

Blizzard Entertainment: A Case History

or

The Right Way to Make a Computer Game

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STS 145: Professor Henry Lowood

Winter Quarter 2002-2003

Blizzard Entertainment. It is a name that has become synonymous with creativity, record-breaking sales, extremely long development cycles, and, above all else, quality. Blizzard Entertainment is the company behind the *WarCraft*, *StarCraft*, and *Diablo* series. Every game they have released since *WarCraft II: The Tides of Darkness* has gone to number 1 on the sales charts, with the latest installments, *Diablo II* and *WarCraft III: Reign of Chaos* each selling over 1 million units. How has Blizzard maintained this track record? How are they able to avoid the bombs which seem to be inevitably released by every other game company, no matter how good? Blizzard owes its success primarily to its almost unique corporate culture, which has foregone promoting single developers in favor of a team environment and ignoring “advantageous” release dates in favor of actually completing a game before releasing it. Within their games, they excel at creating balanced games which are easy to play but difficult to master. Blizzard also established themselves and later maintained their dominant position by always moving forward and pushing the boundaries of established genres.

One of the most significant things about Blizzard is that everyone they employ is a gamer, right down to the receptionist. When John Waters visited Blizzard HQ close to the launch of *Diablo*, he was greeted by a darkened room where nothing but the backside of a darkened monitor was visible. Only the distinctive “claw-hammer-meets-ripe-cantaloupe splurch” told him he was in the right place.¹ Having avid gamers on-staff is crucial, because in the PC game industry it really does take one to know one. This allows them to have virtually instantaneous feedback - “we don’t have to wonder what our audience wants, because we are our audience.”² Blizzard takes maximal advantage of

¹ Waters (1997) 240.

² Schaefer (2000) 4.

this environment by listening to and acting on feedback from all of their employees, be they programmer or musician. No idea is sacred in the development process. Regardless of how dear to someone's heart a feature may be, if it doesn't make the game more fun, it's scrapped. And people who have spent lots of time playing games have a much better handle on what's fun than people who don't.

In terms of a corporate philosophy, Bill Roper, senior director of developer relations, says that they "have always been focused on creating the best games possible and have remained dedicated to not releasing a game until it meets the standards that both we and our fans have set."³ Many companies claim to have this philosophy, but many still fall into the trap of releasing a game in time for Christmas and planning to patch the game later. Blizzard, however, has absolutely adhered to it. For instance, the liner notes on the CD case for *StarCraft* list *Diablo II* as coming in 1998. It was eventually released in 2000. Blizzard has been able to do this because their games have always been of the highest quality, and once people finally get them, they no longer care how long it took. Blizzard also avoids some pitfalls by not setting specific release dates until a few months before the game comes out. Instead, they use "release windows", such as first quarter, 2004. Since the release windows are vague, customers don't develop the same degree of anticipation. Hearing that a game has slipped from first quarter to third doesn't have as much of a psychological impact as hearing that a game has slipped from January 8 to September 20. Currently, about the only way to tell that Blizzard is going to release a game soon is when they start public beta testing.

A large amount of the extra time Blizzard takes goes to testing, resulting in games that are almost completely bug-free. They maintain a permanent staff of 15-20 testers,

³ Saltzman (2000) 55.

and that number rises to 30-40 when they close in on a release date. Once they are fairly satisfied with a game, they open signups for a public beta test. This serves two purposes. First, it allows Blizzard to obtain feedback from a large group of people who are very interested in the game but who haven't been working on it for the past two to three years. Second, since the betas are only playable online, it allows Blizzard to stress-test their Battle.net servers. Blizzard is currently beta testing *WarCraft III: The Frozen Throne*, their expansion set for *WarCraft III*, with 20,000 people.

