

To better understand how to improve the player experience for our game, we researched 6 similar games. Our game, Life and Death is a top-down dungeon crawler with a twist. It involves three players co-operating together to explore and make their way out of a labyrinth, and one adversarial player called Death, that tries to kill the player by placing traps, spawning enemies, and doing anything he can to prevent the other three players from making it out of the dungeon alive. Some games with similar concepts that we thought of were Nintendo Land: Luigi's Mansion, Dark Maus, Bloons Tower Defense, Dota 2, Path of Exile, and Mario Party.

### **Nintendo Land: Luigi's Mansion**

Nintendo Land: Luigi's Mansion is one of several mini games in Nintendo Land. In this game, one player plays as the ghost in the mansion who is trying to catch and knock out all the other players in the game. The other players cooperate to defeat the ghost by hitting him with their flashlight beam or by surviving until time expires. Flashlight players can also revive knockout teammates using their flashlight. The ghost is controlled on the gamepad (a separate screen) so that other players cannot see the ghost. To indicate to flashlight players where the ghost is, their controller will vibrate with more intensity as the ghost comes closer to them. This make team communication very important to figure out where the ghost is and how to best direct the flashlight beams to catch him. Flashlights need to be recharged with battery pickups to keep the players from just holding down their flashlights the whole game.

All of these design choices force the flashlight players to cooperate in order to survive. They must yell out the location of the ghost when their controller starts to vibrate, one player may need an escort to a new battery if their flashlight no longer works, and if a player is knocked

out, they will need help from another player in order to be revived. Since players cannot see the ghost, it creates a fun, yet anxiety filled game where you're constantly flashing your light trying to keep the ghost away. This uncertainty and the large focus on cooperation is what makes the game so entertaining to play and replay. Having friends switch off as the antagonist while working together with other friends to defeat him is a lot of fun. This element is something we are trying to focus on in our game design.

Some interesting elements in this game that could possibly be included in ours to improve it is vibrating a life player's controller when death is close, using some type of similar revive system, and adding items similar to the flashlight batteries that the player must collect frequently to keep their utility such as food to prevent a fatigue or degrading weapons.

## **Dark Maus**

Dark Maus is a top-down single player swordfighting game. The player controls a mouse with a sword trying to fight his way through a series of levels. The mouse has some cool abilities such as a dash, a fire sword, and the ability to have ghosts from a past life help in combat. The swordplay in this game is similar to how we would like to implement the combat system in our game. This type of combat is very different from what is seen in Nintendo Land: Luigi's Mansion. It takes the gameplay to a more realistic level to have sword combat. The tone of the game also changes from a children's game to a more teen rated title which is why we have decided to go with a dungeon theme for our game. The combat with your past life ghosts as allies is how we would like the cooperative combat to feel in our game. Enemies are very strong in Dark Maus and sometimes require some help to defeat. In our game, I would like to see a similar

element so that players must work together to progress through the level. An enemy may attack one life player while their teammates damage the enemy from behind. A similar this game has to Nintendo Land is the stamina meter. This meter works similarly to the flashlight battery except it is recharged overtime when it is not being used. This could be a nice alternative to the food or weapon repair system suggested above while still keeping the idea of limiting a player's ability to spam attacks.

### **Bloons Tower Defense**

Bloons Tower Defense is a great example of how we would like to implement death's role in this game. In this game, the player places different "towers" along a defined path in an attempt to kill all the bloons attempting to make it through the map to the end. Death's goal in our game is very similar, stop the life players from reaching the fountain of youth. The towers in this game are similar to the traps and enemies we would like to implement. Some towers just deal damage and some towers provide status effects such as slowing movement and freezing the bloons. Many of our traps will do damage, but we were also considering status effect traps like an oil slick and a sticky surface. The gold used to purchase towers in this game is similar to our mana implementation which limits the amount of traps and enemies death can place. We would also like death to be able to pick up traps and move them for a small cost in mana similar to how towers can be sold for less money than originally purchased for in Bloons Tower Defense. This restricts death from placing too many traps too quickly and being too powerful. Without this system, a player would just build all the best towers and not be challenged by the waves of enemies at all. One difference between this game and ours will be that the enemies placed by

death will move around the environment rather than staying stationary, and that death will have the ability to interact with the environment which is something not seen in Bloons Tower Defense. These changes should help to give death a little more power than stationary traps and allow death to chain traps and environmental hazards together to kill life players.

## **Dota 2**

Dota 2 is a top down action real time strategy game, where two teams of five players control heroes and fight against each other, seeking to destroy the enemy team's buildings. Each hero has an arsenal of powerful spells, each with unique and novel mechanics. Dota 2's spells function in a similar way to how we want to implement our Death player's abilities; the cooldowns and mana system as well as the point targeting system for spellcasting are all points of interest for our game. In our game, Death functions as an invisible hand that can globally summon enemies, place traps, drop boulders, and perform other adversarial actions. Each of Death's abilities has a cooldown and mana usage, so Death cannot spam the abilities. In addition, every one of Death's abilities requires a casting delay so that the other three players have time to react. Some of the spells in Dota 2 that are relevant for study are the heroes Invoker and Chen. In Dota 2, Invoker is a spell-casting mage with a large number of abilities, including summoning spells and global-targeted spells. One of Invoker's spells, called Sunstrike, allows him to target a point on the map, and after a short delay, a powerful beam of energy will strike that point on the map. This spell makes players on low health constantly afraid, as whenever Invoker has the spell off cooldown, the players could be killed from anywhere on the map. This is similar to how we want the players in our game to never feel safe from Death, and be constantly on the lookout.

