

en Haller, creator of the wildly popular Solarian II, is the father of the modern Mac shareware game. Released in 1990 with irreverent sound samples, 80s-inspired gameplay, and absolutely no trace of a menu bar, it established a framework that has influenced games right into the modern era of 300 MHz Macintoshes.

He later authored Lunatic Fringe, a game module for the After Dark screensaver, and then vanished mysteriously, leaving only the sub-megabyte solarian-ii-104.hqx file in the info-mac archives. Following bits of rumor and legend, I tracked Ben to his musty lair at the heart of darkness, Apple Computer, Inc. Seems he was working for a little company named NeXT...

Ben Haller would like to describe himself as "a Don Quixote of the post-modern era". He was born in Chicago, raised in Ithaca, N.Y., and has been bouncing around like a human ping-pong ball ever since getting his driver's license. He plays bridge more than video games, loves cats but owns none, and considers himself a romantic. He currently resides in Redwood City, CA, a smouldering pit he calls "The Wasteland."

[How did you get interested in writing games?](#)

I first got into games when I was quite young; I'd take a bus after school to my father's office at Cornell University, and I'd have nothing to do until he was ready to go home except play around on the IBM 370 mainframe that he worked on. I started out playing games; I remember Adventure, the precursor of the Zork series, and I remember a game called Wumpus that I liked quite a bit, and many others. All entirely text games.

This was a very formative experience; I didn't think consciously about it at the time, but it gave me a deep instinctive sense of the fact that games don't have to be glitzy to be fun. You don't need 3-D graphics, VR headsets, big speakers, or even color. All you need is a good idea and an imagination.

I learned BASIC on the 370, then moved to Pascal. We got an IBM PC at home around then, and I started programming in Pascal on that. The whole time I was doing only two things: graphics and games. I wrote text adventure games, trying to imitate Zork, which I had

fallen in love with. I wrote a game where you're a pin and you fly around popping balloons. And so on. All of this was done with my friend John-Paul, who I'm still in touch with. He was the best groupie a programmer could ever ask for. He never learned to code much, but he typed more than I did, I guess because he wanted to be involved in the process.

At the same time I was doing all this, I was blowing a lot of money in video arcades. I played games after school all the time, and during school more often than I ought to have. I remember well the religious experiences: the first time I played Qix, the first time I played Tempest. I liked those kinds of games the best: very abstract, very imaginative. Centipede. Donkey Kong. Marble Madness. Fantastic games. In my opinion, that was the Golden Age of video games. It was before technology had gotten in the way of creativity, and it was before the national obsession with kick-boxing and racing games took over and drove all the other genres out. The people who made those games have been role models for me all my life, although I don't know even one of their names.

How did you move to the Mac?

Right when they came out, right around 1984, I saw a Macintosh, and everything changed for me. I remember quite clearly the first time I saw one; I was at the house of a friend named Alex. He had just convinced his parents to buy a Mac; it was either a 128K or a 512K, I don't recall which. He had it set up on his dining room table. I came over and played with it, played with MacPaint and the Finder and everything, and I was simply blown away. Everything about it seemed perfect to me. We had a Mac in my house pretty soon after that, and I switched over to using it exclusively.

By 12th grade I had been taking courses at Cornell each summer for a few years, primarily CS courses. One particular summer I signed up for a course with a certain Doug Ierdi—if memory serves—and that was what really started me on the road to Solarian II. It was ostensibly a course in operating systems or something, but what it primarily did for me was twofold. One, it taught me 68K assembly language. And two, it was the reason for the creation of Solarian. Solarian I, that is, not II.

Solarian was my final project for the course. Everybody was to write a video game using primarily C with assembly language routines for drawing the graphics directly to the video buffer. Solarian was a great project, and I was quite happy with it at the time. It was much simpler than Solarian II. It was black and white, and every level was the same. The aliens were in a more or less square formation which went left and right, dropping a level each time—a Space Invaders clone. It was never released, and it would definitely not run on any modern hardware. But soon after I completed that, the Mac II came out. My family bought one almost immediately, and I applied myself to rewriting Solarian for color: Solarian II.