Blizzard doesn't simply test and patch for bugs, though. Play-testing and balancing is one of the most crucial and difficult part of any game, but it is especially crucial in Real-Time Strategy (RTS) games, and it is there that Blizzard has refined unit balancing to an art. Rob Pardo, who was in charge of unit balancing in *StarCraft* before becoming the lead designer for *WarCraft III*, has four main tenets for balancing units: keep early units fair, give each unit a specific purpose, eliminate any invincible unit combos, and avoid redundant units.⁴ In many games, units are rendered useless by a clearly superior version of the same unit – for instance, a heavy tank replaces the light tank. Blizzard avoids that by keeping the number of different units low, and making each one fit into a certain role, so that while some units are clearly stronger than others, units that are built for initial defense still prove useful in the later stages of a game.

Balancing takes on a different form in Blizzard's *Diablo* series, where players are not directly competing against each other. They have to ensure that monsters can challenge all the different classes equally, which was especially difficult given the great degree of customization Blizzard built into their skill system. Each of the five classes (seven, counting the expansion set) has 30 unique skills divided into three trees which

⁴ Saltzman (2000) 143.

vary between the classes. The Barbarian has Combat Skills, Combat Masteries, and Warcries, whereas the Sorceress has Cold, Fire, and Lightning. Each probable combination of skills had to be tested to make sure that none had a significant advantage or disadvantage. The development team sought to avoid having any character which a player had put 100+ hours into be unable to continue on “Hell” difficulty because they choose to focus on the “wrong” skill tree.

Blizzard doesn't stop once their games are released, either. They continue to track down bugs and release patches as quickly as possible. In addition to fixing bugs, Blizzard will often tweak gameplay with a patch. For *WarCraft III*, they modified the amount of hit points units had, how often certain spells could be cast, and how many resources an upgrade would cost. In *Diablo II*, they even added a new feature – cool-down time. Once the patch was installed, players could no longer invoke certain skills continuously. Instead, they had to wait a specific length of time – anywhere from .4 to 2 seconds depending on the power of the skill. This had a profound impact on the game, forcing players to rethink their strategies. Blizzard still isn't finished with *Diablo II* – they're currently working on patch 1.10, which will apparently make even more significant changes.

Patches can only do so much, so Blizzard also usually releases an expansion set for their games. They released expansion sets for *WarCraft II*, *StarCraft*, *Diablo II*, and are currently working on an expansion for *WarCraft III*. There was an expansion set for the original *Diablo*, but Blizzard did not publish it, they only authorized it. These expansion sets allow Blizzard to add things they ran out of time for. In *Diablo II*, this took the form of two more character classes, a greater role for the helpers players could hire in town, and class-specific items. In their RTS games, they add units to cover for the

weaknesses each side has and introduce new strategies. This is all in addition to new missions/dungeons, which serve to continue and expand the storylines from the originals.

Creating a compelling story and environment takes a backseat to other aspects of development at many companies, but Blizzard integrates the story into their entire design process. They always have thick manuals where most of the space is devoted either to backstory or to vivid descriptions of units, spells, or monsters. Missions in both *StarCraft* and *WarCraft III* were structured and planned around what story events were going to take place during them. This is most evident in *WarCraft III*, where mission objectives frequently change several times during one mission. Blizzard has always striven to create a cinematic feel with their games. Their primary tool in this area has been the computer-generated cutscene. They always open with a compelling cutscene which sets the tone for the game or chapter and draws the player into the world they have created. Blizzard even has a separate film department which works closely with the development teams to ensure that the worlds shown in game and in cinema share a common look and feel. The cutscenes in *Diablo II*, a screenshot from which is shown below, added greatly to the environment of foreboding the game created.



Screenshot courtesy of <http://www.gamasutra.com>

To further this cinematic feeling in *WarCraft III*, Blizzard allowed the player to rotate the camera and zoom in and lower the camera angle to a much more panoramic view (as seen on the following page). This view was very impractical for actually playing the game as it restricted visibility of the battlefield greatly, but it put the player much closer to ground level, increasing his or her immersion, and mimicked the epic views of battles popular in movies.



