Massively Multiplayer Online Role-Playing Games: The Past, Present, and Future

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Massively multiplayer online role-playing games (MMORPGs) are emerging in the computer game industry as a very popular genre. These games have existed since the late 1990s, but in the last few years the market has become increasingly strong. This relatively new genre is attracting a widespread audience, bringing together those who previously enjoyed both pen and paper and computer role-playing games, as well as those who enjoy socializing with other players in a virtual environment. Game developers see MMORPGs as a potentially profitable business due to its widespread appeal, but the reality is that only a small percentage of MMORPGs that are released become a success [Kosak 2006].

This article attempts to determine the many aspects that make a successful MMORPG; it also attempts to ascertain what new and innovative features are expected by the users from the next generation of MMORPGs. This is achieved by looking at and discussing past literature and surveying the MMORPG community's perception of previous and current MMORPGs, as well as their expectations of the next generation.

An online survey attracted 122 participants to provide their perceptions of current and past MMORPGs. This article determines and outlines the respondents' preferences in the MMORPG genre, discussing what implications these could have on its future. The survey also gave insight into the respondents' expectations of the future of MMORPGs. We conclude this article with a discussion of aspects of current MMORPGs that the participants would like improved, as well as new features they would like incorporated into the next generation of games.

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1. INTRODUCTION

Massively multiplayer online role-playing games (MMORPGs) are a fast-growing computer game genre; they are multiplayer role-playing games (RPGs) played online over the internet in a persistent world with hundreds, or even thousands of people simultaneously connected to the same server. A persistent world is an online game world that continues to function even when a player logs out and no longer participates in it. A

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player can log back in at any time and continue from where he or she left off. While a player is logged out, other players can continue to play in the virtual world.

A player assumes the role of a fictional character and then controls that character's actions. This genre of games, like the single-player variety of RPGs, focuses on players carrying out quests with distinguishable goals. Unlike the single-player variety, players can accomplish their goals collaboratively with other players or may choose to compete against others.

1.1 Statement of Purpose

The key aims of this research are to determine the evolutional aspects of MMORPGs by analyzing literature related to MMORPG history and its influences and by exploring MMORPG players' perceptions and expectations.

This research also aims to discover some of the commercially successful MMORPG's innovative or evolutional features, and then see if they fall within the players' expectations. We also explore players' (current and those who played MMORPGs in the past and still have a keen interest in the genre) expectations of future MMORPGs.

1.2 Related Research

Current research in the area of MMORPGs fits mainly into one of four categories:

(1) *The social interactions between players in MMORPGs.* In online games, socializing is a large component of how the game is built, especially in an online role- playing game, due to the dynamics behind forming groups capable of defeating enemies and advancing through the game together. Yee [2006] has an ongoing study on socialization in MMORPGs, in which more than 40,000 people have participated over 6 years.. Yee states that the appeal of these games is strong for a wide age range of players, who average 22 hours per week in play [Yee, in press]. Other researchers such as Foo and Koivisto [2004] identified players they termed "Griefers," who would intentionally disrupt another player's experience in the game. Further on we will see how the participants of the survey viewed socialization in MMORPGs.

(2) *The different architectures to build MMORPGs.* The architecture to build a MMORPG can determine many different things: How many people can be active simultaneously on one server? How much control over the game do the developers maintain? And what up-front costs does a developer need before launching the game to the public? Many of these questions have been considered, for example, Kabus et al.[2005] looked at ways to reduce upfront costs using a peer-2-peer model, rather than what many researchers thought of as the traditional architecture: a client-server model {Kabus et al. 2005; Saha et al. 2003; Yamamoto et al. 2005).

(3) *The effects of latency on MMORPGs.* The word latency is used to describe how much time it takes a packet of data to get from one designated point to another. If internet data traffic is congested, the packet may take longer to reach its destination than normal, which causes delayed actions in the game, much like a live satellite transmission delay. Even at a latency of 1000ms (milliseconds), *EverQuest*, a popular MMORPG, still responded accurately to the player's actions [Fritsch et al. 2005]. The authors [Fritsch et al. 2005] discovered that this was so because *EverQuest* has an action queuing system, whereby many actions can be queued, and are performed as soon as a previous action finishes. Each action usually takes at least one second to perform, thus catering to the 1000ms

latency. Do MMORPG players believe that in the future latencies will need to improve (decrease) to accommodate a new generation of MMORPGs?

(4) *Problems that plague MMORPGs*. There are many problems affecting MMORPGs that need to be resolved to make the games more enjoyable. Some research has focused on cheating within the game to gain an unfair advantage [Golle and Ducheneaut 2005]; hacking an account and using it illegally [Chen et al. 2005b]; and counterfeiting documents to obtain an account illegally (Chen et al. 2005a; 2005b].

The research reported in this study does not specifically fit into any of these four categories, but attempted to use parts of the four aspects as a guideline to create a survey, which helped to determine the players' perceptions of these features and issues.

1.3 Significance of the Study

MMORPGs represent a fast growing sector of the personal computer (PC) games' market, so a study such as this may help inform MMORPG developers how to better meet user expectations, and thus is significant.

As an example, one game in the genre, *World of Warcraft* (shown in Figure 1), boasts over 8.5 million current subscribers worldwide [Blizzard Entertainment 2007]. The game is purchased from a retail outlet at a regular price consistent with that of other PC game prices; but to log in to the persistent world an additional subscription fee must be paid on a monthly basis. At the time of writing the monthly fee was $15 USD, payable with credit card, or a prepaid card purchasable from many game retail stores. The first month is free, and there is a small discount if three or six months are purchased in advance.

Fig. 1. *World of Warcraft.*

However, the *World of Warcraft* is a successful MMORPG. There are many that are abandoned before development has concluded or simply forgotten, if they make it to a launch.

In an interview with Dave Kosak, Robert Garriott, a veteran of the game development business, says:

> "It's funny, a lot of companies look at our business from the outside and say, 'Wow! This is a high profit business! We wanna get into it.' But the reality is different. Everything looks greener from the outside. But if you look at our business, how many companies are really making money in the online game space? There's NCSoft, Blizzard... but outside of a few companies it's questionable. To reach the sort of volume necessary to make money, given the costs of development, and the time it takes -- there are a lot more easier ways to make money than the online game space! Given those risks, a lot of people have chosen not to invest in these experimental projects." [Kosak 2006]

The research reported in this study aims to determine what it is that players liked in past MMORPGs and what they want to see in future games. If developers and venture capitalists can be further informed about players' interests, it will help to mitagate risk and make MMORPG development more viable.

2. RESEARCH APPROACH

To meet the objectives of this study, the authors devised three approaches:

The first approach consists of reviewing some factors that had an influence on MMORPG design and development (detailed in Section 3 of this study). This review considers many MMORPG aspects and features and looked for their sources. With the sources established, there is then a discussion of why these features (which also helped formulate questions in the survey in the next section) were important to the evolution of MMORPGs.

Taking the second approach, the authors looked at the evolution of MMORPGs, from their beginnings to the present day (detailed in Section 4). The common current opinion among many game developers and journalists is that MMORPGs have been through two distinct generations. In looking through the history of this game genre, the authors researched online timelines, game community postings, articles, and web blogs to identify its evolutionary aspects from one generation to the next.

The third approach was a survey of player expectations for future MMORPGs. An invitation to take part in the survey was posted at many MMORPG gaming web forums; the results were used to investigate the MMORPG player community's current perceptions and its expectations for future MMORPGs.

2.1 The Survey

The survey, written with MMORPG player expectations in mind, was the source of the data for the third research approach. In order to gain a more accurate sample from both the existing MMORPG community and also experienced MMORPG players who had taken a break from the genre, the survey was restricted to the participants in those two groups

The first part of the questionnaire was quantitative. This means that the majority of questions were multiple choice. Some required the respondents to check as many answers

as were applicable, while others asked respondents to order the answers in order of preference; the statistical results can be found in Section 5.

The second part of the survey was qualitative, with the opportunity for respondents to express their concerns about the future of MMORPGs. These questions were optional; some respondents wrote a couple of words, while others wrote or as much as an entire paragraph. These answers had to be analyzed qualitatively, and were separated from the rest of the survey results in Section 6.

2.2 Sample Size

Survey respondents were recruited by responding to an invitation to contribute to the project, which was posted on a number of popular MMORPG forums, so the sample represents a self-selected group. The project constraints placed a practical limit on the sample size, as the survey was placed online for two weeks only, after which the evaluation stage had to begin. During the two weeks, 122 people participated in the survey.

