



Interview with Tim Gill

Interviewed by:
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Nelson: Today's date is April 11th, 2019. I'm Jay Nelson, and I'm having a nice sit-down conversation with Tim Gill, in Denver, Colorado, and here begin the questions and answers.

Gill: Okay, great.

Nelson: On what day and where were you born?

Gill: <laughs> October 18th, 1953, and I'm actually not quite sure where. It was Gary, Indiana, I think, is on the birth certificate, but we lived in Hobard, and, we put me in Gary because I needed to be in an incubator, so I'm not sure whether I popped out in Hobart and they moved me to Gary or whether they moved my mom before I popped out, but in the end I suppose we'd say Gary, Indiana.

Nelson: Very good. Can you tell us a bit about your family background?

Gill: Let's see. Dad is a plastic surgeon and Mom was a homemaker, and we, like I said, we started in Indiana. They were both from here. That was just while Dad was in med school, so once-- well, actually doing his residency, I guess. So once that was over we moved back to Colorado. So for all practical purposes I've been in Colorado pretty much all of my life except for a couple years early on.

Nelson: Very good, and so what were the main activities of your parents? You mentioned...

Gill: Well, Dad worked a lot. Especially on Fourth of July. So plastic surgeon, people, like, blow up their hands a lot on Fourth of July.

<laughter>

Nelson: Yeah.

Gill: Things like that, but...

Nelson: <laughs>

Gill: No. As a kid, they tried to make sure we got to do things, so learned how to ski. Learned how to water ski. A lot of camping trips. Dad liked flying planes, and so he had a plane that he would fly. Mostly I liked reading science fiction books, so we would be on a trip and I would have my nose buried in a book the entire time, pretty much.

Nelson: Understood. Did you have brothers and sisters?

Gill: I have two sisters. They're both younger.

Nelson: Okay.

Gill: One lives in California now; the other lives up North. The sister who lives up North has had a life-long fascination with horses, so she kind of has a horse ranch, and my other sister has had a-- I guess she now is an empty nester, so her two kids have moved out, and she actually started writing a children's book, so that's kind of fun.

Nelson: Forgive me if I didn't hear you, but what age-- how old were you when you moved to Colorado?

Gill: Oh, gosh. So it was like Indiana, Colorado, Indiana, Colorado, because of the education thing. I think--

Nelson: Oh.

Gill: --I moved here full-time when I was nine.

Nelson: Okay.

Gill: But of those nine years, maybe half of them were in Indiana and half of them were in Colorado.

Nelson: And when you moved here was it because of the work, of your father's job?

Gill: This is just where he wanted to live, because family was here. Mom's family was here, his family was here.

Nelson: Okay. And that family, were they in Colorado for a long time?

Gill: At least several generations. I actually don't know what the longest amount of time someone was here was.

Nelson: Okay. But your family goes back a ways in Colorado?

Gill: Yeah.

Nelson: Yeah, great. Often there are major themes in a household, like education or religion or politics, art, science, sports, outdoor activities. Would you say that in your household growing up it had a major theme or themes?

Gill: It was really about education, so Dad tried to get me involved in some level of sports, but he wasn't terribly athletic himself, and so really it was about making sure we got a good education, and for us, that-- because there were three kids, and all of them needed to go to college, that meant no one went to a very fancy college. So I went to Colorado University up in Boulder¹. My sister went to Western State. My

¹ [Editor's note] The official name is the University of Colorado Boulder.

older sister, and then my younger sister, the one that likes horses, went to CSU² unsurprisingly. But about I think, what, one semester, two semesters into her college career she decided she would really much rather have and raise horses than go to school and learn about them, so...

Nelson: Great. And so your education up to high school, what was that like?

Gill: Never really thought about my education up to high school.

Nelson: Just standard public education?

Gill: Yeah, it was standard public education. I think I got a pretty good education in the Jefferson County School system. You know, everything was walkable, so it was, like, a really easy kind of kid-friendly place to be.

Nelson: You mentioned that you liked to read science fiction as a kid, and I assume still do.

Gill: Mm-hm.

Nelson: How about math? Can you talk about your growing connection to mathematics as you were going through school?

Gill: Yeah. So the thing I recall that bonded me to mathematics, I can't remember where we were going. We were on a plane, commercial plane flying somewhere, and my dad taught me algebra, like, way, way before you would normally learn it in school, and that was kind of so fun and I was-- so that made me enthralled with it, and the-- so this is like early days for computers in public schools, so I didn't actually get exposed to a computer at public school until I was a junior in high school.

Nelson: But mathematics was a big part of your...

Gill: Yeah, mathematics was my favorite subject. Although I thought for a long time I was going to go into the medical profession, because that's what Dad wanted me to do. But once I discovered computers, that was all out the window and computers were clearly the only thing I was going to do with my life.

Nelson: <laughs> Okay. So how about high school here in Colorado?

Gill: Mm-hm.

Nelson: What was that like for you?

Gill: So I was the typical kind of B-plus through A, A-minus— A-plus kind of student, and when we're talking about computers specifically, so I discovered computers at the end of my junior year in high

² [Editor's note] Colorado State University

school. There was a computer in the-- a time-share computer in the school that I could use, and so what happened was when the summer came I was going to be deprived of the use of a computer and I couldn't tolerate that, and so the solution was to go to Colorado School of Mines and take a computer class so I had a computer to use, and in order to take a computer class you had to have a prerequisite, which was calculus, and so therefore, between my junior and senior year I took college-level calculus and college-level computer science. Then I came back for my senior year at Wheat Ridge High School, and I was taking the calculus class, which, of course, I had already taken in college, so that was kind of entertaining, and our teacher actually gave us the entire quarter's worth of homework assignments, you know, basically on our first day and said, "Here. Here's the homework you're going to do through the course of the quarter," and I went home that weekend and I did the entire quarter's worth of homework and brought it back to her, and she said, "Tim, I don't even have the tests for these prepared yet," and I said, "Great. Then you can let me go to the computer lab and play with the computer," and so that's what she did, and so I got extra use of the computer that way.

Nelson: That's a great story.

Gill: Mm-hm.

Nelson: Wow. That worked out perfectly.

Gill: She was a wonderful math teacher. We all liked to do crazy things to her. I sent her one homework assignment once which was entirely backwards, so you had to grade it in the mirror. Another guy in the class did his entire calculus paper in Roman numerals.

Nelson: <laughs>

Gill: I don't know how he represented decimals in Roman numerals, but he got an A on the paper, so I guess it worked out.

Nelson: <laughs> That's great. So how about outside of high school? Did you do anything that wasn't school related during high school time?

Gill: So as soon as the-- at the end of the school day I would go to the computer lab. I would stay there until they kicked me out, basically. There were three of us that did that, and we started the local computer club for our school and then we found the other computer clubs at the other schools, and so then we started the Jefferson County Computer Club, and we did a couple of outings and things like that, and we also stole the passwords for a variety of accounts for all the other schools just so we had more computer time to use.

Nelson: <laughs> That's great. <laughs> Ah. All right. So while you're in high school, lot of changes were happening in our culture here in the United States, and the question is, how were you connecting to the broader cultural and political changes that were taking place in 1967 to '71 while you're in high school?

Gill: Cultural changes? I don't think I would-- if it didn't have to do with computers, I wouldn't have noticed it.

Nelson: Perfect. Did you have any work experiences while you were in high school?

Gill: Yeah. So I did a couple things. I worked at a, you know, my whole work history is entertaining. Typically it's when I don't work for me something bad happens and when I work for me something-- then it works out okay. But I did a couple things. One is I worked at a Woolco as a stock clerk, and that was okay, except I was-- I didn't fit in because I couldn't cuss, and everybody else, all the other kids, cussed. So I kind of had to learn that, and then also, if someone gave me a job I would do it, and so-- as opposed to some of the other kids would slack off-- and so the net result was that I was noticed by the guy in the Furniture Department, because I was the hardest worker, and so he asked, he got me, most of the time, and therefore I had to move beds and chairs and all these other hard things. So that was kind of unfortunate. I should've learned to slack off maybe. And then I worked for a UtoteM store, which was, like, they don't exist anymore, I'm quite sure, but it's basically like a low-end 7-Eleven, and that, I ended up getting let go, along with everyone in my store, because money was missing from the till, and they were-- they didn't know who to blame, so they just fired everybody, and as it turns out, they later rehired me because they found out that it was the district manager who was coming in and stealing from the stores.

Nelson: Ooh.

Gill: <laughs>

Nelson: Ooh.

Gill: So that was one of my early work experiences. I also one summer did computer programming for the Physics Department. They needed some system to score tests, and so I built the test scoring system.

Nelson: Well, that sounds like it's a lot more fulfilling than being a stock boy.

Gill: Yeah, it's a lot more fulfilling than being a stock clerk.

Nelson: <laughs> That's right. My goodness. How about your life and career hopes and aspirations at the end of high school? So when high school was over, what were you thinking, "Gee, I could do this"?

Gill: So high school was over and I was going to college. A Computer Science, a stand-alone Computer Science degree, didn't exist at CU at that time. You had kind of two choices. You could build your own Computer Science degree inside of the Arts and Sciences Department, or you could take any of a variety of standard Engineering degrees and have a Computer Science minor, and so what I did was I did a Applied Math degree with a Computer Science minor and I picked Applied Math. Actually, the first semester I did, like, a combination of Physics and Applied Math and Electrical Engineering just to figure out what I wanted to do, and it turns out that Applied Math had the fewest requirements and therefore it

had the most electives and therefore I could have the most number of Computer Science courses by being an applied mathematician. So I'm an applied mathematician with a Computer Science minor.

Nelson: Was that something that someone at the school helped you figure out or did you figure that out on your own?

Gill: Oh, it was mostly pretty obvious from just looking at the course requirements.

Nelson: And why did you choose the University of Colorado in Boulder?

Gill: It was local, it was inexpensive, and we had to save money so that my sisters could go to college as well, because they were just-- my one sister was two years behind me. The other sister was three years behind me.

Nelson: That's a real common way to choose a school.

Gill: Yeah.

Nelson: Yeah.

Gill: Yeah, and Dad had gone to CU, so it kind of all fit in.

Nelson: Perfect. And you said already that you were there and you studied Mathematics and Computer Science. That was from '71 to '75?

Gill: That was '72.

Nelson: '72.

Gill: To '76.

Nelson: '76. Okay. And during those years, were there any key experiences that stood out for you that you are free to talk about? <laughs>

Gill: Sure.

<laughter>

Gill: So let's see. The-- I think it was-- I'm trying to remember what year it was, but one of the ways that I made school more affordable for my parents was I worked in doing programming on an HP desktop calculator is what they called them at the time. It was a big thing called a 9830, and had a five-megabyte hard disk that was like practically as big as this desk. Well, not quite, but it was about two and a half feet by two feet by a foot tall at least, and so I was doing that and then it was down in Denver and so it was

complicated to get down here, so I made a deal. My parents said they would either pay for my college and I would not work, or they would give me a car and I could use the money that I made to pay for my college. So I think it was probably my I guess sophomore or junior year I got a car so that I could work in computer science and pay for my college, and I worked for an auto recycling company that-- to do their accounting system, and then after that I worked for a ad agency doing their accounting system, and from that I took away the fact that I love numbers. I just don't love numbers when they represent dollar figures. So I try to avoid accounting programming. It's not my favorite thing. <laughs>

Nelson: I seem to recall that when QuarkXPress was even at its height of popularity you weren't real thrilled about the idea of having QuarkXPress do calculations of numbers on the pages.

Gill: Yeah. I mean, because that wasn't the point.

Nelson: I'm jumping ahead, but...

Gill: Yeah. No, I mean...

Nelson: It's related.

Gill: QuarkXPress wasn't ever designed really to do calculations of numbers. We built something in at some point that did it, but really the focus of that was design.

Nelson: Yeah, okay. Did you have the chance to work in computing or conduct research in computing while you were an undergraduate?

Gill: No. Undergraduates don't usually do research, and there was nothing that I did that I would consider research in any way. It was learning about basic things, so I would, you know, my-- in some sense, my love was operating systems and computer languages, and so a lot of things I do end up looking like that. The Josh product that we do has a language that is something that I built.

Nelson: Oh, okay.

Gill: Inside of it.

Nelson: Okay. Well, that answers my next question, which I don't need to ask now. That's great. Now we're going to switch gears completely, but as an undergraduate, was it as an undergraduate that you began to openly identify as a gay man?

Gill: That happened, depending on how you define openly. That happened within about two weeks of getting to college. I went and visited the Boulder Gay Liberation group, which is what it was called, and I think by my sophomore year, I was their office manager.

Nelson: Oh.

Gill: So-- and I was talking to students, psychology students, about what it was like to be gay, from my long experience being gay at that point.

Nelson: <laughs>

Gill: I don't know if there's sarcasm marks, but when they transcribe this they should put sarcasm marks around that particular comment.

Nelson: <laughs>

Gill: But so that-- and so mostly at the time, because that-- this was before gay people were very well accepted, so I was almost always talking to Abnormal Psych classes trying to say that I wasn't abnormal.

Nelson: Right.

Gill: <laughs>

Nelson: Right. So we're talking '72, '73?

Gill: That was '72, yeah.

Nelson: Yeah.

Gill: '72 and '73, and right around then is when homosexuality was declassified as an illness in the DSM. But still, there was a long road to hoe before the classes we were talking to <laughs> weren't the Abnormal Psych classes.

Nelson: Right. Because the academics still had to bring along everything they'd been taught.

Gill: Yeah, mm-hm.

Nelson: Mm-hm. That makes sense. Changing gears a little bit now too. So as your time at the university was coming to a close, what were career aspirations for you?

