GORDON EUBANKS ORAL HISTORY

COMPUTERWORLD HONORS PROGRAM INTERNATIONAL ARCHIVES

Transcript of a Video History Interview with Gordon Eubanks
Chairman, President and CEO of Oblix

Location: Cupertino, California

Date: November 8, 2000

Interviewer: Daniel S. Morrow (DSM)
Executive Director, Computerworld Honors

DSM: Today is Wednesday, November 8, 2000. We're interviewing this morning Mr. Gordon Eubanks, the president and CEO of Oblix. That company's headquarters is in Cupertino, California. Mr. Eubanks is also truly one of the pioneers of the PC software industry, and as my own boss at the Washington Post used to say, there are two kinds of PC users, those who have been saved by products that you have made available, and those who lie. So thank you very much for joining us and giving us your time. We're very much looking forward to talking with you.

I would like to start at the beginning, around the 7th of November, 1946. Happy birthday, by the way. Tell us where you were born and where you grew up, and where you called home.

GE: I was born in Massachusetts. My parents were living in Arlington, outside of Boston. But actually through high school I went to 13 schools. We moved a lot. So I didn't really grow up in any one place. My father was in sales and marketing for what at that time was high tech, Collins Radio Company. So we moved a lot; we really did.

DSM: Do you have brothers, sisters?

GE: I have two sisters and a brother. I'm the oldest of the four.

DSM: Tell us a little about your mother.

GE: My mother was born in Ft. Lewis, Washington. My mother's father was a career army officer, actually. He ended up a general in the army. He fought in World War I, and with Patton in World War II. Family legend has it that he was the bugler that went into Mexico after Pancho Villa, that he ran away from home and joined the army. I don't know how true that is, but I do know he served in World War I, II, and the Korean War. So my mother was born in Ft. Lewis, Washington. She of course was a nomad, also because of the army life. She had lived for a number of years in China, a little place on the river up in China. 01.05.23

My father was born in Iowa, and grew up in Waterloo, Iowa. Then he went from there to San Francisco out of high school and joined the army. After World War II he ended up working for Collins Radio for a number of years, and then some other smaller high tech companies.

DSM: So in this peripatetic early life, where did you first start school? Did you learn to read before you started school?

GE: I didn't go to kindergarten. I started first grade in Cedar Rapids, Iowa, which was the home of Collins Radio. So I went to first and second grade in Cedar Rapids, and at two different schools. They were building new schools. Then third grade was in New York. Then we went to England, and then back to LA. From LA we went to New York, and then to Ohio, and then to Oklahoma. My senior year in high school, we moved to Tulsa, Oklahoma, which appeared at the time to be in the middle of nowhere, but was actually a great experience for me. So I graduated from high school there. Went to college in Oklahoma.

DSM: I was going to ask, how did you get to Oklahoma State University?

GE: My parents were very practical. They said, "Go to the local school. That's what we think is the right thing to pay for." They were very fiscally conservative. They grew up in the Depression. We were well off. We were middle class, upper-middle class. My father always made a good living, but they were very conservative and very practical, and I wouldn't say that they ever wasted a dollar.

DSM: Did you actually know your grandparents?

GE: My mother's mother died when I was like five or six. I knew my grandfather, her father, the army officer. He was a very colorful guy, a very interesting guy, and he lived into his 90s. I knew my father's mother pretty well. She passed away recently, a few years ago. I never knew my father's father. He and my grandmother separated when my father was young. No one has any idea whatever happened to him actually.

DSM: In preparing for this interview, I've read that you really like to read, and that you'd like to be a teacher. Were there teachers that really made a difference early in your life?

GE: Yes I think there were. I think what I've said is that I think teaching would be a fun thing to do. I think that it would be really fulfilling to teach something to kids. Education is an area that I think this country has way under-invested in.

But certainly when I went to high school in Tulsa, there was a teacher. His name was Doberman. I can't remember his first name. We didn't call people by their first name. I don't know if you know Dick Schaffer, who worked for the *Wall Street Journal*, and runs a company called Technologic Partners. He has been in the industry forever. He wrote the technology column for the *Journal* 20 years ago. Anyway, he went to the same high school and had the same teachers. We've talked about this often actually. So he certainly had a huge influence. He was a math teacher. He had an influence on me. I can remember teachers through grade school and junior high that made an influence, but I think it was more after high school and college that I began to really think about how important it is to have education.

DSM: So you were always the new guy in class?

GE: All the time. I went to the same school for 10th and 11th, and the same junior high for ninth grade, so there were three years there. Other than that, there was never any continuity. The school in 10th and 11th had 3,000 students and it was in Cleveland Heights, Ohio. It was a big school but it was different.

People often ask, "How did you deal with it?" But you don't really think about how you deal with something when it just is. It wasn't like I had a choice. It isn't like now when you recruit people, you have to recruit the whole family. My father would come home one night and say, "We're moving next week. We're moving to here." And we'd just do it. It wasn't like we got a big vote in this or there was any discussion. And people were moved. That's how people built careers and were transferred. In New York he covered all of South America. He used to go to Cuba all the time, and to South America. This was in days when you didn't have cell phones and you didn't call.

