

# **On the Trail of the Wolf:**

## How Wolfenstein 3D Defined the First Person Shooter

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STS 145: The History of Video Games  
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3-18-02

If you asked “the man on the street” to name some First Person Shooters, *Half-Life*, *Unreal*, *Quake*, and *Doom* would certainly be included in the responses. If you asked enough people you would get others such as *Duke Nukem 3D*, *Return to Castle Wolfenstein*, and—the predecessor to *Return to Castle Wolfenstein*, and to all of the previously mentioned games—*Wolfenstein 3D*. Rene Patnode states in *Id as Superego* that *Doom* is the game that current First Person shooters are compared to.<sup>1</sup> It is often argued that *Doom* is the defining game for the genre of First Person Shooters. However, it is *Wolfenstein 3D* that is actually the defining game of the genre. While many games will be forever compared to *Doom* and *Quake*, its next First Person Shooter after *Doom*, most of the basic concepts of game play in *Doom* are based on or improvements to *Wolfenstein 3D*. The design decisions made during the development of *Wolfenstein 3D* affected the design of all later first person shooters, and therefore, defined the genre of first person shooters.

Before I argue that *Wolfenstein 3D* began the genre of First Person Shooters, I must first talk a little about the notion of genre in video games and define what I mean by

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<sup>1</sup> Patnode, Rene. *Id as Superego: The Creation of Duke Nukem 3D*. March 22, 2001. p.2

a First Person Shooter. The idea of genre may seem a bit odd to apply to video games. Yet it is an important distinction and allows us to talk about a set of games that share certain elements of game play. In the cinema, genre has much to do with storyline; each western or romantic comedy does have a different plot yet many of the elements of these stories will be the same. For instance, in a romantic comedy the protagonists will fall in love and then before the end something will pull them apart, yet by the credits they will be back together. The idea of genre on video games is somewhat like this, yet is based more on the style of game play rather than on the actual story. A Role Playing Game<sup>2</sup> could be set in the fantasy world of trolls, wizards, and goblins, or it could be set in the future and have a very science fiction feel yet both of these games would be Role Playing Games because of how you play them.

So what in the game play defines a First Person Shooter? [Gamerjargon.com](http://Gamerjargon.com) defines a First Person Shooter as:

A computer game like *Wolfenstein 3D*, *Doom*, *Quake*, *Half-Life*... where your perspective is that of your character and [usually] the only part of your character you actually see is your hand and whatever weapon you're holding.<sup>3</sup>

It is true that in a first person shooter you see the world from the perspective of your character, however, there is more to a first person shooter than just seeing the world from your character's perspective. Other important points define a First Person Shooter.

While First Person Shooters may have varied storylines, the upshot of the story is that

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<sup>2</sup> Role Playing Game "a genre of game in which players assume the personae of characters in a story, the outcome of events in said story being determined by a player called the referee or game master [computer program]; RPGs are often played according to complex and voluminous sets of published rules, charts, and other sundry materials; examples include *Advanced Dungeons & Dragons*, *Champions*, *GURPS*, and the *World of Darkness* games."

From: the lexicon at [www.GamerJargon.com](http://www.GamerJargon.com) website site maintained by Erik David Even, list of contributors available on website, exact author unknown.

<sup>3</sup> Also from the lexicon at [www.GamerJargon.com](http://www.GamerJargon.com)

you must make your way through some sort of maze and while you are doing this you will have to kill many enemies. When you reach the end of the maze, there will be the boss, which you will have to defeat as well.<sup>4</sup> Also, in First Person Shooters play is fast paced and continuous; these games are not turn based. You must be constantly on the lookout for enemies. *Wolfenstein 3D* was the first game to incorporate these aspects successfully.

*Wolfenstein 3D* was designed by John Romero, John Carmack, and Tom Hall at Id software and published by Apogee Software. It was released on May 5, 1992. But the story begins a few years before...

In the late 1980's John Romero was working for a software magazine called Softdisk writing a program a month for the magazines floppy disk. While he was at Softdisk, he began working after hours on a way to emulate the smooth side scrolling of the Nintendo Entertainment System. After perfecting the graphics engine, he reverse engineered the first level of *Super Mario Brothers 3*, which Romero called *Dangerous Dave in Copyright Infringement*. However, Softdisk was not interested in the technology, as it would not work on CGA graphics cards, which many computers had at the time.<sup>5</sup> There is also a story of Romero having the design shown to Nintendo to see if they were interested in porting *Super Mario Brothers 3* to the PC and having Nintendo turn them down.<sup>6</sup> However, there is some doubt as to the validity of this story.<sup>7</sup> In any

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<sup>4</sup> This definition is true for the single player versions of these games. In the multiplayer versions often the storyline is completely abandoned and the only point is to kill your opponents more than they can kill you; the winner is the one who has killed the most opponents and been killed the least.