How did Solarian evolve into Solarian II?

I decided to rewrite it from the ground up, and a lot of things changed. The primary influence shifted from Space Invaders to Galaxian and Galaga. I merged in some work I had been doing with trigonometry-based patterns, leading to the complex patterns the aliens fly in on the different levels. I actually had a separate program which I used to create those paths, and I had figured out a fair bit of theory about how the patterns had to be constructed in order to guarantee that the aliens would never collide with each other while on the path, and so on. I was constantly listening to records & digitizing sounds. Solarian II was a huge amount of work for one high-school-age child, and it pretty much consumed my life for many months. But it was so rewarding to work on that the time passed like a blur. It was the first real program I had written, I think, and I kind of surprised myself. I never dreamed I could actually write such a thing.

I added a whole lot of myself into Solarian II. I was trying to make the game as bizarre and interesting and original as I could, and I was a very strange young man. At that age, I was fairly asocial, and I spent a great deal of my time reading books like *The Last of the Really Great Whangdoodles*, and everything by Madeleine L'Engle I could get my hands on, and so on. Imagination books. So I had a lot going on inside my head, and it just flowed naturally into the game. I drew all the art using another tool I had written entirely myself, which let me construct multi-frame animations and save them in my own custom resource format. I came up with the ideas for all the bad guys, and all the jokes and bad puns on the information pages. I was just doing my best to go to the boundaries of my abilities and my imagination. I'm not sure why, looking back on it. I guess because it was the most rewarding thing I had ever done, and I wanted to give it everything I had in return.

What Mac games were you into at the time?

I recall some of the games of that era fondly; *Airborne!* was quite fun. *Seahaven Towers* was a great game; I played that a whole lot. I was still playing Infocom games, even on my Mac II. I miss those games. The only game I've seen recently that compares is *Myst*, and I would say that even it wasn't as good; I think there's an inevitable decrease in the quality of adventure games as soon as graphics are introduced. Pure text, there's nothing like it. A word is worth a thousand pictures. I wish kids today showed more interest in using their imaginations; I wish parents and teachers and video game designers did a better job of encouraging that.

What's the story behind the wacky sound effects of Solarian? The chicken sound was practically your trademark.

Well, it was sort of a tribute to the music I was listening to at the time. I had only gotten into modern, mainstream music fairly recently, so I was being totally blown away on a daily basis by the amazing music I was discovering: Peter Gabriel, XTC, Laurie Anderson, the Talking Heads, Prince, Kate Bush, the list goes on and on. And I got a lot of pleasure out of sampling them and putting the sounds into the game.

There was a more pragmatic reason, too: I had no idea how traditional game sounds might be made. All I knew how to do was to sample with my MacRecorder, and so, sample I did. I sampled not only music, but people—by the time version 1.04 came out, there were samples of everybody from my brother Tim to many of my college roommates in the game. In all honesty, I never thought much about how strange the sounds were. It just happened.

The "chicken" sound, by the way, is a sped-up sample from a Beatles song, as I recall.

There's an interesting story about the sounds. I never thought much about whether the original creators of the sounds I sampled would ever hear the game, hear their own sounds. I kind of didn't take it seriously enough to worry about, and this was before everybody got suit-happy about sampling and rap artists had to start crediting each individual sample on their albums—an utterly ridiculous requirement, I think. But as it turns out, at least one artist did notice that I had sampled him: Prince.

I don't know how he found out, but I was contacted by a man who claimed to be Prince's sound engineer. He said he had worked with Prince, and he said Prince had found out that I had sampled him, and so he decided to sample me back. And so apparently there is a

remix, a B-side perhaps, of a song called Willing And Able, or perhaps it's of a different song, but appears on a Willing And Able single, which has in the song sounds of someone playing Solarian II. I've never been able to get my hands on this single; I believe it's a British-only release or something. Of course if anybody out there has a copy, I'd love to find it in my mailbox someday—an actual print of the original only, since I'd want it for nostalgia more than for listening.