DSM: And I would think that for someone in the middle of Oklahoma, and we're talking I guess late '50s here, somebody who had that kind of traveling--

GE: '64 was Oklahoma.

DSM: --that made you pretty exotic.

GE: Right, we traveled more. We had been to Europe and stuff, certainly through grade school. It turns out the school in Oklahoma was a very interesting school. Tulsa is actually a great town, and this school was an extremely high achieving academic school. In the year I graduated there were more National Merit finalists at my school than at any school in the country except New Trier in Chicago and Bronx School of Science, which are two very famous schools. It was a very high academic focus school. There were very bright students.

So I sort of went into there not knowing what to expect, but it gives you a chance to sort of reinvent you a little bit. When I got there I was interested in math and science, and I got in the advanced classes, and I think it really got me very focused in math and science.

DSM: Were there any hints when you were growing up of what you would become? When did you discover this interest in mathematics and logic?

GE: I think computers used to interest me. I used to build things. In high school I'd build my own stereo amplifiers. I had a summer job working at a company that did electronics, and I'd make my own printed circuit boards for these things. I used to like to build things.

I can remember in high school having this--it sounds really corny--but I had this fantasy that I'd have this computer, this machine, and I could keep track of all kinds of information, you know, names, addresses and stuff. And I just had this fantasy that something like this could happen. This was '63, going into '64. No one had computers and the concept was alien, but I really had this idea that this would happen. It really is true. Some people would say, "Well, gee are you sure that subsequent events haven't sort of colored that?" But I can remember it really vividly, the idea that you could keep track of a bunch of information, that it would be very easy to do that.

DSM: So what was the first real machine that you had?

GE: What really happened with computers was a couple of things. I was an electrical engineer. And unfortunately, you have to build things, and you plug them in and they have got to work. At one time I shut down half the campus, and blew out breakers all over the place. They made me pay for all this. I had to pay like $400 before I graduated because I failed to put a fuse in the circuit. I was in a hurry in this lab. This is a true story. $400 was a ton of money in those days, and I had to come up with this money to graduate.

The thing I loved about programming is that things didn't get destroyed if it didn't work. It didn't blow up or something, and I enjoyed it. Then by a quirk, I needed a job in college, and there was an opening to teach FORTRAN programming to business students. Back then Oklahoma State made every business student take at least one computer class, which was actually fairly progressive because most schools didn't even have computer science departments in those days. So they were looking for someone and I had taken a FORTRAN course, and I needed the $300 a month that this thing paid to teach this class. So I went in and said, "I'm an expert at FORTRAN."

And the first semester I taught this, I was literally one lesson ahead of the class. It's really true. So it's really not some master plan that got me there. I got to like it, and I got really good at programming. Then a friend of mine had a Masters thesis, his thesis adviser said, "You know this would be a little bit better if it had a program in it." This was kind of corny, because what he wanted was just BS, and it didn't add any value to the thesis. So I wrote a program for him, and I kind of got known as someone who would write programs for people and help them out.

George was his name. George just thought it would really beef up his civil engineering master's thesis. It was some cement thing, and all I did was take the data and write a program that would reprint the data out of it. It wasn't really anything very sophisticated. But he got his Masters, and I don't know whatever happened to George. I'm sure he's doing well.

DSM: This was in 1966?

GE: This was in 1968. I graduated in '68 from college. But I got a notice to report for induction. It's a little complicated, and this is how this all ended up happening. This sounded like a very bad idea to me, to go into the army. It seemed like this was going to really interfere.

DSM: You were at the university at an interesting time.

GE: People were drafted. People now don't get this. You really did get drafted. You really didn't have a lot of options. I mean I could have left the country but it didn't seem like the right thing to do. So I went to the draft board. I got a haircut, put on a suit, coat and tie, went to the draft board and said, "I'm going to graduate school," and they gave me a one-year reprieve. It's really true. They said, "We understand. "

So I went to graduate school. That was the only reason I went to graduate school, and I took a bunch of computer science courses. I didn't really accomplish anything with it, but I took courses for a year to see what was going to happen here with this draft. Then it was very clear that I had no choice. At the end of that year I was going to get drafted. So I went to an old fraternity brother who was in the Navy and said, "Hey, I really want to be in the Navy." He'd been bugging me, and I'd been saying, "They're never going to get me." So I got an application and was accepted to Officers' Candidates School in the Navy at Newport, Rhode Island. But I didn't have to report for about six months, so I went down and got a job with IBM in the branch office in Tulsa doing programming. The branch manager, Fay Johnson was his name, was an amazing guy.

I worked for IBM for a few months doing real work in corporations, working on help small businesses put 360s in and writing programs to help them get up and running. So I did that. In February of 1970, I reported to Officers Candidates School, and in June, got commissioned as an ensign in the Navy.

DSM: You didn't mess around. You were in the Navy for how long?

GE: Eight, nine years. I was in Newport, and the Officers' Candidates School wasn't like a lot of fun, but it wasn't that tough. You did have to get up at 6:00 and do all these exercises. So they said, "If you're interested in submarines, you can go down to Washington for an interview." So I thought that a couple of days in Washington sounded a lot better than a couple of days in Newport. This is a winner.