Gill: So at some point-- I'm trying to remember when this happened. So I mentioned that I was programming starting in early college on HP 9830 computers, and so one of the things that happened, the first job I can't remember how I found, but second job was an HP salesman knew somebody that needed some help and so he got me that job and then actually he recommended me to the Hewlett-Packard Division, which at the time was up in Loveland, and so I worked for them as a student for the last year and a half or two years of my college career, and then once I graduated I basically had a job kind of already picked for me because they just hired me. They didn't even bother to interview me.

Nelson: Sure. That was good fortune. That worked out just fine.

Gill: Yeah, it just-- it kind of all rolled in and I worked there for I can't remember how long, and then they moved that division from-- well, they-- the Loveland Division moved to Fort Collins and that was fine, and then-- because it started in Loveland, moved to Fort Collins when I was still in school, and so then I moved up and was part of the Fort Collins Division after I got out of school, and then eventually they decided to shut that division down and move it to California, and so I interviewed with HP in California to try to decide whether I wanted to move there and I decided I really didn't, and some friends had a company, a small company in Denver that they'd started. All the same people that I had started the Jefferson County Computer Club with, and so I actually went to work for them, and so that was my next year or so of coding, and somewhere in there-- I forgot to mention this. I'm trying to remember when this happened. It was one of the summer jobs during college, I worked for a company that was kind of doing contract programming and they went out of business because the president ran off with the secretary and all the money, and then-- so that failed and then some of the principals of that company that weren't the president started a new company and so I worked for them for a while and then that failed. So that was kind of my exposure to business: two failed companies, <laughs> a division of HP that was shut down and moved somewhere else. You know, but when I was working for myself, none of those things happened, and so actually that was kind of how Quark was founded: I went to work for this company called ALF Products that did computer-controlled music synthesizers and disk duplication equipment and then just other random things, and so when they ran out of money and let me go, I said, "Well, screw it," and then I interviewed a couple places, one of which said they didn't think I had the skills to work for them.

Nelson: <laughs>

Gill: They're no longer in business, but anyway...

Nelson: Right.

Gill: So, I mean, you know, that's a terribly depressing thing, right? You know, to get rejected in that way, and so the solution really was to go to work for myself, and there was a guy who had a computer store over on the west side of town, Paul Gomez, and he had been selling a computer called an Apple III, and the Apple III was kind of like a successor to the Apple II. It was bigger. It had numerous hardware issues when it started because of some mechanical problems with the design. They only ever sold I think about 120,000 of them. But Apple was-- yeah. So Apple goes through phases, and they were in a phase-- so sometimes developers are great and wonderful and everything and sometimes developers are really just writing software and making money that really properly belongs to Apple, and so they were, when they released the Apple III, they were in one of the "developers are terrible" phases, and so they had released it without any software. They had a product called Mail List Manager, which was a really simple database, but they didn't even have a word processor, and so I got from somewhere a copy of a single sheet of paper that showed how to enter the monitor ROM and the commands you could use, and I proceeded to use that to dump their entire ROM into an Apple II where I wrote a decompiler and I decompiled their ROM to figure out how the hardware worked and then I built an operating system on top of that, and then on top of that, I built a word processor, so, which, you know, at the time, operating systems were simple, hardware was simple. It's not something you could really legitimately do today.

But at the time it was kind of a fun thing, and so then, first of all, the Apple III sold for a higher price than the Apple II, and there was no other competition, and so when I released my word processor it was like \$100 more per unit than the equivalent word processor on the Apple II, and so yeah. It was a really small market but we had a higher price and we had a hundred percent market share. So that's really how Quark started.

Nelson: Excellent. I need to jump back just a little bit--

Gill: Sure.

Nelson: --to the Hewlett-Packard days.

Gill: Sure.

Nelson: Because I don't really know what you did there.

Gill: I was a development engineer. We had a product called the HP250, which-- so this is the Desktop Calculator Division of Hewlett-Packard, and so this desktop calculator was massive. It was-- it literally was the desk, with a keyboard and a monitor built in, so it's kind of hard to describe it as a pocket calculator, but...

<laughter>

Gill: As a desktop calculator, but that's how it is, and I was in the operating system section of that, so...

Nelson: Okay. And then--

Gill: Operating systems and languages.

Nelson: Okay. Well, that gave you a good setup for your future work, though.

Gill: Mm-hm.

Nelson: Good. And is it ALF or A-L-F?

Gill: A-L-F, uh-huh.

Nelson: What did you do there?

Gill: So I did-- I wrote some of the disk duplications software and I wrote an ear training piece of software, which they used because they sold it to schools. So pitch discrimination, chord recognition, all those kinds of things.

Nelson: Oh. That sounds fantastic.

Gill: It's kind of fun.

Nelson: Yeah. Helpful.

Gill: Mm-hm.

Nelson: Okay. So while you were still at Hewlett-Packard and ALF, did you learn some stuff about software and about business as well or were you mainly just working on the software?

Gill: I was just working on software. That said, you know, I got to see the QA processes, the business processes that HP used, which were, you know, designed for a large company, and then I go to ALF, which is like six of us. I <laughs> get to see the processes that a very small company use, and so actually that was, for starting my own company, that was great, because I understood how a small company worked and I understood how a big company worked and there was some fuzziness in between, but I kind of made that up as I went along.

Nelson: Excellent. So when you did start Quark, what exactly was the opportunity that you saw that you might be able to take advantage of?

Gill: Well, that-- so Quark was started literally because Paul Gomez lent me an Apple III so that I could write a word processor, and then when I got done with it, Paul said, "Well, I'll sell this for you or we can go into business together," and I said, "No, no. I'll sell it to you and I'll sell it to everybody else," and so fortunately at that point software sales were through a network of small computer dealers around the U.S., and Apple had a complete list of every Apple computer dealer, and therefore I had a complete list of who to mail to, and so my very sophisticated marketing was to print a letter using the word processor and send it to all the dealers saying, "This was done with this word processor on the Apple III," and that, because there was no other alternative, led to fairly rapid rise in sales. In order to print that letter, I had to borrow \$2,000 from my parents to get a letter-quality printer. But within three weeks I paid them back.

Nelson: <laughs>

Gill: And, yeah, interestingly, years later I was talking to my parents about them loaning me the \$2,000 and they said, "You know, we didn't think those computers were ever going to be anything and we never thought we'd see our \$2,000 again." <laughs>

Nelson: But they loved you and they trusted you and--

Gill: They-- yeah, well, they--

Nelson: --wanted to support what you're doing.

Gill: I don't know whether they trusted me, but they at least loved me.

Nelson: <laughs> Aw.

Gill: And so it all turned out well. I gave them some stock in Quark, the European Division of Quark when we set that up, and so when I cashed out they got some money as well.

Nelson: They got their \$2,000 back.

Gill: They got-- well, they had gotten that long ago.

Nelson: <laughs> Okay.

Gill: They got a lot more than \$2,000 back when I sold Quark.

Nelson: <laughs> Right. You know, that story about sending out the letters to all the Apple dealers, Apple basically followed the same playbook when the Macintosh and the LaserWriter was released.

Gill: Mm-hm.

Nelson: They sent out packets to everybody.

Gill: Right.

Nelson: You know, "This was produced on a Macintosh using the LaserWriter."

Gill: Yeah.

Nelson: I have one of those packets.

Gill: Yeah.

Nelson: Yeah, they did the same thing, and it worked.

Gill: Yeah, and it works.

Nelson: It totally works. So the-- where'd the name come from, Quark?

Gill: Quark. So that was-- so I built a word processor, didn't have a company.

Nelson: Okay.

Gill: And my--

Nelson: What was the name of the word processor?

Gill: Oh, yeah, that's true. We didn't talk about that. So I had built this word processor for the Apple III and it had no name at this point, but we were about to start selling it, and my boyfriend at the time was kind of helping me with logistics and things like that, and so we're sitting there trying to figure out the company name and the product name and it's two in the morning and we're both kind of punchy, and so I said, "Well, we should just call the word processor Texticle."

<laughter>

Gill: And unsurprisingly, unfortunately, he didn't like that, and I-- he had mentioned Word Juggler as a name for the word processor and I really disliked that, and I had also mentioned the name Quark for the company, and that was, you know, A, it was a term taken among other places, from nuclear physics, which I was kind of enamored with, but B, there were no other companies. If you looked in a magazine, like, Mac-- this was before *Macworld*, but if you looked in the list of advertisers there were no Qs, and so I thought, "I'll get my own letter if I call this Quark," so we compromised and I got to name the company Quark and he got to name the word processor Word Juggler, so...

Nelson: <laughs> And Word Juggler did really well, didn't it?

Gill: Word Juggler did really well on the Apple III. Of course, it was really kind of the only game in town. We then ported it to the Apple IIe once there was-- the Apple II didn't have upper and lowercase. The Apple IIe did. So once that was there we ported to that, and-- and then in the Apple II space, we were probably the number three word processor. A much, much bigger market, but I think WordPerfect was big and there was one other product whose name I'm blanking on at the moment that was big and we were number three.

Nelson: Okay.

Gill: And actually, QuarkXPress was-- there's another computer, which you may never even have heard of, called the Apple IIGS. It was a follow-on to the Apple IIe with a newer, better, faster processor and-- but still very kind of Apple II-like, and we were going to port our word processor to the Apple IIGS and release that when Apple released the Apple IIGS, and they were going to have a C compiler for it and everything like that. So I thought, "Well, we'll just port it," because the original word processor was all written in assembly language, and then we-- so we decided we would port it and put it in C, and there was no C compiler for the IIGS, so we did it on Mac, figuring that we would then be able to do it-- because we didn't want to get in the Mac part because there're other people there. We wanted to be the first on the IIGS, and so we would port it to the IIGS when they had their C compiler, and they kept delaying and delaying and delaying, and therefore, as good engineers, we kept adding features and adding features and adding features, until we had built something that was no longer a word processor, it was a desktop publishing system, and it wouldn't have run on a IIGS anyway, because it didn't have enough RAM. So... <laughs> So that's kind of how QuarkXPress started.

Nelson: And that's why you moved to the Macintosh.

Gill: We moved to the Mac because we had used it, we were using it, as a cross-compilation system, and then it just become a thing.

Nelson: I'm not hearing IBM PC show up anywhere in this conversation.

Gill: No, you aren't. IBM PC was something that was very, very much later. That was-- I'm trying to remember historically. I think when we started moving it over to the Mac, this was long before Windows, and then they came out with Windows 1.0, which if you ever had to use Windows 1.0 you'd know was somewhat less than ideal.

Nelson: <laughs> Are the sarcasm quotes coming in there?

Gill: Yes, the sarcasm marks should go on that too.

Nelson: <laughs> <makes air quotes with hands>. <laughs> Okay.

<laughter>

Nelson: Yeah.

Gill: But yeah. So...

Nelson: <laughs> Okay.

Gill: So we eventually did move over to the IBM, but the whole center of gravity of the design and layout market was all on Mac at that point, and so it only ever represented maybe a quarter of our sales? I don't think it got as high as a third.

Nelson: The PC, the Windows version?

Gill: The Windows version, yeah.

Nelson: Okay. Did you have some kind of exposure to the graphic arts and graphic design software before you did all this?

Gill: Oh, no. <laughs> I'm a Math major.

<laughter>

Gill: So the only exposure I had was back when we were doing the word processor. I wanted to do higher-quality output. This was, obviously, long before laser printers. We had standard typesetting

systems, and so one of the things that the word processor had was the ability to add the equivalent of what on QuarkXPress you would call extensions, and so I built an extension for it called Typeface and--

Nelson: Was that a common thing then?

Gill: No.

Nelson: Extensions for software?

Gill: No. So that was completely uncommon. It came from, when I was at HP, so HP desktop calculators had ROMs you could, you know, ROM packs you could stick in them to add new things. Right? And the system that I worked on, the HP 250, we didn't have ROM packs. What we did is we had disk resident ROMs is what I called them or DROMs, and so they were essentially like, you know, like plugin ROMs for HP pocket-- desktop calculators, and so essentially this was like that, right? It was an extension to a product that was disk resident, and that later became extensions in QuarkXPress. But I built this thing called Typeface, whose mission in life was to let the word processor talk to traditional typesetting systems, and so it would cost us--

Nelson: Wow.

Gill: --back then, if I wanted a page typeset, it was like 75 bucks.

Nelson: Right.

Gill: And, you know, we're a small company. We're going to do a bunch of pages over time. I don't want to pay 75 bucks, and so I probably spent a lot more than 75 bucks times however many pages we produced with it, writing a piece of software that could do that, but then it was like five bucks a page for me to do this at this local typesetting house, and so that was kind of my only exposure to high-quality graphics.

Nelson: So out of business necessity, in your mind, you decided to do an end run on what was a standard process of give a typesetter typewritten stuff, they typeset it, you wait a while, it comes back and then you use it in your printed materials.

Gill: Yeah, and so for this I would just take my computer and I would plug it in with our typesetter and I would press the magical button and then I would get typeset copy out almost immediately.

Nelson: That's a big advantage, both in cost and time.

Gill: Yeah, it was, and so it's the thing that when we started doing QuarkXPress, it was a big leap that we would want to have high-quality output.

Nelson: There was also a product, Catalyst?

Gill: Uh-huh. Yeah, so there were a couple products in there before QuarkXPress. There were two. One was called Discourse and one was called Catalyst, so--

Nelson: What was that first one, "Disk..."?

Gill: Discourse.

Gill: Yeah, 5-megabyte disk. Imagine that.

Nelson: Yeah. The size of a--

Gill: Huge.