3. MMORPG PRECURSORS

Today's massively multiplayer online role-playing games (MMORPGs) have evolved from two definable areas: multi-user dungeons (MUDs), and computer role-playing games (CRPGs), both single and multiplayer; they in turn borrowed concepts from pen-and-paper *Dungeons & Dragons* (D&D).

3.1 Dungeons & Dragons

Dungeons & Dragons was built from the epic adventures in J.R.R. Tolkien's novels *The Hobbit* and *The Lord of the Rings* series. The novels include a wonderful variety of beings such as dwarves, elves, and hobbits, as well as humans. They are stories of good and evil (the villains are creatures known as orcs, goblins, ogres, and other assorted evil doers).

In 1974, a company called Tactical Studies Rules (TSR) financed and published the *Dungeons & Dragons* game; this was the first tabletop role-playing game [Wizards of the Coast 2003].

In some form, all MUDs, RPGs, and MMORPGs can be traced back to D&D, so the game needs to be explained in full detail. Together with a group of friends you lead your hero, usually referred to as a character, through treacherous dungeons. The only boundary is your imagination. D&D provides a core set of rules and instructions to follow, but within those rules anything is possible. When players create their character they must make a number of choices that dictate the tasks they can perform, their strengths and weaknesses.

First, players select a race or species for their character, which will determine some of their strengths and weaknesses, as outlined in the D&D rules. For example, the human species is considered well rounded, whereas Halflings, due to their small stature, may have more dexterity but less strength. Dexterity and strength are just two of the attributes in D&D used to determine the outcomes of many events (e.g., to determine how much damage a player will inflict on an enemy, his or her strength score is factored into the equation). Dexterity may be used to determine the disabling of a trap, where a player will roll dice to determine whether the trap was successfully disabled or not.

Second, players select one of a number of predefined classes, which will determine what a player's capacities will be. For example, the fighter class is designed for close combat, so according to the D&D rules a player in the fighter class will be able to wear heavy armor and wield any weapon, as well as have a large number of hit points. Hit

points refer to the number of hits a character can take before dying. The Mage class is another example of a predefined class; it is all about magic spells. In this class, a player is allowed almost no armor, has very few hit points, and can wield only a few weapons (such as a staff). A player in this class will try not to enter into direct combat but will let the fighter suffer the damage; meanwhile he/she will cast spells to damage the enemy by possibly putting the enemy to sleep or via other nifty tricks.

The dungeon master (DM) is an essential component of D&D. He or she is responsible for setting the scene and creating the story, and assumes responsibility for all monsters and friendly characters (in computer RPGs these are known as nonplaying characters (NPCs)) that players may meet. There is no board to play on; it's all carried out by role-playing a character and using imagination to set the scenes within the rules of the game. There have been many adventures, called modules, created and sold commercially that make the DM's job a little easier by providing a playing board and a fully developed story with characters and monsters. A computer RPG is similar to a module, with a pre-built story and world and a computer-controlled DM. It takes away some of the imagination, but still allows role-playing and character development.

The D&D rules have served as a framework for the developers of computer games. It made the transition to computers a seamless one, as the mathematical equations could be translated into programming routines. Recently, the MMORPG *Dungeons & Dragons Online* has been released by Turbine Entertainment (the creators of the successful *Asheron's Call* MMORPG series) utilizing the D&D version 3.5 rule set. D&D continues to have an impact on the RPG phenomenon, even many years later.

3.2 Character Development Models

As outlined above, D&D uses a class-based character development system. Most RPG developers use one of two different systems, namely those that are class or skill-based (or a mix of the two); this continues to be the case for MMORPGs.

3.2.1 *Class-Based System.* The player chooses an initial character class when he or she first creates a character. The class chosen defines strengths and weaknesses: A warrior or fighter class will generally be able to use many weapons, be equipped with heavy armor, and fight at close quarters. Whereas a priest class will generally cast healing spells and other beneficial effects to keep its group alive. The class-based system allows developers to create a game that requires players to interact and help each other by balancing their strengths and weaknesses. It forces players into taking one path in order to advance--once a warrior class is picked, the player will always be a warrior.

3.2.2 *Skill Points-Based System.* The skill points system can be implemented in RPGs in two different ways. In both implementations the character upon character creation has no definable attributes. The first implementation will give skill points to a player as he or she advances instead of levels of a class. Players can assign the skill points to various skills and abilities in order to increase their strength using that skill. For example, players might assign some points to "healing magic" to increase their ability with that skill. The second implementation simply allows players to gain skill points in their chosen skills by simply using those skills. For example, to improve "healing magic" a player may simply cast healing spells more often.

This system generally allows for a more personalized character that is not locked into a specific set of skills as defined by the class system. It can however become unbalanced

when players learn of a combination of skills that can make them more powerful than another combination of skills. If this tactic is used, developers may have to make the hard decision to balance one kind of skill against another, or not. Changing skills may cause controversy among players who utilize them.

3.3 Multiuser Dungeons

The origin of multiuser dungeons (MUDs) can be traced to 1978 [Bartle[1990], when MUD1 was developed by Richard Bartle and Roy Trubshaw. They created an entirely text-based game that could be played simultaneously by multiple users. Game-play was similar to the *Dungeons & Dragons* pen-and-paper tabletop game, in that players entered a dungeon and fought monsters for treasures and experience. The experience would then increase the character's level of play.

MUDs started off by focusing on the imaginative side of D&D and allowing multiple users to interact with each other in any way they desired. For example, players could kill each other openly, and murdering other players was a generally popular business [Cox and Campbell 1994].

Later, MUDs took a new approach, employing more D&D rules and traits such as grouping and class-based characters. This is important to note, as future MMORPGs mainly follow this line of MUDs. Other MUDs such as TinyMUD, however, decided to focus purely on social interactions between players [Cox and Campbell 1994]. While current-day MMORPGs do not entirely focus on socialization only, it is important because socialization is a key aspect in all MMORPGs that are available or in development.

3.4 Single-Player Computer RPGS

Single-player computer RPGs brought a lot of innovative features to the RPG, many of which continue to be used in MMORPGs.

Dungeon Master introduced real-time mechanics into the game engine [Wikipedia 2006a], instead of taking turns as in chess, all the action was instant and in real-time. *Wasteland* offered open-ended game mechanics that allowed players to complete tasks by a variety of means. *Ultima Underworld* was the first game to offer fully rotational 3D [Gallear 2004; Wikipedia 2006d]. While the *Elder Scrolls* RPG series tried to immerse the player into the world through the use of cultures, day and night cycles, as well as weather effects. All these innovations are taken for granted in today's MMORPGs, but it is interesting to see when they were developed.

Despite the fact that many MMORPGs fail [Kosak 2006], many are successful and their profitability has encouraged many software development companies to concentrate in this area, hence single-player RPGs are now less common. Even Bioware, the creator of many critically acclaimed single-player RPGs, has recently announced that it has an MMORPG in production [Bioware 2006]. A successful MMORPG such as Blizzard's *World of Warcraft* can generate much higher revenue than any single-player RPG. But the single- player game is not dead yet, as it still offers well-written stories revolving around the player, something that is difficult in MMORPGs since there are thousands of players in the same world.

3.5 Multiplayer Computer RPGS

Computer RPGs that offered some aspects of multiplayer games have in some cases inspired the developers of MMORPGs. Such games were, and still are, generally played on a local area network or on an online server. They are not considered MMORPGs

because they only cater to a small number of players. But they did implement a few innovative features that have crossed over well into the MMORPG genre.

Neverwinter Nights (not the same as Bioware's 2002 game) is sometimes credited as the first MMORPG (it ran from 1991 to 1997 [(Medar 2001]. The term "massively multiplayer" does not suit the *Neverwinter Nights'* server capacity of 200 players. It was more like a MUD than a MMORPG, as it only had very basic 2D graphics, and players commanded their characters with a simple set of instructions. Even though the internet had not really taken off at that time, *Neverwinter Nights* was a commercial success and an early indication that an online game could be successful.

The first online RPG was not the only innovation of the multiplayer RPG genre. The game *Diablo* and its sequel introduced randomly generated dungeons and items that extended the life of the game by allowing people to replay the game with different characters and to experience altered dungeons and items. And a new version of *Neverwinter Nights* was developed that allowed players to create their own content. This capability is being discussed by many developers and players of MMORPGs, as allowing player-created content could extend the life and world of an MMORPG.