[What was life like in the months following Solarian II's release? Were you surprised at its success?](#)

I was extremely surprised. I was blown away. I mean, here I was, a shy, introverted bookworm of a kid, and I had basically just been entertaining myself writing this thing, and I had no expectations at all about it. And then all of a sudden mail was just pouring in. Hundreds of letters a month, even more. And Solarian was being reviewed; there were printed reviews by everybody from MacWorld to MacUser to MacWeek. And I would introduce myself to people who I didn't even know owned a Mac, and they'd say "Wait—are you *the* Ben Haller?" It was incredible. I felt like a celebrity for a while there. I still get that occasionally. As a matter of fact, somebody approached me just a few days ago and asked me whether I was *the* Ben Haller, and I got a little kick out of that. But it's definitely wound down.

When I first released it, I expected that to be the last I'd do with it, and I was actually pretty heartily sick of it by then. But the response was such that I decided I ought to fix the bugs people sent me, and polish up a few areas I had neglected, and make a truly final product out of it. That work was done while I was at UC Berkeley for my freshman year, and took it through version 1.04. I've never touched it since. I'm not actually certain I even have the source code any more. I'm told it runs in the Blue Box on top of Rhapsody Developer, though, which is a tribute to Apple's backward-compatibility story.

[Why do you think it was so popular?](#)

I think it was serendipity. It happened to be practically the first color game out for the Mac. Seahaven Towers was before me, but it wasn't fast-action. I can't recall whether the color version of Crystal Quest preceded me or not, but it would have been a few months either way, I think, and in any case that was just a colorized version of an already released game. So I hit the market at the perfect time. Also, I think its quirkiness and originality really appealed to Mac users.

[Why did you decide to make Lunatic Fringe a commercial product, after your good luck with shareware?](#)

I didn't have a choice. I was working for Berkeley Systems at the time, and it was a project suggested and commissioned by them. It's not like I could have done it by myself anyway. Igor Gasowski was the brilliant artist who did almost all the graphics for the game. Bruce Burkhalter was the product lead for More After Dark, and probably the best manager I've ever had, and he contributed a huge amount to it. Everybody else involved mattered too; it was very much a team effort, unlike Solarian II. My main contribution was the extremely rapid generation of huge amounts of code, a surprising amount of which was hand-tuned assembler. I had some influence on the art and the plot of the game and so on, but I wouldn't say I was the primary designer or anything.

[How did you react to first seeing Maelstrom back in 1992? It has a lot of stylistic similarities to Solarian.](#)

Heh. Andrew and I have never quite seen eye to eye, on this or other things. I don't think it would be a good idea for me to talk much about that, though. Those who remember a brief public flamewar between us a few years back know how juvenile adults can get, myself included, and I have no desire to reopen that can of worms.

What I will say is, I certainly believe that all art is derivative. It's just a question of how much new stuff you add. By and large I tend to think that it's silly to dwell too much on such things. Solarian II shows a lot of similarities to Galaga. Satori, one of my After Dark screensavers, was a fairly unabashed ripoff of a brilliant work called Flowfazer. I think the important thing is that the artist be comfortable with what he or she has done. I'm comfortable with what I've done, with the exception of Satori (and in that case I at least have the excuse that I wanted to take it a lot farther, but was constrained by the ship schedule Berkeley Systems imposed).

I want to dwell on this a little, because I think it's important. Society can't judge how derivative art is. Creation is a totally subjective act. Nobody but the artist knows how much the artist took from others, and how much the artist himself added. To attempt to quantify this, or to attempt to draw lines as has been done in sampling—duration of sample, number of uses, etc.—is utterly ridiculous. An "artist" could draw enormously from someone else without actually sampling at all, to the point that it would be morally wrong, and yet be on the good side of such laws. And, on the other hand, an artist could sample someone else's work in its totality, and yet do something with it that was totally original—true art. There's no way at all to draw a line.

