To: **Entertainment Planning Department** (EPD) of RockForest Gaming
From: **Yigao Fang** (fgsepter@umich.edu), Chief Game Designer
Subject: Learn from *The Legend of Zelda*: What makes a good game development
Date: Jan. 31, 2022

Foreword:

Our company, RockForest Gaming, is planning to release a new handheld game, *Momory*, on our newly designed game console, Gaming Famicom 3 (GF3), in the first quarter of next year. Given the over $300,000 R&D costs that have been invested in the two years game development process, we hope that the game will be a great commercial success and further increase the sales of GF3. Therefore, our group has conducted a thorough evaluation and research on the Nintendo games over the last thirty years and completed a statistical quality analysis on their characteristics that brought the company a huge market share with a large number of game sales. This report includes our evaluation and suggestions for designing a successful game and saling strategies based on our analysis that requests your approval of my proposed solution so that we can keep the game published on schedule.

Summary:

Our company's main purpose this year is to generate more revenue and profit through our newly developed game, *Momory*. The quality of the game product is the primary consideration. This memo researches key mechanics that would make a difference in enhancing the storytelling of our designed game to make it of high quality. Learning from the typical features of Nintendo games that contribute to their success in publishing best-selling games with memorable storytelling characteristics over the forty years, we can summarize four main characteristics that benefit game stories, that is:

1. providing epic history and abundant side quests;
2. building boundaryless geographic maps with high freedom;
3. creating vivid characters with distinctive personalities;
4. creating an endless story with the player-creating mechanic.

Finally, I suggest the method to maintain the quality of the story-telling game while transferring from the designing process into the production process. That is, resisting third-party developers.

Introduction

Momory is the first fully-open 3-dimensional action game that our company is going to release, and it is designed to be the key milestone point for our company to open up the console game market in North America. Therefore, the board has high expectations for this game, and they wish the release of this game will further increase GF3 sales and in turn, drive the company's stock price to rise. Consequently, how to make a game with high quality that would have best-selling results becomes our main concern.

M. D. Dickey in his paper [10] emphasizes the importance of narrative in adventure games to provide scaffolding and support problem-solving. He points out that most role-playing games and adventure games often rely heavily on the integration of strong narrative storylines to advance the gameplay. Usually, the player is cast as the central character confronted with a series of quests and missions and undergoes many changes as a result of the trials and tribulations. It cannot be denied that narrative plays an important role in adventure games, and it can be a decisive factor in determining whether or not a game is of high quality and attracts most of its players.

All analysis needs to be based on the background of the latest game industry. Figure 1 indicates the most popular game genres in the United States in 2018. According to Figure 1, Action games are the best-selling game genre in the US, occupying 26.9% of the total units sold in video games, followed by Shooter games and Role-playing games. It is worth mentioning that our 3-dimensional action and role-playing game *Momory* fits in the current popularity, and we need to take inspiration from the same genre of games. Consequently, I decided to start by analyzing the success of *The Legend of Zelda,* the most popular action game in over thirty years, and summarizing four essential characteristics of designing the narrative story of the game to make it popular among consumers accordingly.
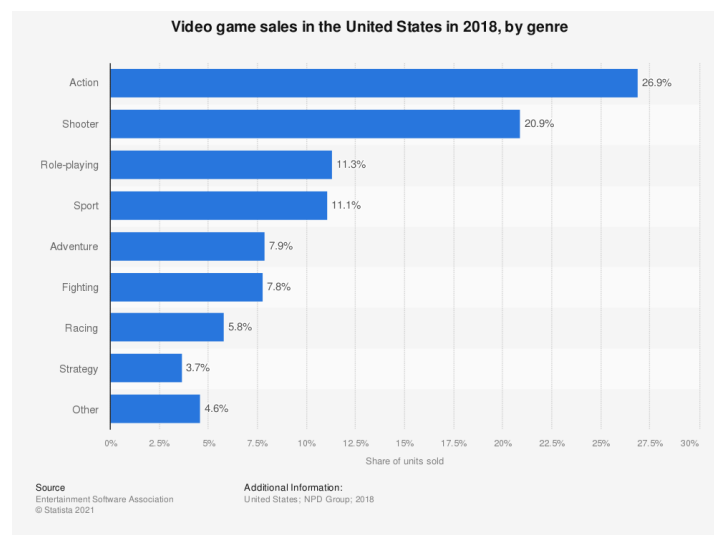

Figure 1: Video game sales in the United States in 2018, by genre [4]

History of Video Games

From the history of video games, we can have an impression of how narrative story plays a role in influencing sales of games, and the event of large-scale recession in the video game industry that occurred from 1983 to 1985 is inevitably talked about. The Video Game Crash of 1983 made the entire game industry in the US suffer a poor performance with bleak sales. However, the launch of the Nintendo Entertainment System (NES) and the release of several NES games, such as *Super Mario Bros* (1985) and *The Legend of Zelda* (1986) completely changed the depression. Gaming hasn't been the same since. Joy [3] pointed out three factors contributing to the recession. The first major cause of the crash is the absurd saturation of the video game console market. [5] Another crucial factor is the quick and low-quality production of third-party development. Legitimization of third-party game developers resulted in the loss of video game publishing control, which bred a huge amount of unofficial games produced by inexperienced competitors. This is also a key factor in overproduction. The third contribution is the competition from personal computers.

