

MG Interview: Bungie's Jason Jones

by Richard Rouse III

Released in 1992, Jason Jones' Minotaur was the first true network game released commercially for the Macintosh. Instead of including networking as an afterthought as so many games had before it (Spectre being a prime example), Minotaur was fascinating because it required human opponents, and was hence infinitely playable. As with many great games, its design was simple to grasp, yet nearly impossible to master. Minotaur is one of the few Macintosh-specific games to be nominated for Computer Gaming World's prestigious Game of the Year award.

At Macworld Boston of this year, Jones's second game premiered, Pathways into Darkness. The first game for the Macintosh to feature real-time, three-dimensional texture mapping, Pathways pushed the technological envelope like no Macintosh game before it, showing the world that the Mac was every bit as good a games machine as the PC. In addition to the quantum leap in technology, Jones included a story that is interesting and involving, a vast assortment of original monsters and weaponry, and an adventure that takes more than finger dexterity to finish.

Many people are surprised to hear that Jason Jones, the man who did all of the programming for both of these games, is only twenty-one and still an undergraduate at the University of Chicago. He and Alexander Seropian make up the nucleus of Chicago-based Bungie Software, which is quickly becoming one of the premier Macintosh game publishing houses. IMG took some time to interview this phenomenal programmer, interrupting him from his next Macintosh game which, he claims, will put Pathways to shame.

IMG: How did you first start programming?

Jones: Like a lot of programmers my age, I started way back on the Apple II when I was in high school. I first learned Applesoft Basic and then 6502 Assembly. As soon as Apple came out with the Macs my family got a Macintosh 128k, but I never did any development on that machine, except in Microsoft Basic 1.0, which was really awful. After high school my family bought a Mac II and I got a job programming in C for a CAD/CAM company on PCs. Needless to say, I didn't go to college for a year. During this year off, I bought MPW for the Macintosh and started doing Mac development on the side. All I ever did on the Apple II was write

games, and it seemed logical to continue that on the Mac. Honestly, it's the only good use of computers that I can think of. The first thing I did on the Mac was to port a modem game I'd written called Minotaur from 6502 Assembly on the Apple II into MPW C on the Mac. I was still finishing that when I came to college. By that time, I knew I wanted to write games. So I guess it all goes back to the Apple II.

IMG: How did Bungie Software get started?

Jones: Well, somewhere in the middle of my second year at college I met Alex, who at that time was running Bungie by himself and had already published Operation Desert Storm. He was looking for something else to publish, and we decided to work together on Minotaur. Alex started doing the packaging and marketing while I was finishing up the AppleTalk portions of the game. I think I worked on it from December of '91 until it shipped in April of '92. If I remember right, we initially planned to ship on April 1st, but the code somehow wasn't ready until March. So we told everyone that our April 1st ship date had been a joke. Anyway, it became obvious after we published Minotaur that Alex and I worked well together and we decided to become partners. We now each own half the company. It took us a while after we published Minotaur to get serious and try to do something real, and it wasn't until January of this year that we started working in earnest on Pathways.

IMG: You designed Minotaur entirely by yourself?

Jones: Right. Like I said, Minotaur was originally an Apple II game for my friends and I to play over the modem. It was never released, and I never thought it would ever be a commercial product. It existed for about two years on the Apple II before I ported it to the Macintosh. During those two years, the combat system and the interaction between the various items continued to evolve and eventually lead to what we thought was a really fun game. The Mac version was almost a direct port of the Apple II code, which is why the screen looks kind of funny.

IMG: So how did Minotaur lead to Pathways?

Jones: Actually Pathways started out as Minotaur 3D, but we pretty quickly decided that Minotaur was not well suited to a 3D environment since so much of the game relied on the top-down point-of-view. We also wanted to create a game which could be played without a network or modem, which was Minotaur's big marketing weakness. We eventually decided that we had a totally different product, and that it was going to be an adventure game. So, we wrote a story for it and started to carve out maps. . . .

IMG: I heard that there were a lot of rejected plot-lines for Pathways into Darkness.

Jones: We started out with very simple and very cliché plots. We moved away from those toward very interesting and unique but extremely difficult to understand stories. The final plot turned out to be somewhere between these two extremes. We had initial plots as cheesy as: "You're an archeologist whose sister was kidnapped by some evil guy who wants an ancient artifact from you and you have to get the artifact and save her." Sound familiar?