Screenshot courtesy of <http://www.blizzard.com>

One of Blizzard's main focuses for all of their games is the User Interface (UI). Bill Roper says that the interface "should be as intuitive and clean as possible."⁵ Erich Schaefer refers to it as "the "Mom test": Could Mom figure this out without reading a manual?"⁶ This idea has lead Blizzard to create UI's that are easy to learn but also offer advantages to those who learn their subtleties. *Diablo* and *Diablo II*'s interfaces are marvels of simplicity. Everything can be done by clicking. To attack a monster, to open a door or chest, to talk to someone, all the player has to do is left-click on him/her/it. At the same time there are many keyboard shortcuts which the experienced player can use, such as holding down the shift key to keep stationary while using a ranged weapon or assigning hotkeys to spells or skills he or she frequently uses. Blizzard has also lead the

⁵ Saltzman (2000) 54.

⁶ Schaefer (2000) 3.

way for refining UI's in the RTS genre. *WarCraft II* introduced the auto-command. Rather than choosing a specific command such as move, attack, or gather, the player could simply right-click on an enemy, location, or resource, and the game would automatically determine what the most likely command would be for that unit and that target, and issue that command. *StarCraft* used an almost identical interface, but added the attack-move command so that units would move towards a specific point and engage any enemy units along the way. *WarCraft III* kept all of its predecessors' innovations and included the auto-cast feature. Since battles in *Warcraft III* typically involve fewer units than other RTS's and more spellcasters, many units have one or more spells which the player can use auto-cast on. When auto-cast is enabled, that unit automatically detects conditions which should trigger that spell to be cast and casts it appropriately. However, not all spells can be auto-cast, so players with more experience managing their spellcasters can still gain an advantage.

Blizzard's innovations are not limited to in-game mechanics. With each game they release, Blizzard usually either defines or re-defines a genre. *Diablo* turned the Role-Playing Game (RPG) genre on its head. It took the basic ideas of Dungeons & Dragons and boiled them down to the bare necessities required to make combat work. It threw out everything which didn't contribute to monster bashing, narrowing the in-game world down to just the dungeon and immediate surroundings. Plus, it took place in real time, where almost every RPG up until that time was turn-based. This offended many RPG purists, as did one of the other most creative features of *Diablo* – the random generation. Most RPG's thrive on a set world. The dragon will always be at the top of *that* mountain, there will be a helpful old wizard living in *that* hut. The only fixed part of *Diablo*'s environment was the town and the fact that Diablo was waiting at the bottom of

the dungeon. The layouts of all the levels and the monsters populating those levels were generated anew for each game. *Diablo*'s final and most subtle innovation was in its artwork. Up until its release, the appearance of characters in most RPG's was set. If a character started out shown with a sword, he always carried that same sword, regardless of whether or not he was using a different sword or even an axe. In *Diablo*, whatever weapon you equipped, that's the weapon that showed up in your character's hands. This approach to artwork has been mimicked in many games since then, most notably in the recent *Dungeon Siege*. *Diablo* landed in the RPG genre primarily because its heroes leveled up and used magic, but it was in many ways the Doom of the RPG genre. As Bill Roper put it, "Many people argued about whether *Diablo* was a true RPG or some action/RPG hybrid. What no one ever argued about was whether the game was fun."⁷

Diablo II continued in the vein of its predecessor, having random maps and making combat the focus of the game. However, it replaced the spell system of the first game where 18 spells were shared between the three classes with five classes with 30 unique skills each, which the player improved by spending skill points. The scarcity of skill points forced players to specialize in just a few areas. This meant that two high-level characters would play extremely differently, even if they were the same class. *Diablo II* gave players the chance to completely customize their characters, admittedly within class guidelines. The truly innovative part of *Diablo II* was its save system. Blizzard took the console idea of save points and hybridized it with the PC save-anywhere philosophy. Whenever a player saved, a game, he or she had to exit at the same time, and the only facts that were saved were the character's progress on the various quests, the items they were carrying and had in their stash, and how many waypoints had

⁷ Saltzman (2000) 55.

been activated. The player started out in town each time they loaded a game, and all the monsters regenerated. Waypoints were the only way to save geographic progress, functioning like a series of linked teleporters. From one waypoint, a character could warp to any other active waypoint. This system has many critics and advocates, but it allowed Blizzard to solve one problem *Diablo* had. Sometimes, due to the random nature of the dungeon, a player could get stuck without enough experience or equipment, unable to continue past the hordes blocking his or her path. Since monsters in *Diablo II* regenerate each time a game is loaded, a player can simply warp back a few areas, kill some monsters to level up, and then continue on.