So I went down to Washington and was interviewed. Admiral Rickover interviewed every officer at the time; he personally interviewed them. So I got my 30 seconds with Rickover, and at the end of the thing, they said, "You're accepted into the program." I said, "Well, how long do I have to decide?" They said, "I don't think you understand. When you sign those papers to come down here you don't really have a choice." So I was in the nuclear submarine program. So I went back and finished up officers' candidates school, and then went through the nuclear submarine training. I went through a year of technical training on nuclear reactors; went to a submarine school; went to a submarine. I was an officer on a submarine and we did missions, really fun stuff, sort of Hunt for Red October.

DSM: What were some of the boats you served on?

GE: I was on the Grenard and the George Washington …

DSM: So what was your job?

GE: I was a line officer. I was a division officer, so I'd stand watch, officer of the deck. Or in the engineering department I had different engineering jobs, like electrical officer. And I was a communications officer for a while. You did a lot missions, and you did intelligence missions. It was a lot of fun.

DSM: On nuclear submarines, you were out what, like a six-month cruise?

GE: The attack submarines would go out for six months. The first year in San Diego, I was in the Grenard home port in San Diego. The first year we were gone 270 days. You had to stand duty every third day. I was a bachelor, so it was no big deal. It wasn't that you were being paid a lot, but you had a lot of money because you were never home to spend it. You stayed in the bachelor's quarters, so you didn't have to get an apartment, and life, I mean, it was really good.

So I did that in the '70s, and I was due to get out. We were in Subic Bay in the Philippines, actually we were sitting around drinking in San Miguel, and I said, "I'm getting out. My time's up." So the commanding officer, a guy named Ralph West, this guy was a great guy; he said, "Call your Washington, the person who decided your next job, that's what the Navy calls them. Call this guy and just see." I said, "Well, I don't know." He said, "Well, is there anything that would keep you?" I said, "Well they could send me to graduate school." To make a long story short, I called him and said, "If you send me to get a masters in computer science, I'll stay in." So the next day I literally got the orders. The Navy has a postgraduate school in Monterey. So they sent me to graduate school to get a masters in computer science, and so then I agreed to stay in three years after that.

That's how I ended up staying in until 1979. But the real turning point was an IBM summer job. That was kind of a fluke. I got that job. I really got into understanding what IT might be like. I went into the Navy and had nothing to do with computers. I mean there were computers there, but I was a line officer. I was standing watch during these missions. They sent me to graduate school. In 1975 I show up at Monterey at the old Hotel del Monte, and as life would have it, one of the top professors of computer science there was a guy named Gary Kildall. He was teaching there.

DSM: Now had you heard of him?

GE: Never heard of him. He was working on these personal computers, these microcomputers as they called it.

DSM: They weren't going anywhere in those days.

GE: Well, I don't know if they weren't going anywhere, but it certainly was very different. Intel was a very small company but Gary had a reputation for being the hardest instructor. So give to give you a little background, people didn't go there to work their ass off, to tell you the truth. People were there because it was a good check mark for their career.

So I had this idea that I could really learn something, and I actually worked pretty hard there. They had some pretty good instructors. They had great teachers there, because they paid them well, and they gave them a quarter of the year off to do whatever they wanted and do research. It was pretty lucrative. So they had some very good people. Gary was great. Gary's Ph.D. thesis was one of the fundamental theses in computer science, in global flow analysis. Gary was a well regarded individual. They had one of the best operations research people in the world teaching there. Hamming, I don't know if you've heard of the Hamming code, but Dr. Hamming there when I was there. People say, Navy postgraduate school--it's not really accredited, but they had a great faculty.

DSM: Those guys are legends now. So you been in the Navy for--

GE: Six years, five years.

DSM: Five years. You've been away from computing since your IBM job. So who put you on to--

GE: What happened was, the rumor at the school was that Gary Kildall was the toughest thesis adviser. He made you really work. So I showed up at his office, and Gary was never in his life a hard worker I will say this, as an individual. So he happened to be there and I went in and said, "I want you to be my thesis adviser." And Gary said, "Oh, no, you really don't." I said, "I really do." So he agreed to do it, but he said, "You've got to work on these microcomputers." I said, "Okay." He wanted me to work in word processing, but I said I wanted to do a compiler. So I think this thing called Basic E. It was a compiler that ran in CPM. The one thing it did which was interesting was, it was a compiler versus an interpreter.

So here we are in 1976, I get my master's degree, and I have a lot of experience now working in these computers. Now at this point the hot company was IMSAI, and Seymour Rubinstein was the head of marketing. Seymour Rubinstein calls me up and says, "Come by, I'd like to hire you to work on this compiler." I said, "One, it's public domain; two, I'm in the Navy, you just don't quit." It may be a hard thing for people to understand. He just couldn't understand that you just couldn't quit. But I did go by. I said, "I'll give you the source code." And I said, "Can I hire you as a consultant?"

So again, to make a long story short, the Navy sent me to Vallejo to be on a submarine called the George Washington. It was supposed to be out of overhaul in four months. It ended up staying in Vallejo for a year and a half.

So in that year and a half by just complete blind luck I did this project for IMSAI. The project for IMSAI retained equal rights to it. I did it completely myself. So I ended up with a product, which I called C-Basic. It was a commercial Basic that used BCD arithmetic, so it was very good for business. It was a compiler, so people could distributed applications. And that became really the standard language in applications. I owned the rights to it. IMSAI also owned the rights to it. They went bankrupt.