4. HISTORY OF MMORPGS

There is no definitive opinion that is agreed about what constitutes a first, second, or future generation MMORPG. There have been many discussions about it, and the general consensus is that there have been two generations already, and the third generation is not far away. Some people dispute this, such as Richard Garriott (in an interview with Dave Kosak [2006]:

> "Here's my take on the result of the first-generation of games, which covers everything from Ultima Online to EverQuest and even up through World of Warcraft. WoW, by the way, was the pinnacle of these kind of games: incredibly well refined, very good user-interface, totally polished. The challenge/reward cycle is perfectly perfected. On the other hand, they still fit the mold [of first-generation games]: the level grind."

Richard Garriott has been in the computer RPG *and* MMORPG business since their beginnings, so his comments have weight. However, the fact is that for a long time now, articles, journals, and most other information regarding the generations of MMORPGs talk about *two* generations of MMORPGs; this article will continue to take this line during the discussion of history.

4.1 First-Generation MMORPGS

The first generation of MMORPGs were the first graphical online role-playing games that allowed many players to simultaneously play in the same universe. From an online perspective, these games generally had only text-based MUDs to look to as models. The other obviously influential factors were single and multiplayer computer RPGs. The developers' idea was to take MUDs further by implementing a user friendly interface without text commands and a graphical engine similar to the leading computer RPG's of the time.

4.1.1 *The First MMORPG.* Meridian 59 (pictured in Figure 2) is often credited as the first MMORPG, as it had many of the elements that players associate with MMORPGs, at least in an early stage [GameSpy 2003]. Meridian 59 was published in 1996 by 3DO, but went through a beta period in early 1996 which was supported by thousands of
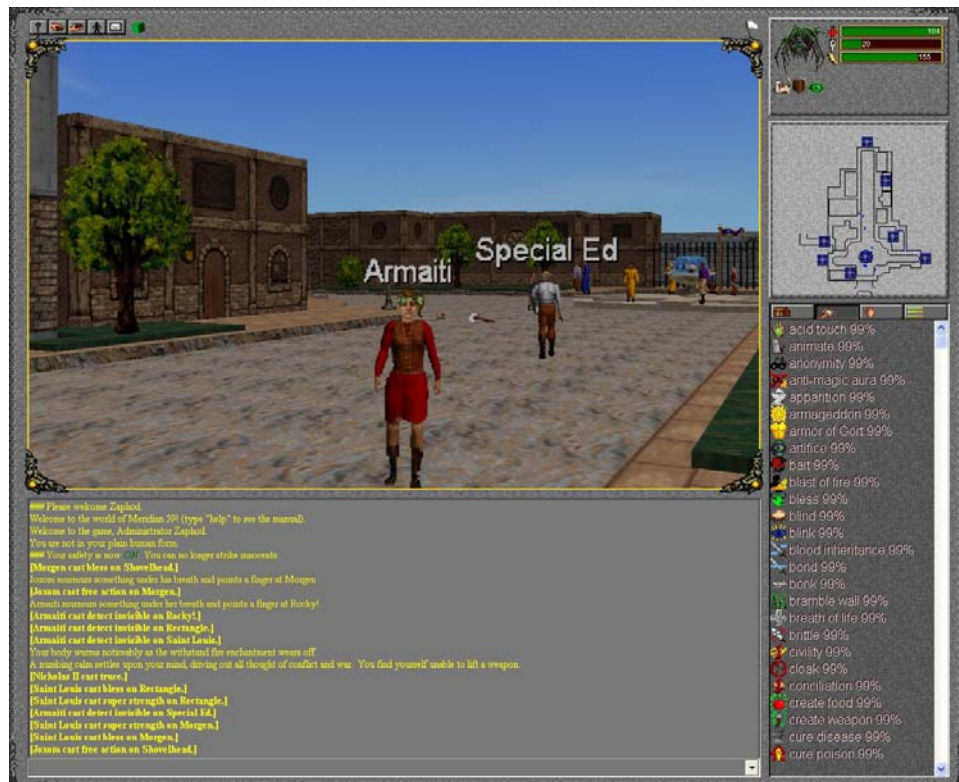
Fig. 2. Meridian 59.

players [Kirmse], a number that was "massive" and the reason it's often considered the first MMORPG. Meridian 59 also marks the introduction of the term *massively multiplayer*. In 1996, 3DO used this term as well as "persistent world" to describe their game to the press [GameSpy 2003]. Meridian 59 was also the first game to have a monthly charging system, as opposed to an hourly rate [Kirmse].

Meridian 59 offered many features that MUDs did, but allowed users to see everything occur on screen (such as another player waving to them). The communication system although unrealistic (since it allowed players anywhere in the world to converse with others), facilitated the establishment of a community. The interface had elements that are still widely popular today, such as the mini-map (similar to a radar system) that uses a small amount of space usually located in a corner of the user's screen. It also had a dialog box, which, for example, allowed chatting and gave detailed information about actions that had been performed.

With layoffs at 3DO bringing the development team down to one artist [Kirmse], Meridian 59's graphics quickly became outdated, but the game had shown promise and paved the way for other developers to jump into the new ambitious venture now known as MMORPGs.

4.1.2 *Ultima Online: The First Commercially Successful MMOPRG*. The games developer ORIGIN watched Meridian 59 with interest, and quickly moved half of its

team from Ultima IX (a single-player RPG of a very successful series), to a new project, *Ultima Online* (UO). UO was released in 1997 and is credited with popularizing the MMORPG genre, as it quickly gained 100,000 subscribers [Koster 2002] by using the name "Ultima" (an RPG series that had attracted over 5 million customers [GameSpy 2003]), and by engaging one of the biggest games publishers, Electronic Arts, to do an intensive marketing drive.

Although UO was the first commercially successful MMORPG, it had its share of problems [Wikipedia 2006c]. Early on there were some technical difficulties, and later new players were often surrounded and killed by other players for sport. UO was largely centered on a PvP (player versus player) model, in which players are free to kill one another and the losing player incurs penalties such as loss of gold. UO offered a large persistent world to adventure in and created the popular MMORPG game mechanism called crafting, which allows players to build their own weapons, armor, and other objects.

Ultima Online is currently undergoing a transition to overhaul its graphics so it can compete with today's market leaders. Figures 3 and 4 compare what a player sees now (at the time this article was written) to what the developer Electronic Arts proposes for the new graphic. Electronic Arts must believe that players find graphics important.

Fig. 3. *Ultima Online* original graphic.

Fig. 4. *Ultima Online* new graphic.

Fig. 5. *EverQuest.*

4.1.3 *EverQuest: A Blueprint for Future MMORPGS.* In 1999, EverQuest (EQ), was released; see Figure 5. In the Western world this is known as the second big game in the MMORPG genre after UO. It had the backing of Sony, and set out to achieve everything Meridian had tried to do

It created a massive world to explore, in full 3D with contemporary graphics, unlike Meridian 59's outdated engine. It could also support a massive community, between 10,000 and 15,000 people per server [Fritsch et al. 2005].

Whereas *Ultima Online* popularized the genre for other developers to take advantage of, EverQuest brought MMORPGs to the mainstream. At its peak it attracted over 500,000 subscribers [GameSpy 2003]. EQ's main drive was, and is, combat, exploration, and character development; over the course of its life it has released 11 expansion packs that detail new areas to explore and conquer.

EQ focused more on being a cooperative model rather than a PvP; it encouraged players to work together rather than against each other, much like DikuMUD did many years before it. It is also known as a player versus environment (PvE) model, which refers to a player engaging in combat against a computer-controlled environment full of virtual monsters and enemy characters, rather than PvP, where a human-controlled player fights other human players.

EQ was so similar to the text-based DikuMUD that Verant (the developers) provided a sworn statement [DikuMUD 2000] to scotch rumors that they had copied parts of DikuMUD.

EQ also introduced the idea of "raids," which is a very large group formed to overcome extremely difficult encounters that require the cooperation of many players simultaneously (a maximum of 72). The players must work harmoniously together in order to accomplish the goal. Many MMORPGs today have used EQ as a template in order to achieve success.

4.1.4 *Customizable Interfaces.* *Asheron's Call* was published by Microsoft in late 1999. Although it was mostly another fantasy set game, it was known for the originality of its creatures, as well as its friendly stance towards third-party software, which, for example, allowed interface enhancements. This is an extremely important element, as interfaces in MMORPGs can get very cluttered with statistics, menus, items, and information. Third-party alteration allows for more customizable interfaces, which the MMORPG community appreciates, as long as the rules and mechanics of the game are not broken.

4.2 Second-Generation MMORPGS

Most second-generation-MMORPGs had their start in the new millennium. While on the whole second-generation games are not very innovative (they copied the concepts created in first-generation titles), they have evolved in most areas. Second-generation MMORPGs have generally improved on the graphics and interface of the first generation, since they were able to look back on the successes and failures of older titles and improve upon them.