The hero Chen in Dota 2 is another unique hero - his playstyle revolves around controlling multiple wild beasts at a time to push down enemies. To play Chen effectively, the player has to be proficient at micro-managing the beasts and using all of their abilities correctly. This idea would be interesting for how we want Death's summoning and trap-laying abilities to behave. If Death can control his summoned creatures and manually trigger traps, it adds a new layer of strategy to the gameplay, making the Death player far more involved in the game, instead of waiting for cooldowns and mana to regenerate. Aside from these two heroes, there are many creative and interesting spells and abilities in Dota 2 that can serve as inspiration for Death's mechanics.

However, it is not just Dota 2's heroes and spells that are worthy of study for our game, but the very essence of the flow of the game. Similar to traditional RPG games, Dota 2 allows the player to accumulate gold, experience, and other resources to become more powerful as the game goes on, but unlike RPG games, Dota 2 are designed to be finished within 20 to 50 minutes, and the main objective is to destroy the enemy base. This makes the game very strategic as the player must weigh the options of accumulating resources by killing NPCs or to take the fight to the enemy to shut them down or destroy their base. Without sufficient resources the players may not come out on top of a teamfight and will become further behind, but if the players neglect to shut down the enemy, attack the enemy structures or defend their own structures in favor of mindlessly killing NPCs, they may quickly find themselves losing control and being unable to gain resources. We want to maintain a similar balance in Life and Death, where the player must make decisions on whether to grow stronger by exploring and picking up powerups, or to rush towards the finish line. Death grows stronger the more time that they spend

so just like in Dota 2, we want the players to strike the perfect balance of accumulating resources as fast as possible while maintaining the goal of reaching the final objective.

## **Path of Exile**

Path of Exile is a top-down RPG game where the player fights against hordes of monsters in various dungeons and levels, growing stronger and collecting treasures, weapons, armor, and other power ups as they play through the game. In Life and Death, we want to capture the same sort of feeling as the three players called Life collect new powerups and fights enemies. However, Path of Exile is a game that is meant to be played hundreds of hours, with vast amount of grinding, or killing enemies over and over to accumulate experience, levels, or treasure. Since our game is meant to be finished within a 5 minute sitting, there are many differences that we have to take into account. We want to make the exploration of the labyrinth and accumulation of power ups in our game interesting to the player, so that they can actually feel like they're progressing and make them choose a decision of either exploring more or to try to rush straight for the finish line. To maintain this balance, we need to make sure that the player can very quickly become more powerful with a few power-ups, instead of the more gradual leveling up in Path of Exile. What makes Path of Exile addicting is the natural rewarding feeling that the player gets from getting more and more powerful, giving the player a goal to work towards. Every new area or enemy can drop or give the player new powerful weapons or great loot which gives the player that incentive to explore. We want to replicate the rewarding feeling of discovering new powers which allow the player to tackle new challenges in our game, but at the same time we must strike the delicate balance of preventing the game from lasting too long.

## **Mario Party**

Since our game is a 1 vs. 3 type of game, Mario Party is naturally a good source of inspiration. Mario Party is a game where four different players compete against each other on a board and seek to win coins or stars by playing various mini-games on each turn. Many of these minigames are 1 vs. 3 minigames where one player is given a great advantage over the other three players. The other three players need to either work together or survive against the one player in order to win. In Mario Party, the minigames are carefully balanced to make sure that it is not too hard for the one powerful player to win, but ensures that if the three players work together they can come out on top. Similarly, in our game, we want to make sure that Death is powerful enough to be a significant threat to the three players in the dungeon, but also make sure that if the three players play well enough they can overcome Death. The minigames in the Mario Party series that are particularly relevant to our game are the many minigames where one player is given control over various hazards that can knock out the other three players. The player with control over the hazards must kill the other three players within a certain time limit, while the goal of the other players is simply to survive. This gives a sense of urgency for all players in the game. However, in our game, the player with control over environmental and other hazards has unlimited time to kill the other players - the other players must simply reach the finish line to win. To make sure that the players are not too comfortable and that the game finishes faster, in our game we want to make Death's abilities grow more powerful as time goes on, so if the other players take too much time, Death's increasing powers will force them to pick up the pace, or die.

## **Conclusion**

Our research of these six games and the mechanics behind them was very beneficial to helping us flesh out and inspire mechanics for our games. The intricate balancing between growing stronger and taking objectives in Dota 2 and the balance in 1vs3 minigames in Mario Party provide good lessons to us on how we should design our game. The rewarding nature of accumulating loot and leveling up in games like Path of Exile should be replicated in the exploration of the labyrinth in our game.