Design Your Rules-A Roguelike Designe

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Abstract. For a roguelike game, the characteristics of the turn system, permanent
death, randomness, and so on are the keys to the success of this kind of game design.
However, for most roguelike games, designers focus on the characters or enemies,
improve the game experience of players through a variety of gains or losses,
and ignore the possible diversity of game rules. In order to solve this problem,
the author started from the basis of roguelike game development and focused on
the game rules themselves. When designing the rules, according to the existing
roguelike game design principles and methods to improve the game experience,
the author creatively designed rules such as "perish together". Finally, the game
can let players get a better game experience by changing the rules themselves and
providing some inspiration for game design in this field.

Keywords: Roguelike · Rules · Permanent Death · Randomness · Game Design

1 Introduction

Rogue is the name of a game [1], which includes elements such as enemies, treasures,
props, channels, and walls. In order to allow players to explore an unknown dungeon,
strive to break their own limits, and have different experiences every time, the makers
of Rogue developed a new way of playing - randomness and permanent death [2]. This
means that when the player dies, the progress will not be saved and it needs to be restarted.
Every time we explore the map and its contents, we will ensure that there will be no
repeated experiences. The Turn system [3], permanent death, and randomness [2] were
later widely used in various games, so this kind of games is called roguelike. However,
in roguelike games, there are also some visible shortcomings.

Because the creator is human, the design of characters, levels, and props is limited,
and some props have a stronger effect, and some props have a weaker effect. As a result,
there will always be a few strategies that are the optimal solution among the limited
clearance strategies, and a few strategies that will be extremely difficult or impossible to
pass. This will lead to the loss of the game experience. Take the "Arknights" game as an
example [4]. In the roguelike mode of the game, a few characters are far more popular
than the others [5].

Second, most roguelike games focus on one goal, such as defeating monsters and
passing the game (for games with excellent plots, there may be different routes to pass the
game), while most of the props obtained by players in the process only work for players

and monsters, such as players can be stronger, use more gorgeous skills, monsters can be weaker, and so on. But this will form a "circle". That is, the purpose of fighting monsters is to become stronger, and the purpose of becoming stronger is to better fight monsters until you pass the game, which is obviously not conducive to the repeated experience of players.

In order to solve the two problems mentioned above, the author chose to design a roguelike game. The only goal of this game is to win, but how to win depends on the players themselves.

2   Related Work

2.1   Roguelike Game Design Principles

Many principles are often referred to in the design of roguelike games. The first is the "no beheading rule". The second is the "no cyanide rule". The third is the "item masquerade rule". The fourth is the "situational ID advantage rule". The fifth is the "item enhancement rule". The sixth is the "two side coin rule". The seventh is the "reducing grind rule". The eighth is the "race you can't win rule" [6]. Although these rules have been relatively perfect for the traditional roguelike game, there is relatively little mention of the rules themselves. Similarly, for the design rules of roguelike games, there is a set of "Berlin interpretation" [7]. In this article, the most basic game design principles of a roguelike game and the rules that most roguelike games will consider when designing are discussed. This game design will focus on the most basic game design principles and create a new design mode on this basis.

2.2   Methods to Improve the Game Experience

Improving user experience is a very comprehensive issue, and there has been quite a lot of research in this field. In Tubik's article [8], it was mentioned how Gamification design can improve the user's experience. There are several main points, namely: challenges, points, badges and stickers, leaderboards, journeys, and constraints. All these points can motivate players to continue playing and improve their concentration. Similarly, in Jenova Chen's article [9], he also explained the methods to improve players' concentration. He found that a challenging activity requires these elements: skill; a merging of action and awareness; clear goals; direct, immediate feedback; concentration on the task at hand; a sense of control; a loss of self-consciousness; and an altered sense of time. These methods can improve the user's concentration to improve the player's experience. It is worth mentioning that he also explained in the article that these methods are not all needed, so all the methods mentioned in the above article will only be used in part in the game design.

