

## The Doom of Doom

by **Alexander  
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Last month, we brought you the story of Doom. This month, we follow up with a look at how Doom is faring in the market—and its unusual band of followers who are creating their own descent into Hell.

In an industry where the life of a product can often be measured in months instead of years, the idea that a particular program would stay in the limelight long enough for people to spend months writing extensive utilities for it seems unlikely to say the least. But to one company, Id Software, it happened twice.

The first time was with its smash hit game *Wolfenstein 3-D*. After the release of *Wolfenstein*, level editors sprang up, and the flood gates burst open. Utilities were made for changing the bitmaps of the characters, the walls, and pretty much anything else as long as the basic level and episode structure (six episodes with 10 levels per episode) remained in tact. Hacked levels were turning up all over the place. When you saw somebody starting a game of *Wolfenstein*, you never knew what to expect.

### Fame or Fortune

This unexpected fame represented a problem to Id and its distributor; at the time, it was Apogee. The game and the first episode were in the public domain, where money was made from people ordering the remaining five episodes from Apogee. If people could create their own levels, who would order the final game? Apogee went on the warpath threatening to sue the authors of the various customization utilities, and Id designers stated that nobody would be able to hack the maps in their next game. In the midst of this concern, sales of *Wolfenstein* kept going strong. The game was on its way to becoming the best-selling shareware game of all time.

By the time I visited the Id design-

ers during the creation of *Doom*, I asked them if they were going to allow the kind of modification to *Doom* that had happened to *Wolfenstein*. They said not only were they going to allow it, they were going to encourage it. "If people get satisfaction out of modifying our code, it's just another form of entertainment that they derive from buying our games," said John Romero. "We fully expect people to be blowing away Barney's soon after the game is released," echoed John Carmack.

They had been surprised when the first slew of editors came out for *Wolfenstein* because they thought the compression algorithms that compressed the levels would be some of the hardest code to crack. So, after *Doom* was finalized, they planned to release some level specifications and the Binary Space Partitioner they used, so that wannabe *Doom* hackers wouldn't have to write their own.

But Carmack's vision of a Barney holocaust was realized soon after the shareware version of *Doom* v. 0.99 was released on Dec. 10, 1993. Within weeks, there were saved game editors, map viewers, and a slew of other hacks, including *BarneyDoom*, which turned the main villains into giant Barney's complete with sound effects.

### Barney in Hell

There's something about *Doom* that inspires people like Bill Neisius, a professional aerospace programmer who works mainly on manufacturing and inventory control on Apollos and VAXs, to hack *BarneyDoom* in his spare time. You know its serious when two other people (David Lobser and Aaron Blackwell) rerender the Barney images in 3D Studio

## A Journey to Hell with BarneyDoom



and touch them up with paint programs so that Barney looks even better.

Bill Kirby, another professional business programmer, was bored playing Wolfenstein, but he was still fascinated by the technology. He wrote two of the map

editors for Wolfenstein, which earned him a nasty letter from Apogee. When Doom came out, although he doesn't usually modify games, he figured he'd check it out. He got the program by calling the folks at Id Software. They sent him some

source code, and he made one of the first map utilities for Wolfenstein. His experience with Wolfenstein was helpful because he found similarities in the file formats between the two games.

Moving up the ladder of Doom is game hacker whose goal is to make every game he gets modifiable so his two-year old daughter can play and win. With his arsenal of disassemblers and knowledge of programming, he has made utilities for many commercial games. One of his utilities, RA Easy (a utility used to modify LucasArts game Rebel Assault), worked so well he got a call from LucasArts, asking if he'd gotten hold of a beta copy. His opinion was that Id designers had gone out of their way during the development process to make Doom easily modifiable because there were a lot of hooks, and the main data was easily accessible.

As it stands now, one of the key Doom utilities is Deu, a level editor, written by a Raphael Quinet, a Belgian electrical engineering student. This utility has been passed from author to author because the source code has been included with every release. As one person's interest wanes, another picks it up. Using this editor in conjunction with one of the binary space partitioners (preferably Id's own) makes the creation of levels very easy, leading to a proliferation of Doom levels over on-line networks and Internet.

## WHERE DO I GET THIS STUFF?

The best place to start is with the official Doom FAQ file, which contains more than you ever wanted to know about Doom and includes the e-mail addresses of most Doom spelunkers.

The file is available on the following Internet news groups:

- comp.sys.ibm.pc.games.action
- comp.sys.ibm.pc.games.announce
- comp.sys.ibm.pc.games.misc

Additionally, the FAQ is available at the following Internet sites:

- ftp.uwp.edu in either /pub/incoming/id or /pub/msdos/games/id/home-brew/doom
- ocf.unt.edu in either /pub/incoming or /pub/doom/text
- wuarchive.wustl.edu in /pub/msdos\_uploads/games/doomstuff

Alternately, the FAQ is available from the Software Creations BBS: (508) 365-2359 at 2400 baud, (508) 368-7036 at 9600 to 14.4k v. 32bis, or (508) 368-4137 at 14.4 to 16.8k HST/DS.

Outside these sources, the FAQ is available on most commercial on-line services.

If you're interested in contacting any of the Doom tool authors mentioned in this article, you can reach them at the following e-mail addresses:

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## Why Is This So Easy?

What makes the data easy to change is the way Doom is written. The main executable, DOOM.EXE, loads a data file called DOOM.WAD or DOOM1.WAD. This file contains all the level, image, and sound data for the game. By modifying the .WAD file, most of these independent utilities work. What Id added to Doom that wasn't in Wolfenstein is a disclaimer that would pop up on the screen if the .WAD file isn't the original file that came with the program.

The best resource of information about .WAD file structure is a text file called "Unofficial DOOM Specs" by Matt Fell, who, together with other Internet denizens, has compiled most of what's inside a .WAD file.

Another good source of information

Another good source of information about Doom is a text file called the "Official DOOM FAQ." It's written by Hank Leukart, a beta tester for Apogee, who noticed that there were questions about Doom that would end up getting asked over and over again, so he compiled a FAQ (frequently asked questions) file. He works with Id in compiling this document that's swelled to over 200K and lists over 80 after-market Doom utilities.

### What about Id

If you're wondering where Id is in all of this, it's moving forward like nothing's happening. The Id team is working on various Doom ports, including Windows, Atari Jaguar, and Linux/X; preparing new levels for the commercial version of Doom called Hell on Earth; and starting up its next project called Quake.

The Doom after-market has made the product more marketable now than when it was first released. With all the new levels and graphics available, players who found the original game not enough



can get their fill with all the add-on utilities. The only stipulation that Id has made so far is that created levels only work on the registered version. This is done by placing an item that only exists in the registered version on that level. Most people have abided by this rule, so there haven't been any problems.

It will be interesting if this move

makes other developers think more about potential after-markets of computer games. As Id CEO Jay Wilbur put it: "Our fans used to be our salespeople, but now they're our developers as well." ■

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