Nelson: --of a Macintosh.

Gill: Yeah. But despite the fact that it had a hard disk, there was no way to put programs on the hard disk. If you wanted to switch from a word processor to this, you had to stick in the disks and reboot the machine.

Nelson: The floppies.

Gill: The floppies.

Nelson: Yeah.

Gill: And so what Catalyst was, it was a system for moving programs from diskettes onto the hard disk, so it could essentially reboot from the hard disk.

Nelson: Brilliant.

Gill: And it did it and it preserved the copy protection of the product when it did it, so... Because there were a lot of things that were shipping copy protected. So we had to, A, break the copy protection in order to get it on there in the first place, and then, B, move it on-- preserve it so that someone couldn't take what was on the hard disk and move it to someplace else. So we did that and that was Catalyst, and then Discourse. The other thing was, when you printed from your word processor and you wanted to print a 50-page document, your computer was essentially unavailable for the entire time that you were printing. In normal computer science parlance this is called spooling. So what you want to do is you want to take the output, put it on a hard disk and send it to the printer in the background so that your computer is free, and so Discourse was a spooler in simple terms.

Nelson: I remember that, because there was no multitasking.

Gill: There was no multitasking.

Nelson: It could do one thing at a time, so if you were--

Gill: It could do one-- mm-hm.

Nelson: --printing, you were printing.

Gill: Right.

Nelson: Uh-huh.

Gill: And so it's a limited kind of multitasking that I built, and we actually sold a bundle of Catalyst and Discourse to Apple, which they bundled with their hard disks for a while. I think we sold five million dollars' worth of that. I don't know how many units that was, but that was my one experience bundling with Apple.

Nelson: So you had to have some money to make all this happen, and the lore about Quark is that you got this \$2,000 loan from your parents.

Gill: Uh-huh.

Nelson: Is that the same 2,000 we talked about earlier? So the--

Gill: Yes, so the 2,000 we talked about-- yeah, there's-- so the funding for Quark was the \$2,000 I borrowed from Mom and Dad to buy the printer, okay? And then there was other money because, you know, while I was developing this I had to live in my apartment and I had to pay for food and all that kind of stuff, but that was just money that I had saved up because I didn't spend a lot of money, and-- but I also didn't keep track of that, so I have no idea how much that was but, I mean, it wasn't hundreds of thousands of dollars or anything. It was, you know, thousands of dollars. So that was kind of that, and we never really, you know, today everybody goes out for venture capital for things. I did need a loan at one point when we were a little strapped for cash and I got a \$50,000 loan from the bank, and we--

Nelson: So like a small business administration loan or just a straight up loan?

Gill: No, no. No. It's just from the bank.

Nelson: Okay.

Gill: And the fascinating thing about that was-- well, first of all, we paid it back pretty quickly, but, you know, within a couple months, but the thing was that the president of the bank was so enamored with the idea that he was making a loan to a high-tech company, he just gave us the loan without any background check, looking at financials or anything. So that was kind of fascinating, but...

Nelson: Did you look for that kind of deal in the future?

<laughter>

Gill: Yeah, I-- again, that wouldn't-- everyone's wise to that now. No one would do that now.

Nelson: <laughs>

Gill: But at the time it was very helpful. So those were kind of the only two financial transactions-- that and the \$2,000 from my parents and then the \$50,000 temporary loan from the bank.

Nelson: So other than that then, there wasn't a whole lot of investor type of involvement?

Gill: Zero.

Nelson: None at all?

Gill: Nope, nope, none at all.

Nelson: Okay. No board of directors?

Gill: The board of directors was me and Mark, my boyfriend at the time, and then when Fred came into the company--

Nelson: Mark Pope?

Gill: Mark Pope.

Nelson: Mm-hm.

Gill: When Fred came into the company, Fred Ebrahimi, then he came in and he bought shares from me and shares from Mark, because it was 50/50 between me and Mark, and when Fred came in he bought enough so that was a third, a third, a third, so-- and then over time, the company bought back Mark's shares so that he would drop to a 10 percent share.

Nelson: Because he didn't want to be involved so much with it?

Gill: Yeah, he didn't want to be involved so much.

Nelson: Okay.

Gill: His degree was in Architecture so, I mean, he was good at, like, doing purchasing and things like that, but he, you know, the core of the company was not something that was in his bailiwick, really.

Nelson: Okay. So with Mark less involved and you and Fred running the business, were there other people involved with that? Did that team change or grow-- or stay the same for a while?

Gill: In terms of ownership, that was it.

Nelson: All the way until you left, right?

Gill: Yeah. So even-- at some point we bought out Mark's last 10 percent too. Mark was getting nervous about the way we were spending money and afraid we were going to, like, crash the company and make his shares worth nothing, and so we arranged to buy his shares out.

Nelson: Okay.

Gill: And that turned out to be a good decision for us, so...

Nelson: <laughs> It sure was, but nobody knew at the time what was happening.

Gill: Mm-hm.

Nelson: But there was that incredible growth of the desktop publishing market that occurred right around that time.

Gill: Mm-hm. Yeah.

Nelson: What's your perspective on that growth of the desktop publishing market?

Gill: Perspective in what way? I mean...

Nelson: Well, you know, the Macintosh obviously had a great deal to do with it and Adobe's PostScript and the LaserWriter was the trifecta-- you know, the things that made it all possible for that to grow the way it did.

Gill: Yep. Yeah, and so it was interesting because-- so our, one of our main competitors once we got into doing QuarkXPress, it was either Design Studio or Ready-Set-Go! depending on where you're talking about historically, and Aldus PageMaker. Aldus, because Apple was positioning Mac as the computer for the rest of us, right? So it was kind of like supposed to be mass market, not high end at all, and yet it could do all these things that very, very high-end systems in publishing that existed at the time couldn't do. It could do WYSIWYG, <laughs> and so--

Nelson: What you see is what you get.

Gill: Is what you get.

Nelson: Mm-hm.

Gill: And so-- and it was cheap enough that it could do it in-house, and so while Aldus was busy positioning PageMaker along the Mac line saying this was publishing for the rest of us, we were positioning QuarkXPress and saying, "No, this is professional publishing," and we did that in a couple ways, one of which was to price the product a hundred dollars higher than Aldus PageMaker, and then of course we had to deliver in terms of feature set, and Version 1.0 really didn't. By the time we got to 2.12, it was really meeting that mark, and then when we released Version 3.0 of QuarkXPress, then it really was very, very high-end publishing. But during that time, Aldus would come out with a new version. We would come out with a new version, and they figured out that they had underpriced their product, and so they brought their price up to our price, and then when we would release a new version I would add a hundred dollars to the price, because, after all, you know, you don't buy a Volkswagen or Mercedes for the same price and you shouldn't buy publishing for the rest of us and a professional publishing system for the same price either, and so I think-- I can't remember whether we started at \$295 or \$395. By the time I left Quark I think it had topped out at \$895 being the suggested retail price or \$995 being the suggested retail price. It's come down since then.

Nelson: So that difference then between PageMaker and QuarkXPress, you say, in your mind, PageMaker was the desktop publishing for the rest of us and QuarkXPress was the professional publishing package.

Gill: Mm-hm.

Nelson: That was my experience--

Gill: Yeah.

Nelson: --at the time, because it seemed like PageMaker had more of a just drag things into position and hope they line up kind of approach.

Gill: Yeah.

Nelson: And QuarkXPress was always a lot more precise and even mathematical in the way things related to each other in the program.

Gill: Yeah.

Nelson: So that-- would you say that that addressed a need for the professional publisher and designer that PageMaker wasn't doing?

Gill: Yeah. I mean, if you see how professional layout is done they have actual rulers with, like, little markings on them. <laughs> If you don't have a ruler with a little marking, you can't get it to look like you

want it to look. So that level of numerical precision, allowing people to have font sizes that weren't integers, that--

Nelson: Meaning?

Gill: Like, nine and a half point. You couldn't do that with PageMaker.

Nelson: Right.

Gill: So--

Nelson: It'd have to be 9 or 10.

Gill: It'd have to be 9 or 10, and that's not always what you need.

Nelson: Right. Yeah.

Gill: So-- and the operating system, the Macintosh operating system, was really designed to only do font size <laughs> 9 and 10, so do font size 9 1/2 was tricky.

Nelson: How'd you do it?

Gill: Horrible, awful, kludges and writing into operating system tables at opportune moments.

Nelson: Mm-hm.

Gill: With modern operating systems, this is no longer an issue, of course, but at the time it was pretty messy the way we had to get there.

Nelson: I seem to recall that you had to sort of hack into the operating system to do not just that but printing, for example. You had to do some of your own printing.

Gill: Yeah. So one of the reasons we succeeded is so people would produce a high-quality page on QuarkXPress or PageMaker, for that matter, and they would take it to a typesetting service bureau to get their output produced, unless they happened to be super-large and had their own. But in the end, what happened was if you used the tools that Apple gave you for printing, all that precision went away. It was, you know, things were on one-point increments. Type was in one-point increments. Line lengths were in one-point increments, and so we literally didn't use Apple's driver for almost anything. Everything else was pure PostScript that we sent out, and so that had one other advantage to us too, is that, you know, Apple was not particularly focused on how-- as long as it printed, the Apple printing group was super-happy, and we, of course, wanted to print it fast, because typesetting service bureaus were saying, "We'll do your output for \$2.00 a page," or whatever it was, and if it takes them 10 minutes to render a page, they make a lot less money than if it takes them a minute, and so we spent a lot of time making sure that

we printed faster than anything else and so then the typesetting service bureaus can actually in many cases, they would go and replace Aldus PageMaker with QuarkXPress for free with their customers, if their customers did a high enough volume, because they made that all back in terms of the efficiencies when they were charging the customers a fixed price per page.

Nelson: Right. So as I recall, too, you mentioned the one point limit, you know, <laughs> in measuring things on the Mac at the time. Was that related to QuickDraw in the fact that they wanted one point to represent one pixel on their display--

Gill: Yes.

Nelson: --and their ImageWriters were, like, also set up that way?

Gill: Yep. Everything was-- it was 72 points per inch.

Nelson: Which redefined the point, correct?

Gill: It redefined the point. Well--

Nelson: Because it was 72 and change.

Gill: .72. Or 72.3. It depends on which system you had. Whether you had a Mergenthaler system or a Linotype system.

Nelson: <laughs> Yeah.

Gill: So it's not like it was a super <laughs> strict standard anyway.

Nelson: But it was enough, because I recall that if you had an old-fashioned typesetting ruler and you tried to measure something that came out of QuarkXPress or PageMaker, it didn't match up.

Gill: It didn't match.

Nelson: Right.

Gill: Yeah.

Nelson: Just by a little bit. If it was a, like, for packaging design, it was just enough to make it off.

Gill: Yeah. And so we all kept this, these 72 points per inch. The only difference was I let you. Actually, no, that's not true. In QuarkXPress there was an option to redefine the point.

Nelson: There was. To the--

Gill: To whatever the standard you wanted to use. So it wasn't Mac points and real points. It was how many <laughs> points per inch do you want?

Nelson: Want. That's right. Did a lot of people make use of that or...?

Gill: I really don't know.

Nelson: Yeah.

Gill: We, you know, it's funny, because the difference between now and then is there was really no good way to keep track of what people were doing, and now, you know, when they're browsing your web pages or something you get all sorts of metrics, so you know what people use and what things are important and what things aren't important.

Nelson: So then you'd have to ask them or hope that they'd call you with a problem that would indicate that they were doing something.

Gill: Yeah.

Nelson: That must've driven your mathematical mind nuts because you didn't know exactly what people were needing or wanting.

Gill: No. You know, you just learned to parameterize things that you didn't think you had to parameterize, <laughs> and the number of points per inch was not something I had considered I would have to parameterize.

Nelson: Wasn't on your radar. <laughs>

Gill: No, not originally.

Nelson: Yeah, that's right. So how about the development process of QuarkXPress? When you were first starting, of course, you were probably doing most, if not, all of it, right?

Gill: Yeah. So I'm trying to remember. There were--

Nelson: And you must've done some research too, to find out what, like we were just saying, about what people needed.

Gill: What people needed. That was Fred. Fred went around and visited publishers and brought back requests from them. So Fred was the research tool that we used.

Nelson: Fred was-- <laughs> Right. Was it just in the United States or did you go to other countries for that?

Gill: Initially just in the United States and then at some point he pushed us into other countries. About 60 percent of our sales and probably 90 percent of our profit came from outside the U.S., so... But it was initially all in the U.S., and we had a team which was me, Rick, Perry and Chris, so four of us, and this was before there were-- because it was largely before the internet. Not completely, but largely-- there were no real online tools for coordinating things. So today what I would do is I would-- and this is what we do here at Josh. We use a product called Git that lets us share code and push updates back and forth to each other and at the time that didn't exist, so what happened was I was the equivalent of Git and people would send me their changes and I would integrate all of their changes into the master set of source, which was on my computer, and so there were some great advantages of that. One of the things that you do when you write code, and what we do here, is when someone pushes changes it goes to somebody to review, right, and so it's just that when they gave me their changes I was the reviewer all the time. So I was--

Nelson: So you were aware of everything that was happening.

Gill: I was aware of everything that was happening, and so I had a fairly complete image of the entire code for QuarkXPress in my head at all times.

Nelson: That's perfect. Can we talk a little bit now-- switching a tad-- toward XTensions?

Gill: Sure.

Nelson: As I recall, you were a real champion of independent developers, and by having hooks in QuarkXPress so that third-party companies could write extensions for it, you created a substantial cottage industry, and I believe Quark was the first company to build a deep-level access for plugins into their flagship product.

