, and perhaps even sub-sub-subsections.
- Making a detailed Table of Contents for your design document is crucial to making it useful.

# Introduction/Overview or Executive Summary

- You should have a single-page overview of your game's design at the beginning of your document.
- For producers/executives/marketers/new team members, this would be a good starting point for understanding the game.
- From this one-page summary, the reader should get some understanding of the essence of the gameplay.
- Write a first paragraph that sums up the entire game, with the following paragraphs filling in the structure outlined in the opening.
- One of the body paragraphs should sum up the game's story, if any.
- Other paragraphs should discuss different aspects of your gameplay: which features of the gameplay are most central to the game and will be most instrumental in making gamers want to play your work for hours and hours?
- The conclusion paragraph should sum up the entire overview, with a special emphasis on why this game will be so compelling to the user.

# Game Mechanics

- This is the most important section of your document.
- The Game Mechanics section describes how players can interact with the game-world (whereas the Artificial Intelligence section documents how the world will react to the players' actions).
- If you are writing your game design document as a journalist might write a news story, in the game Mechanics section you should be concerned with the “what” and “how” — what players do in your game and how they do it. Later in the document, you will get to the “where”, “when”, and “why”.
- This section can also be called “gameplay” since it describes what players are allowed to do in the game and how the game is played.
- Writing about gameplay is hard but must be done for your design document to be useful to the team who will create your game.

# Game Mechanics: Focus on the Core Game

- Except for necessary references to the player character, you will want to avoid detailing any specific game-world objects or characters in this section.
- For example, you will want to describe the possible effects of the different weapons players might pick up and how players will control those weapons, but you will want to save the actual list of the different weapons found in the game-world until later in the document.
- The specific weapons represent instances of the functionality you describe in the Game Mechanics section.
- For example, the design documents for the Thief games follow a nearly identical Game Mechanics description.
- It is only the weapons, items, levels, and enemies that change from Thief to Thief II.
- The core game remains the same, and it is the core game you are documenting in the Game Mechanics section.

# Game Mechanics: Order of Capability Introduction

- Introduce the players' different capabilities in the same order that someone playing the game for the first time would experience them.
- Start out simple by describing the most basic actions that players can do (e.g., simple movements left, right, up, down, etc).
- In an RTS, the players would probably move their surrogate(s) using point-and-click, and you will want to describe precisely how that works.
- As you describe the character's movements, you will want to list the physical commands users need to perform to pull off these movements (e.g., “to move forward, players will need to press and hold the Forward button”).
- Having started with the basics, you can proceed to the players' more complex actions, trying to logically structure the document so that each subsequent action builds on the previous one as much as possible.

# Game Mechanics: Misc.

- This section is also a proper place to lay out what sort of puzzles players might encounter in the game-world.
- If the game in question involves players switching into different modes in order to accomplish different tasks, each of these modes should be described in detail.
- The Game Mechanics section will need to describe what players see while they are playing the game. This includes how the players see the world, what sort of camera view will be used, and how players will be able to affect that camera's position.
- The graphical user interface (GUI) is of critical importance to your game, and therefore it should be described in detail.
- You will want to describe only the GUIs that are used in the game and are therefore relevant to gameplay.
- Any of the front-end GUIs used when players are starting a new game or loading an old one are not really part of the gameplay. As such, the front-end GUIs should be described in the System Menus section.

# Artificial Intelligence

- The Artificial Intelligence section documents how the world will react to the players' actions (whereas the Game Mechanics section describes how players can interact with the game-world).
- How will the opponents that players face in the game-world behave?
- This section may also describe how the game-world behaves when the players are not doing anything.
- Designing an AI for a strategy game can be a significantly more involved process:
  - what sorts of strategies will the enemy use to overwhelm the players' units?
  - how will the units work together?
  - when will the computer player decide to build more units, and how many will it make?
- In working on your Artificial Intelligence section, try to follow the same rules you did when writing the Game Mechanics section: do not refer to specific non-playable characters (NPCs) in the game, but rather to general behaviors that different agents may exhibit.
- You will get to the specific NPCs and what set of behaviors they will use in the Game Elements section later in the document.

# Game Elements: Characters, Items, and Objects/Mechanisms

- If we think of level designers as painters, then the game elements are the colors they have on their palette.
- Game element types include:
  - Characters.** Active, non-player-controlled elements in the game (e.g., enemies).
  - Items.** Anything that players can pick up and use or manipulate in some fashion (e.g., weapons, notes, keys, etc.)
  - Objects/Mechanisms.** Not AI driven and can't be picked up by player. However, they can be operated/manipulated in some way (e.g., doors, switches, puzzle elements, etc.)
- An RTS game like StarCraft might have a units listing (which is essentially a combination of characters and items) detailing all the different units that the players or their adversaries can control, along with an objects/mechanisms list that details any objects players interact with, such as doorways or teleporters.
- Try to separate your game-world elements, whatever they may be, into the most logical groupings possible.
- For example, an RTS might want to separate its units into offensive, defensive, and construction, or perhaps static and mobile.

# Game Elements (Continued)

- In listing and describing these game elements, you want to avoid assigning actual statistics to any of them.
- This level of detail about the items or enemies is simply not something you can predict before you have a functioning game in which you can test the behavior of the AI or weapons and balance them properly.
- However, you can explain how game elements compare to other elements.
- For example:
  - How do they compare in difficulty to each other?
  - What traits does a particular AI agent have?
  - Is this one more or less likely to run away in combat?

# Story Overview

- The Story Overview provides a quick way for everyone on the team to understand the story's "big picture".
- Keep the overview to an easily readable length but try to include all of the major story points.
- You do not need to include all of the game's sub-quests or describe every conversation players will engage in or every character players will meet.
- Try to make the story overview as compelling and readable as possible.
- While the Game Mechanics section may be difficult to read with its bullet-point lists and attention to detail, your Story Overview should be a pleasure to read.

# Game Progression

- In this section, the game designer breaks the game down into the events players experience, and how they change and progress over time.
- The level designers take this section as a guideline for what each level is supposed to include and then fill in all the details as they build out each level, bringing all of the components of the game together.
- For many types of games (including RTS games), the Game Progression breakdown will be best done by level.
- For each level, you should describe in detail what challenges the players will face.

# System Menus

- Describe the main menu and whatever other options screens players will be presented with at various points outside of the game itself.
- These menus do not actually impact the gameplay in any significant way.

# Poor Design Documents

**Wafer-Thin Document.** These thin documents lack any useful content whatsoever. They use meaningless descriptions like “gameplay will be fun” and “responsiveness will be sharp”. In these documents, many comparisons to other games are made: “This plays like Super Mario 64” or “The game has a control scheme similar to Quake.”

**Back-Story Tome.** It is mostly back-story. It may be very interesting stuff, but in the end the reader is left with very little idea of how the game is supposed to function.

**Overkill Document.** Going to excessive level of detail can be a waste of the designer’s time as well as that of the person who has to sift through all of that excess information.

**Pie-in-the-Sky Document.** Although writers of these documents often have noble intentions with grand ideas for truly magnificent gameplay, they typically lack any technical grasp of what the computer is capable of or what a team of twenty people is likely to accomplish in a year and a half.

**Fossilized Document.** The designer is not diligent in her efforts to keep the document up to date.