Blizzard helped form the RTS genre. *WarCraft: Orcs & Humans* was one of the first RTS titles, released in 1994. It was followed nine months later by *WarCraft II: Tides of Darkness* in 1995. For several years following its release, most RTS games were either clones of *WarCraft II* or *Command & Conquer*, another extremely successful RTS game. But where WestWood Studios was content to churn out sequels to *C & C* which were nearly identical except for better graphics and different names for the opposing sides, Blizzard pushed onwards from the foundation laid by *WarCraft II*. It's expansion pack, *WarCraft II: Beyond the Dark Portal*, introduced hero units – unique units with names and specialized voices that the player had to keep alive through each mission. These early heroes were really nothing more than souped-up versions of the normal units, but they were harbingers of things to come. *StarCraft* used essentially the same hero model, but it gave them some special abilities and much more pivotal roles in the campaign storyline.

StarCraft reshaped the RTS landscape that *WarCraft II* had created. Up until *StarCraft*, the opposing sides in most RTS's were virtually identical. A few units or

abilities might be different, but the sides played almost the same. This was definitely true of *WarCraft II*, where the Orc and Human units had completely different names and artwork, but with the exception of a few spells, the units were identical. *StarCraft* changed this completely. Each of its three races was completely different, not just in units but in structure. Even the way they built bases was unique. The Terrans (humans) built using SCVs, which had to stay with the building the entire time it was being built. If the SCV was killed during construction, construction stopped. The Zerg (insectoid aliens) built using Drones, which morphed into the building. Thus, whenever a Drone built something, the Drone was lost. The Protoss (psychic aliens) built using robotic Probes, which merely placed a beacon. The building would then warp in on its own, leaving the Probe free to complete other tasks. With such diverse sides, it would have been easy to make one side too strong, but Blizzard, through extensive play-testing, created a game so balanced that RTS aficionados still regard it as the standard.

Blizzard also changed the story aspect of the RTS genre. In most games, the story was very simple – whichever side you fought for won. If you were the Orcs, the Orcs crushed the Humans, and vice-versa. In *StarCraft*, however, there was only one story. It started with the Terran campaign, continued through the Zerg, and ended in the Protoss campaign. It was one gigantic story arc, starting on a little backwater planet and culminating in a climactic battle for the fate of the universe. The campaigns each fed directly into the next. The final Zerg missions had the player invading the Protoss homeworld, and the first Protoss missions have the player trying to drive back the invading Zerg. *StarCraft* also intertwined the missions and plot developments. Betrayals and objective changes no longer just occurred between missions. This was made possible

largely by Blizzard's increased focus on heroes, whom the player commanded in battle but who also advanced the story and described objectives in briefings.

WarCraft III took the heroes even further. The entire arcing storyline (now covering four distinct races) is seen entirely through the eyes of the various heroes the player commands during the campaigns. The biggest changes were to the heroes themselves, though. Rather than being stronger versions of regular units, each race has three unique hero units which look nothing like anything else in the game. Individual heroes gain experience through combat and level up just like heroes in an RPG. Like *Diablo II*, they gain a skill point with each level, and each hero has three unique skills plus one ultimate skill which becomes available at level six. They can also carry items which can boost their attack or heal their allies. These heroes form the backbone of the player's army, especially in the campaigns, where players command the same heroes through multiple missions, keeping the experience and items acquired in previous missions. The idea of hero-driven stories has already been copied, even though *WarCraft III* hasn't been out very long. *Age of Mythology*'s single-player campaign also follows unique heroes, though the heroes are not as powerful or customizable as those in *WarCraft III*.