DSM: Is that when you founded Compiler Systems?

GE: Compiler Systems was the company that did C-Basic, and sold it, and managed it. I was still in the Navy, and we eventually left Vallejo and went off to Hawaii and did things on the submarine. So my mother ran the company out of Sierra Madre. She hired all the technical support people. I mean it's kind of a weird … this is a long convoluted story.

DSM: No this is a great story.

GE: This is how it actually happened. My mother called me one time, she said, "I met this really interesting guy. He's a distributor. He sells some C-Basic. You ought to meet him." I said, "Yeah ,yeah mom. I know most of the people." She says, "No, no, this guy is really interesting." "Who is it?" His name is George Tate. So that's how.

It was a very small industry. There were a number of companies and we were in the right place, in that we had a product that ran in CPM that people could write applications. A funny irony of George Tate was that DBASE ended up being the development language, but for a number of years it was C-Basic. So the nub of it is I started really early. I got involved in all this, I was at the right place at the right time. What would have happened if Gary hadn't been in his office that day? What if I couldn't track him down? What if he'd been on sabbatical?

DSM: How did you get your mom to do this?

GE: Well, because she just did. My mother was very smart. She never worked. In those days families were different. She stayed home and raised four kids, which was a lot harder than what my father did. He had a job; and that was just the way it was. But she was very talented. And she just sort of put this together, figured out how to do it, got an office, hired some people. Then we sold the company. I got out of the Navy in 1979. In '81 we sold the company to Digital Research, to Gary. That was always my idea, was to go there and work with Gary.

So here we come to '81. The PC has just been introduced. Gary is sort of the top company at this time. Microsoft is the top company. VisiCorp is the top company. There are really three hot companies. There's Digital Research; there's VisiCorp; and there's Microsoft. 1981, the PC is just coming out, I own a reasonable percentage. I mean if Digital Research had ended up dominating the industry……

DSM: We're talking about Gary Kildall and CPM. There are a lot of legends about missed opportunities, and opportunities taken. You knew him at the beginning. There's a story here.

GE: When I first met Gary at the postgraduate school and he was my thesis adviser, he was mulling over what to do with CPM. Just to be clear, CPM was something that he wrote to demonstrate that these microcomputers could be general purpose computers. He wrote it to just show the value of the technology. Al Shugart at Seagate donated a couple of disk drives. Somebody wrote a disk drive controller card that was wire round. There were like three of them in existence. He had an Intel blue box, which just had the CPU in it. He had jerry-rigged this system to run CPM on it. There were like two or three of these systems in existence in the world. There was really weren't even prints to show how this disk controller worked. I don't know if it could ever have been reproduced. Who knows what would have happened if the thing had failed early on and hadn't worked.

Anyway, so Gary had that. He'd written this operating system. But it was becoming clear that floppy disks were going to be an important part of computers; that this mag tape and punched cards weren't going to hack it. Gary had an operating system and he started licensing it. He licensed it to people like IMSAI and Digital Microsystems, and all of these companies that have totally disappeared.

Probably by 1981, he had 100, 200 people who had licensed it, including people like Hewlett-Packard and Xerox and companies like thatThis is when people were really beginning to get intrigued by PCs, and Gary had done this from probably 1974 on. He'd been working in this, was interested in this whole area. Then the pivotal thing that everyone wants to know is, how come Digital Research didn't end up with the IBM contract for the operating system? There were three companies: Microsoft, there was VisiCorp, Microsoft of course run by Bill, VisiCorp by Terry Opdendyk, and Digital Research by Gary. So those are the three leading companies at the time, and anyone else was really distant. Those were big companies, you know, 10, 20, 30 million in revenue.

So basically what happened is that IBM showed up at Digital Research with a nondisclosure about the PC project. It wasn't the first time they'd shown up there. And Digital Research was completing a major contract with Hewlett-Packard, the same day. IBM showed up on short notice. Apparently they had been in Redmond and they came down here. They got the BASIC from Microsoft. They're going to get the operating system from Digital Research, and they were going to get the applications from Visicorps. That's what people did. The difference was that IBM wanted to use the new chip, the new Intel 8088 chip, the 16-bit chip, okay. So they showed up, they had their very complicated nondisclosure--let me back up. At Digital Research, Gary and his wife Dorothy ran the company. Gary did all the technology; Dorothy did all the business side. I wouldn't say they got along well. Dorothy was sort of a bitchy person to begin with. She's difficult to begin with. But there was no question that if someone showed up to do business, Dorothy dealt with it. Gary did the technology. So that day Gary was delivering some software to, I believe, Northstar up there. But he flew up to deliver this. But that wasn't anything to do with IBM. It wasn't that Gary just decided to screw off for the day. He didn't deal with OEM. So Dorothy was trying to deal with Hewlett-Packard, who was signing the biggest contract to date for the company, and dealing with IBM and their nondisclosure. The nondisclosure got signed. They had a meeting. Gary got back there and they all met. And even more ironic, the next day Gary and Dorothy were going on vacation. They flew to Florida with the team on the same airplane, they just happened to be on the same flight. And it wasn't that there was this incredible animosity, that Digital Research refused to deal with them. What was really true, was Digital Research didn't have a 16-bit operating system.