According to Joy's analysis, during this crisis, a large number of low-quality game products have greatly reduced people's desire to buy games, which therefore brought a huge depression to the whole industry. However, together with the Nintendo Entertainment System (NES, also known as Famicom) as well as a series of well-known NES games with high quality, the Nintendo company from Japan changed the situation and created a new world for the game industry.

Table 1: Best-selling home video games of the 1980s (as of 2015) [6]

No.	Title	Sold (million)	Genre	Publisher(s)
1	*Super Mario Bros.*	40.24	Platformer	Nintendo
2	*Tetris*	35	Puzzle	Nintendo
3	*Duck Hunt*	28.31	Light gun shooter	Nintendo
4	*Super Mario Land*	18.14	Platformer	Nintendo
5	*Super Mario Bros. 3*	17.28	Platformer	Nintendo
6	*Donkey Kong*	15.05	Platformer	Coleco, Atari Corporation
7	*Pac-Man*	11.15	Maze	Atari, Coleco, Namco, TM
8	*Tetris* (NES)	8	Puzzle	Nintendo
9	*Super Mario Bros. 2*	7.46	Platformer	Nintendo
10	*The Legend of Zelda*	6.51	Action-adventure	Nintendo

https://www.statista.com/statistics/189592/breakdown-of-us-video-game-sales-2009-by-genre/

Table 1 shows the Top 10 best-selling home video games of the 1980s, from which we can see that eight games were published by the Nintendo company. Most of its games had a well-

designed narrative story. Especially the *Super Mario Bros* which tells the adventures of the Mario Brothers, and *The Legend of Zelda* which presents an epic story of warrior Link fighting against evil and saving the princess. They are still a world-renowned famous game IP in the contemporary video game industry. For example, on March 3, 2017, Nintendo released a new video game console, the Nintendo Switch, and two video games at the same time, *Super Mario Odyssey*, and *The Legend of Zelda, Breath of the Wild*, which are the continuation of these two famous series. They each achieved tens of millions of units sold, from which we can see the long-term and far-reaching impact on the game industry around the world of these two series of games. [7] Same as our designed game, *The Legend of Zelda* is also an adventure game, so this memo will start with this classic game and analyze how did it use narrative stories to create an interesting game world for players.

Providing Epic History and Abundant Side Quests

Makowski in his article "Why 'The Legend of Zelda' is the greatest video game series of all time" [2] addressed that one of the most attractive points that Zelda addresses to its audience is the epic story. What makes most role-playing games interesting is having a compelling story, and *The Legend of Zelda* is undoubtedly the best when it comes to storytelling. In a certain sense, it is not just a game, but also a grand epic novel. Especially, a mix of fresh and intuitive storylines with the same Zelda feel is what makes the series the greatest. In every different game in the Zelda series, it delivers not only by keeping its classic story structure but also by giving each story an incredibly new feel. *The Legend of Zelda* follows a loose timeline (known as Hyrule Historia), thus constructing a new and huge worldview for its audience. The main story is that players will play the role of Link to rescue Princess Zelda. After defeating enemies and collecting equipment, the player will become strong enough to defeat the evil Ganondorf, who is trying to take Zelda's power and destroy the world. The benefits of this narrative story are obvious. During the period of playing the game, players can have a sense of glory and responsibility to save the whole world, which therefore becomes the motivation to keep playing the game. Since they are the main character of this story, the whole history of the world will be written along with the player's gaming progress. The power of the narrative story makes the player feel more engaged and more eager to see the end of the epic in which they have participated themselves.

In addition to the main story timeline, players can complete the abundant side quests on their way to completing the main quests. These side quests also contain a lot of stories and characters, which enrich the game content and playability. For example, in the latest Zelda version, *Breath of the Wild,* the players must pass through 120 temples, acquiring skills and weapons as he solves the puzzles. Moreover, the exploration of side quests greatly increases the freedom of the game, which makes players unconscious of the fact that they are acting on a script that was written in the game's design process. This makes it more realistic for players to explore the world and write stories on their own.

