Comp 369 - Assignment 2

Research on Computer Games

Professor: Dr. Walter Ridgewell

Name: Daniel Tran

ID: 3339325

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There are five games that will be discussed in this research of computer games. The games to be discussed are The Binding of Isaac, Killing Floor, Hearthstone, Warcraft 3, and Dota 2. The Binding of Isaac was developed using Adobe Flash ActionScript 2, which became a limiting factor for the games’ development. The game became popular after many Let’s Plays appeared on YouTube and Twitch. The Binding of Isaac created an impact on Indie game development. Killing Floor was originally a mod for Unreal Tournament 4, but later became a standalone game using Unreal Engine 2. The game provided a unique feature of permanent perks for the users that played. As well, there was lots of opportunities for community involvement, where users could create their own floor levels using the Unreal Engine. Hearthstone was developed using Unity, allowing for easy porting of the game to many platforms. The game single-handedly increased the popularity of Collectible Card Games (CCG) in the mobile game market. Warcraft 3 was developed using Blizzard’s its own dedicated game engine. Warcraft 3 is an RTS game provides a unique concept of Heroes, which have levels and abilities. The game also comes with a Warcraft 3’s World Game Editor, allowing the community to make custom game maps. These maps have lead to a revolution in the eSports scene, seen through the development of Dota, a Massive Online Battle Arena (MOBA) style game. The final game is Dota 2, which is a MOBA created from the original Dota custom map in Warcraft 3. The game originally used Valve’s Source gaming engine, but was later ported to the newer Source 2 engine. The game is unique in it’s complexity due to the number of mechanics that are available in the game. As well, they push the limits of eSports in terms of the prize pools for their tournaments, where Dota 2 has the largest prize pools in eSports history.

There are many different genres of games that have been released overtime, each impacting the game market in different ways. The objective of this paper is to research different computer games that are currently in the market and take an indepth look at some of the different mechanisms the games. In particular, the mechanisms that will be observed are the different type of game engines and how these game engines participated in the development of the game, components of the games that make it unique in comparison to similar games, and what components of the games attract certain players. Further, we will also be looking at who made the games, when they were released and who the target players for the games are. There are five games that will be analyzed in this report, which are The Binding of Isaac, Killing Floor, Hearthstone, Warcraft 3, and Dota 2.

The first game under discussion is The Binding of Isaac. The Binding of Isaac was developed by Edmund McMillen (Klepek, Patrick, 2016), where it was released on September 28, 2011 for Windows and Mac OS and released for Linux on December 19, 2012 (GameWise, n.d.). The genres that describe The Binding of Isaac are Action, Adventure, Indie, and RPG (SteamPowered, n.d.). The target audience is geared towards gamers that enjoy a simplistic yet difficult game. It also targets those who enjoy playing dungeon crawlers and playing games to collect achievements. Those who have enjoyed games such as The Legend of Zelda, which was developed in 1986 (Wikipedia, n.d.) may also enjoy The Binding of Isaac, due to their similarities in gameplay and genre, where the character under control moves around an enclosed area and has to “clear the room” by defeating all the enemies before being able to move forward in the game. To add onto this point, The Binding of Isaac used “the basic Legend of Zelda dungeon structure as the game's skeleton, [making] it easy to rework almost all the elements of a traditional roguelike formula” (McMillen, Edmund, 2012). A roguelike game is one that generally takes place in a dungeon (making the game a dungeon crawler) where the instant the user dies, the game is over. Rothman stated that “all roguelikes share Rogue’s DNA, combining a randomly generated world with the iron rule of ‘permadeath’” (Rothman, Joshua, 2014). The game engine used to develop this game was Adobe Flash using ActionScript 2 (McMillen, Edmund, 2012). The approach to creating the game was with a roguelike design, which allowed the game to have a simplistic interface. A difference from this roguelike game in comparison to other games was its difficulty curve, where the “game adjust to players as they played, adding increasingly difficult content to the game as they progressed” (McMillen, Edmund, 2012). Edmund also said that “the biggest downfall of The Binding of Isaac is its performance” (McMillen, Edmund, 2012), which was attributed to the use of Flash ActionScript 2, which was already outdated at the time. Flash ActionScript 2 lacked many features that most other games had, including a lack for controller support and Steam integration, making development of the game a lot more difficult than it should have been. A reason to why The Binding of Isaac was developed with Flash ActionScript 2 was because it was what his co-developer, Florian, could develop again. Edmund stated that “if I had known that anyone would have cared about Isaac, I wouldn't have made it in Flash at all”. McMillen didn’t believe that the game he developed would be popular, especially when the game had only “[yielded] over 40,000 dollars within the first month” (Weber, Sebastian, 2015). After 4 months, the game suddenly became very popular, with a huge spike in sales. Sebastian said that “at peak times, about 200 Let’s Plays of the game [popped] up per day” (Weber, Sebastian, 2015). This, combined with streamers played the game with a large audience watching contributed to the success of the game. The success of this came caused lots of other companies to create similar indie games such as Spelunky or Enter the Gungeons.

