

Terminal Reality  
(www.terminalreality.com)  
Dallas, Texas

Autodesk® 3ds Max® software  
Autodesk® Maya® software

The thing we really liked about Maya was the flexibility of the tools and being able to do things with mouse scripting on the fly... The architecture that's built into Maya, to me, it's second to none.

—Angel Gonzalez  
Lead Character and  
Animation Artist  
Terminal Reality

# GHOSTBUSTERS REDUX

Terminal Reality uses Autodesk 3ds Max and Autodesk Maya to revive a 1980's movie classic.



Image courtesy of Terminal Reality.

## Summary

Gamers better keep their moist towelettes handy and prepare to be slimed as Atari rolls out its latest creation, *Ghostbusters: The Video Game*. Based on the 1984 action comedy, gamers must face the marshmallow madness of Mr. Stay Puft and other tortured souls as they navigate spook-filled Manhattan as a junior member of the Ghostbusters crew. The game is a hit and its developer, Dallas-based Terminal Reality, can take a large share of the credit.

It was a mammoth undertaking that spanned almost three years and involved a team of 65 developers, designers, and digital artists. Terminal Reality relied on Autodesk® 3ds Max® and Autodesk® Maya® software, as well as their own custom-made development platform called Infernal Engine, to create a gaming “sequel” to the first two Ghostbusters™ movies.

Creative Director Drew Haworth, Art Director Adam Norton, and Lead Character and Animation Artist Angel Gonzalez took a few moments out of their hectic schedule to tell us how it all came together.

## The Challenge: Make It Authentic!

“There had been Ghostbusters games previously, but they were of varying quality and success,” says Creative Director Haworth. “Our objective was to give players an authentic experience for the very first time, to experience what it would be like to actually use the capture stream to capture and trap the ghosts. We wanted gamers to be in the skin of the Ghostbuster team as well as be a fly on the wall and get to hear all these great jokes and experience the scares that the Ghostbusters must experience as they go about their jobs.

“You really had to get the characters and their likenesses down,” agreed Art Director Adam Norton. “Getting the dialogue and the timing and the comedic reactions between the Ghostbusters team was a pretty difficult task.”

Autodesk®

## The Solutions

Terminal Reality's concept artist got the ball rolling in late 1996 by putting together a series of high end inspirational drawings that the team reviewed as their baseline environment.

"From that point on," explained Adam, "we used 3ds Max. We then put together what we call a grey box level to simply block out shapes and prototype assets. This allowed us to get it all into the engine very quickly. The design team could then go on to populate the levels with characters. We developed temporary animations, then start implementing the gameplay. At that point we could play the whole level before there were any real production quality assets in place."

The Terminal Reality art team then moved in and provided production quality assets using Autodesk 3ds Max while the animation team used Autodesk Maya to add lifelike action to the completed game characters.

Replicating the real-life Ghostbusters characters played by Dan Akroyd, Bill Murray, Harold Ramis and others, was key to maintaining a legitimate user experience.

"One of the biggest challenges was taking 25 year-old characters and making them seem life-like again," said Haworth. "If you do a game using intellectual property and you can get the actors that appeared in that movie, you can grab some reference images from those guys. But we couldn't do that in this case. So we ended up going to not only that movie, but other movies from that time period and just pulled out as many images as possible. The challenge was, we didn't ever get a really good side profile or a straight on head shot, making it difficult to get the likeness we wanted."

"So what we did with Maya was create a generic male head rig, which we called 'Adam'. From that we were able to put multiple cameras based on the camera angle on the image that we were using. We could have up to 10 cameras for the model to reference from any given angle and sculpt his head based on that camera angle. It worked out really well because we were able to get pretty good likenesses overall with every character."

"We were able to use the Maya software scripting capabilities and tools to get us a really good robust head sculpting system. We ended up using one head for literally every male character in the game."

With the realistic head shots nailed, the Terminal Reality team went on to develop a generic body for the individual Ghostbusters characters.



Image courtesy of Terminal Reality.

"We built two character models in 3ds Max and two character models in Maya, using Maya rigging, says Lead Character and Animation Artist Gonzalez. We then created a type of rigging system so that basically any animator could drop a template on a character and set up all the joints with just a click of a button and get the animation controllers on top of all that.

"And for dealing with motion capture, we came up with a motion transfer tool that let us take any motion capture data from any one of the vendors we used. Our outsourcers used Autodesk MotionBuilder real-time character animation software and we were able to take all that data and transfer it directly to our Maya controllers using an internal tool that we wrote. That way, the animators could use the controllers they were comfortable with and didn't have to jump between packages. It all worked out pretty well."

## The Result

Since the release of the game, reviews from gamers and critics alike have been enthusiastic, posting an impressive meta-critic score of 80. "At the beginning," says Haworth, "we weren't sure if would be making a game that was legitimately funny. We didn't know if that would work, we weren't sure if it was achievable. And that's something we put a lot of effort into. And from most of what we heard back from players and critics, people actually laugh when they're playing the game, which is a huge step for us. We think there is a place for comedy in action games, and blockbuster games going forward. There's certainly is in movies, so why wouldn't it also be the case in gameplay?"

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—Drew Haworth  
Creative Director  
Terminal Reality

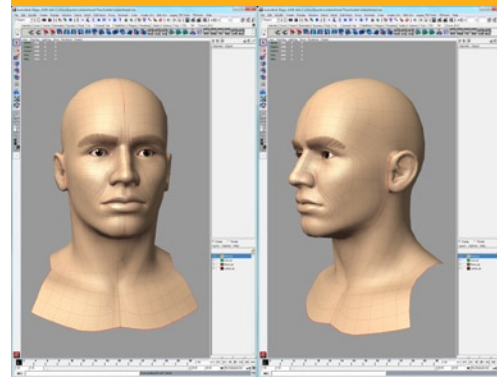


Image courtesy of Terminal Reality.