<sup>5</sup> Patnode, p. 5

<sup>6</sup> Brown, Ken. "The History of Gaming 101" *Computer Gaming World*. Dec 1, 2000 p.112

<sup>7</sup> Patnode, p. 5

case, Romero continued to work after hours on this smooth side-scrolling project with John Carmack and Tom Hall, also employees at Softdisk.

Romero began to receive fan mail for his work at published on the Softdisk magazine disk. One day, while reading a an article in PC Gamer about publisher Scott Miller, he noticed that all of his fan letters had the same postmark, from the Dallas suburb where Miller lived. Romero wrote to Miller asking why he had been sending all these letters. Miller responded that he was interested in having Romero and design games for Apogee Software. Miller said that he didn't contact Romero directly because he was worried that Softdisk was screening all of Romero's calls.<sup>8</sup> Romero responded by sending Miller a copy of *Dangerous Dave in Copyright Infringement* and the current project he was working on with John Carmack, and Tom Hall. After seeing Romero's work Miller agree to finance Romero's current project and to publish it through Apogee. That current project would become the first *Commander Keen* game.<sup>9</sup>

While Romero, Carmack, and Hall were working for both Softdisk and creating games for Apogee, they began to experiment with 3d games. The first was *Hovortank 3D*, which was published by Softdisk. The next was *Catacombs 3D*, also published by Softdisk. Both of these games attracted the attention of Scott Miller back at Apogee. After seeing *Hovortank 3D* and *Catacombs 3D*, Miller asked Romero, Carmack, and Hall (now working as Id Software) to design a 3D game for Apogee. Unfortunately, Id was under contract to produce a game for Softdisk. Luckily, a deal was worked out whereby George Broussard at Apogee would design *Scubadventure* for Softdisk.<sup>10</sup> This left Id

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<sup>8</sup> Brown, Ken. "The History of Gaming 101" *Computer Gaming World*. Dec 1, 2000 p.112

<sup>9</sup> Patnode, p6

<sup>10</sup> Stoddard, Samuel. *The Apogee FAQ* section 1.6.  
available at [www.rinkworks.com/apogee/](http://www.rinkworks.com/apogee/)

software free to design a 3D game for Apogee. The game they designed was *Wolfenstein 3D*.

When played now, *Wolfenstein 3D* seems slow and jerky. Its puzzles are quite simple, usually consisting of looking for a key, looking for the door that the key opens, going through the door and finally finding the elevator to the next level. But you cannot compare *Wolfenstein 3D* to current games. Compare it instead to the games that existed at the time.



Screen Shot from *Catacombs 3D*<sup>11</sup>

Catacombs 3D and Catacombs Abyss were both published by Softdisk in 1991 the year before *Wolfenstein 3D*. As noted before, Catacombs 3D was designed by Id. The only available information on Catacombs Abyss is that it was designed by Softdisk<sup>12</sup> so presumably it was done by other programmers at Softdisk. Of these two games only Catacombs Abyss was available for download and play. Therefore, I will assume that Catacombs was perhaps a little more primitive, but that they are both about the same in terms of game play. One of the first things you will notice if you play Catacombs Abyss is how slow it moves. Turning seems to take forever; your health might drop over 30%

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<sup>11</sup> Courtesy of [www.3dgamers.com](http://www.3dgamers.com)

<sup>12</sup> From page on Catacombs 3D and Catacombs Abyss on [www.3dgamers.com](http://www.3dgamers.com) Frans P. De Vries: content editor

because you can't turn around fast enough to kill your attacker. The graphics are also quite primitive. One thing that is interesting to note is that the puzzles are actually more complex than those in *Wolfenstein 3D*. There are four different types of keys, almost constant text hints flashing on the screen, scrolls to collect, and a compass in *Catacombs 3D* (in *Abyss* the compass is replaced by a radar readout, although what exactly it is showing is not immediately clear).

For *Wolfenstein 3D* the exclusion of complex puzzles was a deliberate design decision. According to John Romero, "In the original [design for] *Wolf*, you could move bodies, you could kill someone and drag them around corners. We took those elements out, because it slowed down game play."<sup>13</sup> The design team recognized that speed of play was the most important characteristic in the game and sacrificed game depth in order to achieve it. This would turn out to be the right decision.