Building Boundaryless Geographic Maps with High Freedom

Apart from the storytelling and history, The expansive map is also a big selling point for Zelda. In the 1986 version of Zelda, players can explore hundreds of rooms of multiple dungeons and the on-the-ground world. In *Breath of the Wild*, players can walk around the 3-D world entire magical land of Hyrule. Only passing the map from the southernmost to the northernmost takes more than an hour. It cannot be imagined how long will it take to cover the whole map. Together with the epic history, these features expand and enrich the game's content both horizontally and vertically, that is, from the historical and geographical perspective. With geography and history, a virtual game world is finally formed. Meanwhile, there are various bonus plots on the map, making players never get bored exploring the whole map. Specifically, combined with the abundant side quests, this kind of real-world system with high freedom makes Zelda not only a game, but a simulation of life in another completely different world.

Currently, our game is based on the main storyline that *Momory* is required to pass through all the levels, face different enemies, and finally, reach the termination. Based on this foundation, adding more stories is possible. For example, why does *Momory* has to reach termination? Where are those enemies come from? Does *Momory* need to save someone or save the world? Can we make the 3-D world more complex and real? That's all possible improvements that we have to consider in the following months.

Creating Vivid Characters with Distinctive Personalities

What makes Zelda shine is not only its heroes but also its supporting cast. The game describes different Links throughout the series, which brings players a brand new, but familiar, feel to each game. In addition to the main character, Link, who as a hero wants to save the entire magical land of Hyrule from Ganon, we have Zelda, princess of Hyrule, the finest heroine in all of the video games, seal Ganon for over a hundred years. We also have loads of different villains, Mipha, Revali, Daruk, Urbosa, each has a legendary story, and provide great help to Link. Not only do we have Ganondorf, but there is Ghirahim, Zant, Skull Kid, Vaati, Demise, and countless more causing treacheries in the series. The game has created many of those characters with rich emotional context and storylines, and those characters may influence players' experience a lot. For example, in *Skyward Sword*, Link's fate relies on the actions of his goofy acquaintances at the Knight Academy. It is because of these rich character settings that the content of The Legend of Zelda has been greatly enriched and the playability has been improved a lot. Moreover, characters with distinctive personalities play different roles in the narrative story of the game, and it could be fun to enable players to choose the one they like the most to play. Therefore, players can have various playing experiences within the same historical and geographical world, which will strongly enrich the game context without huge modification to the original game world.

Creating Endless Story with Player-creating Mechanic

Although we have already come up with many approaches to enrich the contents of our game's storytelling, due to limited time and resources, players will eventually complete all the tasks we designed previously. Due to stimulus satiation, if we cannot make an update and add new content to our game in time, players will eventually get bored of our game and give up. Hence, one way to avoid this situation is to add a player-creating mechanic. That is, enables players to create their game world. According to Robertson and Good [9], the process of game creation requires programming and mathematical skills, but technology has reached the point where these skills are no longer always necessary. Many commercial games nowadays are designed with game-editing tools to encourage player communities to develop further game content. For example, one of the most popular games on Nintendo Switch, *Super Mario Maker*, provides a typical example of inspiring players to create their world and story and hence is evaluated as an "endless" game. In this game, players can get access to a community, where other players around the world can publish their self-designed scenes using the game-editing tools provided by the game company. Players can experience the world created by themselves, or have an adventure in the world created by other players. In this way, the playability of the game is magnified without limitation, and the story and the game world become truly endless and boundaryless.

Further Strategies for Maintaining High-Quality Games

Learning from the 1983 game crash, avoiding overproduction of low-quality games is of great importance to maintain the popularity of the game. I have already introduced four methods to create attractive narrative stories for our game, which will ensure we design a game with high quality and attract most of our consumers. However, we still need to check the manufacturing process to avoid jerry-building of our designed game content. The most important strategy I want to propose is resisting third-party developers. It is well-known to everyone familiar with Nintendo games that players have to buy a special game memory card or buy a digital game code to play games on the console. Only Nintendo has the right to issue game cards and digital codes. Nintendo will strictly control pirated or third-party software and games and crackdown. This is because a large number of unauthorized third-party published games will greatly increase the market supply. On the other hand, those third-party games are usually of low quality, which would greatly reduce consumer confidence in the market. The failure of Atari in 1983 is the strongest proof of this point. Consequently, we should strictly control the production of the game *Momory*, and ensure that only genuine games produced by our company can enter the market. Meanwhile, we should investigate possible pirated software on the market, and use copyright laws if necessary.

Conclusion

Above all, I believe that as far as the four characteristics of creating a memorable storytelling mechanic of game designing are fully considered, our game *Momory* will create a realistic and attractive game world for the players, and can therefore become the top best-selling game product in the coming years. I appreciate it if you can consider my suggestions.

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