I've often thought, when I heard a politician make a particularly stupid remark, that it would be a totally valid artistic statement to simply quote that politician verbatim, with nothing added. Ketchup is a vegetable. Bombing will commence in ten minutes. I am not a crook. The simple act of quoting these things is art, because what's being added is what isn't seen: the judgment that it is worth quoting, the implied idiocy of the statement which makes it worth quoting, the political act embodied in the act of quoting, and so on.

This ought to be old hat, and I think to most people in the art community it is. Unfortunately, those who write our laws are not artists—neither are they, by and large, qualified to pass laws regarding anything else important, but this doesn't stop them, of course. So we've got idiots like Jesse Helms making decisions about how art should be regulated, and that's bound to be a disaster. I think people can judge, on a case-by-case basis, whether an artist is doing valid art, and if they aren't, and if people care, then their art won't sell. And that, of course, is the ultimate punishment for an artist.

By this metric, Andrew is clearly OK, since he's been operating in the black for a while now. And I think that's fine.

[Were there other games you worked on that never saw the light of day? I remember you were looking for beta testers in comp.sys.mac.games around 1993.](#)

The only thing I've done since Solarian II that has failed to be released, and this is what you're referring to I think, is a game called GridRunner.

GridRunner kicked ass. It was written with a friend of mine, Rob Vaterlaus, now at Metrowerks, over various summer vacations and suchlike. We poured quite a bit of time into it. It was a networked multi-player game which is hard to describe—I sometimes say it was like fast-action Go, or like soccer in cyberspace, or any number of other things. It had

great graphics. It was a full-screen scrolling game like Lunatic Fringe. This is a difficult thing to do, because scrolling the entire screen involves moving a whole lot of bits in memory, and moving that many bits takes so much time that it's hard to maintain a decent frame rate, and hard to prevent flicker and tear of the images. GridRunner played a lot of tricks to be able to scroll quickly enough to be smooth.

The thing I was proudest of about GridRunner was its originality. Unlike practically all other video games after the golden age, it was almost completely non-derivative. I can't think of a single game that it bears more than the most passing resemblance to. One thing I always admired about the game designers during the golden age was their originality. There had never been a game remotely like Tempest, or Pac Man, or any of those other games. Each game those guys made invented an entire new genre. Incredible.

But GridRunner's originality was also GridRunner's downfall. It is an immensely difficult thing to balance a video game, so that it's hard enough to challenge people, easy enough to not frustrate them, interesting enough to keep them addicted. Working within an established genre, these problems are largely invisible, because the original founders of the genre balanced the concept of the genre—that work has been done for you as long as you stay on the path. Making up a totally new game is altogether a different matter. Rob and I had immense trouble trying to keep GridRunner balanced, trying to adjust the rules to provide the right incentives at the right strength to encourage the kind of game we wanted.

This is a really interesting problem to me, and one that games outside of the computer arena struggle with too. If you look at the artificial rules that have been introduced in football, basketball, and other sports, it's clear that it's a really hard problem. Boxes you can't stay inside too long, boxes you can't go outside, offsides rules, interference rules—the list goes on and on of totally artificial and almost nonsensical rules which have been added to these sports in an attempt to balance them. I think it's particularly hard for team games, which GridRunner essentially was in at least some of the rule sets Rob and I played with. Trying to encourage cooperation within the team, trying to make it fun for everybody, trying to eliminate "cheap shot" type loopholes in the rules, is all very, very hard. Rob and I wanted to balance the game without an excessive number of arbitrary rules, and ultimately I think we failed.

I've still got the code for it, but I don't know whether it'll ever make a comeback. For one thing, a lot of the technology that went into it would be superfluous nowadays. If I were writing a networked video game nowadays I doubt I'd even consider writing it for anything other than TCP/IP and Rhapsody. New technology is much cooler than old technology, and it works a lot better too.