This decision was necessitated by the limits of early 1990's computer technology. This is a time before graphics accelerators and fancy designer graphics cards. *Wolfenstein 3D* is designed to work with VGA (Video Graphics Array) graphics cards and monitors. VGA is capable of producing 256 colors (from a palette of 262,144 colors) at a resolution of 320x200 or 16 colors at 640x480.<sup>14,15</sup> In fact, *Wolfenstein 3D* requires this type of graphics card (or better, although not many people had anything better in 1992). While many people now complain at the simplicity of the graphics, it is the best

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<sup>13</sup> Brown, Ken. p 112

<sup>14</sup> Risley, David. *VGA & SVGA: Summary*.  
available at [www.hardwarecentral.com/hardwarecentral/tutorials/67/1/](http://www.hardwarecentral.com/hardwarecentral/tutorials/67/1/)

<sup>15</sup> To give you an idea of the difference between then and now, my computer is now set at over 4 billion colors at a resolution of 1024x768; I could in fact go to a higher resolution but it would make the icons too small.

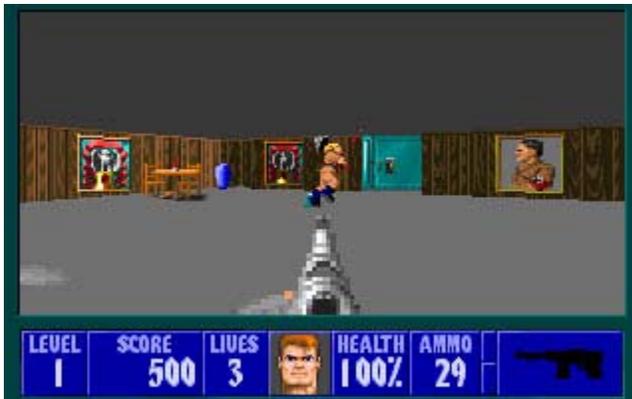
possible that could be done without sacrificing speed of play. The speed of play is quite important. It is the pace that holds your interest not the puzzles or storyline.

The storyline of *Wolfenstein 3D* changes from episode to episode, although game play does not. The story of the first episode is that you, Captain William J. "B.J." Blazkowitz, are trapped in a Nazi prison and as the game starts you have just killed a Nazi guard with your knife and taken his gun. You must escape.<sup>16</sup> The story is only there to justify the actual plot: to find your way through the maze while killing the enemies before they kill you. There aren't any great puzzles or other secrets to give the game much depth. The only extra thing is the treasure that is around, although I never found much to really be gained in collecting it. Getting a new life every 40,000 points isn't a big deal when you can save your game every few minutes. Running out of lives isn't really a problem if you can just restore whenever you die.

The game exists in a world that looks three-dimensional yet has freedom of movement in only two dimensions. You cannot jump and your movement is limited to the plane of the floor. There are a series of rooms connected by door and passageways. Most of these rooms contain Nazis. The number of Nazis is dependant on the level of difficulty that you selected at the beginning. If you see a Nazi your job is to shoot him immediately.

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<sup>16</sup> Taken directly from the game. There is more to the story but it is completely inconsequential to actual game play.



Scen Shot from *Wolfenstein 3D*<sup>17</sup>

You see all rooms as if you were “BJ” Blazkowitz. These rooms consist of textured walls placed on un-textured floors and ceilings. While all of the decorations on the walls are quite simple and the graphics are primitive, the perspective is right. With a little imagination, it does look like you are there running through the prison.

It is also possible to see the game's roots in the world of Third Person Side Scrollers.<sup>18</sup> The objectives of killing enemies and collecting treasure are much the same.<sup>19</sup> However, an important emphasis shift takes place for *Wolfenstein 3D*. In Third Person Side Scrollers, collecting treasure often has some intrinsic value or is even the point of the game, for example in *Crystal Caves*, another Apogee game of about the same era. In *Wolfenstein 3D* the main point of the game is to make it out of the maze and to kill whatever is in your way. Or more correctly, the point is to kill everything in your path and the maze is there for justification. Collecting treasure is a distant second in terms of priority.

Since killing your enemies is the main point of the game, the quality of gameplay rests entirely on whether it is fun to run around killing Nazis as you try to make your way

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<sup>17</sup> Courtesy of *Wolfenstein 3D Archive* at [www.mac-archive.com/wolfenstein/index.html](http://www.mac-archive.com/wolfenstein/index.html)

<sup>18</sup> A 3<sup>rd</sup> person side scroller is a game like *Super Mario Bros.* Or the original *Duke Nukem* where you can move left and right and jump up and climb ladders but the game basically exists in the plane of the screen.

<sup>19</sup> From Rene Patnode's lecture on First Person Shooters

through the maze. That 150,000 people paid an extra \$35 to get the second and third episodes<sup>20</sup> (the first episode was shareware) shows that it must have been. The key to making the game playable is the decision to make speed a priority. If some of that speed had been sacrificed to make the game have a little more depth, the game wouldn't have had the impact it had. Games that had more depth and even cleaner graphics, such as *Ultima Underworld*, were not as successful.