So let's look at the history of what really happened here. Gary cared a lot more about partying than running a business. I think anyone would agree with that. Gary cared about what Gary cared about. At that time he was writing a PL-1 compiler. That's what he cared about. He didn't care about the 16-bit. He didn't have any interest at all in it. As a matter of fact, a company called Seattle Computer Products was building a board with a 16-bit processor on it, and they were desperate to get an operating system. Digital Research had no interest so they wrote their own. They basically copied CPM. So Tim Patterson had a little company called Seattle Computer Products. They'd written their own operating system just so they could sell their board. Gary was down there doing a PL-1 compiler. Microsoft was doing BASIC. The difference between Bill and Gary were just striking. Bill saw an opportunity, he would drive, he'd commit, he'd probably over commit, no problem. Gary was like, "I don't care, I'm Digital Research. You deal with me, and you deal with me on my terms."

The same thing had happened a couple of years earlier when hard disks became popular. CPM-1 didn't support hard disks. Gary almost let this slip away at that point, and he barely came out with CPM-2. I don't want to spend a lot of time on that but there's a whole lot of history there. So again, the same situation came up. Gary was focused on one thing. Dorothy and Gary weren't, I wouldn't say, the best team to work together. Digital Research didn't really have a great thing to give them, although they were working on CPM-86. It wasn't the top of Gary's mind. It wasn't the highest priority project. So out of this, Bill Gates--and I'm not sure why or how this happened--went to IBM and said, "Listen, I'll just provide the whole thing to you." And he went and licensed the stuff that Tim Patterson had done for $50,000.

Now you can argue, that that was a rip-off of CPM. There's a lot of problems there. And you can maybe wonder, why did this never blow up on Microsoft that someone really reverse engineered and copied the CPM data structure? So the next thing that happened was that Gary finally figured this out, and he had a very fateful meeting with IBM in New York which I don't believe has ever been written about.

DSM: This was about what year?

GE: This was in 1980, when they were working on the PC, maybe late 1980, or early '81, but it was in that timeframe. He went to New York and he said to IBM, "Listen, what you have is a rip-off of our technology. We're going to sue you." So IBM agreed to include multiple operating systems with the PC, and I've seen the documentation. Gary agreed to release IBM in turn for being included, so the PC then had three operating systems: the P-system, CPM-86, and MS-DOS, which they called PC-DOS. Then behind the scenes Bill and IBM agreed that all the applications would run in PC-DOS. Digital Research then had no degrees of freedom and they were hosed, and Gary didn't realize this for a long time.

And I think that's realistically what happened. It wasn't something that Microsoft did. It was really, Gary really didn't have the passion and the drive. He was a great person and we were very good friends. I really thought highly of Gary. He was a tremendous amount of fun, but running a business was not something that was high on his list.

DSM: And you were actually working as a VP there.

GE: Well, no, at the time that the IBM PC came out, and Gary realized what had happened, he then bought my company. I was there from September of '81 to September of '83. But it became clear to me that the desire there wasn't going to be to win and I decided it was better to go off and do my own thing.

Gary and I were together from 1975 to '83, first as a graduate student doing a thesis with him, more becoming someone who was helping him as a sounding block and thinking through what to do. The thing I remember most about Gary, you know you talk about fate, and this is kind of complicated, but in 1977, I went back to visit Gary. I was out of the postgraduate school, and we were down in Pacific Grove, at a place called Lover's Point. That's where the plane that--who's the singer from Colorado?

DSM: John Denver.

GE: That's where his plane went in, it was right at that point. So we were down at this place, just sort of talking. And if I can kind of put this together, Gary had CPM at that point in 1977. He was the dominant operating system. Bill would send people to Gary to get the operating system, and then Bill would sell them BASIC. Gary also had his own BASIC, which he'd actually traded to Intel to get the hardware so he could have the machines he needed. So I had a long argument with Gary in '77 that he should bundle the BASIC with the operating system and eliminate Microsoft, and he just wouldn't do it. We had a really heated argument about this. He said, "No, Bill would never do anything to hurt us. They send us all these customers. I can't really do that." So anyway, nothing came of that.

Gary continued to sell CPM until the fateful IBM situation. Once IBM came out, it became increasingly clear that MS-DOS, or PC-DOS as it was called then, would become the standard. I think Bill showed a tremendous amount of brilliance in the OEM strategy. I think that Compaq was a critical component in really legitimizing the plug compatible PC market. I think IBM probably in retrospect would have done some things differently. Anyway, the net of it was, the die was cast when Gary agreed with IBM that he would relinquish any claims on the operating system side. I'm sure this isn't the story that other people would tell, but I really believe this is true. I've seen the documents. I've talked to the people that were there, and I believe that's what happened.

So I stayed there for a couple of years and decided in September of 1983 to go off and do something different.

DSM: Was it hard watching this?

GE: No, it's not hard to watch something that you don't know how it's going to look three years from now. What was hard was to see a company where Gary cared a lot more about having a good time and not running a business. Dorothy and Gary were typical founders who couldn't really manage a company and couldn't relinquish it, and they paid the price.