Gill: Yep.

Nelson: That's right, so--

Gill: And it all started from my experience at HP where they had plugin ROMs.

Nelson: Plugin ROMs.

Gill: <laughs>

Nelson: And you saw the value of it.

Gill: Yeah. I mean, because we had used it on Word Juggler for typefaces, and I think there were probably some other XTensions, although I didn't call them that at the time, but, you know, some other add-ons to Word Juggler, and then so it was just kind of natural to put it into QuarkXPress and I can't remember what we used it for internally, but at some point we decided we would release that to

developers, and that intuition that that would help us came from looking at computer magazines, and if you remember Lotus 1-2-3?

Nelson: Mm-hm.

Gill: If you would go back in that time to look at any computer magazine, there was maybe a one-page ad for Lotus 1-2-3. Maybe a two-page ad. Maybe nothing. But all scattered throughout in typical-- in little tombstone ads, there were ads for add-ons, which were, you know, essentially templates for Lotus 1-2-3, and so the amount of pages of ads for those add-ons to Lotus exceeded the number of pages for Lotus, and so it's clear that there are people that want to do that and that they have particular niches they can contribute to, and so we released XTensions to people and let them-- because there were all sorts of, like, crazy, high-end things that we were never going to do, and so we released that thinking that's what people would do, and some people did, like, little utilities that were sometimes, like, trivially obvious features that we hadn't gotten to yet, and so they were going to get crushed by our next release and we would say, "You know, you can do this and it'll be great for a little while. You just have to realize that it's going to get crushed by our next release, and if you want not to get crushed by our next release, you should do something novel and interesting and more high-end." But there were hundreds of XTension developers, hundreds of-- hundreds and hundreds of XTensions. There was a company that essentially was the aggregator of XTensions so that they would sell them all. So there was a catalog you could-- so we kind of helped with that marketing process, and it worked out really, really well, and Aldus was considering doing plugins and their tech support and our tech support talked all the time, and at one point their tech support had called ours and said, you know, "So what about these XTensions?" you know. "How does that work?" and I said, "When you talk to them, tell them it was a terrible idea and that you wish you-- that we wish we'd never done it."

<laughter>

Gill: And I don't know how long that might've held them off for, but I think from the time I remember making that comment until they released their plugin architecture, it was, ah, probably nine months, maybe as much as a year?

Nelson: Okay.

Gill: I'm not quite sure.

Nelson: So they didn't put it on the front burner, they put it on the back burner?

Gill: They-- yeah.

Nelson: But--

Gill: I hope so. I mean, I would like to think that my little white lie--

Nelson: Yeah.

<laughter>

Gill: --bought us a little time, because they were big. They were much bigger than us at the time, so...

Nelson: Right. We'll get back to that.

Gill: Sure.

Nelson: And to be clear now, so XTensions, being plugins for QuarkXPress, tapped deeply into the architecture of QuarkXPress so that developers could create new functions and new abilities in QuarkXPress that didn't exist, and that's very different from a template like you were talking about for Lotus 1-2-3, where all you could do is take what it already did and make a preset layout or whatever.

Gill: Yeah.

Nelson: Okay.

Gill: Yeah, no, no. I wanted them to be able to, I mean, because we were using the architecture for some of the work we did, and so I--

Nelson: Mm-hm. Well, that left you open to add things. Like, let's say, for one platform and not the other. You could add things for Macintosh that you couldn't do on Windows.

Gill: Sure. Yep, yep, you could.

Nelson: Because you could plug it in and you could make an extension that just worked on Macintosh.

Gill: Right. Yeah.

Nelson: Using--

Gill: And most people-- I mean, the number of Windows extensions was small just because the Windows market was so small.

Nelson: Right.

Gill: So most all the real designers were, to the chagrin often of their IT departments, were using Macs.

Nelson: Right. I know.

<laughter>

Nelson: Yeah. Now, was there more to this idea of allowing small or even large developers to add capabilities to QuarkXPress more than just the business aspect of it? Did you have-- I always had a sense that you had some kind of soft spot in your heart for smaller developers who wanted to create their own little business, and you were providing them an opportunity to maybe start that up.

Gill: Well, I mean, you know, so I started as a small developer, and so yes. I have incredible soft spot for people who want to start their own business, and, you know, in the end they have to make a decision about whether this is the thing to do or that is the thing to do, but I wanted to make sure that if they wanted to be in the publishing business that they had an opportunity to do it with us, and it worked out well. A number of companies were constructed that way, and so that makes me pretty happy.

Nelson: You had a whole department at Quark called XTensionland; is that right?

Gill: <laughs> Yeah. XTensionland, which I think it was basically--

Nelson: To manage the XTension developers.

Gill: --To manage the XTension developers. So in some sense it was like an evangelist and a tech support arm and things like that. You know, what I-- so I mentioned earlier I talked about us making things fast for service bureaus, and we actually built some of our own XTensions just for service bureaus to help them do their jobs better. But what I looked-- the way I looked at a service bureau in some sense is it's a free sales force, by which I mean they're going out and selling and they're not on my payroll. Now, it's not really free because I'm supporting them and doing things for them and things like that, and XTensionland was the same thing. It was... the XTension developer then runs ads, they go out and try to sell their product, and so they're another free sales force, and I just have to supply them with the support and tools in order for them to do that.

Nelson: And also a bit of trust, right, because they had to feel like you weren't going to, like you mentioned earlier, take over what they're doing with the next version of QuarkXPress and put them out of business?

Gill: Yeah, well, and--

Nelson: It seemed like you had a good communication there with the developers.

Gill: Yeah, and, you know, like I said, there were any of a variety of XTensions and they sometimes-- they eventually realized that if you do something that's small and obvious but terribly, terribly useful, that's something we're going to do because that's-- the product should do all the simple things, right, and the vision for XTensions was that it did-- complicated things, things that were rare, things you could charge more money for, and so those kinds of products, of course, never got smashed, because there was just-- we would never-- we would, you know, we wanted to do things that 90 percent of the users would use, not 20 percent or 30 percent of the users would use.

Nelson: Right. Yeah, I remember a number of XTensions that were, like, full-blown programs that somehow tapped into QuarkXPress to do part of what they wanted to do.

Gill: Yeah.

Nelson: Really amazing.

Gill: Yeah.

Nelson: Piggybacking almost. Yeah.

Gill: Mm-hm. Yeah, a well-designed XTension architecture can make you magical, and then you just have to have enough market share, which we did, so that those people could actually make money at it.

Nelson: And you seemed to get a tremendous amount of respect from those developers for the quality of the architecture.

Gill: Yeah, yeah. They were-- they were great.

Nelson: Yeah. AppleScript.

Gill: Yes.

Nelson: Now, AppleScript is different from XTensions.

Gill: Mm-hm.

Nelson: Can you talk about your--

<laughter>

Nelson: Yeah.

Gill: My love/hate relationship with AppleScript?

Nelson: Exactly. So first of all, AppleScript is...?

Gill: Yeah. So AppleScript is a system that Apple devised for automating arbitrary programs on the Macintosh platform, and so the theory was that you could then write a program in AppleScript that would pretend like it pressed the Print button or it pretended like it, you know, did any of a variety of things, and it was a novel language that they wrote. It was kind of an ill--

Nelson: Does "novel" have the sarcastic tags?

Gill: No.

Nelson: No?

Gill: I mean, a little bit.

Nelson: Okay.

Gill: You know, there was a period of time where if you remember HyperCard?

Nelson: Sure.

Gill: HyperCard was “programming for the rest” of us and once HyperCard was out no one was going to need programmers anymore, and I don’t know if you remember that--

Nelson: <laughs>

Gill: The claim that some people were making, but, you know, the idea was that AppleScript was something that the average Joe could use to program, you know, to automate their system, and it just was not designed in a way that the average Joe could do something. It was a little too complex and abstract. So that doesn’t make it bad. It just means that it didn’t hit that mark, I think, that they were going for, because it still required someone with a fairly sophisticated computer sciencey mind, and so we supported AppleScript some extent, but the extension architecture was more capable, because you could get in and fool with all sorts of fairly low-level things, and so we didn’t spend too much time with AppleScript. Apple... We had a kind of I don’t want to say quite a love/hate relationship with Apple. Kind of. Depends. You know, because Apple would--

Nelson: Depending on...?

Gill: Apple would come out with, you know, different things that they wanted all their developers to support and often we would look at them and say, “Well, but this doesn’t help our market,” and so then they would get mad at us. Steve would, like, call us and try to cajole us into doing something, and eventually we would look at it and say, you know, “This isn’t--” and then he’d get mad at us. <laughs> But when things just didn’t really serve our market, so-- and then we also were-- I’m kind of a-- I don’t want to call myself quite a technological Luddite, but I don’t believe in adopting new technologies on the very first version because the very first version doesn’t ever work quite right, and so it doesn’t bother me that when new technology comes out, you know, if we’re six months later or three months later or something like that, it seems to me like that’s always the right amount of time because you kind of can let that technology settle down and get its bugs worked out. So when Apple came out with new operating system features that they wanted to support, we were kind of slow, and at one point they came up with their help system. I’ve forgotten what it was called. Where you could like set it in Help mode and scroll over the top of things and it would tell you what to do, and I calculated that it would take us an entire extra diskette in order to put enough help there to kind of meet the requirements they wanted, and we were already I don’t

remember how many diskettes, and I was going, “You know, this is not worth it. It’s not worth--” you know, it was-- so a million users at a dollar a diskette, that’s a million dollars.

Nelson: Oh!

Gill: And so for a million dollars I could hire a lot of engineers and do a lot of cool things rather than putting out a diskette with kind of lame help on it.

Nelson: Uh-huh.

Gill: If it’d been good help that might’ve been a different thing, and of course now anymore you put all that stuff on the web and it wouldn’t cost a million dollars. <laughs>

Nelson: Yeah. But then it was a serious factor.

Gill: Mm-hm.

Nelson: That makes total sense. Speaking of love/hate relationships then, should we talk at all about magazines?

Gill: Sure.

Nelson: So *Macworld*, *MacUser*, were the main magazines.

Gill: Mm-hm.

Nelson: There was also *MACazine* and *PC User* and like that.

Gill: What was the-- what was Dan Brogan’s magazine? Dan Brogan came to work for us eventually and now, course, he publishes *5280* magazine here, but--

Nelson: I remember.

Gill: --I’m trying to remember what it was called. Anyway, might’ve been *Mac Publishing* or *Mac Publisher*?

Nelson: I can look it up³.

Gill: Yeah, anyway, so yeah. That was-- the magazines were interesting, because, of course, you know, we advertised some. We didn’t advertise as much as our competition, but *Macworld* in particular had a

³ [Editor’s note] In one email Dan Brogan replied “I was Editor-in-Chief at *Personal Publishing*, which was the very first magazine covering the desktop-publishing industry.”

Top 10 Products in, you know, different categories, and so one of them was publishing, and Aldus PageMaker was always number one, just always number one, <laughs> and we heard that what happened was the publisher of *Macworld* had said, "We have a strategic relationship with Aldus," which, of course, means that Aldus gives them a lot of money, and so they actually, the way they compiled those statistics was they would call computer stores and ask them, you know, what they were selling, and so what they did was they optimized in favor of computer stores that were selling Aldus PageMaker, and so the numbers were completely skewed, and it was annoying at first, but it was good in the end because we knew that the numbers were cooked and we knew what our sales were and we had a way to estimate what their sales were. So we could use that for guidance. Meantime, to the extent that Aldus doesn't have that information, then they're busily thinking that they're number one, and they're not number one. <laughs>

Nelson: Which was a competitive advantage for you, right?

Gill: It's a huge competitive advantage for them not to be panicked about doing new stuff. So it would be interesting to talk to Paul Brainerd and, you know, get his perspective on that, but I think they had the illusion that they were number one for a lot longer than they actually were.

Nelson: I imagine he was happy until he wasn't happy; is that what--

Gill: Yeah. I mean, at some point they must have figured it out.

Nelson: Well, you told me one time years ago that you always-- a piece of advice that I've taken with me-- you always want to look bigger than you are to your customers.

Gill: Yes.

Nelson: And smaller than you are to your competitors.

Gill: <laughs> Yeah.

Nelson: And that's pretty much what you did right there, right?

Gill: Yeah, yeah.

<laughter>

Gill: Well, and we had unwitting help with it, so... <laughs>

Nelson: Yeah, through a bad wall between editorial and advertising in a magazine.

Gill: And advertising, yeah.

Nelson: Yeah, or no wall, I guess.

Gill: No wall, really.

Nelson: Ah, that's too bad. Let's talk about education.

Gill: Sure.

Nelson: I'm just going to say that I think Quark had the absolute best training infrastructure in the industry. Called it QuarkEd. It spawned hundreds of Quark authorized training centers around the world and it provided a step-by-step professional course and workbook for the trainers and the students.

Gill: Yeah.

Nelson: Do you want to talk about that?

Gill: Yeah. So if you think back to the Apple II days, Apple II was like the number one computer in education, and they lost that eventually, but it is really clear that people got out of college and then they wanted to use the same kind of computer that they were using and they wanted to use the same software that they knew, and so it was really important for us to make sure that we got people hooked as soon as possible, which is why there are educational discounts on QuarkXPress. It's why we had a whole collection of training things, people wrote books, and that is another part of the infrastructure too is, right, when someone writes a book, that's like an ad for you. It just happens to be an ad that sits on a bookshelf in a bookstore. It's not as effective anymore, of course, now that you don't have bookshelves and bookstores quite so much as you used to.

Nelson: Right.

Gill: But that's-- it's all about enabling those kinds of things and enabling people to know how to use the product in a way that makes them maximally efficient.

