

**Game Review:  
Wolfenstein 3D –  
Influencing a New Genre**

By Sean Sylvis

Professor Lowood

STS 145: History of Computer Game Design

## **Publishing Information**

Company: Id Software

Programmers: John Carmack, Michael Abrash, John Cash

Publisher: Apogee Software

First Released: May 5, 1992

## **Storyline**

In Wolfenstein 3D, often referred to as Wolf3D, you play as William J. "B.J" Blazkowicz, an Allie espionage agent during World War II. Your mission is to find the plans for Operation Eisenfaust, a Nazi scheme for building the perfect army from the bodies of the dead, thought to be within Castle Hollehammer. Caught, imprisoned, and now escaped, you are to proceed with your mission and blaze your way deep into the castle, stopping the Nazi plans.

## **Game Play**

In Wolf3D, one of the first games to popularize the first-person shooter (FPS) genre, the goal of the game is to finish each episode (six of them), killing the "boss" character at the end of each episode, with the final episode featuring Adolf Hitler as the boss character. An episode is completed by racing through the many levels of the episode (taking an elevator to get to the next level), killing Nazis, attack dogs, or sometimes zombies, and picking up treasure on the way. Thus, as with most FPS's, the emphasis of game play is on killing everything in site as quickly as possible, with limited emphasis

on strategy or problem-solving. The storyline then is not as important to the game's success as is the game's technology, or the implementation details of the game engine.

## **Technology**

By today's standards, Wolf3D is unimpressive in most respects. The graphics are blocky, the sound synthesized, and the artificial intelligence (AI) simple. But at the time Wolf3D was released, these same aspects were well ahead of their time and are what popularized Wolf3D, causing it to spread rapidly through the shareware underground of Internet Bulletin-Board Systems (BBS's). Never before had a game combined the graphics, sound, and player control so effectively as Wolf3D, resulting in a totally fresh, immersive gaming experience.

**Graphics.** The graphics basically consist of a textured maze of walls, some world objects such as lights, plants, and treasure, and the enemy Nazis and dogs. So, it is not the graphics that are particularly impressive, a simple rendering engine is used, but the attention to detail in the graphics. For example, the wall textures are not simply repeated but some random process is used to repeat a few wall textures, giving the walls a look of uniqueness. Also, the occasional banner, poster, or jail cell is used to texture a segment of wall, adding to the reality of the environment (and sometimes signifying the location of secret passage ways). While not extensive, Wolf3D exhibits some lighting effects as well, which consist of static circles of light on the floor beneath ceiling lights. And one of my favorite features of Wolf3D (one that is improved upon in later games) is the rendering of the hand and gun in the screen. This further reinforces the idea that the game environment is real and helps the player associate themselves

with the main protagonist of the game. These details may not seem like much alone, but when added together, they result in a more realistic game environment.

Note: Because of the limitations of the hardware that ran Wolf3D, there were many graphics tricks that Carmack used so the game would run more quickly. For example, instead of actually drawing and texturing a ceiling and floor, the top half of the screen is colored one color (dark gray for instance) for the ceiling and the bottom half another color (light gray) for the floor. Everything else is then drawn on top. In addition, all of the walls in the world are axis-aligned (aligned along the x, y, and z axis planes) and only intersect other walls at 90 degree angles, which the engine takes advantage of when making rendering computations.

**Sound.** It is hard to believe that once upon a time, video games did not have dynamic sound, or sound effects, to enhance the game playing experience and further immerse the player in the game environment. Wolf3D uses sound very well to set the mood of the game as well as to supply the player with important information. For instance, when a guard sees the player, they give a shout, such as “Halt!” or “Ein Spion!” (“A Spy!”). This not only gives the enemy guards more personality (each guard has his own distinctive shouts), but indicates to the player when they have been spotted. The guards also give a shout when fatally shot (“Mein Leben!”, or “My Life!”), which does nothing more than provide the player with a certain amount of satisfaction. Other environmental sound effects include opening doors, firing guns, and powerup crescendos (noise that accompanies pickup of food or ammo). Wolf3D does not however include sounds other than these effects, such as background music, giving the game an eerie silence. This

has the positive side effect of intensifying the player's attention to her senses. Thus, sounds such as opening or closing doors increase the anxiety in the player, raising the expectation of the appearance of an enemy player. So, a player often becomes more startled when a guard does appear than if background music or other auditory sounds were present.