Bill, for anything you want to say about him, Bill really wanted to build a business, and he was aggressive, maybe ruthless. But mostly he was just aggressive. Gary really had the upper hand. He just didn't play the cards right.

DSM: Do you think you got your business focus from all that association with business school people when you were teaching FORTRAN?

GE: I think the biggest thing that impacted me was seeing what happened at Digital Research, and really making a firm commitment that if you're going to run a company, you have to take the long view. You have to run it to succeed, and you have to run it for the people who work there.

Gary as I say was fun. He was an awesome water skier. He grew up in Seattle. He did a lot of water-skiing, so he had a ski boat. One Saturday, we were going to go up skiing. So we pull by the company, and Gary you know goes in and loads up a bunch of cokes from the company into the car, I didn't see anything wrong with that. About a month later I was in Dorothy's office, and she was bonkers and going crazy and was all upset because somebody had said some employee took some cokes home. So she put in this policy, there'd be no more free cokes. They went crazy. In their mind, it was their company, and not the employees, and they didn't see the employees, how they fit into this.

Another thing that is sort of sad but true, we were in a board meeting one time, and we were arguing about stock options, and I remember a conversation about rewarding an employee. And the debate was, "This woman, you say she's great, why can't we give her 500 shares?" And Dorothy was adamant: she's unprofessional. So someone asked the fateful question, well why? Well, because at 5:00 o'clock her daughter comes in and sits in the office for an hour or two while she finishes up. I swear this is actually true, we're looking at each other like, wait a minute, this person is so dedicated that she works extra hours. But it gets better. So we move on--people are like, "Okay, whatever." It didn't seem very fair to employees. But 15 minutes later, we're in a board meeting, and in pops Christie Kildall, who was probably 8 at the time, bops in, jumps up in Gary's lap, and says, "I need to go to the stables to go riding." So Gary pops up, takes Christie out, and drops her out at the stables. Absolutely true!

The reason I tell that story is that Digital Research didn't get beat by Microsoft because of dirty tricks or something. It was just fundamentally not a company that was destined to be successful. Then they didn't bring in good people subsequently, and eventually Novell bought it, and I think Ray Nordis desired to find any way to do in Microsoft, bailed out some people, and he made at least a little bit of money.

There was a company who had in Gary, a great technologist with a superb vision. And they had a position that was really a very strong position: they controlled the operating system; they could have controlled the languages; they could have controlled the applications. In those days anti-trust was not even in anyone's vocabulary. They were all private companies. And the reason it didn't happen has to do with the fundamental ways the business was run, and the motivations of the people. So anyway, at that point, 1983, I'm off, and I get together with Denis Coleman.

DSM: Now how did you meet him?

GE: Okay, this is a very strange story. I'm in Hawaii running Compiler Systems. I'm still in the Navy. I have a house and I have some computer equipment, and I'm working on the compilers for Compiler Systems. My mother is running the company in Sierra Madre. I get a call from this guy who says, "Listen, I understand that you have the only really reliable computers in Hawaii that are production, and this is sort of a strange story, but I'd like to rent some time on your computers because I am a professor at the Stanford Business School. I'm over here for a few weeks to get married. My fiancé lives here, and I'm working on an application." This is true. I say, "Well, gee I don't really rent these out. I wouldn't even know how to do it. But why don't you come over and meet me?" So he came over. He seemed like a good guy. He was writing a spell checker called SpellGuard.

DSM: Now how did he meet you?

GE: Because it was a small community. He went to the local computer stores. They said, "Well, there's this guy Eubanks." It's kind of weird, he seems to know a lot about this stuff, but he bought some equipment from us. His CRTs were like $1,000, and he lives in a nice house in Hawaii Kai. So Denis came by and I said, "Listen, I don't really want to rent them, but I'm going to have to go into the Navy in the day. So if you want to just use them." So Dennis borrowed the machines. I had a hard disk. This was amazing. I had a 2 Mg. hard disk system. So it was high performance. So he was working on his spelling checker. He used the system and we got to know each other. He was Infoworld's first product of the year. The very first time they did product of the year it was called SpellGuard. He wrote a spelling checker. He was quite a pro. Denis was a smart guy. He was teaching at the business school. So he ended up doing that. This was in the '70s now, so you had that product.

Come 1983, I went up, sat down with him and said, "Let's start something." We started something called C&E Software, because we really hadn't come up with a good name for Coleman and Eubanks. The next thing I know, I'm in my condo in Menlo Park, and John Doerr knocks on my door with a bag of croissants and says, "We want to put you together with this company called Symantec." So I went down and checked it out and basically said, "Gee, I don't think Symantec is going anywhere." And he said, "Well, we understand, but we've got 90 percent of the equity," and they agreed to invest more money. So here we are in early 1984, and Denis and I and a few of the people that we hired are at Symantec just a mile from here in this three-story building.

DSM: So you went down to Symantec rather reluctantly?