[What made you decide to get away from games—and the Macintosh?](#)

My move away from games was probably due to a few things. One, my life moved in the direction of college and other pursuits. Two, I didn't like the direction the game market seemed to be moving in. And three, after GridRunner failed I felt somewhat demoralized about games in general, and it took a while to get over that.

As for moving away from the Mac: I discovered NeXT. And similarly to my discovery of the Mac, that changed my life. I'm probably one of the only solitary, non-corporate, non-educational users weird enough to buy a NeXT machine. I owned two before I actually went to work for NeXT. NeXT's technology just blew me away. My Ilici's hard drive died a while later, and I just never bothered to revive it, because I liked my new toy better. The Ilici is still sitting up on the top shelf of my closet.

Were you surprised by Apple's acquisition of Next?

Hmm. It was clearly the right thing for them to do. But yes, it took me quite by surprise. I still remember the comedic period right before the announcement—entire days wasted to gossip, all-company meetings called and then canceled with no explanation given. It was fascinating to watch the process. And it continues to be fascinating to see how Apple and NeXT continue to merge. They're still somewhat distinct entities within the company, but the edges are blurring more and more, and old prejudices are being sorted out, and cultural differences are adjusting.

What work are you doing at Apple these days?

I'm working on a product called WebObjects Builder. It's a sort of vertical-market HTML editor. It doesn't compete directly with PageMill and those guys, it's for a more specialized market that is using a dynamic web application server called WebObjects Framework. It's pretty cool. The Web actually doesn't impress me that much; by and large I regard it as a big waste of time. But WebObjects is, nevertheless, a very cool product, and the version I've been working on for nearly a year now is going to be very cool when it ships.

What's your take on the future of Apple and the Macintosh?

Well, I'm reservedly optimistic. It's been a great pleasure to see Apple pick up the pieces since the acquisition: the development of Rhapsody, the return of Steve Jobs, and so on. A lot of my old faith in Apple, and in the Mac, which had pretty much died, is starting to return. I really hope this trend continues. It would be nice to see the software industry have a return to quality and innovation after the Dark Ages we've been living through lately. Microsoft is apparently incapable of making even basic UI usable, so clearly they're never going to be leading us anywhere good.

How do you feel about the modern Mac game market?

Frankly, I don't know the Mac market today very well. I know what's changed in the arcade game market, and I'm not happy about it. And to the extent that I've stayed connected with Mac games, I see the same trends. Everybody's fired up about games like Doom and whatever that Doom clone is on the Mac. I can't stand games like that. I have no problem with 3-D, or first-person perspective, or any of that. But the sad fact seems to be that the more technologically advanced, and the more graphics-oriented, games get, the less actual content there is, the less thought they require to play, the less imagination they demand. As someone once said in a completely different context, "there's no there there". Games like that piss me off, and it's that trend that is responsible for me leaving games for greener pastures. I get the distinct impression that a game like Solarian II, much less a text adventure game like Zork, wouldn't stand a chance in today's marketplace, and I think that's a terrible indictment of the direction things are going in.

An example of this is a game called Glimmer. This was written by a friend of mine, Jeremy Bem, and released fairly recently. As far as I've heard, it hasn't made much of a splash, despite being a really original and really fun game. It just doesn't seem to be what people want any more. Its quirkiness reminds me of Solarian II, and it's quite eccentric and imaginative, and very well-executed. But as far as I've heard, the response is nothing like what it was for Solarian II.

Is there any chance you'll write another game? Solarian 3, perhaps?

I've been toying with the idea. Actually, I've been toying with the idea of trying to become a major games evangelist within Apple. Steve Jobs was recently quoted as saying that he felt Apple needed to pay more attention to games, and if he means that, and if it turns out to be what I want to do at Apple, you might be hearing a lot more from me soon. And if that happens, you can bet I'll be doing everything I can to encourage a return to truly creative games. If I could be responsible for the dawn of the second Golden Age of video games, I can think of few things I'd be prouder of. Maybe people are ready for that. Maybe they're sick of games with amazing graphics and nothing interesting going on. Maybe they're sick of kick-boxing and shooting people in mazes. I hope so.