Nelson: Right. Okay. And that really, really worked work QuarkEd, I thought.

Gill: I think it did, yeah. I mean, I, you know, I think we did a lot of things right. I think we did some things wrong, some of which we corrected. Not all of them, and then I think we were really helped by the fact that Aldus was not paying attention, I think, to the right things, and so they were led into a false sense of security about their place in the market.

Nelson: Well, let's talk about that market and let's talk about customer numbers and stuff like that since we're there.

Gill: Sure. If I remember them, yeah.

Nelson: Yeah. So some of the questions that, you know, always come up are numbers of customers over the years. Any ballparks on that?

Gill: I can-- let's see. I can probably do a quick calculation in my head. So we probably sold-- because at our peak we were selling around 300 to 330 million dollars of stuff a year, and so that was a combination of new product and upgrades, so we probably had over a million units sold. It might've been-- I don't think it was as high as 10 million. You know, that I'd actually have to ask Fred. Fred would have a better sense of that than I would ever. <laughs>

Nelson: Okay. And that translates to, like you said, maybe a million users?

Gill: It's-- yeah. I mean, since we did that for multiple years it had to be over a million users, but I'm sure, I'm pretty sure, it wasn't even as high as 10, so...

Nelson: Okay.

Gill: And that's worldwide, so...

Nelson: Okay, and that's worldwide.

Gill: Yeah.

Nelson: So your key challenges with the-- well, your costs of producing the thing, both in terms of development and the physical shipping of the product and such, you want to talk a little bit about those key challenges of the costs of producing it and distributing it?

Gill: Yeah.

Nelson: And did you work through distributors or did you sell direct? How did that work?

Gill: We sold direct in the U.S. We worked through distribution outside of the U.S.

Nelson: Okay.

Gill: And there was just no way. So the distributors were in-- outside the U.S. were then responsible for the tech support and so on and we were just responsible for tech support inside and then providing them tech support so they could do tech support. The big challenge was-- so the wonderful thing about software today is to the extent that it's distributed over the internet you can push a button and update everybody's software. <laughs>

Nelson: But back then it was a big deal.

Gill: Back then <laughs> if you--

Nelson: The bigger you were the harder it was, right?

Gill: Yeah. And so when you had a million-user install base and there was a bug you critically had to fix, that means sending out a diskette to everybody with the patches on it, and that meant making an error cost millions of dollars.

Nelson: I seem to recall an estimate of \$25 per time that happened, per unit, per time that-- even though the diskette maybe cost you a dollar, the whole cost of producing it and shipping it and managing that was more like--

Gill: Yeah, I don't think it was that high as \$25, no.

Nelson: No? Okay.

Gill: It shouldn't have been. Something would've been terribly wrong if it was \$25.

Nelson: Okay.

Gill: But yeah, so it was--

Nelson: Several dollars anyway.

Gill: It was several dollars.

Nelson: Postage and packaging.

Gill: It was several dollars' worth of, you know, cost for every one, and so that was always-- you wanted to be super careful and then you wanted to not ship out bug fixes too soon because if you shipped out a bug fix and then two weeks later you have another one, then there goes another million units, <laughs> several million dollars to upgrade people.

Nelson: I can imagine the anxiety of that moment where you say, "Okay. We ship it now."

Gill: Right.

Nelson: Phew. Wow. So how did you market then? How did you market QuarkXPress in the US and internationally, and what kind of markets did you aim for?

Gill: So we specifically said that we were kind of for more professional publishing. That said, when there's only a hundred-dollar difference between the Volkswagen and the Mercedes, why wouldn't you buy the Mercedes? And so we very much relied on that fact, but we had a group of salespeople in the US, and they were responsible for supporting the dealer chain. And then everything else was word of mouth, so a lot of sales were done because *Time* magazine used us. The *New York Times* would

continually talk about using us, but it took them forever to adopt us. They were the slowest I think of all the newspapers and magazines in terms of adopting new technology. I can't remember when they first did color on their front page, but it took them years after everyone else was full color before they even tried to run a color page <laughs>.

Nelson: They were called the Gray Lady, weren't they? Yeah.

Gill: The Gray Lady for exactly that reason.

Nelson: Okay. And aside from newspapers, what other markets did you try to get into?

Gill: So newspapers and magazines were kind of who we thought of ourselves as being focused on, but brochures, so kind of design and creative work was fairly high up there, and then there were a ton, a ton, a ton of newsletters that were little, small organizations. But when you think about it, the reason I said earlier that we sold more outside of the US than in the US is, when you do a magazine in the US, you have a market of hundreds of millions of people maybe, at least 50 million people, 'cause the kids probably aren't reading stuff like that. But when you go to Europe, all of a sudden there's not one massive market, so you have a magazine that goes to France, you have a magazine that goes to Germany, you have a magazine that goes to the Netherlands, all in a different language. And so the net result is there's more pre-press activity per capita in Europe than there is in the United States, and that was one of the reasons that we were in 13 languages I think in the end.

Nelson: And that was usual in itself, right? There was no other product that did that.

Gill: No, I think everybody did to some extent, and Fred certainly pushed us in that way earlier than I would have tried to push us. But I think we probably did more languages than anyone. I think it ended up being maybe 16 languages by the time it was all said and done.

Nelson: Right.

Gill: And then for some languages, what we would do is just build a set of <sighs> hyphenation rules for them that they could use, and that was an XTension that would add hyphenation for Tongan or something like that. And so they'd use whatever language they all knew, but then they'd insert something that did the hyphenation for their language, and so we got into those markets as well.

Nelson: Gotcha. So what--

Gill: The Mormon Church was very big on that, because they do publishing essentially everywhere in the world.

Nelson: Oh, okay.

Gill: Yeah.

Nelson: So there was a really rapid, it seemed, growth in the desktop publishing market at that time that Quark led or rode during that period, almost a hyper growth situation where I would imagine it was a challenge for Quark to keep up with developing the product and getting it out there. Can you talk about the market's reaction to QuarkXPress with the rapid growth of the market and your dominance in it? Were people cool with that?

Gill: <laughs> Probably depends on who you talk to. As long as we're providing a quality product, then those people who want the quality product are cool with it. So anytime you get a new technology, it creates jobs and it obsoletes jobs, so some of the old typesetters didn't adapt fast enough. Some of them converted into PostScript service bureaus and kind of rolled with the punches. And then even within newspapers and magazines, it was interesting to watch. Like I said, The *New York Times* was one of the last ones to really adopt that technology as opposed to, say, the Condé Nast publications, which were pretty right on top of it. And *Playboy*, too. If you remember Eric, whose name I'm blanking on at the moment--⁴ anyway, he would always get up and do presentations at the conference, the pre-press work at *Playboy*, and everyone was just all fascinated about the fact that *Playboy* was doing the presentation.

Nelson: That's great! The main players in the computing publishing world at the time were Quark with QuarkXPress, Apple of course, Microsoft, Adobe and Aldus. And Aldus was definitely a competitor, but Apple and Microsoft, Adobe at the time were more on equal footing with you guys with what they were trying to do. What kind of relationship did you have with those companies?

Gill: So first of all, we weren't in the Bay Area, and neither was Aldus actually; they were up in Seattle. So for the most part, we didn't have close, personal relationships with them, so we thought of ourselves not as a computer software company but as a publishing company providing pre-press tools. And so, yes, we were dependent on Apple in terms of what their operating system was like and things like that, but they weren't a huge consideration for us. And Adobe at the time was doing-- well, there were two products, right? Illustrator and FreeHand for doing high quality graphics, high quality line graphics. And so we had to work with them, but there wasn't a lot of close integration, and it led to some problems with this very abstract concept, if you're not in the publishing industry, called trapping, which has to do with the alignment of elements on the page in such a way that you don't get color fringes. So that was an ongoing discussion that we had with the developers of those products.

Nelson: Didn't Microsoft come into it at all with you?

Gill: Microsoft had Microsoft Publisher, but it really was publishing for the rest of us, so it was pretty low-end. And it was great for newsletters and things like that. It really didn't get anywhere beyond that. So I'm trying to remember. The three products were Aldus PageMaker, QuarkXPress and either Ready, Set, Go! or Design Studio. Ready, Set, Go! turned into Design Studio later. And so those were kind of the three major products, and the press loved the fact that they were like three people battling it out for dominance.

⁴ Eric Shropshire

Nelson: Sure.

Gill: And so they played that up a lot, even though in the end, Design Studio had something-- I don't want to say zero market share, but very small. But they kept them up there as the number three for a long time, just because I think they liked the story that it told.

Nelson: And it made a nice chart. You could do a chart of features.

Gill: Yeah.

Nelson: Here's what PageMaker does, QuarkXPress does and Ready, Set, Go! does, and people like to read that.

Gill: Right. And people like to read that kind of thing.

Nelson: Yeah, that makes sense. Now, Microsoft, though, I'm thinking QuarkXPress needed to support the Microsoft Word and potentially Excel, I guess, data format so that someone could enter data in Microsoft Word or Excel or whatever and then bring it into QuarkXPress and format it professionally.

Gill: Sure. Yeah.

Nelson: Was that an easy thing to do for you guys?

Gill: <sighs> I think Microsoft Word was the hardest, because they had both the poorest documentation and they kept changing faster. Some of the other products like WordPerfect were very, very popular at the time, and that had a fairly well-defined format, and so that one was easier. But in the end, you do the best you can to import that and preserve faithfully the intentions of the original text in terms of coloring and size and so on, but you can't always do it perfectly, and so people would end up having to go in and reformat things into final form.

Nelson: And they would blame you for that, right?

Gill: No, not usually, because they knew that the fact that we do drop caps and that can't really be done in Microsoft Word at the time-- can now, but at the time it couldn't, and so they knew that.

Nelson: Okay, fair enough. Most of this wild activity was going on I would say in only the '90s, right? From the early '90s up through that whole decade. And I have to think that your role at Quark and with QuarkXPress and other Quark products changed over that period of time, partly because of the hyper growth of the market and all the rest. How did your role change from, say, the late '80s up through the '90s? Was it still the same?

Gill: So when we were very small, of course then you do everything, right? You write code; you shrink wrap boxes; you answer tech support calls from Australia at three in the morning, 'cause when I was in

my house, literally my home phone number was the tech support line. And so if I would get a call at three o'clock in the morning, I would pick it up and go "Quark, how may I help you?" <laughs> And I did tech support for the Australian market from my bed on a number of occasions just for that reason. <laughs>

Nelson: Wow.

Gill: Once we got bigger, that didn't happen anymore. It was no longer the phone by my bed.

Nelson: And you sort of became the face of the company, because the company needed a face.

Gill: Yeah, so Fred was the face more so in Europe, and he was the face to an extent here, but I was more of the face here.

Nelson: That was a big leap for you, being a sort of more reserved programmer type and suddenly being thrust onto stages and such.

Gill: Yeah, so the first speech I ever gave at a conference was terrible. It was something that someone wrote out for me and I read, and it was just awful, and that was the last time I did that. But after that, I kind of-- Fred has this speaking style where he wings it, and it just kind of works, and so I kind of emulated that style. Fred is less fact-oriented than I am, and so it's not like I copied him, because I can't do that. I have to have facts and things in everything I say. But, yeah, that was an interesting learning experience, and I still use it, but if you don't use-- for me anyway, if I don't use it enough, I kind of lose it, and I have to kind of recover it. But the favorite-- probably a Seybold conference or something where I was actually up on stage talking, and I just completely lost my place, and I froze. This was within two sentences of getting up on stage. And I took a deep breath, and I had a handheld mic, and I just spun around, and I looked at the audience, said "I have stage fright." <laughs> And everybody burst out laughing, and then that kind of calmed me down, and I was able to go on.

Nelson: Well, most of the people in the room probably have that, too, so it made sense that they-- "Oh, good, okay. We get it."

Gill: Yeah.

Nelson: But I recall that you said some of the most profound things. I was a journalist at the time, and I was covering these conferences, and when you would get up on stage, I always got excited, because something interesting always happened. And I remember one time you just talked about-- they were talking about "What's the future of computing and publishing and all that?" And the other guys that were up there, I think they had Paul Brainerd up there, and they had--

Gill: John Warnock.

Nelson: John Warnock, and I think Bill Gates actually a separate time--

Gill: Yeah, at a separate time. He wasn't at that panel.

Nelson: Was up there, too. And their answers were pretty much-- all of them pretty much said "What we're doing now but more of it," and you totally disrupted the thing with talking about how your mother can't use a mouse.

Gill: <laughs> Yeah, that was a really entertaining experience when Mom wanted a computer 'cause her son did computers, and so I got her a Mac. And we were playing with the mouse, and we all have this intuitive mapping of what happens when you move a mouse. And so she was trying to-- "Here's the cursor, the thing you're moving on the screen." I said "No, move it up," and so she picked the mouse up off the desk thinking that it would move the pointer up with her.

Nelson: Right, a 3D mouse.

Gill: It's a 3D mouse. My mother invented the 3D mouse.

Nelson: Wow.

Gill: Or at least she showed us the need for a 3D mouse I guess. <laughs>

Nelson: And that was kind of the point of what you're talking about is that we have an interface that works for a certain select group of people in our culture, maybe not at all in other cultures. Who knows? And then until we got some kind of interface that worked for everybody, we're always going to have the haves and the have-nots, and that's what I took away from what you were saying.