GE: No. Here was my thinking. We were going to need to raise more money. It was hard to raise money in 1984. Symantec was at least known. It had a lot of programmers. They had this facility that was five times the space they needed. Kleiner Perkins was willing to get behind it in a big way. The people who originally funded us were sort of seed people. So all this made sense. We ended up with 90 percent of the equity, so how could this be a bad thing? We took on some debt in that we had facilities that we didn't need. But it seemed like a good thing and Symantec had some very cool natural language technology. The founder of Symantec, Gary Hendrix, was one of the country's resident experts in this area. So we looked at it and said, "Let's get focused." C&E was going to go off software publishing. They're going to integrate file report and writing into one product. Symantec had natural language. We said, "Let's create an integrated file report and let's use natural language to query it so anyone can use it. Let's put this whole thing together." Out of that came Q&A. So from 1984 through '86, we developed this, got it to market, and eventually absolutely dominated the market. We put software publishing out of that business, and we had a tiny little business going in productivity software at the low end.

Our days were numbered, because Office was beginning to come out. And I was sitting there thinking, "Well, this has been a very great learning experience, but we're not going to build a great company here with the path we're on with Q&A." So a few fateful things happened that really changed the day for Symantec. First, I'd hired Tom Byers. Tom was at Symantec, and he was looking for new business opportunities. And how did I know Tom? I'd hired him at Digital Research when he graduated from Berkeley. So that gave us a Kleiner connection that turned out to be absolutely necessary for Symantec to succeed.

So I hired Tom. He came up and worked for us. And Tom hired a guy named Ted Schlein, which he met through Heidi Roizen. I think Tom was dating Heidi at the time. Ted is now a general partner at Kleiner Perkins. He ran the Java Fund. But Ted worked at Symantec for years and years. He came out of Penn. He's a great guy. So Ted and Tom started this thing they called Turner Hall Publishing, and they did Lotus add-ons like Note-It and Squeeze. They actually created this business doing that, and got us some momentum, and some breathing room.

So that was one really lucky thing that happened. It gave us some good people and some momentum early on. What you start out doing and what you end up doing to succeed are very different. That set the tone at the company, and taught me this lesson, that business is about surviving over a long period of time. What you have to do is put people first, and find business opportunities, versus the more traditional thing which is, you get cornered into what you do, and when buggy whips are no longer of value, you kind of go out of business. But we started very early saying, "Listen, we're open-minded, and we'll look at opportunities."

DSM: What do people want rather than, what are we making?

GE: Right. So and then two or three very important things happened. First of all, we decided acquisitions were something we could do, and we bought a company called Breakthrough Software. It was owned by Bill Losey. It was the leading project management software, and this saved the company. We basically got it free. It was kind of a complicated deal, but Bill was between a rock and a hard spot.

DSM: The Breakthrough purchase was really--

GE: Having Turner Hall and having that go was important, but we were beginning to build our thought process around the business, and the willingness to take risks.

At this time Bill Losey was publisher of PC Magazine, and Bill Ziff had told him, you can't own a software company that's getting "Editor's Choice" every time. This is an absolute conflict. Get rid of it or get out of PC Magazine. I know that's what really happened. So Bill had to sell it. He originally sold it to a company in San Diego who was then acquired by Computer Associates, and they said we don't want Breakthrough. They then came back to us, and I said, "Okay, here's the deal. We'll give you $10 million in stock--or $10 million in cash payable on an IPO." So we basically got the company and the cash flow for potentially doing an IPO, and never had to pay for it, because there's no way we could have paid for it as a private company. I know $10 million doesn't sound like a lot now, but at that time, that was an inconceivably large amount of money.

So they got a tiny piece of equity; a $10 million note only payable on an IPO. Timeline continued to grow rapidly, and that was a huge success. So that opened our eyes. We did a couple of other acquisitions that were not as positive.

DSM: You bought Central Point...

GE: Well, that was much later. So then we go public in 1989, and we had Q&A, we had Timeline, we were a productivity company. And still I could see that Microsoft and us were on a collision course, and there was no long-term really great strategy in productivity. It didn't matter how great it was. So we made this fateful decision--really Bob and I made this decision--to go after the utility market. We went out and we talked to Central Point, to Fifth Generation, and to Norton. So you can look back and say, "What a great decision." But this was thought through. We looked at where we could go. We'd hired a young guy named Mark Bailey to do business development. And between Mark, Bob and I--I should give Mark very much credit here--we looked at it. We visited all three companies. Here's what really happened--Fifth Generation, I won't go there, but that wasn't a choice. Central Point was actually our first choice. They were killing Norton, but there was no way to do a pooling of interest transaction with Fifth Generation because they had too big an owner in some Asian investor. There was Norton, and Peter wanted to sell. So we looked at it and thought, well Peter had the better brand. And I met with a technologist, a guy named Brad Kingsbury, and he convinced me could win at Norton. So we worked a deal, we paid $85 million and people thought that was an outrageous amount of money. So in 1990 we changed the course of the company. We then went out and bought all the competitors, and ended up really dominating that utility business.

Now let's go back to this guy, Ted Schlein, he was hired by Tom Buyers. Well, Ted, after it was clear these Lotus Add-ons weren't going to keep being a big business, he went out to find another opportunity, and he found Anti-Virus. He had a thing, a product called SAM for the Mac, Symantec Anti-Virus for Mac. Everyone's who has had a Mac remembers SAM. That was Ted. It was the first commercial anti-virus product. Ted got us into that business. We then linked up to Norton, and we drove anti-virus, and that changed Symantec for the 1990s.