There is an extremely large number of second- generation games that have been released to the market, many of which are never heard of again. This article will focus on second- generation titles that have made an impact or brought some innovation to the genre, or both.

4.2.1 *Realm versus Realm Combat.* The first successful MMORPG of the 21st century was called the *Dark Age of Camelot*, released in beta format in early 2001. It quickly outpaced *Asheron's Call*, becoming the third most popular American MMORPG [Koster 2002]. The *Dark Age of Camelot* brought PvP combat back to the genre. It also required less time for players to gain a character level, meaning it was more accessible to casual players. But its most innovative feature was realm-vs-realm (RvR) combat, which allowed massive battles of human-controlled players among the three different kinds of beings.

4,2,2 *Instances.* *Anarchy Online* was released in June 2001. It fought to eliminate problems created in other MMORPGs by creating "instanced dungeons," more commonly referred to today as "instances," which are special zones that generate a new copy, or instance, for each group that enters the zone. This allows players or groups a private copy of the zone, and ensures that there will be no competition for resources or for opportunities to kill enemies in that zone. This sort of competition had become a problem in previous MMORPGs, as players would "camp" (patiently wait in one area for a resource or a creature to spawn) so they could acquire the resource or the kill before anyone else. The new "instance" averted this behavior and gave everyone a chance to experience the content; it also allowed for more personal groups to have a bit of fun together, without the fear that all their work could be undone by a "camper".

Fig. 6. *Final Fantasy XI*.

4.2.3 *Multiplatform Support.* *Final Fantasy XI* (FFXI), shown in Figure 6, was released in 2000. It scored a number of firsts: it was the first successful console-based MMORPG; and the first to have servers that shared populations from both console and windows-based PC users. These were innovative features technically, but what about in-game innovation?

Final Fantasy XI divided its goals into two categories: quests and missions. Quests are like ordinary jobs--the player performs a task to acquire rewards and/or in-game money. Missions, however, advance the storyline and the progress of the player-character, gaining the player new privileges such as access to new areas or an increase in rank.

FFXI has a very dynamic character-development system. Characters choose a "job," which is another word for class. Unlike other class-systems that lock the player into that specific class, FFXI allows the player to change his or her job at any time within their in-game private quarters. Changing a job allows the player to experience the game differently, and eventually a player can acquire a support job. This system allows for a good mix of attributes, something players look for in an MMORPG.

4.2.4 *One Server for All.* In May 2003, *Eve Online* (pictured in Figure 7) was released. This game chose to ignore the popular fantasy-themed setting and instead based itself in a fictional galaxy 24,000 years in the future. The game revolves around space exploration, trading, and of course, space combat. Although *Eve Online* has not achieved the subscription records of some MMORPGs, it does have a loyal fan base that continues to grow.

Fig. 7. *Eve Online*.

Because *Eve Online* is set in space and much of the graphics is empty space, it does not require a hefty computer system to run. Hence the developers were able to have all players log in to one galaxy, or one server. The record stands at 23,811 players playing concurrently on a single server [CCP Games 2006]. For future MMORPGs, as games grow in size and worlds become larger (like the galaxy in *Eve Online*), a larger population per server needs to be implemented for a good player per area ratio.

4.2.5 *Player Economy and Crafting.* *Star Wars Galaxies* (SWG) was released in June 2003. Set in the Star Wars universe, the game initially attracted a large audience. SWG also had the most extensive set of emotes, moods, and associated animations, which, due to the way it allowed players to express themselves, later MMORPGs also implemented. A big feature of the game is that almost every item in-game is created by players, from blasters to starships, creating a completely player-driven economy.

The unique crafting system was also SWG's undoing: players learned to go into combat with only the best equipment and enhancements, which made characters far more powerful than intended by the developers. A major update was done to the game to try and balance this, which left many players with items that were now useless and with a whole new combat system to learn. SWG subscriptions have never recovered [Tierney 2006].

4.2.6 *Highly Customizable Characters.* The *City of Heroes*, an innovative MMORPG of the second generation, was released in April 2004. Completely avoiding all other settings, it is centered on super heroes controlled by players, battling the villains of the

Fig. 8. *EverQuest II.*

Paragon City. *City of Heroes* is said to have the most extensive character-creation system; it is able to customize everything from facial features to the superhero's outfit. Such customization allows players to be visually distinguishable from one another, which many MMORPGs fail at: many players with the same equipment end up looking the same. There is a lot of concern over this particular element; this topic is discussed further in Section 6.1.4.

4.2.7 *Refining the MMORPG.* *EverQuest II* (EQ2), shown in Figure 8, was released in November 2004. It was designed to keep the best features of the original and remove the worst, as well as to add new features and implement those that had become standard in the single-player games market. One of the biggest new features was that players could become tradesmen by spending all their time crafting items to sell to the game community rather than adventuring and leveling up a character class.

To try and match the production levels of single-player games the initial release of *EverQuest II* contained complete voice-overs for all NPCs [Sony Online Entertainment 2004], by enlisting Hollywood talents such as Heather Graham and Christopher Lee [Wikipedia 2006b]. Its graphics were also a huge improvement over first-generation titles, unfortunately hampered by the need for an extremely powerful PC, beyond the level available at the time EQ2 was published.

4.2.8 *World of Warcraft.* *EverQuest II* never achieved a large market share because, unfortunately, it was released at the same time as *World of Warcraft* (WoW), shown in Figure 9,, which currently has 8.5 million subscribers. While largely incorporating first-

Fig. 9. *World of Warcraft.*

generation ideas, its graphics are a huge improvement over those of the first generation. With a lower system requirement for the graphical engine, an intuitive interface, along with an easy learning curve, WoW was accessible to almost anyone, and opened the genre to a much wider audience.

Although a great success, WoW copped some criticism, with one case of a child suffocating while the parents went to play WoW at a local internet café [Gibson 2005]. Later that year the Chinese government enforced strict rules and limits to playing time [BBC News 2005].

4.3 Summary

In general, first-generation games were an experimental phase, during which developers created a new genre out of older ones. The second generation is happening now: developers are currently releasing much more polished games based on first-generation ideas. There is still a little bit of experimentation taking place, but the major innovations appear to be in graphics. In order to create a third generation, developers will have to continue to evolve many MMORPG game mechanisms, and the improvements will include, but not be limited to, graphics.

5. RESULTS AND DISCUSSION

This section will discuss the results of the survey's quantitative questions, which was conducted to gather information about what the players' expected of MMORPGs.
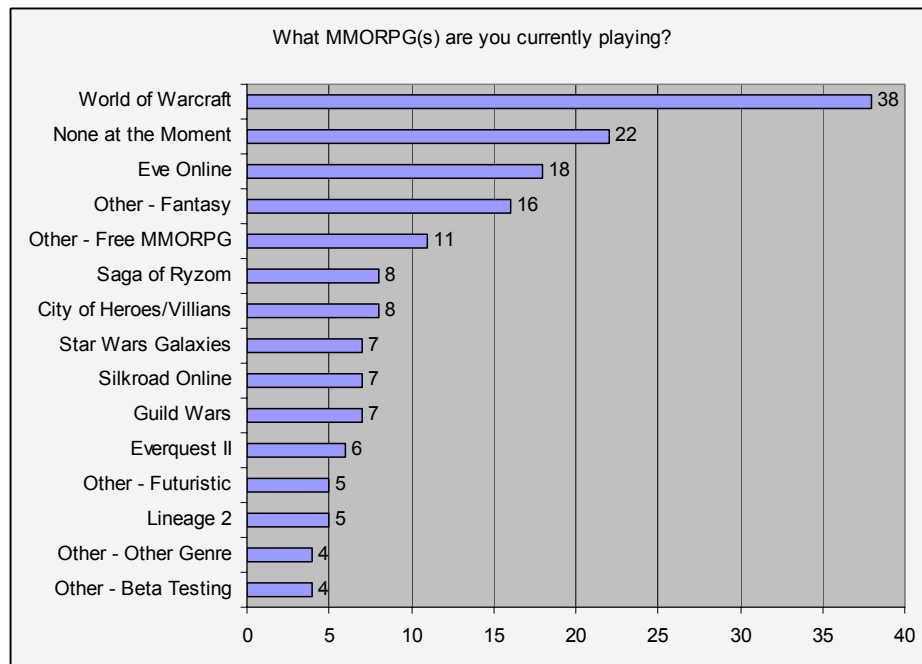
Fig.10. MMORPG(s) the respondents were playing.