**AI.** This is arguably the most important part of a single-player FPS game and also one of the most difficult to design. However, the AI in Wolf3D does not disappoint and provides one with plenty of challenge. For instance, the guards have a predefined place in the maze and do not move until they see the player or hear a shot fired. Once this happens though, a guard will follow the player through the maze, giving the impression that the guard "knows" the maze. Other guards who heard shots will even sneak up on the player. However, once a player is face to face with an enemy guard, the guard's actions are easily determined (the enemies simply move back and forth, occasionally stopping to shoot) and the confrontation is usually won by the player. Wolf3D overcomes this by placing more guards in a room, a common technique in games, to overpower the player by strength in numbers. (Higher difficulty usually increases the number of guards and/or their speed.)

## **Design**

The game design of Wolf3D, as with many FPS's, is centered upon the technology of the game engine and not character development or an engaging story, which is why the storyline of Wolf3D is limited. It presents some background information on the main character, but leaves most of the character development up to the player. Because the

player takes on the first-person perspective, this allows her to more easily assume the role of the main character and believe in the game environment than if a complete and unambiguous story was presented. And when the player feels any attachment to the main character, they will be more likely to continue playing a game after defeat. In addition, the story often serves to provide the player motivation as to why she should kill everything in site. In Wolf3D, the Nazi Germans are the enemy, a commonly used bad guy in the 90s, who certainly supply the player with ample motivation for total annihilation. Because the basic goal in FPS's is killing everything in site, they are not appealing to everyone, especially those with moral objections to video game violence, or senseless acts of violence for the purposes of entertainment.

Note: FPS's have been known to cause motion sickness in some people due to the brain being tricked by the first-person perspective. This is sometimes referred to as DIMS, or Doom Induced Motion Sickness, from the hugely successful game Doom (Id's next game after Wolf3D).

So, it seems that the more impressive the game technology (graphics, sound, AI, etc.), the more popular and successful the game will be, right? Not exactly. In order for the game to be successful, the game must have a coherent design. The technology must be impressive as well as creating a unified, believable environment. The levels in Wolf3D all have a distinct style that differentiates them from one another, while staying within the theme of a Nazi prison castle. Unfortunately though, due to the limitations of the graphics system, the game levels are restricted to relatively simple designs. The level layouts are mostly straightforward and relatively easy to navigate, with secret

passages provided the only interesting puzzles for the player. I feel the game would be even more enjoyable with more challenging levels to navigate.

Another factor in the success of Wolf3D is its replay value, a measure of player desire for game replay. Even today, Wolf3D has a high replay value because of its game design and combination of graphics, sound, and AI. The graphics and sound appropriately set the mood of the game and make the environment realistic enough to lose oneself in. The computer AI then challenges and focuses the senses of the player, so the player's entire body is ready to react. If a game can create this extreme state of focus, then a mistake or failure in the game, often resulting in the player's demise, will only make the player want to play more. While no longer able to create this type of focus, when released Wolf3D had this combination of elements to make a player addicted.

## **Summary**

More so than anyone expected, Id included, Wolf3D became quite popular after its release. The unique combination of graphics, sound, AI, and perspective made Wolf3D an instant hit for many avid gamers. But, the way in which Wolf3D was distributed by Id also had a large impact on its success. Instead of spending large amounts of time and money advertising, Id distributed the shareware version of the game in computer magazines, which eventually found its way to thousands of BBS's across the country. In this way, the game was widely distributed, passed along by countless friends via floppy disks, and becoming the method in which Id distributed its later games (utilizing the Internet, once available). But in the end, Wolf3D had more of an impact on Id Software

than it did on the rest of the computer gaming industry. Eventually selling over 250,000 copies, with millions more playing the shareware or registered versions, Wolf3D mainly provided Id Software with the motivation, and money, to continue its efforts. It was Id's next release, Doom, that exceeded all expectations, becoming one of the best-selling and most influential games ever. But, it was Wolf3D that provided the framework at Id to develop Doom and it was Wolf3D that whet the public's appetite for a (practically) new genre.