Gill: Well, so some of that comes from older people have a greater deal of difficulty adapting to new stuff, and of course now everybody's exposed to that at such a young age that a six-year-old could use a computer better than my mother can. But it also just shows you that we haven't kind of reached the end of where we need to be with computer interaction, because it should be even more intuit-- the mouse is marvelously intuitive once you get that basic mouse skill, but we need other skills for other times. And so like the product that I'm doing now, Josh, which is artificial intelligence for home automation, is all about using voice. Certainly that's not the only way you interface with a Josh home, but voice is one of the key things. And so you have to kind of get beyond-- if you remember the very early car navigation systems, it was very, very structured, and if you used the wrong words in the wrong order, nothing worked. And so I could never use my car navigation system, 'cause I used it so rarely, I could never remember the commands. And so when we built Josh, one of the objectives was to make sure that someone could say something pretty much any way they want, and if you look at, say, the Alexa product, it's "Turn on the lights," right? And it's probably not even "Turn the lights on," and it's probably certainly not "Extinguish the lights" or "Douse the lights" or "Kill the lights" or "Cut the lights." And then one of our customers was of Italian descent, and they'd say "Open the lights and close the lights."

Nelson: Wow.

Gill: Which I had never considered until Vin said that, and it showed up on my dashboard in red saying “He said this, and I have no idea what it means.” So then we had to go back and teach Josh that “Open the lights” and “Close the lights” have very specific meanings.

Nelson: So in a way, that little conversation on the stage at Seybold all those years ago sort of gave rise to the work you’re doing now.

Gill: So talking to computers or typing to computers in English and having them respond back in English is something I started when I was in high school. There was an old, old product-- it wasn’t really a product-- by a guy named Weizenbaum I believe called ELIZA that you could talk to, and it was supposed to emulate a Rogerian therapist. So if you would say “I’m really unhappy about my mother and dah dah dah,” and it would say “Tell me more about your family.” <laughs> So using a small set of keywords, it attempted to maintain a conversation with you. And in high school, I wrote a replica of that. I refer to it as-- so if you have a box and you can’t see into it, you can throw balls in and see which way they bounce; you can eventually figure out what the shape is in there that’s deflecting them. And so that’s essentially what I did with the ELIZA program is I kept throwing things at it and seeing what it did and derived how it worked and then built a replica of it in BASIC and then enhanced it and enhanced it and enhanced it. And this is probably my fifth rendition of something that is a rule-based conversational engine with a very specific objective of being able to control your house, because what boy doesn’t want to control his house? What boy doesn’t want to talk to his house and have his house talk back?

Nelson: If you’ve seen “The Jetsons,” you want that.

Gill: Yeah, yeah. It’s Hal from “2001.” It’s Rosie the Robot. It’s the robot from “Lost in Space.” You want all those things, and the thing that happened literally in the last under a decade is that speech recognition became good enough that you can actually do full speech, and you aren’t stuck saying just navigate something something like the cars originally did. And so speech recognition became readily available; speech synthesis became good enough that it’s not totally annoying. It’s getting better fast. And then processing power has increased so dramatically with a very small footprint, and so the device that we sell right now, which is on the wall right there, is-- well, it probably has more computing power than existed in the entire world in the ‘60s. It certainly has more memory than existed in the entire world in the ‘60s, ‘cause it’s got 16 gigabytes of RAM and a quad core processor, and it’s what led to-- do all this stuff locally and really fast and really well.

Nelson: In early 1995, Quark announced development of an image editing application named QuarkXPosure. It was scheduled to ship in early 1996 along with QuarkXPress 4 and QuarkImmedia. What happened to QuarkXPosure?

Gill: So QuarkXPosure was actually a product that was developed by a Japanese company, and they approached us to market it for them. And we said “Yeah, we’d be happy to do that. We’ll just have to guide you through making professional quality product.” And I think they were a little naïve in terms of what it took to actually do something that was professional quality, and so in the end, what happened was that they kind of threw up their hands and said “This is too much work for us to do,” and so the product

never got off the ground. And it's kind of sad, because one of the things that happened, which-- this happened a while back-- was before Photoshop-- Photoshop was something that Adobe acquired from a pair of brothers⁵, and they had actually approached us about potentially marketing that, too. They were kind of shopping it around, and the guy who was the head of our marketing at the time was charged with making sure that we got that product, and he totally dropped the ball.

Nelson: So Quark could've had Photoshop.

Gill: We could've had Photoshop. I'm sure Adobe gave them great terms, and hopefully you'd think we would try to give them great terms, too. So it might've been more of a bidding war <laughs> in the end if we had actually had our act together, but we didn't on that.

Nelson: Okay, that answers that. Then a month after that, Quark adopted Apple's ColorSync 2.0 for color management. In hindsight, was that a good idea?

Gill: So really doing color management right is hard, and we didn't have any in-house skill to do that, and so we were trusting that Apple would be able to-- and you'll notice we didn't adopt ColorSync 1.0-- that it would be good enough to really be usable, and I'm sure in some cases it was, but doing color really, really well is hard. And it's particularly hard-- if what you want to do is get color right on the screen, that's easy comparatively. If what you want to do is have it look right when it prints, that's hard, and it's hard because while we have control of the colors of elements drawn in QuarkXPress, borders and lines and type and all that stuff, we don't have control of the color that comes to you out of an EPS file. That's just a PostScript file. We have no choice but to dump it, and therefore the color is completely unmanaged.

Nelson: And at the time, EPS was the standard for all line art graphics, and actually many photographs were being wrapped into an EPS wrapper as well and imported that way.

Gill: Right, and as soon as it was wrapped into an EPS wrapper, we lost control of the color. So TIFF we had control of the color, and we could run it through ColorSync. Everything except something that was wrapped as EPS.

Nelson: Seems like that would've been a big conversation to have with all the customers over and over and over and over when their colors didn't turn out the way they expected and they wanted to blame QuarkXPress.

Gill: Yeah. Yeah, no, eventually people come to understand what the problem is, but it's still a problem, and it's a problem that there's not really a good way to solve short of going and turning the EPS into something else.

Nelson: Right. Yeah, and you weren't in that business.

⁵ [Editor's note] The name of the brothers are Thomas and John Knoll.

Gill: We weren't in that business.

Nelson: Right, okay. Little while later, November '95, you personally, Tim Gill, changed Quark's technical support to be more responsive. What was happening at that time to prompt the change?

Gill: Our technical support was awful. The queues were long. There was no good education going on, even within our own staff. When a problem would happen, one person would learn the answer, and then that wouldn't get shared with everybody else. And so I took over managing in some sense on a high level tech support, and it was something I was good at because it is so amenable to be managed by numbers. So you can measure queue times; you can measure the number of customer complaints, and so we instituted systems so that essentially we knew when we were going to get hit with calls; we knew what our queue time was going to be. We had systems where I think it was for one in ten people or something, we would actually either send them a survey or have a manager call them back to see what their experience was like, so everybody knew that their quality, their support was being watched. We instituted internal training programs for our people so that they knew stuff. We made sure that the things that were the key critical problems were brought to engineering so that we could solve them in the next release. And it was me setting the direction and defining the systems, but other people executing and the guy, Kevin, who did that, was really good and cared about it deeply, and it was just fun to watch the graphs of customer quality change. The other thing we did, and I can't remember which company we borrowed the idea from, but we did a hold music, which was-- was it David Blatner that did some of those interviews and things? He would just talk to people in the industry, and that was what the hold music was.

Nelson: Oh, so they would hear conversations while they were waiting--

Gill: They would hear conversations about QuarkXPress and some tips and tricks and interviews with luminaries and things like that.

Nelson: That's a good idea.

Gill: And one of the guys in tech support was an audio engineer, so he got to use his audio engineering skills to make that happen for us.

Nelson: Well, that whole thing sounds like a good template for other companies to adopt or use.

Gill: Yeah, like I said, tech support is really, really amenable to being managed with pure metrics, because the same thing happens again and again and again and again. Customer service, some of it can be managed that way, and some of it can't. It's just not as amenable to be managed like that. The thing is that you get a bad rep for your support, and we had a bad rep for our support, and you can improve it a lot faster than your rep changes, so it was a long time before people realized that we actually had some of the best support in the industry.

Nelson: Rebuilding trust takes a lot longer than ruining it or losing it.

Gill: Yeah, yeah, you can ruin it <laughs> pretty quickly.

Nelson: Yeah, and that seemed-- yeah, yeah, yeah. All right. Little bit later, early 1996, Quark announced a plan to replace the single language versions of QuarkXPress with the multilingual QuarkXPress Passport.

Gill: Yep.

Nelson: And this was seemingly far ahead of other companies' plans for multilingual publishing, but it wasn't implemented for three more years. So why do you think it took so long from the intention to the execution?

Gill: Yeah, I don't remember why it took so long, because when we announced it, I had a basic prototype of it running, 'cause one of the things I did at HP was also do their localizations for the HP 250, so I had some experience with it from the technical side, not from the manager side. But I think a lot of it had to do with documentation and other kinds of systems like that, and I think we started shipping it in Europe long before we did in the US.

Nelson: Because they do much more multilingual publishing.

Gill: Because they need that multilingual stuff much more than we do here.

Nelson: I see.

Gill: So it'd be interesting to go back to your archives and see if that's the ship date in the US versus the ship date in Europe, 'cause I think the ship date in Europe was much earlier.

Nelson: Okay. But later that year, December of 1996, QuarkImmedia shipped, which I recall being quite ahead of its time, and at the time I got the impression that it was kind of your baby. Can you tell us about that project, QuarkImmedia?

Gill: Yeah, so QuarkImmedia was a response to any variety of-- what was the Macromedia program that did that?

Nelson: Director.

Gill: Director. So it was kind of a response to Director saying how can we use Quark not just to publish on pages but to publish on screens? And so I was actually--

Nelson: I'd like to move things around and motion and music and--

Gill: To move things around and to do presentations and things like this. And I was inspired a lot by a game called Myst.

Nelson: Oh, yeah.

Gill: And I wanted to make sure that QuarkImmedia had the capability of doing the original Myst game in a trivial, trivial fashion among other things. So it was super fun and involved a lot of low-level programming. I had to get back into assembly language programming again to make it fast enough. But, yeah, I don't even know how well it did from a marketing point of view. We sold some, but it wasn't anything that competed with Director very well.

Nelson: I think it was just ahead of its time. That's what I think. I think that it would've been better received a year or two later, but because it was so early, people were like "What do I do with this?" and the web hadn't caught up yet.

Gill: Yeah. Yeah, the web had started to exist at this point, and so people were a little bit trying to navigate their way between print and onscreen stuff and on-web stuff. It was kind of an interesting time where everyone had different opinions about which way the market was going to go, and it took us a couple years to start to sort that out.

Nelson: CD-ROM was going to be a big thing, and it didn't quite do it.

Gill: CD-ROM was a big thing for a flash. <laughs>

Nelson: Right. Well, I personally appreciated a Christmas card from Quark that year that was delivered on a floppy disk that had an animation on the floppy disk that you could play, and it was created in QuarkImmedia. And the player program was small enough to fit on the floppy along with the actual content that was being displayed. That was astonishing. I still have it. It's great. Okay... About a year later, toward the end of 1997, that's when QuarkXPress 4 shipped. How involved were you in determining its feature set and its development?

Gill: I was much more hands-off. At that point, I was focused on QuarkImmedia. We had some projects we were working on in Europe that related to one of my favorite things, accounting in the publishing industry, so I was spending a fair amount of time over in Germany helping specify that and review the state of that project. So I was literally in Germany for about a quarter of the time every month.

Nelson: Accounting in the publishing industry. What does that mean?

Gill: That means if you look at the accounting systems that run *Time* magazine, that do both their business accounting but also all the accounting related to subscriptions and magazine tracking and stuff like that, it was supposed to manage to do all of that. And I left before that got out the door, so I can't tell you anything about the state of that at all.

Nelson: Okay. So QuarkXPress 4 was developed largely not from your fingertips.

Gill: Correct.

Nelson: Okay, but how about the feature set? Were you involved in deciding the direction, what should be included?

Gill: To an extent. I would've helped with the review of customer requests and things like that, but in the end, I'm not even sure who exactly took over my fine-tuning of the feature set for four.

Nelson: Okay, could've been a committee.

Gill: <laughs> It could've been a committee.

Nelson: Right? Yeah, okay.

Gill: It probably was a committee. <laughs> It probably was a committee even while I was there. It's just that I kind of had veto power. <laughs>

Nelson: As it should be. Yep. Also at the end of that year, 1997, QuarkXPress began exporting to Adobe's Portable Document File format. So for the first time you could export to PDF from QuarkXPress, and at the time, some of us were baffled by Adobe wanting to charge for what was essentially a printer driver, 'cause that's what it seemed like. It was like "We'll take your document and turn it into an onscreen version of what you would get if it printed," and they wanted you to pay for that.

Gill: I remember.

Nelson: Yeah. What are your thoughts about PDF besides the fact that they stole your acronym?

Gill: <laughs> So the idea was good. Some technology are really enabling technologies, and they kind of have to be free. And <sighs> you're right; charging for something that's nominally a printer driver seems a bit of overkill.

Nelson: It ultimately did sort of become for free, but at that time they were charging for it.

Gill: Yeah. Yep. But we lived and breathed PostScript, so we wanted to be able to put things out in appropriate format for things that went in PostScript.

Nelson: And PDF wasn't that, was it?

Gill: <sighs> No, not ultimately.

Nelson: Mm-hmm. Mm-hmm. Right.

Gill: <laughs> I'm trying to see where you want me to go with this, 'cause--

Nelson: No, where do you go from that? I just remember it was a big conversation, because it was a new idea, right? And the web wasn't happening, and like you said, people were trying to figure out what direction the technologies were going, and PDF was one of them. And they even had a competitor that was better than them at creating onscreen documents like that, and of course Adobe ate them. But, yeah, I know it took a while for Quark to buy in and say "Okay, we will find a way to output to PDF."