5.1 Distribution of Respondents

The 122 respondents to the survey had very different tastes. As expected, respondents who played *World of Warcraft* constituted the largest percentage of players: 31% of all respondents were currently investing time and money in *World of Warcraft*. The chart below (Figure 10) shows the distribution of the survey respondents and the games they were playing. As we can see, the total number of games played exceeds 122, as some respondents were playing more than one game at the same time.

Some MMORPGs were played by a few respondents only, so the researchers sorted games with fewer than five players into the "Other" categories. Figure 10 shows five categories classed as "Other," for example, "Other – Fantasy" is made up of a few MMORPGs with a fantasy setting.

The other thing of note here is that a large percentage of currently-played MMORPGs fall within the fantasy genre, with a smaller percentage of respondents turning to futuristic and/or science fiction MMORPGs. It is interesting to see that 22 of the respondents (18%) were not playing any MMORPG at the time they submitted their survey. They took the time to participate, and hence are interested in MMORPGs and their future, so are these respondents ready for something new?

The respondents were also quite experienced in the genre: over 80% had played MMORPGs for two years or more, and 73% had played more than four games in this genre.

5.2 Favored Genres

Respondents were asked what other game genres they liked to play; the results can be seen in Table I.

Table I. What other Game Genres do Respondents Play?

What other game genres do you pay?	Frequency	Percent
Role-Playing (Single Player)	107	87.7
Strategy	105	86.1
Adventure	84	68.9
Action	83	68.0
Shooter	83	68.0
Fighting	54	44.3
Simulator	54	44.3
Puzzle	42	34.4
Racing	36	29.5

There are two genres that stand out. The single-player variety of role-playing games and strategy games were played by almost the entire survey base. The next three most-played genres were action, adventure, and shooter games, played by 68% of the respondents. The rest of the genres failed to attract more than 45% of interested players, suggesting that those games would not be a good avenue for a new innovative MMORPG. They may, however, fill a niche market, as long as the developers are willing to accept this early on, and plan for it when purchasing equipment and servers.

MMORPG players may like a bit of strategy in their role-playing game, as evidenced by role-playing games and strategy games being the respondents favored genres. The strategic element already occurs in some second-generation games, where players are forced to work cooperatively with a variety of different character types in order to achieve a goal, such as defeating a dragon. The strategies for reaching such goals can sometimes be very complex, and there are many guides on the internet to help players do so, as well as videos showcasing strategies on free video-hosting websites like "Google Video Australia" and "YouTube Broadcast Yourself".

Action, adventure, and shooter genres can sometimes be mixed together very effectively, so it is no surprise that they had very similar (numbers of) responses in the survey. There are also many games currently in development combining MMORPGs with first-person shooters (FPS). This sort of innovation may be something the MMORPG community has been looking for, considering just over two-thirds of those surveyed enjoy these genres.

5.3 Respondents' Preferences

In the survey, respondents were asked a series of questions which aimed to discover their preferences for various aspects of all MMORPGs, not just those specific to a particular generation. The questions required the respondents to select only their top five responses, rather than selecting every response they agreed with. This forced respondents to prioritize; for example, to the question "What are the features you like the most?" there were 16 features available, but the question requires respondents to choose, in ranked order, only the five that are most important to them.

Table II. MMORPG Game Settings: Respondents' Top Five Preferences

	Setting					
	Fantasy/ Medieval	Futuristic	Post Apocalyptic	Outer Space	Contemporary	Other Setting
Mean Rank	1.69	2.69	3.30	3.33	4.10	2.64

The first question, 'What game setting in MMORPGs would you prefer to play?' contains only five settings to choose from, but respondents were allowed to create their own "Other" category as well. With a small number to choose from and only 36 of 122 respondents citing an "Other" category, the settings from the survey were ranked according to the top five settings. Table II shows the mean rank of each setting, which is the average rank that respondents assigned to each setting. The order of preference for the game settings are fantasy/medieval with a mean rank of 1.69; futuristic at 2.69; followed by post-apocalyptic and outer space both at approximately 3.3; and lastly, contemporary, with a mean rank of 4.1. It seems it would be a poor choice for a developer to make an MMORPG set in a modern world.

Looking at Section 5.1, most respondents are either playing MMORPGs set in a fantasy world or a futuristic world. As shown in Table II, these players do not want to change, with most ranking fantasy and futuristic settings as their first or second preferences. The first generation of MMORPGs (Section 4) consisted of fantasy-based games only; the second generation, while encompassing a large number of games, is still mainly set in a fantasy world, but also includes futuristic settings. The preferences outlined in Table II show that these setting are still popular with MMORPG players, as the majority of respondents preferred them, and the market for them is still strong.

Even if more settings were available to choose from, it is doubtful that there would have been much difference for the top two, as only 36 respondents chose the "Other" category. These respondents very rarely ranked their own "Other" setting as their number one preference, instead they chose either fantasy or futuristic settings. The most popular among the "Other" settings was the historical one, with 11 people adding it to their rankings. If the historical setting were given as a sixth choice, it would be interesting to see if more respondents ranked it highly. The rest of the "Other" options such as cyberpunk, horror, and alternate reality, or a cross of fantasy and futuristic genres did not fare as well, with only three respondents citing each of them.

The respondents were asked "What are the features in MMORPGs you like the most?" They had 16 features to choose from, with the choice of selecting a feature that was not on the list by using the "Other" option. But the question required respondents to choose in ranked order only those five features that were most important to them. Table III outlines their responses.

Looking at the "Total" rows will help determine the number of respondents that included a given feature in their top five. Of 122 respondents, 78 chose to rank "Lots of Class/Skill Options" as one of their top five features; it received the highest rating, with 22 of 78 respondents rating it as the top feature to be included in an MMORPG.

The top five features that respondents found important were "Lots of Class/Skill Options," "Graphics and Effects," "Large World to Explore," "Player versus Player Combat," and finally, the "Socialization" aspects of MMORPGs. The "Lots of Content"

Table III. Respondents' Top Five MMORPG Features

	Frequency					
	Lots of Class/Skill Options	Graphics and Effects	Large World to Explore	Player vs Player (PvP)	Socialization	Lots of Content
Rank 1	22	12	13	19	16	9
Rank 2	16	11	10	10	11	16
Rank 3	21	16	19	10	11	6
Rank 4	8	15	6	11	8	14
Rank 5	11	17	12	8	7	6
Total	78	71	60	58	53	51
	Elaborate Crafting System	Solo Content	Player vs Environment (PvE)	Rich World History and Lore	Small Group Content	Extensive Story Telling
Rank 1	6	5	0	7	2	1
Rank 2	12	6	7	5	4	5
Rank 3	5	6	7	5	3	3
Rank 4	9	10	11	4	3	5
Rank 5	7	11	10	5	9	5
Total	39	38	35	26	21	19
	Low Latency	Instances	Raid Content	Low System Requirements		Other Feature
Rank 1	2	3	0	1		5
Rank 2	1	0	3	0		5
Rank 3	3	1	0	1		4
Rank 4	4	4	7	2		1
Rank 5	4	2	0	1		5
Total	14	10	10	5		20

feature cannot be ignored either, as it only fell two votes short of "Socialization," in fifth place.

The features that failed to attract much interest were "Instances," "Extensive Storytelling," "Low Latency," "Low System Requirements," and "Raid Content". This does not necessarily mean all players would like these features removed, but that respondents do not rate them as highly as other features on the list.

A further question that respondents were asked to rank is "What are the worst issues that plague MMORPGs?" There were nine issues to choose from, with the option to state an issue not on the list by using the "Other" feature. While there were not as many issues to choose from as there were features in the previous question, it still required the

respondent to prioritize what they considered the most serious issues; Table IV outlines their responses.

The "Total" row will show how many respondents included a given issue in their top five worst issues.

Of all the issues, "Exploits, Cheats and Item Duping" was selected by 100 (82%) of the 122 respondents' as one of the top five issues; it was also most frequently ranked as the number one issue. Considering this, developers should be extremely careful and implement security measures to stop players from exploiting the game system to gain unfair advantage over other players. The other three high-ranking issues were "Running Out of Game Content," "Player Griefing," and "Real-World Services". 'Running Out of Game Content' was an important problem for MMORPG game players, and "Lots of Content" was valued highly by them. This means that players are interested in bigger game worlds with enough content to keep them happy for years. As MMORPG players are already playing these games for long periods of time, they want to see many more activities and goals within these worlds.

The least problematical issues for the respondents were "Downtime Between Battles," that is, the time it takes to recover from a battle in order to initiate another encounter, and "Competition for Resources," competing with other players for resources to help win the game. In fact some players were adamant that this was not a problem at all, but was a feature, suggesting that competition was a healthy part of MMORPG.