The next game under discussion is Killing Floor, which was developed by Tripwire. The release of Killing Floor was originally in 2005, as a mod for Unreal Tournament 2004 (Matos, Xav, 2009), but later, Killing Floor got a standalone release on Steam in May 14, 2009 (SteamPowered, n.d.). Killing Floor is a first-person action shooter that revolves around killing hordes of zombies in order to stay alive. The target players for Killing Floor are players who enjoy first-person shooters, such as Counter-Strike, but also enjoy a horror aspect. This game shows similarities to Half-Life, which is another first-person zombie shooter, thus allowing it to appeal to the half-life audience as well. The inclusion of a “persistent perk system allowing players to set them apart from other survivors with skills and ability upgrades” (Matos, Xav 2009) is a feature that helps set Killing Floor apart from other zombie survival shooting games, such as Left 4 Dead or Half-Life. An example of a perk is the Field Medic perk, which allows a player to heal their allies with a specific type of gun. The use of the Unreal Engine allows users to create custom game levels for the game, making it easy for the game to be expanded by the community. In an interview with the lead behind the Killing Floor mod, Alex Quick, he was asked about the official SDK that will be used to created custom content for Killing Floor. Alex responded that Killing Floor will be using the Unreal Editor, and that “[he] can bet [his] money that there’ll be like a dozen new custom maps to play within a few days of the game being out” (Quick, Alex, 2009). This shows that the use of the Unreal Engine allows for the community to be involved in the game. Although the game hasn’t had a very large impact on the first-person shooter game community, it was impactful enough as a mod to become its own standalone game. As well, there was a release of its sequel, Killing Floor 2, which used an upgraded game engine, Unreal Engine 3. More about Killing Floor and its sequel can be found at http://www.tripwireinteractive.com/.