The RPG elements Blizzard infused into *WarCraft III* don't stop with just the heroes. Most RTS's involve huge armies of weak, expendable units. *WarCraft III* features far fewer units and a much lower maximum number of units. The units themselves are much more powerful, especially in terms of the damage they can sustain. This makes battles in *WarCraft III* last longer, giving the player more options in terms of tactics and increasing the importance of support units. The storyline in *WarCraft III* is every bit as sweeping as that of *StarCraft* – as one trailer for the game put it, “This

winter, the fate of the world is in your hands.” But Blizzard chose to focus on smaller numbers of units to give the game a different feel and increase the importance of the hero units.

Blizzard also included a campaign editor with *WarCraft III*. This in and of itself was certainly nothing new, but the power of the editor was. In addition to creating new maps, it allowed players to create new units and heroes from the ground up. The editor is so flexible and the RPG elements in the game so strong that players have already created maps imitating the first Act of *Diablo II*. Players have also created units that mimic many of those found in *StarCraft*.

Constant innovation has been one of Blizzard’s most effective tactics, but they have also employed other useful strategies. Since *Diablo*, all of Blizzard’s games have offered free on-line play through Battle.net. Blizzard was one of the earliest companies to offer this feature (after the First-Person Shooter (FPS) genre), and it granted all of their games even more longevity and popularity, particularly for their RTS games, which are inherently competitive. It also allowed for more cooperative play in *Diablo II* where friends could assemble a team of characters which could all compensate for each others’ weaknesses.

Blizzard has also been able to read their audiences’ psyches very well. When designing *Diablo II*, they realized that feeling like a “bad-ass” from the beginning was very important. So Blizzard designed a game which played a lot like the ultimate power trip. In fact, all of Blizzard’s games operate like this – they supply the player with a detailed, powerfully realized other reality in which they play the pivotal role. RTS’s already fulfill this by making the player the general, but Blizzard accentuates this by perfectly ramping up the difficulty level as campaigns progress. The first few missions

introduce the player to the game and units and hook them on the feeling, so the player still wants to keep playing even when he or she starts to struggle. The reason gamers enjoy these games parallels the reason young children enjoy violent fantasies according to *Killing Monsters* – they both crave the feeling of empowerment. This could be interpreted either as a commentary on the universality of psychological drives between different age groups or on the arrested development of gamers, but either way, Blizzard found a way to tap into a highly universal desire.

Blizzard has also thrived because they developed trademarks. The two most important of these have already been detailed – the consistent quality of gameplay and cutting-edge cutscenes, but there is another universal theme in all of Blizzard’s games – humor. As far back as the first game they made – *WarCraft*, Blizzard included jokes for players to find. In all of their RTS’s, if the player repeatedly clicks on a particular unit, that unit begins to respond to talk back to the player instead of just issuing the usual acknowledgement. In *WarCraft III*, the Night Elf Dryad unit, a hybrid of a human female and a deer, responds to repeated clicks in the following way:

1st click: “Hi!”

2nd click: “What is nature’s call?”

3rd click: “Is there trouble?”

4th click: “Are we being invaded?”

5th click: “I’m not the Dryad you’re looking for.”

6th click: “Doe!”

7th click: “Fear the fearsome fury of the forest faun!”

8th click: “You communicate by clicking on me. I communicate by doing what you say.”

9th click: “I’m not in season!”

10th click: “I’ve got a few bucks set aside for later.”

11th click: “Fall . . . like leaves . . . in . . . fall!”

12th click: “I don’t reveal much on the minimap. It’s all my fault.”

13th click: “I’ll attract the enemy with my human call – I’m so wasted, I’m so wasted!”

All of the units have similarly humorous unique responses to repeated clicking. Blizzard also brings humor into its otherwise grim world of *Diablo*, primarily through cows.

Some of the people in towns in both games have a sense of humor, but *Diablo* featured a trio of cows which the player could attempt to milk, provoking annoyed responses from his or her character, such as “I’m no milkmaid!” from the Warrior. *Diablo II* does not have any cows to milk, but it does have “The Moo-Moo Farm”, or “Secret Cow Level.”