3   Game Design

3.1   Overview of Game Process

The general process of the whole game is as follows: first, players can start the game after logging in. The game can be played alone or by inviting friends. After that, players

Fig. 1. Preview of The First Three Stages of The Game

Fig. 2. Stage Preview

can select the basic mode of the game they want to play (this article will describe it later with 2D RPG games as an example) [10]. The ultimate goal of this game is to win the game and become a winner. After matching, players will enter the main page of this game. On this page, they will see the maps (just like other roguelike games have), as well as the avatars and IDs of other players. When players start the game for the first time, all of them can only select the lowest level. In the subsequent game process, they can only select the stage connected with the stage they selected last time (Fig. 1).

After entering the stage (Fig. 2), if it is the first stage, all players will use the same rule, that is, to destroy all enemies on the map and win. The purpose of this is to teach players the main game flow of the stage in this mode. If it is not the first stage, each player follows his/her own rules. If the player fails in the first stage, he/she will end the game directly and be asked whether to teach. If he/she fails in other stages, he/she

will judge according to his personal rules. If players successfully pass the stage, they will get a card according to the selected stage. If the player passes the first stage, an additional "invalid" card will be fixed (the effect of this card will be explained later) and they can also select a subsequent victory rule from a plurality of random options which is invisible to other players. If players pass the stage other than the first stage, they will get the opportunity to use the card after they get the card. The order of using the card is determined by the time they pass the stage. The person with the shortest time will have priority to use the card. There are many rules on these cards that are specific to the game and the stage, which can be used for others or themselves. These used cards and rules can be seen by other players. If there is still no winner after everyone has used the card, the game will continue from the map until one or more winners appear.

3.2   Some Card Rule Settings and Effect Examples

According to the different effects of the card, it can be divided into "Rule class", "Game class" and "Prop class".

"Rule class"

"No left": when you press the left key on the keyboard at any time in the game, the game fails.
"Perish together": when you fail due to the rules of other players, both of you lose the game at the same time.
"Turning defeat into victory": when you and one other player are left on the spot, you will become the winner when the game fails.

"Game Class"

"Compassion": your game mode has been changed to save monsters.
"Snake" (Fig. 2): your game mode has changed to snake.
"Fast and Furious": your game speed increases.

"Props Class"

"Swap": designate a player and exchange all cards and rules with him/her.
"Invalid": remove a specified rule or effect.
"Double chances": get and use a card again, but skip the next get and use (Fig. 3).

3.3   Basic Game Types and Playing Methods

2D RPG Game
In this game mode, players will control characters in the game to fight monsters in a 2D environment. Players can move by pressing the "up", "down", "left" and "right" keys on the keyboard, attack with the "J" key on the keyboard, and use the "K" key to use skills. There are multiple obstacles in the scene, which can block the movement of monsters and players. If there is a bullet type attack, it will also be blocked by obstacles. The character has a certain life point and will lose some life points when attacked by
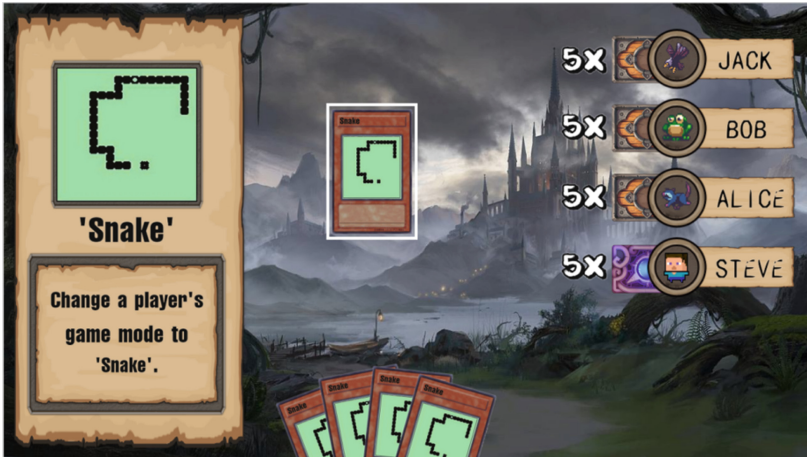
Fig. 3. Card Effect and Eard Output Interface Preview

the monster. When the life point is 0, the stage fails, and when the monsters are all eliminated, the stage wins.