This speed of play is something that can be seen in all following First Person Shooters. As the technology has improved, the puzzles have improved; the graphics have improved yet the speed of play hasn't slowed. In fact, one of the most frustrating things is to try to play a First Person Shooter on a computer that can't really handle it, thereby making it go too slow. In the *Return to Castle Wolfenstein* section of the *Wolfenstein 3D Archive* website there is an entire page devoted to getting *Return to Castle Wolfenstein* to run faster.<sup>21</sup>

The basic plot formula set by *Wolfenstein 3D* of trying to make it through a maze and killing the enemies that pop up remains as well. Perhaps, now enemies appear out of thin air and are more deadly, and in addition to enemies there are also friendly characters that you shouldn't kill. Puzzles are more complex. And now the games really are three-dimensional; you can jump out of the plane of the floor and climb ladders. Yet on the basic level, all of the elements of a First Person Shooter can be traced back as to *Wolfenstein 3D*. The basic plotline, the first person perspective, and the pace of play are all present in *Wolfenstein 3D*.

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<sup>20</sup> Brown, Ken. p112

<sup>21</sup> see [www.mac-archive.com/wolfenstein/speedtips.html](http://www.mac-archive.com/wolfenstein/speedtips.html)

This being the case, it is clear that the success of *Wolfenstein 3D* greatly affected the genre of First Person Shooters. Therefore, it is important to look at the other not specifically game related decisions that affected the success of the game. Perhaps one of the most important, especially given the time period, was that Apogee was the publisher and like all of Apogee's games it was sold using the episodic model or "Apogee Model"<sup>22</sup>. Apogee released the first episode of all of its games as shareware. This was a fully functional version that was designed to be short enough to leave you wanting more, yet long enough to give you a good idea of the game and to get you hooked. You could buy the rest of the episodes directly from Apogee. Each game had a total of three to six episodes.<sup>23</sup>

This marketing model has some important effects. It allowed relatively obscure games and game designers to get noticed purely on merit. Since the first episode is shareware, many people downloaded it or got it from someone at work, and if they liked it they passed it on to their friends. This was actually quite easy to do; all you had to do was to copy the files or the archive file onto a disk. At this point in time a game could still fit on one floppy disk. This affected *Wolfenstein 3D* in a few ways. It gave a new type of game a chance to succeed. It is important to remember that *Wolfenstein 3D* was released into a market that was populated by 3<sup>rd</sup> person scrollers, and that at the time a First Person Shooter was a new and different idea. Having the 1<sup>st</sup> episode as shareware meant that *Wolfenstein 3D* could succeed on the quality of gameplay alone rather than on box design or placement in a software store. This distribution also meant that while

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<sup>22</sup> Patnode, p. 3

<sup>23</sup> Stoddard, Samuel. *The Apogee FAQ* section 1.6. available at [www.rinkworks.com/apogee/](http://www.rinkworks.com/apogee/)

150,000 people actually paid for the extra episodes,<sup>24</sup> a much higher number just played the first episode and didn't buy the following episodes.

I would also argue that the success of *Wolfenstein 3D* greatly influenced the form and game play of *Doom*. If *Wolfenstein 3D* had not been a success, if the designers had not realized that making a fast game was the key, *Doom* most likely would not have taken the form it did. And whether it would have succeeded is anyone's guess. Yet if it had succeeded in another form, it would have defined the genre of First Person Shooters in that different form. Therefore, while *Doom* greatly influenced the genre of First Person Shooters, it was *Wolfenstein 3D* that defined the genre.

*Wolfenstein 3D* was not the first game to use first person perspective it was preceded by a few other games including *Ultima Underworld*, *Catacombs 3D*, and *Hovortank*.<sup>25</sup> Yet *Wolfenstein 3D* was the first **successful** game to incorporate first person perspective. As the first successful First Person Shooter it defined elements of the genre that can be seen in later First Person Shooters. The basic plot structure, the perspective, and most importantly the pace of play have remained in all later games. I would argue that these are some of the defining characteristics of the genre. If any of those three elements do not exist in a game, it is not a First Person Shooter. For these reasons *Wolfenstein 3D* is the defining game of the genre of First Person Shooter. While *Doom* affected the design of all later First Person Shooters, *Wolfenstein 3D* shaped the design of *Doom*.

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<sup>24</sup> Brown, Ken. p112

<sup>25</sup> From list of games with release date on [www.3dgamers.com](http://www.3dgamers.com) Frans P. De Vries: content editor

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<http://www.3dgamers.com/> this is a website devoted to 3D games contains some useful facts and downloads: Frans P. De Vries is the Content Editor.

<http://www.GamerJargon.com> site maintained by Erik David Even (this is a source for terms used in the gaming world. There is a full list of contributors on the site; however, who contributed what is somewhat unclear.

<http://www.idsoftware.com/> the official website of Id Software: the designers of Wolfenstein 3D.