This is only accessible once the player has completed the game on a particular difficulty level, but once the player gets to the level, he or she is pursued by hordes of huge, bipedal cows wielding giant axes. The cows “moo” in human voices, giving up an anguished “Moooooo!” when killed. *Diablo II* also features a “Hardcore” mode, where if a character dies, he or she stays dead instead of being able to re-spawn in town. This isn’t terribly funny, but Blizzard’s disclaimer on their website is. It goes as follows:

“Blizzard Entertainment is in no way responsible for your Hardcore character. If you choose to create and play a Hardcore character, you do so at your own risk. Blizzard is not responsible for the death and loss of your hardcore characters for any reason including Internet lag, bugs, Acts of God, your little sister, or any other reason whatsoever. Consult the End User License Agreement for more details. Blizzard will not, and does not have the capability to restore any deceased Hardcore characters. Don't even ask. La-la-la-la-la, we can't hear you...”

Blizzard has risen to the top of the PC game world through innovation and a dedication to quality. They isolate the core elements of their games, and find new ideas to make them even more fun. They also look for ways to modify existing genres.

Blizzard’s path would be a hard one for a new game company to follow. But their ideas are very basic: make a game as simple and as fun to play as possible. Blizzard is not satisfied with where they are by any means. Blizzard is currently working on two brand-new games in addition to the expansion set for *WarCraft III* and re-issuing several of their early console games on the Game Boy Advance. The first is *World of WarCraft*,

Blizzard's entry in the world of Massively Multiplayer Online Role-Playing Games (MMORPGs). PC Gamer said in a recent article that combining the WarCraft universe with a monthly access fee would be like owning a license to print money. However, if the past is any indication, Blizzard will take forever to publish the game, but it will also be anything but an *EverQuest* clone. Blizzard is also returning to the console world where it published its first games with *StarCraft: Ghost*, a "tactical-action" game. It brings the player down onto the battlefields shown in *StarCraft*, putting the player in control of Nova, a Ghost (a stealth unit with cloaking, anti-robotic ammo, and the ability to call in nuclear strikes). It will take place from primarily from the third-person perspective popularized by the *Tomb Raider* games. In keeping with their philosophy, Blizzard has not yet set release dates or windows for either of these games. Another idea Blizzard may have in the works is a movie. This is completely unsubstantiated speculation, but there is some evidence to support the idea. Blizzard recently released a DVD of all the cinematics from their games on it, and Blizzard created a trailer for *WarCraft III* which was shown before some movies at AMC theaters. Wherever Blizzard goes from here, it'll either be someplace no one has thought to go before, or they'll go there in a way no one's thought of yet.

Bibliography

- Arreat Summit, The. <http://www.battle.net/diablo2exp/>
- Blizzard Entertainment. <http://www.blizzard.com>
- Farkas, Bart. *Diablo II: Official Strategy Guide*. Indianapolis: Brady Publishing, 2000.
- Halford, Neal & Jana. *Swords & Circuitry: A Designer's Guide to Computer Role Playing Games*. Roseville, CA: Prima Publishing, 2001.
- Hancock, Hugh. "Better Game Design Through Cutscenes."
http://gamasutra.com/features/20020401/hancock_01.htm
- Jones, Gerard. *Killing Monsters: Why Children Need Fantasy, Super Heroes, and Make-Believe Violence*. U.S.A.: Basic Books, 2002.
- Kodiak, Michael. "Crafting a World: Understanding the Preeminence of *WarCraft* in the Real Time Strategy Genre." Stanford University, 2002.
- MobyGames. <http://www.mobygames.com>
- Mojo StormStout's *WarCraft III* Strategy guide. <http://www.battle.net/war3/>
- PC Gamer*. Multiple issues. <http://www.pcgamer.com>
- Saltzman, Marc. *Game Design: Secrets of the Sages*. Indianapolis: Brady Publishing, 2000.
- Saltzman, Marc. "Game Design: Secrets of the Sages."
http://www.gamasutra.com/features/20020308/saltzman_01.htm
- Schaefer, Erich. "Postmortem: Blizzard Entertainment's *Diablo II*."
http://www.gamasutra.com/features/20001025/schaefer_01.htm
- WarCraft.Org. <http://www.warcraft.org/w3m/>
- Waters, John K. *Diablo: The Official Strategy Guide*. Rocklin, CA: Prima Publishing, 1997.