One of the more complicated plots involved you as the descendent of Roman soldiers who had been separated from the rest of their legion while attacking a group of barbarians in what is today Switzerland. They found a mountain spring that extended their lives by hundreds of years and founded this society of semi-immortals. Every seven years they would gather and the leader of the group would descend into this cave system and return with water from the spring to assure their longevity. Now and then their leader would be killed

while getting the water, none of the other members knew why or how, and a new leader would have to be chosen. The game starts with the player having just been chosen by lot to descend into the caves, find the location of the spring, and become the new leader of the cult. Of course this was extremely dangerous, and several people had already died trying. It was a very interesting plot since your quest wasn't necessarily virtuous, it didn't involve doing good things or saving the world. It was just you were chosen, more or less against your will, to become the next leader of this freak cult of immortals. It's similar to Pathways in that you would find dead people who were previous leaders of the cult or had died trying to find the spring.

It was even much more complicated than I'm letting on, and was a really cool story, but we decided that it was too involved. Basically we wanted something that could grab you. You can play Pathways without really knowing what the plot is at all, and with the complex plot you really couldn't do that. You would have really had to get into the plot, and we didn't want to force people to do that because a lot of people don't want to. It was a really good story, at least I think it was because I wrote it, but I think it would have been burdensome. But in the long run, that's the kind of game I'm much more interested in writing.

IMG: Are you happy with the finished Pathways? Anything you would have changed?

Jones: Yeah, I'm happy with it. You reach a point in developing a piece of software, especially a game, where you just have to stop. You continue to have new ideas, people continue to suggest new features, the product could continue to evolve in beta for years. There's a point where you just have to release it, and there's also a point where MACWORLD [Expo] arrives. I'm happy with it, but I'll never do anything like Pathways again. We can do so much better now. Certainly the rendering technology is going to be different, the interface will change, and so on. We learned a lot from Pathways in that the window-based interface was just too complicated, and while it's nice for people who have multiple or large monitors, they're definitely the minority. Most people playing Pathways leave their windows in the same place all the time. I'll also spend more time on plot development. You'll see textures on the floor and on the ceiling, better tinting and darkening effects, and it'll be faster too. You'll be able to look up at the ceiling and down at the floor, instead of the "Pathways Neck-Brace" where you can only look left and right.

IMG: I've got some criticisms of Pathways that you can respond to. A lot of people have complained that the game is too tough

Jones: Yeah, Pathways is probably more difficult than the average adventure game, but I don't think that that's a problem. I think that I'd rather have people complain that it's too hard than that it's too easy, because when a game is too easy, you somehow feel that you've been cheated. But at the same time I realize that a lot of people are having problems with Pathways and it's probably more difficult than I intended it to be.

IMG: Many people seem to wish that the player could move faster.

Jones: I think most of these comments arise from people who have played Wolfenstein 3D. I don't think that the way you move in Wolfenstein is realistic; I think you move too fast. Most of the game-play in Pathways is based on dodging projectiles and actually not being able to outrun monsters. If I was going to let the player move really fast, I feel that the monsters would have to move like that as well. I don't like the way in Wolfenstein you can turn around and run away from a fight. In Pathways several of the monsters, like the Wraiths, can actually outrun you, and most can at least keep pace with you, especially if you're backing up. I just think that makes the game more interesting. If you were able to move much faster than you can now, dodging projectiles would be a lot easier, which I think some people

would appreciate, but it wouldn't have been as challenging. A lot of the Pathways world is based on relative velocity, and if the players speed increased everything else as well would have had to increase together. All the bullets would have had to move faster, and the monsters would have had to move faster, which wouldn't really help you very much. If you want to move faster, drink the red potion.

IMG: A few people have even found Pathways too violent.

Jones: Pathways is actually a lot less violent than it almost was, but there are still a couple of gory animations, like when a Nightmare explodes or when a Skitter dies. If people don't like to see blood, I guess they could find those animations offensive. But you're not shooting people, remember. I think the problem a lot of people have with violence on TV and in movies is that it's directed at people. In Pathways you're shooting these inhuman monsters. My next game will probably be as bloody, if not a little worse.

IMG: You said Pathways was almost more violent than its current incarnation?

Jones: Yeah. The guy who was doing the art for Pathways, Colin Brent, was really good at drawing gore. He loved it. We had to ask him to tone down a couple of his drawings.

IMG: What is your relationship with Colin? How did you two work on the development process together?