Next up is a popular game designed by Activision Blizzard called Hearthstone, which was released in March of 2014 (Wikipedia, n.d.). Hearthstone was officially released March 11, 2014 on Windows and OS X and on April 14, 2015 for iOS and Android devices (hearthstone.gamepedia, n.d.). The target players for Hearthstone are those who enjoy strategy games, as well as card games. As told by Greg Austin, Hearthstone is “easy to learn, which means anyone can play it and enjoy themselves, but it is also difficult to master” (Austin, Greg, 2015). This allows the game to be picked up by just about anyone and played casually. Since Hearthstone allows you to customize your own deck, there are endless possibilities when it comes to deck building, as well as decks someone can play against. This creates a large area for complex and strategic gameplay that suits those who enjoy strategy games, as well as other card games, such as Yu-Gi-Oh, Magic: The Gathering, or even Poker. Also, Hearthstone is a Warcraft themed game, which also appeal to those who are fans of World of Warcraft or the Warcraft trilogy, broadening the scope of people who may play the game. Hearthstone is currently affecting the mobile game market by creating an increase in collectible card games. Lazarides states that a “study also reveals some interesting data about CCG player demographics: apparently, it’s one of the most male-dominated gaming categories, with about 80% being male” (Lazarides, Tasos, 2015). He goes on to state that the study “goes on to highlight the huge role Hearthstone has played in this expansion of CCGs on mobile” (Lazarides, Tasos, 2015). It is clear that Hearthstone has had a major impact on the way game companies and developers see games, and what kind of games are now being produced. The success of Hearthstone has caused many developers to shift their game development towards creating more collectible card games. Hearthstone was created using the Unity game engine, but it was first prototyped using Adobe Flash (Takahasi, Dean, 2014). The use of Unity as a game engine allowed the developers to create a game that could easily be ported to different platforms. Jason, a developer in the Hearthstone project stated that the use of Unity gave them “a lot of flexibility in terms of what platforms we could go to in the future” (Jason, 2014). Adding onto this, another developer, Bryan, said that a “great thing about using Unity is that [they] can fix features or bugs in the Unity engine and that carries over to the builds on all platforms”, allowing them to have “a lot less duplicate work that [they] have to do for developing across multiple platforms” (Bryan, 2014). This allows for a decrease in developing time for cross-platform updates to the game, which is very beneficial for the small team of around 12-15 people, in comparison to other teams that exceeded 60 members, who developed the game (Wawro, Alex, 2014). More information about Hearthstone and Blizzard can be found at http://us.blizzard.com/en-us/.

The next game under discussion is Warcraft 3, which was developed by Blizzard Entertainment. Warcraft 3: Reign of Chaos was released on July 5, 2002, and its expansion, Warcraft 3: The Frozen Throne, was released on July 1, 2003. The target players for Warcraft 3 are players who are into RTS, or real-time strategy games, as well as those who are fans of World of Warcraft, since Warcraft 3 shares the same heroes, unit, abilities, and items as World of Warcraft. Warcraft has many similarities to Starcraft, being made by the same company and having relatively similar style gameplay. Thus, it can be enticing for those players to also play Warcraft 3, as it had superior graphics in comparison to Starcraft at the time. Warcraft 3 also comes with mini-maps and custom games, which are developed by fans of Warcraft 3. The custom games span many genre of games, from tower defence, to RPG, and even to MOBA games. One of the most well-known Warcraft 3 mini-games is Dota, which is commonly referred to as the first MOBA game developed (although it was Aeons of Strife developed as a mod for Starcraft 1) (Walbridge, Michael, 2008). Max of Csgmagazine states that the MOBAs in conjunction with the rise of platforms such as Twitch and YouTube, have driven eSports to new levels, with almost every publisher and hardware manufacturer now trying to obtain a slice of this newly tapped revenue stream. And none of this would have existed today, if not for Warcraft 3” (Brownhill, Max, 2017). This demonstrates the huge impact that Warcraft 3 has on the current game market and state of eSports. Continuing, Warcraft reaches a large variety of gamers, due to its versatility in the different genre of custom games that are available. The use of Warcraft 3’s World Editor allowed the community to get involved easily by allowing them to create custom games easily. A factor that makes Warcraft 3 unique compared to other RTS games, such as Starcraft and Command & Conquer, was that “Warcraft 3 introduced Heroes, strong leader units with 4 abilities that would level up slowly throughout the duration of the game, becoming stronger and more adaptable that would allow the player to control their style of play” (Brownhill, Max, 2017). Max also goes as far as to say that “the impact of some of these changes and stories lead to a massive change in the gaming landscape, that gamers are still experiencing today” (Brownhill, Max, 2017). The introduction of heroes allowed for a new dimension to the RTS games. It allowed the custom games in Warcraft 3 to be more in-depth and have a lot more variety, in comparison to other games that did not have heroes, such as Starcraft. This allowed users who created custom games to also customize the heroes that were being used and the skills that they had. More about Warcraft 3 or other games that Blizzard have made can be found at <http://us.blizzard.com/en-us/>.