Table IV. Respondents' Top Five MMORPG Problem Issues

	Frequency				
	Exploits, Cheats, Item Duping	Running Out of Content	Playing Griefing	Real-World Services	Camping Rare Items/Spawns
Rank 1	32	21	18	19	4
Rank 2	29	16	21	13	17
Rank 3	16	16	10	14	14
Rank 4	13	14	16	19	14
Rank 5	10	22	19	14	9
Total	100	89	84	79	58
	Downtime while LFG	Ninja Looters	Downtime Between Battles	Competition for Resources	Other Issue
Rank 1	5	2	5	0	16
Rank 2	12	3	5	1	4
Rank 3	15	22	6	3	4
Rank 4	15	11	7	5	4
Rank 5	7	10	16	7	3
Total	54	48	39	16	31

When respondents ranked problems in the "Other" column, "High Latency" was among the top five. As a feature, however, "Low Latency" was not ranked very highly. We assumed that respondents felt that there were more important features to evaluate, so they cited latency as a problem instead; in most cases they ranked it as number one.

Respondents agreed on a few "Other" problems: In particular, they felt the level/monster "grind" was a concern, as it became "repetitive and boring" to kill monsters over and over again using the same basic strategy in each battle so that their character could gain experience and access to new abilities and spells. A few respondents also placed "Lack of Role Playing Support" among their top five problems; although it seems actual role- players (those who tend to act within character at all times (e.g., if a player undertakes the role of a knight, that player expects everyone to address him as 'Sir') are declining as MMORPGs are being accepted and enjoyed by a much wider audience.

Class- and skill-based character development models are discussed in Section 3.2. In the survey, respondents were asked which style of character development they preferred, with the option to choose a combination of the two methods. The respondents were strongly in favor of either the "Skill-Based" or the "Combination of Class- and Skill-Based" as shown in Table V. Less than 10% of respondents preferred a system that is totally class-based. Class-based games are very restrictive, in that depending on the class a player chooses, he or she is limited to a specific set of abilities defined by the class. It is apparent from these results that players do not wish to be restricted in such a manner: they either want to build up the skills of their choice, or if they enjoy belonging to a class of characters, they like to be able to differentiate themselves from others by choosing abilities within that class.

The results of the respondents' preferences reflect a mostly male audience, as only 6 out of the 122 respondents were female. In particular, the few females who responded preferred adventure, strategy, and role-playing games. Interestingly, none of the females ranked graphics very highly; the most popular features were solo content and socialization, which is contradictory, suggesting that the sample size was too small.

6. QUALITATIVE DISCUSSION OF FUTURE MMORPGS

This section discusses in some detail the answers that respondents gave to the open questions at the end of the survey. Many of the respondents' answers were short and to the point (e.g., "Improve PvP"), which did not leave much room for discussion. But some answers were quite detailed, providing insight into respondents' expectations. The comments contained a lot of jargon and abbreviated English, so for readability the results are presented in summary form.

Table V. Respondents' Preferred Character Types

Character Type Preference	Frequency	Percent
Class-Based	13	9.8
Skill-Based	54	40.6
Combination of Class/Skill	55	41.4

6.1 Improving Existing MMORPG Features

This section summarizes the response to the following question: "If your perfect MMORPG were to be released tomorrow, what three EXISTING features would you like to see improved?"

6.1.1 *Player versus Player Combat* (*PvP*). Many respondents spoke out more strongly about PvP than any other feature that they would like improved. In fact, 27 respondents, a little less that one quarter, at least mentioned that PvP needs improvement, and some were more vocal and outlined their concerns. PvP was also among the top five features that respondents liked, so it is no surprise that they want it to evolve beyond its current level.

There were a few noteworthy comments as to how PvP could be improved. Some respondents wanted the PvP rules to be less restrictive; another suggested that PvP was not truly balanced between classes; the balance of classes in PvP combat usually follow a "rock, paper, scissors" format, where class A will always beat class B, which in turn can beat class C, which can finally beat class A. The respondent suggested that this needed to change, with all players having an equal chance to defeat each other.

One of the common themes in comments on PvP games was the need to motivate large-scale battles. For example, why do factions fight each other? Some suggestions for motivation include gaining territory (e.g., one faction can besiege a castle and take it over from another faction).

6.1.2 *The Level Grind*. Respondents were quite vocal about "The Level Grind". In order to advance their character's level, and hence access newer and harder content, players had to repeatedly kill monsters, using basically the same strategy over and over again; players call this *level grinding*, or simply *grinding*. They see it as a major problem that needs improving.

Some respondents commented that they know the grind is inevitable, but developers should take greater care to cover it up, rather than sending players on multiple quests that are simply "Kill X amounts of creature Y".

One respondent commented that the grind is simple repetition, which forces the player into a routine like this: player enters outpost and stocks up on healing items; player kills as many monsters as he/she can; when the player is low on resources he/she returns to the outpost for more supplies; the cycle repeats.

While many respondents simply answered "Improve Level Grind," with no real suggestions on *how* to do so, this issue is something to which developers need to pay special attention.

6.1.3 *Storyline, World Lore, and Immersion*. This category received more detailed answers than most other categories. Roughly 20 respondents commented on storyline, world lore, immersion, or a combination of these. In particular, respondents were concerned with the way questing was handled by the MMORPGs they play. Quests allow a player to break away from the "grind" and become immersed in the plight of the NPC that issued the quest. However, as stated in Section 6.1.2, many quests are more like chores, forcing players to "grind" by killing X amounts of creature Y.

One respondent suggested that developers should distinguish a quest from a job; a few others tended to agree. One respondent wrote:

> "Need to earn money? Get a job (used to be called quest) to kill some rats or pickup the job givers Dry Cleaning. Have quests be very special and meaningful from a roleplaying point of view."

The respondent suggests that jobs can be used to earn in-game currency, and can be as simple as picking up or delivering an item, or a military task that requires killing certain creatures, or escorting an NPC. A quest, however, should be story-driven and more meaningful within the lore of the game world. In any case, the respondents are asking for improvements in questing and in the storyline.

Other comments referred to developing the worlds further via ecosystems that allow hunting and harvesting in order to give a greater sense of immersion in that world.

6.1.4 *Graphics and Effects*. Graphics is another category that many people would like improved. Apart from a few interesting comments, many respondents failed to explain what aspects needed work: 25 respondents stated that graphics needed improvement, and as it ranked number two among the MMORPG's top features, it is no surprise that many respondents want it to evolve with the genre.

Although the information in Section 5 shows that having MMORPGs with low system requirements is not a priority, a few respondents commented that they would like to see graphics improved, but not at the expense of requiring newer technology. This is a problem faced by many current MMORPG developers. They are trying to reach a graphics standard for single-player games, but with all the technological requirements for an MMORPG, a stable acceptable frame rate is harder to achieve.

Fig. 10. *Oblivion*: A recently released single-player RPG.

Fig. 11. *Lord of the Rings Online*: A recently released MMORPG.

With reference to single-player games, a few respondents commented that such games have much better graphics than do MMORPGs (Figures 10 and 11), and they would like to see the gap close, especially artistically as opposed to technically. What they mean is that the artwork in these games is poor, even when the game engine is capable of producing much better-quality graphics at no performance cost to the consumer.

Finally, much was written about the customization of a character's visual appearance. The respondents are fed up that their heroes may look exactly like every second person who shares the same armor or character class as them. Respondents are asking for full customization of facial features, shape and skin tones, body shape, and the ability to customize armor and weapons.

6.1.5 *Content and Updates*. A few responders mentioned improving the rate at which new content and updates were released, but provided only a couple of detailed comments. The first respondent looked at raid content, which in MMORPGs can only be completed with a lot of players banding together. The respondent felt that raid content needed more engaging battles, with strategies to defeat the enemies, rather than everyone in the raid using their full arsenals to overpower the enemy as quickly as possible.

Another respondent was concerned about the amount of time developers took to fix a game bug that could potentially alter the game experience. Many MMORPG developers make updates at long intervals of a month or more, as opposed to fixing bugs as they are found. However, this turn-around time is still much faster than for single-player games, which may or may not even have their bugs fixed. The problem is that MMORPG players are committed on a long-term basis, not just to the game but financially as well. Due to the subscription fees (or other revenue models in place), players expect more from the developer, especially faster response times.

6.1.6 *Classes and Character Skills*. The option of having many classes and character skills was the number one feature selected by the respondents. They simply loved the ability to play many different kinds of characters, so it was surprising that there were not a lot of comments on how to improve these features.