Gill: Right. Yeah, but in the end, we relied on the Apple printer driver to do it. We just made sure that-- so the thing about PDF was that it could take in pure PostScript and transform it into its internal format and render it, 'cause if it hadn't been able to do that, we wouldn't have been able to support it very well.

Nelson: Right. Okay, that's the key. So beyond that, also in 1997, Quark bought a company called mFactory, whose flagship product was mTropolis, a multimedia programming language, a package actually. People thought it was more powerful and interesting than Macromedia Director that we talked about before, and I understand your plan was to somehow let the engineering teams for mTropolis and Immedia share resources. QuarkImmedia and mTropolis developers would share resources, but about 10 months later, Quark announced that it would discontinue mTropolis and integrate mTropolis technology into future Quark products. I don't know that that ever happened--

Gill: I don't think it did.

Nelson: But that was the plan. So what was that? What happened there?

Gill: Yeah, so what happened, Fred, he really liked the technology. He thought we could make use of it, and we brought it in house, and then they just-- it was kind of a mess. Their architects got moved onto other things, and it just kind of never went anywhere, so it was kind of sad that that happened, 'cause it was a kind of cool product.

Nelson: But things just didn't align?

Gill: No, and I wasn't directly responsible for running them for the most part.

Nelson: Earlier we talked about XTensions, and we talked about the power of the extension community and that at some point there needed to be some kind of distribution central hub for that. And one distribution company was XChange, and the other one was the Worldwide Power Company a little bit later.

Gill: Yeah, Worldwide Power Company came much later.

Nelson: Much later.

Gill: Yeah.

Nelson: Okay, but in 1998, in June of '98, XChange was purchased by the Worldwide Power Company, and they took on their debts to XTension developers. What do you think happened to XChange?

Gill: I don't know. So when XChange was set up, and we set it up, we gave Will and Buck, the owners of XChange-- it wasn't ours to give them exclusive license, but we could promote them and push them. We took their catalogs and included them with our product and a lot of other things like that. And they did really well for a while, and then they tried to start a magazine, and that I was a little bit horrified by. And I think there were some decisions that, in retrospect, if Buck could go back and make different decisions, he would. So I think they just kind of overextended themselves in ways that weren't particularly useful, and Worldwide Power Company came in and bought them. So I've talked about it a couple times since then. He felt like there were some promises we had made to them that we hadn't kept, and I don't know exactly what those promises were, 'cause I remember keeping every promise I made, but people hear things differently sometimes.

Nelson: Right.

Gill: But it was the thing that really made-- it made QuarkXPress great; it made XTensions great.

Nelson: It was good for everybody.

Gill: It was really good for everybody, and in the meantime, Will and Buck had a company that was making money. And I think they should've just stuck the course and stayed with that and not-- there were probably ways to extend yourself, but making a magazine was probably not one of them.

Nelson: I see. Very good. Here's a fun one: In August of 1998, Fred Ebrahimi?

Gill: Yeah, mm-hmm.

Nelson: Yeah, he was your CEO at the time, correct?

Gill: Yes.

Nelson: CEO. Yeah, he sent a private offer to Adobe's CEO, John Warnock, and President Charles Geschke on behalf of Quark Incorporated to buy all outstanding Adobe stock at a premium price at the time. They refused the offer. Can you talk a little bit about the reasons for Quark's offer and then the response from Adobe's customers?

Gill: So I wouldn't know what the response from Adobe's customers were.

Nelson: Okay.

Gill: So the reason that that made sense was, A, they were in the publishing industry, and, B, if you look at the history of their stock price, that was a particular low point for their stock. So it was wildly

undervalued by the market, and so if we had acquired them, it wasn't like massive amounts of reorganization had to happen to make money. They were making money. They just were undervalued. But you can't acquire more than 10 percent I believe it is of a company as a single individual or a collection of individuals without doing something like what Fred did, and so we were really quite serious about wanting to do that. I can't remember what the total acquisition cost was, but it was in the small hundreds of millions I think.

Nelson: Okay. And that was enough for Quark to afford and would've given reasonable value to Adobe at the time.

Gill: It would've given reasonable value to their shareholders, and it would have basically combined two profitable companies.

Nelson: Right. But they refused, and it went south.

Gill: Mm-hmm.

Nelson: 'Kay. Anything else?

Gill: No. No, it was an interesting experience to watch Fred try to navigate that, but it would've been fun if it had worked, but it didn't, so that's okay, too.

Nelson: Well, good news was a month later, Quark sold its two millionth copy of QuarkXPress. That had to be exciting. Did you celebrate in some way? Can you remember anything about "Oh, my god, two million copies"?

Gill: <laughs> Oh, gosh, no, I don't. I remember celebrating when we had our first one million dollar month and our first ten million dollar month and things like that, but, yeah, I don't remember celebrating for the two millionth copy.

Nelson: Well, at least that gave us a number that we were wondering about earlier. At least two million in September of 1998.

Gill: Yeah, so it fits my earlier contention that it was over a million and under ten. <laughs>

Nelson: Yeah, right, right, right. Okay, December then. So December of that same year, 1998, Quark spun off a new subsidiary company to support publishing systems based on Quark Publishing System 2.0, otherwise known as QPS, and the Quark Digital Media System, Quark DMS, which is a client server digital asset management system based on Oracle's Oracle 8 relational database.

Gill: Right.

Nelson: Would you like to talk about the role of these products in the development of Quark as a company and perhaps as QuarkXPress as a product?

Gill: Yeah, so DMS didn't affect the core development of QuarkXPress very much, but QuarkImmedia-- or, I'm sorry, QPS and QuarkXPress were terribly, terribly tied together, because what we wanted to do was make sure it was easy to share documents and move them around and keep track of them and have multiple people working on them at the same time.

Nelson: So it sounds like something for newspapers and magazines.

Gill: It was. It wasn't ever something that was going to be in little mom-and-pop newspaper shops. And QPS actually didn't use an off-the-shelf database and just used basically a RAM database, because what we were trying to do was so simple. Hopefully it was powerful and useful, but actually at its core what it did was comparatively simple.

Nelson: Okay, and then it sounded like you needed an asset manager as well to go with it, and so that's what the Quark DMS was all about.

Gill: Right, yeah, and so DMS now is dealing with massive files, tons of them potentially, and so, yeah, it really wanted Oracle as a backbone.

Nelson: So all the pictures and everything that were brought into the document?

Gill: Right, yep. Yeah, and that was developed actually out of our IT department and not out of the normal QuarkXPress, QuarkImmedia, Quark QPS engineering system.

Nelson: That's a fairly substantial accomplishment to create a product like that. Were you proud of it or more nervous about it?

Gill: <sighs> I don't think of it either way, 'cause I didn't really feel like I had any ownership of it, 'cause it was coming out of essentially what amounts to a different division.

Nelson: Okay. Great. So then along comes 1999, and in March, Adobe began showing InDesign, the page layout software that was going to compete with QuarkXPress. At the spring Seybold publishing conference, Adobe founders Chuck Geschke and John Warnock gave Tuesday's keynote, and you gave Wednesday's keynote, so on subsequent days. Now, Quark hadn't yet shipped QuarkXPress 5, so the comparison was between InDesign that they were about to release and QuarkXPress 4, which was then a year and a half old. Do you have any memories of how that whole event turned out for Quark, the introduction of InDesign and them comparing it to a product that you'd had out for a substantial period of time already?

Gill: Yeah. So the answer is no, 'cause that's approaching the point in time when I was getting ready to leave Quark, and so I think probably depending on-- do you remember the date? Is it March or April?

Nelson: March of '99, yeah.

Gill: Yeah, March of '99, and I think by June of '99 Fred and I had hammered out-- June or July of '99 Fred and I had hammered out kind of what my exit was going to look like, and then I ended up leaving in January of 2000.

Nelson: Okay, so real near after that.

Gill: Yeah.

Nelson: All righty. Okay, good enough. Right about that same time, also Quark was introducing a new product called Wrapture, which is intended for package design. Allowed you to import die lines of a package, arrange the elements into QuarkXPress, and then watch it fold up and do a 3D version of the actual product.

Gill: Right.

Nelson: Then you could rotate the package in real time, save the whole thing as a QuickTime VR movie, and you could create bar codes in Wrapture; you could add non-printing layers for annotation. It was a really robust packaging solution. Do you know how that project turned out?

Gill: I don't know how it turned out. I helped with optimizing the 3D rendering, so when I said I went back to assembly language, it was for--

Nelson: For Wrapture.

Gill: The 3D rendering. And of course it was super tough to do it fast at the time. Now of course computers are a bit faster, and you wouldn't have to do all the gymnastics I had to do to make that--

Nelson: You could do it on your phone now, right? On your phone.

Gill: <laughs> You can totally do it on your phone. <laughs>

Nelson: All righty. And then later that year, Quark began supporting XML, extensible markup language. Did you have any part in pushing that interest of supporting XML in QuarkXPress?

Gill: <sighs> No. I don't want to say I don't believe in XML. I want to say that XML has its place, and it wasn't clear to me-- XML was more about talking about the structure of things and how they were related and rules that bound them together potentially and things like that, and QuarkXPress is really about the precise details of how things are rendered. And so XML is not really well designed for that, so we did it because we were asked to do it and because it seemed important to some of our customers. But since it didn't preserve the design very well, I was never very happy with it as a solution for that problem.

Nelson: Right. It seemed to me that it was intended to help multi-channel publishing, so if you've got the same-- let's say you got headlines and bylines and stories and photos and captions that all kind of go together, you could tag them to all kind of go together and then reuse them in different layouts, different output mediums, that sort of thing.

Gill: Mm-hmm.

Nelson: Yeah, okay. Did you ever think about taking Quark public?

Gill: Yeah, actually we did, and we talked to some people about that. I remember there's an investor-- I believe he's still around-- named John Dore, and we talked to him about the possibility of us doing that. The thing was we didn't look like the kinds of companies they were used to, so we said "Here are our sales. Here's our profit," and he basically looked at us and said "Bullshit." He believed we were lying.

Nelson: Oh.

Gill: <laughs> Because the numbers didn't correlate to what he was used to.

Nelson: They were too good.

Gill: They were too good. Basically our profitability was too high with respect to our sales.

Nelson: So you learned a lot from those previous business failures that you experienced early on with other companies you were working for.

Gill: Yeah, a lot of that is actually Fred, because he knows how to run a tight operation. If you've looked at our marketing, our marketing was more based on XTension developers, service bureaus pushing us, word of mouth, and not based on magazine advertising. And so our marketing cost was just minimal, and so that was one of the things that let us keep the profitability so high. And then the other thing is the international sales. QuarkXPress in the US, to buy one in Germany or France, because they were localized it was not a straight translation dollar to pound. There was essentially a mark-up in there, and it was a higher mark-up for languages that had a smaller user base, because we had a smaller number of units to recoup the costs from.

Nelson: You had to do the same amount of work--

Gill: We had to do the same amount of work to change it to Greek, 'cause we would have to change it to Tagalog, and so--

Nelson: So the Filipinos spent more money.

Gill: <laughs> So the Filipinos had to spend more money, and then if that made the product unattractive in that market, then we just wouldn't go to that market.

Nelson: I always got the impression that underlying all of this for you personally, and I think Fred, too, was an interest in taking the power of the press away from the rich white men who seemed to have millions and millions of dollars to do that and putting some of it into the smaller communities, giving it-- if you can provide it at a tenth of the cost, more people can put out information.

Gill: Yeah, and it was never about taking power away from anybody, right?

Nelson: Right.

Gill: 'Cause those people are going to continue-- the people that are doing it now are going to continue to. But the cost of pre-press activity-- what you could do with QuarkXPress and all those other low-cost tools, you were cutting people's costs by factors of a hundred in some cases, and so all of a sudden people could do things where they never could before, and so, yeah, that moves it out of the hands of large organizations and puts it into smaller organizations. You saw more newspapers, more newsletters, all that kind of stuff. I think it was 14,000 newspapers in the United States, and we were in most of them, and so that's like the *Thrifty Nickel*, The *Summit County Gazette* and all those other little publications. So it was kind of fun to be there. At the National Press Photographers conference I did a keynote once, and someone asked me what publications I read, and I said I found the most joy in looking at the small publications rather than the big publications, 'cause you got a sense of the people who wrote them; their personalities shone through the publication. It was kind of fun.

Nelson: I hope we can get back to that somehow, 'cause that's real important, and I think you guys played a big role in making that possible.

Gill: Well, we've gotten there, right? The web is even cheaper to publish on than QuarkXPress. On the other hand, the noise level is so high that it's hard to find things.

Nelson: It's so cheap that anyone can say anything.

Gill: Yes, indeed.

Nelson: And they don't have to-- yeah. Okay, cool. Well, that leads us into your world beyond Quark. Now, you left in 2000.

Gill: Right.

Nelson: Okay. And can you talk a little bit about your growing involvement leading up to that time? With activism in the LGBTQ rights arena through the 1990s while you were still at Quark, obviously some changes were occurring especially in Colorado. Some things were being done you didn't agree with, and you took some actions to change that.

Gill: Yeah, I think it was 1996 was when Amendment Two was passed? It might've been 1992⁶, but I think it was '96. And so that was basically a law that said no law may be passed, and any law that currently exists or local ordinance that currently exists that provides non-discrimination protections or other things to LGBTQ people is henceforth null and void. Further, that it was illegal to lobby the state legislature for protections for LGBTQ people. So in other words, it was taking a class of people and saying "Your access to the government to which you pay taxes is less than other people's access," and so that was quickly struck down. Ultimately it ended up at the Supreme Court. There was no point in time along that process where they ever won a case, because it was so egregiously anti-American. But it still passed, and it didn't pass by much. I think it was 53-47 or something, but still more than half of the people said that they thought LGBTQ people didn't deserve the same rights as everybody else.