The final game that will be discussed is Dota 2. Dota 2 was officially released in July of 2013 for Windows, OS X, and Linux Systems (Steampowered, n.d.). The target audience for Dota are those that are into MOBA or Massive Online Battle Arena style games, such as League of Legends, Heroes of Newerth, Smite, or Heroes of the Storm. Dota 2 has a very steep learning curve in comparison to many other MOBAs; Chris describes the game as a “deep and rewarding competitive game” (Thursten, Chris, 2013). Dota 2 by far the most complex MOBA available due to the large number of mechanics that players must get used to. As Minotti says, “it’s the most technical of the four, so it’s probably not a great place to start if you have no experience with MOBAs” (Minotti, Mike, 2015) in his comparison between four MOBAs, League of Legends, Dota 2, Smite, and Heroes of the Storm. The number of mechanics available in the game are seemingly endless, and the Dota 2 gamepedia provides a list of mechanics in the game (dota2.gamepedia, n.d.). Some examples of mechanics in the game are friendly-unit denials, vision mechanics at different times in the day, and vision at different elevations in the game. In terms of the heroes available, Dota 2 has many heroes that are complex, such as heroes that require a lot of microing to control multiple units, or heroes that have more than the standard 4 abilities (Invoker has 10 abilities) (Nadril, 2016). These kind of mechanics can be very attracting to players that enjoy games with lots of complexity and skill involved. Although this may make the game seemingly daunting, Dota 2 provides lots of support for new players. Many of these support mechanisms have been introduced after the game overhauled its game engines. Dota 2 uses Valve’s own 3D game engine called Source 2, written in C++ (Walker, John, 2012). Originally, Dota 2 used the original Source engine, but was ported to the Source 2 engine in 2015, being the first game to use the new engine (Nunneley, Stephany, 2015).This upgrade in game engine introduced things such as the ability to demo any hero, which creates “a safe place to try out any hero’s abilities and practice last hitting” (Hussain, Tamoor, 2015). As well, there was an introduction of Guided Bot Matches to help newer players learn the mechanics of the game without the daunting feeling of playing with real players. Finally, another interesting improvement to be discussed from the conversion from Source to the Source 2 game engine was the introduction of “new interfaces, and custom games” (Livingston, Christopher, 2015). The custom games are similar to the ones that Warcraft and Starcraft had, which may attract players who want to play similar custom maps to Warcraft 3, but with improved graphics. Dota 2 also has a large impact on Steam and the gaming community. Currently, Dota 2 is number one in terms of most players playing the game on Steam (steampowered, n.d.). Dota 2 also has the largest prize pools in eSports history, which occur at the yearly The International events. The largest prize pool from The International occurred this year, with a total of US$24,787,916 (Wikipedia, n.d.). The first International in 2011 had a prize pool of US$1.6 million dollars, but in every subsequent year, the prize pool only got larger. There are also smaller events called The Majors, with a static US$3 million dollar prize pool. These large prize pools demonstrate the success that Dota 2 has in the eSports industry. It also creates an atmosphere that makes people want to play the game and become a part of the historical event. Valve is the company that created Dota 2, and can be found at http://www.valvesoftware.com/.

There are many games that helped in shaping the current game market and some of those games were discussed above. The games that were discussed were created using different game engines, and each game has their own perks that make it unique or interesting. The Binding of Isaac was a simplistic indie game that exploded after the game started getting popular from “Let’s Plays” on YouTube and Twitch. Killing Floor was originally a mod developed on Unreal Tournament 4, but after gaining popularity, it became its own standalone game, featuring a unique perk system. Hearthstone was a CCG game developed by Blizzard, which shifted the game market towards the development of more CCG games. Warcraft 3 was also developed by Blizzard. The game’s ability to allow players to develop their own maps in the form of custom games created popular games, such as Dota, which shaped the way the competitive eSports scene is today. One of these effects is the rise of MOBAs, where Dota 2 stands paramount in terms of possible eSports winnings. Dota 2 is unique in the sense that the game provides a plethora of mechanics that make the game one of the most difficult MOBAs to master. All in all, these games have their own way of affecting the game market in a positive manner. They influence the way developers of games think, causing more unique and innovative games to be created.

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