

3D Printing Lets FigurePrints Play Outside the Game

World of Warcraft figures come to life with 3D color printing.

by Susan Smith | Published March 13, 2008

For World of Warcraft enthusiasts, FigurePrints is one more way in which they can play the game with the characters they have come to know and love.

The brainchild of former vice president for Microsoft, Ed Fries, FigurePrints are 3D figures created from World of Warcraft characters, made into actual statues using Z Corp's Spectrum Z510 printers.

The last half of Fries' career at Microsoft was spent building up the company's PC game division. He helped launch the Xbox and the console video game segment of the business. After leaving Microsoft, Fries helped a friend start a couple of video game companies, and worked on the boards of and as advisor to some other companies.



"I was at a video game conference when I saw the output of the Z Corp Spectrum Z510, a color 3D printer," said Fries. "I'd been interested in 3D printing conceptually but didn't realize that color 3D printing was possible. When I saw these prints, I asked if they would make one for me. I knew the guys from the game business — they had printouts from the game Spore, which is a game that has been under development for many years, led by a visionary named Will Wright."



Fries played with part of that program that allows you to create your own little creature. "I asked if they would make me a print of my creature and they agreed. A few months later, a box showed up at my door that had this little creature in it. I was amazed at what that printer could do, how good the color looked and how fine the details were. My little creature had wings that were more like fins on a fish. They were almost translucent, quite thin, with pointy little tips. I was impressed that the printer could capture that."

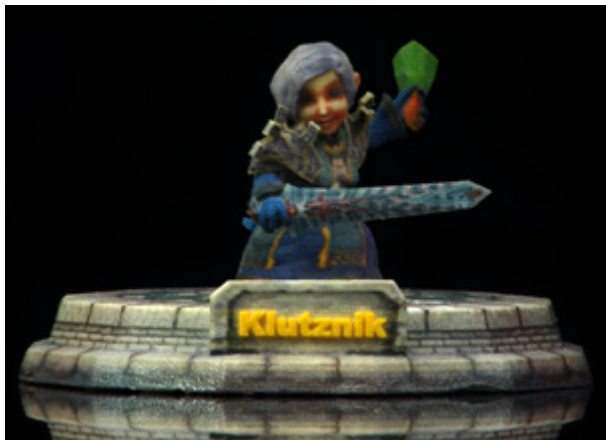
“I didn’t know it at the time, but I was holding the color 3D print,” said Fries. Further investigation into the color 3D printing process revealed that the figure had been made with the Z Corp printer. An avid gamer himself, Fries was playing World of Warcraft, the “biggest game in the world,” at that time. With more than 10 million subscribers who pay \$15 per month to play, that single game is a billion dollar business. Fries goes way back with the creators of the game and said he has tried to acquire the company several times. In fact, he was playing in the beta release before the game was out.

During this time, Fries said, “I was playing and looking at the Spore figure and finally put it together and thought of doing figures for World of Warcraft.” The response to Fries’ resulting company, FigurePrints, has been overwhelming. “Since we launched we’ve had more than 100,000 people sign up to order.” Demand for FigurePrints is so high that orders are filled on a lottery basis.

The dedication to these multiplayer games is tremendous, according to Fries. “A typical player might play 20-40 hours a week on top of whatever other commitments they have. And so when you get into the higher levels of the game, it takes a big commitment.”

What that means to these players is that you might go into a dungeon with a group of as many as 40 other people, all working together, all coordinated, everyone with headsets and microphones. A leader issues instructions. “It takes three to five hours to go through that mission,” said Fries. At this level, challenges are presented that require a lot of coordination and skill to defeat. Rewards, typically items such as a sword or helmet are offered, then the 40 people fight over who will get the items. “If you’re successful, you get a couple of items. It takes a long time to build up all your items — armor pieces, weapons, etc., and that’s one of the things that makes people interested in the game.”

With thousands of hours invested in this game, players seek the items to add to their collections but until now this experience has always been virtual. “To actually be able to hold them is compelling for the players,” Fries said.



The process of ordering is all automated: players go to the website, type in the name of their character, and choose from a variety of poses, armor, swords, bases. There is a demo on the website where you can try it out.

In the game, the character can not only move through the environment but can use attack styles, cast spells, jump and lay down, can employ “emotes” such as waving and smiling. There are more than a hundred different animations for each character, and within each of those animations are hundreds upon hundreds of different body positions. “We picked frames out of those animations, certain specific positions for the

character and we make those available in a big gallery for the player to choose from,” said

Fries. “Basically they see their character standing in a neutral pose, then they go into the pose gallery and choose a pose, rotate it around and see if they like it, and can play with that to get the character to look the way they want.”

The customized program used to choose, clothe and pose characters is based on core software made by Warcraft fans that could go into an installation of World of Warcraft on a user’s machine. Using this software, programmers can pull out characters and other game objects and look at them onscreen. The sources were released as Open Source so that others could use it.

Once you hit print, the model is saved to a file. That file is then loaded into Autodesk 3D Studio Max. A customized program specific to World of Warcraft in 3D Studio Max makes changes to the model to make it printable, extruding features that are too thin to print, for example, or making the model much smoother, less polygonal and setting the colors. At this point, a 3D artist may make last minute changes before the model is printed.

As they move through different stages, a piece of database software tracks the models.

A number of models are printed in a batch at one time, and it takes approximately 10 hours to print on the Z510s. Once they’re complete, they go through an infiltration process typical for this printer, meaning they are soaked in a kind of glue that makes them strong and hard and accentuates the colors. Then each model is attached to a wooden base and a glass dome is placed on top of them, then they’re packaged and shipped. The figures are created at 1:18 scale. A human warrior in the game is about 6 feet tall, so a corresponding FigurePrint is about 4 inches tall, not counting the base it is attached to.



Fries is one of four partners in the business, with one printing expert who does the printing and oversees the four Z Corp’s Z510 printers in Vancouver.