Jones: Colin and I worked on the plot of Pathways together, and with very little help from me he was turned loose to work on the art, and often he would come up with things I had never imagined or expected. For example, I didn't tell him to draw a bipedal creature with six eyes along its chest and a long tongue wagging out of its neck, I just told him to draw something disgusting that the player would be afraid of. He came up with the Headless creature. Colin said that most of the challenge was not actually drawing the monsters, but coming up with unique designs for them, and I think he did a really excellent job at that. He'll be doing the art for one of our next games. It was really good to work with him, because he was able to take a lot of the creative job of monster design off of my shoulders.

IMG: You worked pretty much entirely by yourself on the coding of Pathways and Minotaur. Do you prefer doing the coding yourself, or is it just because there's no one else to work with?

Jones: Minotaur was a very small project, most of which was already done, so it made sense that I work on that alone. Pathways was more a case of: "Gee, we don't have any money, and I'm the only one that has time to code." I don't mind working alone, but there were times when I was working on Pathways where it really would have helped to have people working with me. It's very difficult to conceive and implement every last element of a project. Hopefully most of my future projects will be more collaborative. In Minotaur I did most of the graphics, and I think the art turned out better, and my job was easier, in Pathways where Colin was drawing everything.

IMG: How do you develop a product from concept to implementation? Does the technology come first, or the idea of the game?

Jones: Minotaur was the case of, "Hey, we've got a great idea, let's make it into a game." So the concept really drove the coding and the technology. Pathways was more a case of "Hey, we've got this really great rendering technology, let's make a game out of it," where we had the 3D graphics engine before we knew what the game was going to be like. I don't know

which is better. In Pathways we would come up with cool ideas for screen effects, like the tinted teleporters or force fields, depth shading, and color table animation, and then we could come up with plot elements to match them. Sometimes it's difficult to develop a game from the other direction, letting the story drive the technology, since without any idea of what's possible you could really make the programmer's job a nightmare. What we're doing right now for the next game is developing more really cool rendering technology, so it's probably going to be another case of the technology driving the plot, though for the latest project, the technology suggests such a compelling plot that I don't think this will be a problem like it was for Pathways. With the new game, there's one thing that immediately strikes you, and that's what we're going to work on first.

IMG: With the current influx of CD-ROM games there seems to be a trend to fancier graphics over plot-line/game-play/interaction. What do you think of this trend?

Jones: I think it's a fad instead of trend, because I think that it will fade. Consumers will not continue to buy games they don't like and which aren't any fun. And if people don't like games which sacrifice plot for cool graphics, they won't continue to buy them. The computer gaming industry is definitely consumer driven. With the advent of CD-ROM and Macromind Director, a lot of people now have the opportunity to create cool looking games which are arguably not much fun to play. Many publishers seem to believe that they need to make games simple-minded for them to be widely popular, which I think is a total myth. I mean, look at Civilization. It's a very complex strategy game and is at the same time one of the best-selling titles on the Mac or PC. I know people that ordinarily don't have anything to do with computers, much less computer games, who play Civilization constantly. It's a great game.

IMG: What's your impression of the Macintosh game market as a whole?

Jones: I think, from the publishers point of view, it's still very small, but growing fast. People have been saying that about the Mac games market for the last ten years, of course, but I think it's especially true now. With the Performas and the low-end color Macs, there is a large installed base of color capable computers which are fast enough to play good games. We still haven't caught up with the PC, but I think we will, and I think we will soon. And if nobody else does it, I'm going to do it. Every month something new is coming out that's cool — that's closer to the stuff they have on the PC. Now you're not going to see X-Wing, Wing Commander, Strike Commander, or Ultima Underworld next month, but actually you might see something better than Ultima Underworld early next year.

IMG: Does Bungie plan to stay devoted solely to the Macintosh in the future?

Jones: Yeah, in the foreseeable future, Bungie will continue to develop products solely for the Macintosh. Whether our games are ported to the PC or whatever remains to be seen, but we won't be doing that ourselves. Once again, I think the Mac is a great machine, it has so much more potential than we've seen demonstrated so far.

IMG: Any plans for the PowerPC?

Jones: Yeah, we want Pathways in ROM! Seriously though, a texture mapping game running native on the PowerPC has amazing potential. I can't really talk about the stuff we're working on, except that it will be incredible.

IMG: What do you think of Apple's involvement in the Mac game market?

Jones: It's gotten a lot better. Recently they've actually gotten serious about it. Apple's doing the best they can to bring great games to the Mac. There was, for a pretty long time, a serious dearth of good Mac games. But Apple has changed their policy, and they were extremely helpful during the development of Pathways. The Apple Developer program is great.

IMG: It's a frequent rumor that game developers have a lot of fun and make a ton of money. Is this the case?