Nelson: I'm going to pause you for a second here, 'cause I was here for that, and what I remember was that it was written in such a convoluted, twisted way that, if you wanted to be for it, you had to vote against it. Just by reading it, it led you to the wrong conclusion of what it was about.

Gill: Yeah, it was confusingly written.

Nelson: So you can't really trust the outcome of the vote, because it wasn't clear what you were voting for.

Gill: Yeah, there's a certain amount of that, but what you learned, now that I've been involved in LGBT rights for a long time, is that people are initially afraid of change, and they're afraid of people they don't know and afraid of people they don't think are like them in some way. And so LGBT people were like that, and so literally it was a matter-- so here, what, 14 or something odd years later-- well, it's a little longer than that, but <laughs> certainly less than 25-- we have gay marriage or same-sex marriage, and that entire time was really about having a conversation with the American people and making them think about it and reason about it and get past their initial knee-jerk reaction. And so that really is what the Gill Foundation is about. It's great that there are people that say "I want to serve homeless youth," or any of a variety of other things, and we give a certain amount of money to that, but in the end, the rights of minorities always have to be granted by the majority, because the majority has the power to pass laws. And so you need to spend your time communicating with the majority to convince them that what you want is reasonable and fair. And so for the last 25 years, this is the 25-year anniversary of the Gill Foundation, and we have been communicating with the broader American public, and slowly over time we win, because when you can get people to stop and think about it rationally, in the end there's no real reason to put different people in different boxes.

Nelson: Very, very, very good. I understand that your work with that was so successful and impactful that President Bill Clinton invited you and a few other philanthropists to the White House to sort of better understand what your interest is in this philanthropic world that you're involved in. So what'd you take away from that meeting?

⁶ [Editor's note] It was 1992 and it arrived at the Supreme Court in 1996.

Gill: So there were a couple different meetings. Is this the meeting that was referred to as “coffee klatches” in the popular media?

Nelson: I think that could’ve been.

Gill: If it was. So Bill Clinton was a very clever guy, so what he wanted to do was make all of his major supporters, whether they were donors or other people, feel like he was listening to them. And so what he would do is he would select a group of 15 to 20 of them and have them all to this meeting, and the thing that he did that was really, really clever was none of them had the same issue. And so he would ask one of them about their issue, and he would talk about that for a while, and then we’d go around the table, and by the time you got all the way around the table, your time was up. And so he never had to do anything except tell you his opinion as opposed to if everybody had been on the same issue; then you would’ve talked about that issue and tried to come up with a solution. But he didn’t organize it that way. He’s very, very clever from his point of view. <laughs>

Nelson: Do you think that it improved-- do you think that your involvement with it improved his understanding of these issues?

Gill: No, I don’t. I think there were other things that were more perhaps helpful to him. Those particular meetings I don’t think were.

Nelson: Well, you must’ve been flattered to be invited.

Gill: It was fun, and he’s got an incredible, magnetic personality that you can feel in the same way you can feel the magnetism of Steve Jobs. So that was kind of interesting to watch my own emotional reaction to it.

Nelson: Did you have other meetings with him besides what you described?

Gill: That was the main one. I think there were probably other just kind of casual meetings, but, no. I had more meetings with I think probably Obama, and certainly more meetings with Joe Biden than I ever had with the Clintons.

Nelson: Well, let’s talk about that. What kind of meetings did you have with them?

Gill: So for Obama and the LGBT stuff, there were other people who were positioned that did that, who were in Washington that did all that. When we were meeting with politicians, I would often not talk about LGBT issues, because that was something I wanted to get sold mechanically and permanently, and having a top discussion with a politician where you end feeling good, that’s lovely, but it doesn’t solve the problem, and so you have to get down and solve it by making changes to policies or laws. As a foundation, you cannot really make a change to a law, but you can make a change to a departmental policy with 501C3 funding. So we did a lot of that that way through agency work, and then we spent some time-- Fred’s wife actually is Cuban. She was born in Cuba to an American mother and an Irish

father, but all her formative years were in Cuba, and so she was working very hard on getting the travel ban removed from Cuba. And so when we were talking to Biden, we would-- and the administration really wanted to solve the Cuba problem and kind of normalize relationships, and so we were trying to help them get through that process by providing them-- Patty was, by providing them the data that they needed in order to make the case to Congress that Cuba should be opened up. And it was opened up for a while, and now it's kind of closed down a little bit again because of the current administration.

Nelson: Ah.

Gill: But we'll get back there.

Nelson: Ah. Besides your growing interest, your growing passion for improving the lives of people around everywhere, were there any other causes for you needing to leave Quark in the year 2000? Or was it mainly that you wanted to pursue other interests?

Gill: I had been at Quark for 19 years at that point, 19 years and change, yeah, and I just wanted to try something else. Fred wanted to get more into those numbers that represent monetary figures that I'm so unfond of, and I really wanted to push more into pre-press and design. And so we talked about it and what an exit would look like for me, and it was-- if you remember, right around 2000, at the end of the first quarter of 2000 there was that massive tech crash, and Fred had invested in a lot of high-tech companies, done really super well. And so if you look at the timing, he was buying me out with the money he made from selling his high-tech stock positions immediately before the crash. <laughs> So I got the money, Fred got out of the positions before the stock market crash, and it was kind of a perfect storm.

Nelson: Magic, wow.

Gill: It was magic.

Nelson: Okay, so you got the money you wanted to continue with the work that you wanted to do.

Gill: Sure, and about 60 percent of my earnings from the sale of Quark went to the Gill Foundation, and then since then, the Gill Foundation has got more money from me, and I've also spent money on LGBTQ things politically. As of this point in time, we've spent just under a half a billion dollars on LGBTQ rights and a few other things that the Gill Foundation does. We do STEM education in Colorado and things like that.

Nelson: Which of course is a strong interest for you.

Gill: Yeah. No, we did LGBTQ stuff almost exclusively for a long time, because in the beginning, even LGBT people were afraid to fund it, <laughs> and so we had to change that mindset, some of which we did, some of which just the natural evolution of culture did. And so we've always had a little pot of money that we used for other things like public radio, vaccinations for kids. The uses have been quite varied,

although the STEM education stuff, the elementary STEM education which we did, we basically fitted out all the schools in Inglewood, all the elementary schools for STEM education last year. And that's been tremendously successful, and now we're trying to get other local business people to follow our lead and pick a school district and adopt it and put STEM education there.

Nelson: That'd be great.

Gill: It would be great if we could get it everywhere.

Nelson: Really great. Well, that actually answers some of my upcoming questions here. Connexion.org, and we're just about done here. Connexion.org, C-O-N-N-E-X-I-O-N.org.

Gill: Uh-huh, yep.

Nelson: What's the story on that?

Gill: So we'll actually go back to a prior web product that I had. So when I turned 40, I became a snowboarder to prove that I wasn't getting old and fell in love with snowboarding. It was super early. There were no other gay snowboarders I knew, so the solution was to create them, and I started Outboard.org, which is a website, now an event.

Nelson: Outboard. Outboard.org?

Gill: Outboard.org.

Nelson: Got it.

Gill: So some friends of mine who had been doing websites for hiking and trail maps and things like that built the original website for me, and then I took it over, so I learned web programming from that. And then at some point, what happened was I went down and did a tour, Focus on the Family, which is kind of a right-wing religious organization, and I saw kind of their analog for tech support, right? So they have phone banks of people selling their books, talking to people about their religious points of view and so on. I thought "We're never going to have <laughs> a switchboard like this for the gay community. What could we do?" And the answer is that you could build an online presence, and so Connexion.org originally started as a way to get LGBT people politically involved. And so no one says "Gee, I really want to be politically involved today. Let's go find a website that lets me do that." MySpace was around; Facebook was not around or not very big yet, and so I built a portal that had all the social interacting capabilities and then tried to infuse as much political content as I could into it and tried to--

Nelson: To educate people?

Gill: To educate people. In Colorado, you had a star by your name if you were registered to vote, so everybody wanted the stars. Then we gave them simple tools to register to vote and things like that, and

then we would occasionally lobby people to-- we got 300 people to go down to protest a law that the legislature was talking about passing back when Republicans had control of both branches of the legislature. So that was the intention of Connexion, and in the end, to get good political content for 50 states required a lot more energy than what I was willing to devote for what was just kind of sort of side passion project. And so it became pure social network, and you learn things from that. Sometimes you learn things you would rather not know about people, but--

Nelson: But that's important. That's important.

Gill: <laughs> So the version of Josh-- so Josh.ai's the current company, but the code for that started as Cold Fusion code on the Connexion website. So you could talk to Josh about whether someone was dateable and all sorts of things like that, and it knew that stuff, because you give people tools to block people, for example. So if you don't like somebody, you can just block them, and if you look statistically at the bell curve, there are people that block lots of people, and there are people that get blocked by lots of people, and the people that get blocked by lots of people are almost always my problem children. They're posting inappropriate photos; they're doing trollish kind of things. And so Josh could use all that, so if you said "Is such and such dateable?" it would say "Well, no, they're a drama queen," which is, if somebody gets offended easily, they block everybody, so those were the drama queens, and the people who got blocked a lot, those were the assholes. <laughs> And so Josh had assholes and drama queens and everybody else. <laughs> And it would use that in its calculation about the dateability of someone.

Nelson: So is that why the name is Josh.ai? No, because it has--

Gill: Yeah, so that's what that Josh learned. This Josh, the one for home control, is all about looking at your patterns of light and shade usage, your patterns of music and so on so that it can make sensible recommendations. The thing that is a little different, if you remember when the Nest thermostat first came out, it said it was a learning thermostat, and the problem was it typically learned things you didn't want it to <laughs> about your patterns, and so everybody almost always went in and turned off all the learning features. So it's fine to learn those things. You just have to be very careful about deploying them and kind of get permission. And so that's one of the things that we work more and more towards is how do we come up with recommendations for things that will actually make someone's life better but not implement it without them specifically agreeing to it? Because quite often what you've learned is maybe just a little bit wrong, right? And if you have a vacation home, your opportunities for learning are really limited. This was the problem with the Nest thermostat is it would learn what your pattern was like when you weren't there, which is unrelated to what your pattern is like when you're there, 'cause there is <laughs> no pattern when you're there. When you're not there, the temperature is low and <laughs> all that kind of stuff.

Nelson: And it would assume that that's how you like it.

Gill: Yes, yeah. So the current vogue in artificial intelligence and learning is called deep learning, and it requires massive amounts of data in order to learn some really incredible things sometimes. But if you're

trying to learn something about one home, you don't have massive amounts of data, and so you have to be very judicious about the algorithms you use and the kinds of things you use them to produce.

Nelson: I know I was certainly underwhelmed by Nest's abilities when it came out, and you just described why I guess. Yeah, okay. So obviously I love that you've been able to use your programming knowledge and what you've learned through Connexion.org and Outbound.org and the rest and Josh to apply to this new company that you-- well, it's not new anymore, is it?

Gill: We had our four-year anniversary last week.

Nelson: Congratulations. That's great, and judging by your office here, it's doing really well.

Gill: Yeah, we're about just under 30 people between the two offices. Couple people work remotely, but mostly it's in one of those two offices.

Nelson: And the other office is in Santa Monica?

Gill: In Santa Monica, yeah.

Nelson: Are there other projects that you're involved in with your programming, or are you focusing on this project?

Gill: This project is all-consuming. This project is 50 to 60 hours a week. And the foundation probably takes the equivalent for me of 10 days a year, but other than that, this is what I do.

Nelson: Okay, so you're mainly focusing on this and the foundation.

Gill: Mm-hmm.

Nelson: Now, being here in Colorado and having your company here, always have had a company here, Colorado is a real magnet it seems for high technology companies here, and what do you think about that? Do you think there's something special about, say, the front range of Colorado for high tech companies and people?

Gill: Colorado is not the same kind of pressure cooker that the Bay Area is where people work crazy hours all the time; they hop from company to company. There's a huge, huge number of startups, and Colorado isn't quite like that, so it's a bit lower key. I'd have to actually go through and count, but maybe half of our engineers are local, and the other half are imported from schools. Usually you want people from schools in the northern part of the country so that they're not shocked by the snow, <laughs> but we have a few people who had to learn to deal with the snow.

Nelson: Sure. So what's next for Tim Gill, coder, snowboarder, philanthropist and family man?

Gill: And family man, I know. <sighs> Well, this. So it took 19 years for me to kind of do Quark, and I'm now at year four here, and I expect that-- maybe not 15 years. I'll be pretty old in 15 years; I'll be 80. I don't think I'm going to work super hard like I do now when I'm 80, but I think for the next five to ten years this is a really good place to be, and it's a really fun set of problems to solve.

Nelson: Great. Well, thanks for talking with me today.

Gill: Sure.

Nelson: Is there anything else you want to add?

Gill: Nope, that's always the last question everybody asks. And what you're told is you're supposed to repeat the key point, whatever that is, but we've had <laughs> a couple hours, and maybe there's not a key point <laughs>.

Nelson: -- right. Okay. Well, thanks for covering all of this information.

Gill: Sure. Yeah, if you need anything else or anything didn't come across clearly, then you could come down again, or we could do a follow-up on the phone or something like that. Just let me know what you want.

Nelson: Okay, great. I'm going to turn these off now.

END OF THE INTERVIEW