Many short comments simply stated that a skills-point system should be used to for character development rather than classes; this reflects the results in Section 5.3. Another comment was against this, stating that classes in combination with skills should continue to be used, but that this could be implemented without the use of levels. We assume that this means that instead of gaining experience points that would increase the character's level, the player would gain skill-points, so as to assign and increase the capabilities of his or her class.

The other big problem with classes is that they are not balanced for all types of game-play. One class may have an advantage in PvP combat (in which the player fights against human opponents) while being disadvantaged at PvE combat (in which the player fights against computer-controlled opponents). A result of this is that some classes are much more desirable than other classes for groups attempting PvE content, and vice-versa for PvP content. The respondent wants this area looked at, giving all classes some balance. However, skills may be suited to this in-balance-- after all, players with this character development system choose their skills, and hence the type of combat they will excel in.

6.1.7 *Technical Enhancements*. Some respondents found the artificial intelligence (AI) of the computer-driven NPCs unacceptable. Twelve respondents stated that the AI needs improvement. In particular, one comment states:

> "NPC subroutines need to be either thoroughly upgraded or done away with entirely. As it stands, NPC interaction, or the lack of such, serves only to support the static nature of contemporary MMO[RP]Gs."

This statement refers to the reduced immersion in the game world which can lower a player's suspension of disbelief. These NPCs are not serving their purpose. In Section 6.2.10, respondents talk about new ways to improve NPC interaction.

There were also a few comments regarding upgrading the game engine so as to include collision detection and game physics. Many single-player games such as *Oblivion* and the faster-paced *Half-Life* 2 have these features, and the MMORPG community is asking for them also.

6.1.8 *Item Crafting and Player Economy*. In some MMORPGs, players gather resources as they adventure in the game world, and with these resources they can create their own items by means of a crafting system.

The current crafting iterations seem to be either undervalued or poorly executed. Respondents claimed that the goods they craft are sometimes of less value to other players than the resources used to create them. The items that can be obtained by defeating enemies in most MMORPGs are generally more powerful than any item that a player can craft, which devalues the crafting systems.

Other respondents claimed that executing crafting simply makes it a minor diversion from the main game. They believe that the time taken to learn a craft should be time well invested. For example, one respondent wrote:

> "Meaningful crafting: Currently you get part A and Part B to make item C. Why not add tools, plans and other concepts to make for variety [with] different results."

Most responders acknowledged the importance of economy in a game, but some were concerned about the stress it could create by pressuring the players to "grind" for in-game money just to support the various costs such as personal housing in the virtual world.

6.1.9 *Combat and Skill*. Many respondents stated that playing combat system in current MMORPGs does not require a lot of skill. One commenter goes so far as to say that the combat system in the game he/she plays requires him to press a button and then he can go to sleep while the character auto-attacks the enemy to death. Such respondents would like some personal skill to be involved in determining the outcomes of battles.

There were some suggestions to alter combat systems: one was to allow patterns and unique combat moves from various key- and mouse-click combinations.

There were other comments about reworking the combat system entirely. One respondent suggested that players should fall unconscious first, before dying, thus allowing other players to save them before death can occur. Another comment was that

enemy NPCs should function more like human-controlled players, and hence provide more interesting battles, since NPCs currently behave predictably in combat.

6.1.10 *Downtime*. There were some respondents who commented on the time, referred to as *downtime*, that is wasted in MMORPGs by looking for a group of players to quest with, in travelling between places, and in preparing for combat. Concerned respondents want to see this improved. Downtime while looking for a group and downtime between battles do not rate highly as separate issues in Section 5, but combined as downtime they make more of an impact. This has been a problem since the early MMORPGs, and needs looking into by developers. Some respondents report that it can take hours to find a group that has the same objectives as them. To resolve this problem one respondent suggested the following:

> "When I have 1-2 hours to play, I don't want to wait an hour to find the perfect group. If you could rent the services of henchmen, it would solve that problem."

With the ability to hire an NPC henchman, or possibly a whole team of henchmen, the player would be able to complete objectives when he or she does not have the time or the patience to look for a group.

6.2 Adding New MMORPG Features

This section summarizes responses to the following question: "In your perfect MMORPG, if it were released tomorrow, what are the three *new* features you would like to see that do not currently exist in MMORPGs?"

6.2.1 *Player Impact in the Game World*. Many respondents believe that their characters should be able to make an impact in the game world that would completely change it forever. In many current MMORPGs, creatures and NPCs that are part of a quest are reset each time a player completes the quest so that the next person can attempt to do the same. This is commonly referred to as respawning. When a creature that was killed is reset in the world in full health it is said to have respawned. One respondent suggested that the developers permanently alter the world so that creatures or quests did not respawn. The problem is that sooner or later there would be no quests left to complete and no monsters left to kill, as the players would have completed or killed them all. The developer would have to constantly create new content quicker than the players could complete it. This is simply not feasible.

Many respondents did, however, make some feasible suggestions that could be added to an MMORPG. Quite a few respondents wished to have some sort of seats of power, a faction leader or a king, for example. With this in mind, they wished to be able to overthrow the existing faction or kingdom and become the leader (if only until the next player overthrows them). This also promotes healthy PvP with a goal in mind. Other respondents suggested that killing a leader could be made permanent; but the developers would be forced to alter the story or lore to suit such a scenario.

MMORPG players want to standout above the crowd, especially when they achieve a goal that they feel deserves attention, but as one respondent put it: "*How can thousands of subscribers all feel like the hero?*"

6.2.2 Player-Created-and-Controlled Content. Many respondents suggested the need for content that is created by the players. The suggestion is due to the perception that developers cannot create content fast enough to satisfy demand. This is apparent from "Lots of Content" falling just short of the fifth position in the top five features of MMORPGs. Respondents simply want more content, and some respondents would be happy if the player-base helped achieve this. One respondent suggested that it should be easy and efficient to implement player-created quests. For a PvP, for example, a player could place a bounty on another player from a different faction. Those who carry out the bounty are rewarded appropriately. Excluding PvP, a player may place a request for a certain amount of resources; those who deliver this receive the reward.

Some respondents suggested more dramatic changes to allow players to create content, as follows:

> "Allow players to change world content. Why not have an ability for a city to build a bridge to cross an area, rather than taking an hour to get around it?"

This should cause concern, however. Where does the developer draw the line? In *Ultima Online*, for example, at one stage the entire world was covered in player-built housing simply because it was allowed. The developers had to enforce a one-house-per-account rule, with additional houses "decaying" and disappearing after five days once the game was patched with this new rule [ORIGIN 2002].

So as well as letting players develop new content, the content will have to be inspected before any implementation is to occur, or at least a set of rules must be in place to prevent the content detracting from the game experience.

6.2.3 *Technical Enhancements*.   Many respondents suggested including a voice system in MMORPGs, to allow players to talk to each other during the game. These voice programs currently exist in third-party iterations, and it is quite common for many players to use them. However, at times players do not share the same program, and hence cannot talk to each other. The respondents suggested that a voice system be programmed into the game, so everyone in that game can use it. In addition, one respondent stated that some players pay extra money per month on top of the game fees to support a third-party server for themselves and their friends:

> "It's about time they implement a voice system built in-game. I'm tired of having to pay an extra 10 bucks a month just to support a ventrilo [voice over IP server] for my guild."

6.2.4 *Mini-Games*. There were only a few comments regarding the implementation of mini-games into MMORPGs. But they are interesting enough to talk about, as the implementation of mini-games would in fact serve to increase the amount and variety of content in an MMORPG, something that players are asking for. Take the single-player *Final Fantasy* RPG series from the consoles for example. The developers added diversions from the main storyline in the form of little games known to keep people occupied for hours. *Final Fantasy VII* had a casino with many little games that players could spend hours on to earn casino cash and buy unique items; *Final Fantasy VIII* and

IX had two different card collection games, as well as multiple activities tied to their iconic animal, the (the large chicken-like) Chocobo.

6.2.5 *Item Crafting and Player Economy*. Respondents wanted item crafting to go much further than it currently does. Instead of having weapons and armor looted from corpses – especially when it doesn't make sense (a sword found on a spider's corpse?), some suggested that these items should all be crafted by players. One respondent takes it further, to say:

> "Why not have a class that are [a] specialist in making vehicles which you
> can ride and maintain?"

Another respondent suggested that players have the ability to invent their own items by altering attributes of the item and its mechanics.

Of course, all this would affect player economy, as players would be more reliant on each other to provide services, so either barter would be in order, or there would have to be ways to earn money.