Card Game
All players will randomly get an ID card and a fixed 10 gold coins. Different ID cards have different effects. Players themselves cannot view their identity cards. The winning condition is to get 20 gold coins. When it's a player's turn, he/she can choose one of the following behaviors: (1). Check his/her ID card. (2). Exchange his/her ID cards with another player (this process is invisible to other players). (3). Declare his/her ID card and use the ID card's ability. If other players doubt the player's ID card, turn over all the doubters' ID cards and the player's own ID cards. Among the opened ID cards, the player who successfully corresponds to his/her own ID card can use the corresponding ability, and the other players lose 2 gold coins at the same time and deposit them in the bank. After the end, the next player will continue to play until one player gets 20 gold coins, and the rest will be ranked according to the number of gold coins.

Examples of ID card ability:

"KING":Get three gold coins.
"QUEEN":Get two gold coins.
"BISHOP":Get one gold coin from each player.
"BANKER":Get all the gold coins in the bank.

4   Conclusion

In order to explore more possibilities of roguelike games, this game focuses on the rules themselves on the basis of previous roguelike games and creates a set of effect cards for the rules themselves, so that players can have more game experience. However, due to the operation of the rules of the game itself, it poses a great challenge to the specific

implementation of the game, and because there are many rules, how to make a balance between different rules is also a difficulty.

To successfully play the whole game, players need the following abilities: 1). Be familiar with the whole process of the game. 2). Adaptability under various victory conditions. 3). Understand the combination effect between cards. 4). Teamwork. 5). Fast adaptation to new cards.

According to the above capability requirements, the limitation of this game is that compared with the traditional roguelike game, players need to spend more time getting familiar with the effects between different cards and adapting to different game modes, which may cause players to lose interest and give up the game in the process of playing. And because this game has the function of inviting friends, those who invite friends to play together will have more advantages than those players who start the game alone.

In the future, we can explore more rules in the game, so that the game can have more possibilities. At the same time, the production of balance between various cards is also a problem that cannot be ignored. On this basis, in order to facilitate players who play different types of games to quickly get started with the game, the development of new game modes is also at the core of future work.

References

1. Altay, C., Warren, S., & Mosely, J. (2010). Rogue game. CRITIQUES: Critical Studies in Architectural Humanities, 207
2. Ahn J K. Mechanism of Permanent Death in Rogue-like Games. Journal of Korea Game Society, 2016, 16(1): 33-42
3. Kučera, A., Apt, K. R., & Grädel, E. (2011). Turn-based stochastic games.
4. Xu, Y., & Tanaka, T. (2021). Procedural Content Generation for Tower Defense Games: a Preliminary Experiment with Reinforcement Learning.
5. Anonymous. Online: https://baijiahao.baidu.com/s?id=1721849652307174605&wfr=spider&for=pc
6. Harris, J. (2020). The Eight Rules of Roguelike Design. In Exploring Roguelike Games (pp. 435–438). CRC Press.
7. Anonymous. Online: https://www.zhihu.com/question/538421588
8. Studio, T. (2017). Gamification in UX. Increasing user engagement. UX Planet.
9. Chen, J. (2007). Flow in games (and everything else). Communications of the ACM, 50(4), 31-34.
10. Chang, J. K. W., Dang, L. H., Pavleas, J., McCarthy, J. F., Sung, K., & Bay, J. (2012). Experience with Dream Coders: developing a 2D RPG for teaching introductory programming concepts. Journal of Computing Sciences in Colleges, 28(1), 227-236.