Jones: I had a lot of fun developing Pathways, except for possibly the last month before MACWORLD when I wasn't getting any sleep and had serious doubts as to whether we would actually ship at the show. But that's why I do develop games, because it's fun. As for making a lot of money, we basically broke even on Minotaur and it's still unclear what's going to happen with Pathways. So far all the money's gone right back into advertising, doing promotions with dealers, paying the people who printed our packaging, et cetera.

IMG: Will there be a Pathways II?

Jones: I don't think that Bungie will ever publish a game called Pathways into Darkness II. There's a lot of reasons for that, one of them being that I tend to dislike sequels. Many times when a publisher comes out with a sequel to a game, it means that they made a lot of money on the first one and they're going to continue to publish similar games until everyone gets sick of them. Sometimes those games are actually fun, and the people who liked the first one also like the second one, but sometimes they're not. No, Bungie is not going to publish a Pathways II. A lot of cool things have happened with the rendering technology since Pathways shipped, and it suggests some different products which don't really fit into the Pathways world.

IMG: The next game will involve texture mapping then?

Jones: Yeah, the game that I'm working on now definitely involves texture mapping, but in a way that makes Pathways look like it was using flat colored polygons. The development name of the new project is Mosaic. Anybody that thought Pathways was cool will most definitely need a change of underwear when they see this new thing. There are a few things you immediately notice about Pathways: it doesn't have textures on the ceilings and floors, and on slower Macs you have to switch into the lower resolution mode to get an acceptable frame rate. Those are the two things we've been trying to address in recent development. Pathways would have been an average PC game, but this next product will be something for PC users to be truly envious of.

IMG: So there will be more improvement in Mosaic than just a revved-up graphics engine?

Jones: One of the things I find extremely annoying about most games is that the computer rarely does anything novel. The first time you play a game it might surprise you, but in the long run it's not very difficult to figure out how the computer will react in different situations. That's why I like playing network games, because human opponents are completely unpredictable. One of my goals in the next game is to have the monsters react to you in ways that are fairly unusual in computer games. It'd be nice to point a weapon at a monster and have it run away and find its friends, for example, before it comes back and tries to kill you. Or in some way be able to parlay with the monsters, instead of just going and fighting them. And that kind of thing has been done before, but on very basic levels. I really want the monsters to be smart, and to have them react to you, not just to your presence. I want the monsters to know when they're in your line of sight and when they're not. I want them to know when they outnumber you, and when they out-gun you, and when they're about to get

creamed. And then I want them to react accordingly. There are easy ways of getting a monster to retreat for example, and we've seen those in hundreds of computer games, but then there's the complicated real way, where you actually give the monster some sort of intelligence and knowledge of what's actually going on.

IMG: So the monster intelligence is going to surpass the full-blown, prize-winning, master Artificial Intelligence found in Pathways?

Jones: The situation in Pathways would be something like this: you've got your M-79 grenade launcher out, you've got a sack of high-explosive cartridges hanging from your belt, and a single random Headless monster walks around the corner. What does he do? Well, he charges right at you and attacks. Which is totally stupid! He should either retreat, if he can, or maybe use the player's favorite tactic in Pathways, which is to shoot and then run back around a corner. I think that it would be extremely annoying if the monsters could use hit and run tactics in the new game. Unless they out-gun you, in which case they'll charge right up in your face and attack. In the next game I want the monster types to have real personalities. I want the dumb monsters to act like the monsters in Pathways, if not dumber. Then there are the smarter monsters which have some basic sense of fear and self-preservation. But then there's the level above that where the monsters are able to cooperate intelligently, where they're able to run from you, where they will be able to talk to you. In Pathways the monsters sort of have different personalities, because they have different powers, but if you pay any attention at all you discover that they're all running off exactly the same algorithm. In the next game I want you to have complete contempt for some of the monsters, and be really scared of meeting even a single one of the smart monsters.

IMG: Is Bungie working on anything else?

Jones: Actually, yes. The development name for the other project is Marathon, and it's a drastically faster version of the Pathways graphics engine with optional texture mapping on the floor and ceiling. It will be much more of an arcade game than Pathways, or the upcoming Mosaic, and will certainly have a much more streamlined user interface. It could be compared to Wolfenstein, perhaps, in that it will be fast-action arcade game, but really it'll be completely different. The development goal of Marathon is to have a game that will run on the LC at 72 dpi in a reasonable window. Hopefully you'll see demos of both Marathon and Mosaic running at Macworld San Francisco in January, but no promises!

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