6.2.6 *Player-Aging and Death*. Because of the amount of time players invest in their characters, just to have a character die of old age without any benefit to the player would not be a good development. So the main suggestion brought by respondents on this topic was that when a player's character dies it should leave a legacy of some sort for the next of kin. The player would then be able to hand down wealth, experience, or some ability to the "offspring".

This makes for a very interesting idea, but we do not know how the player base would react. If, for instance, a player were committed to a particular character and the character died, the player might lose interest in the game and the developer would lose a customer. On the other hand, the player could enjoy starting fresh with a new character, but still retain some of the original character's traits or wealth. The topic of permanent death is often debated among MMORPG players, but it is rare for them to agree on very much.

6.2.7 *Dynamic Environments*. Rather than players affecting the world, as indicated in Section 6.2.1, many respondents suggested instead that the world change on its own via natural environmental occurrences. The examples include fires that destroy forests, floods that drown the land, the growth of vegetation, and the decay of man-made structures and paths, and so on. This would create a much more immersive world, just as the simple addition of night and day cycles and changes in weather have in the past. The burned forests could eventually regrow, floods could subside, and NPCs could maintain decaying areas so that the world does not change so dramatically that entire quests, NPCs, and events have to be altered.

6.2.8 *Dynamic Content and Quests*. Rather than having exactly the same quests available to anyone who plays MMORPGs, some respondents suggested that quests should depend on certain factors such as the player's past actions, the background of the player's character, and the choices the player made in the game. The player's actions could change the quest he or she receives from the NPCs, and the quests the player completes could change his or her character.

Some respondents said that the dynamic questing and role-playing aspects could in turn create dynamic content. One respondent stated that

"In-game choice and instances could be used to create content on the fly. Devs [developers] seem to think in terms of random dungeons as putting rooms and halls together. Why not use story to base the generation [of these dungeons]?"

So this respondent suggests that when a player enters an instanced dungeon, the game refers to the choices the player made in the past to alter the story and the quests connected to that dungeon or even the dungeon's layout. These dynamic aspects would make implementation more difficult for the developer, as there would then be multiple paths within the MMORPG; but for exactly the same reason, it could encourage more players to restart the game with new characters and attempt a different path than their other characters.

6.2.9 *Realtime Combat and Damage*. Respondents want new combat systems in place of the old ones that MMORPGs have used for over a decade. Many of the current systems have the player target an enemy with the mouse cursor and select the action or attack they wish to inflict on the enemy. Some attacks take longer than others, with the sensation that the player and the enemy are taking turns at hitting each other. Many respondents want a new real-time system, as in first-person shooter games (FPS). In fact there already are a few new games like this being produced, some coined as MMOFPS (massively multiplayer online first person shooter), claiming to be a cross between a MMORPG and an FPS [Webzen Games 2006].

Respondents also noted that the damage system could use an overhaul. In particular, a few respondents said that one should be able to kill a character by targeting specific body parts, rather than acquiring the number of hit-points required to kill the enemy. Players would gain advantages depending on the body part (e.g., targeting legs would slow the enemy down). This sort of damage system would suit the FPS-style combat, as it requires players to have quick reflexes and aim at moving targets.

6.2.10 *Nonplayer Character (NPC) Interaction*. There were a few respondents who wrote that there was extremely little NPC interaction. This follows on from much needed AI improvements from Section 6.1.7; but in this case the comments suggested new ways to make NPCs more immersive.

Respondents said that NPCs were too static, hence to help with game immersion the NPCs should go about some daily routines, as they do in single-player games like *Oblivion* and the *Gothic* series. In most cases, friendly NPCs stand around day and night waiting for players to talk to them. In such cases they have only one purpose, be it a quick one-line statement, a store to buy items, or to give the player a quest. Enemy NPCs tend to stand around waiting to be killed. One respondent suggested that

"NPC[s] could be hired to do a range of task[s] from resource gathering to guarding buildings"

According to some respondents, the NPC would then have a purpose other than just standing around. Another respondent said that players should have the option to play as NPC enemies for small intervals of time, to make them less predictable, like a dungeon master in *Dungeons & Dragons* for instance.

6.2.11. *Evolution*. There were a few suggestions that MMORPG should evolve along with its timeline. This would allow races to evolve biologically and technologically: as they evolve they would gain new abilities and skills. Obviously, developers would have to have a timeline written and planned so changes could be incorporated at regular intervals; this could also provide a new an interesting dynamic.

7. CONCLUSION

This section summarizes the results of the survey by highlighting its most important aspects.

The survey clearly shows that the majority of the respondents preferred to play MMORPGs set in fantasy and medieval worlds or in futuristic settings. As outlined in Section 4, the most successful or influential MMORPGs belong to one or both of these categories. The trend of setting MMORPGs in fantasy or futuristic worlds continued throughout both the first and second generations. Developers would do well to continue this trend for the next generation of MMORPGs, keeping in mind the many features that the respondents would like improved or added.

It is interesting to note that more than half of the respondents enjoyed playing games belonging to other genres, like first-person shooter, action, and adventure games, but especially strategy games. MMORPG developers should consider incorporating some aspects from these genres, especially the style of combat in first-person shooter games. The respondents made many comments regarding the combat in MMORPGs and how more player skill could be incorporated to alter the mechanics of combat. There were also comments on placing more emphasis on the strategies that ought to be necessary to defeat enemies instead of merely repeating the same patterns.

The level grind was also a major concern for many respondents. They were outspoken in their criticism of having to repeatedly kill the same enemies over and over by utilizing the same strategy just to gain an experience level and access to new capabilities. They felt that the mechanics used to increase a player's level needs further refinement. Respondents were also disappointed that developers used quests as a way to force players to grind. Some of the respondents thought that quests should be reserved for story-driven content that immerses a player into the game world and its lore, instead of quests that require players to kill X amount of Y creatures.

The survey identified the top five features of interest as "Lots of Class/Skill Options," "Graphics and Effects," "Large World to Explore," "Player vs Player" combat, and "Socialization".

The feature called "Lots of Class/Skill Options" attracted the most response, both as the number one feature among the top five for many respondents and in general as the option most commonly picked to be among the top five. But it failed to attract many comments for its improvement, other than from a few respondents who asked that developers consider a skill-point character development system over a class-based one, and make sure that any system used is balanced so players have an equal chance to defeat each other.

Balance was a key factor for respondents commenting on "Player versus Player" battles: specifically that "rock, paper, scissors" scenarios should be avoided. The respondents disliked the fact that, in many MMORPGs, some classes or sets of skills can easily defeat other classes or skills with no competition. Player versus player type comments garnered the largest number of comments and suggestions made by respondent on all topics in the survey. The more detailed responses were on the topics of balanced systems, mentioned above, or the purpose of player versus player combat. Developers

need to concentrate on providing more motivation for this style of combat (e.g., a large-scale siege of a castle or a conquest for territory between warring factions). Such large-scale battles would serve as a good versus evil scenario with players on both sides.

The topic of "Graphics and Effects" was very important to almost all respondents. They expect that as the genre matures so will the graphics, both technically and artistically. On the technical side, respondents are looking for improvements like those in single-player games; with real-world physics, collision-detection, and dynamic environments. On the artistic side, respondents want to see more variation in their characters, in both personal appearance and in the armor they wear, so that each character has a unique visual appearance.

The "Large World to Explore" and "Lots of Content" topics were important to most respondents. They were not only concerned with the size of the world but its content as well. Some respondents wished that players had the capability to create their own content, thus reducing the workload for the developers and extending the worlds. They also wanted to give players a little more control over the games in which they had invested so much time. Others simply wanted more involving content that fit the lore of the world, with more interaction from NPCs and the environment; "Running Out of Content" also rated highly as an issue for MMORPGs.

The final feature that players enjoyed (it was one of their top five) was "Socialization". It is a large part of an MMORPG. Even those who generally preferred to play solo were affected by the communities in MMORPG, especially in the form of player economy and crafting systems. Some respondents want to see the items that can be crafted increase in value to the players, so as to compensate for the time spent in-game to learn the craft. A large percentage of respondents agreed with the statement that MMORPGs need more options for socializing, but they did not offer further opinions.

It is apparent that although many of the respondents are content with the progress MMORPGs have made over the last decade, it is definitely time for developers to start creating the next generation. This time developers will need to take a new approach, as the method of using first generation MMORPGs, or even the successful second generation, as a blueprint is lacking in innovation. Respondents want to see both new concepts and features and improved existing concepts and features incorporated into this growing genre. The fact that 18% of the respondents were not even playing an MMORPG at the time of the survey, but took the time to complete it indicates that there is unmet demand within the player community. It is hoped that this study will help to inform developers of the next generation of MMORPGs.

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