So that's a very kind of quick history --but if I look back on it, the critical things in the 1980s were one, staying very focused on an existing market. You know, we're going to compete with Software Publishing, and they were bigger, but we had a real differentiation, and there was a market, and we delivered a great product. It won reviews. It won a tech excellence award. Really a great product, and we won in the market.

DSM: Were there some things that you didn't buy that you wish you had?

GE: Yes, and certainly with hindsight you can really pick those really clearly. So, here we had taken Symantec from a company that wasn't going to make it, to a successful small business. We got it public, and we were willing to roll the dice and get into a much bigger area with a lot of growth potential which is still the area that they dominate, which was utilities. Then we hit Michelangelo--remember that virus? That was the first public virus threat, and our business was rocking. But we really got caught up in too much inventory in the channel, and following that business got a little tougher; growth slowed down, and the stock went down. But we stayed the course on utilities, and I think over the long term had a successful business there.

In looking to expand, the other area we really thought was a great opportunity was email. We tried very hard to buy cc:mail but got beat out by Lotus. I think that that would have been one that I wish I'd tried harder earlier on it. We had the vision, but we didn't execute, and by the time we got around to executing, we had a big competitor in Lotus who wanted it. They convinced them, well, gee, they would do a lot better at Lotus than they would at Symantec. But that would have been a very interesting change, because that turned out to be an absolute dynamite business, coupled with the utilities, I think it would have been a change. I really regret not going after it.

The other thing we did, which I think was fateful, was in 1994, we went after system management instead of doubling down in anti-virus, and by doing that we let Network Associates, the old McAfee, get in there and it took a long time to turn that problem around. It wasn't until we bought the IBM AV and the Intel AV business, and we came out with a product called System Works in 1998 that we really began to turn the tide on that. But the decision that I look back on was, getting into the system management business, and trying to compete in that enterprise business, we weren't equipped to do that. We had a gold mine there in AV that really had a lot of legs in it, and we didn't see that, I didn't see that.

DSM: Well, the Internet was bubbling below the surface then.

GE: We sort of saw that things were happening there. But we didn't see absolutely that the Internet would drive the AV business. We didn't really see that the Word macro viruses would really drive the virus business.

The other mistake we made in '91-'92 with AV that I don't think people really want to own up to is, we lost track of the customer a little bit. So part of it was the Internet, but part of it was that in AV, you buy an anti-virus product because it finds viruses. And while we were the leading brand, we were the worst at finding viruses in all these tests. And we weren't part of this group of sort of virus people in places like Europe that collected all the known viruses, and our competitors were. When we recognized that, and really put a woman named Lilly in charge of fixing this, it was a little too late. We really had the coolest interfaces, the most features and whiz-bang stuff, but we missed the fundamental customer thing, which was, find more viruses than everyone else. If you don't find the viruses--

So we recovered from that, but if people ask me, what did I learn? I learned that you cannot confuse market position with understanding the customer. And you've got to stay really close to why customers buy things. Then the Internet of course drove the virus business, and we didn't see that, and that affected us a lot in the mid-1990s.

That got us up to the late '90s, where it was clear to me that the Internet was going to change the way businesses operated, not about computers so much but about connections. I mean the Internet is a technology that reduces the cost of interaction so fundamentally that it can destroy business models. I began to see the Internet as something like the railroad or the telephone that would fundamentally change the way businesses operated. At this point, Ted Schlein, the guy who did Lotus Add-Ins and the guy who got us in the virus business, who was now a venture capitalist at Kleiner Perkins, he came over to dinner one night. And I was saying, "I think I've probably done all I can do at Symantec, and I think it would be mutually beneficial if I did something different, and I really think the thing is this Internet." So the next thing you know he said, "Why don't we look at this little company, Oblix, and see what we can do?"

So I joined Oblix in April of 1999, and we've really focused there on how to apply the Internet to solve business problems. What kind of infrastructure does the company need if they're going to apply the Internet? We're sort of early on in that, but we're having a lot of fun, it's been an interesting transition. And the connections to people--there's one set of connections around Gary that went through 1984. Then there's the connections like Tom Buyers and Ted and Kleiner Perkins and that group of people, and then Symantec and group of companies. I will say in retrospect that at Symantec the people made the difference. We really had an extraordinary group of people, and it really shaped a lot of my thinking about how business should run, what's most important.

DSM: The business that you're in now, with the expansion of the Internet and the huge portions of the world that's untouched, it seems as if it's an ever-expanding business. What do you see as the future of this?

GE: As I said, I think that the Internet is so fundamental in reducing the cost of interaction , hat what will happen is that businesses will apply this in a way that is fundamentally aimed at serving customers and reducing costs. And what happens in this is that it dis-intermediates smaller businesses. We end up with larger global businesses. It's hard to say what the long term impact is, but over the next five years I think globally, companies will apply this technology to better serve customers, partners, suppliers, employees, to make life easier for them and at the same time reduce cost for the companies that are doing this. We're going to have companies connected through the Internet, through the IP protocol, in the same way companies today are connected by the phone.

I think of my father in the 1950s selling Collins Radio gear to Cuba. He would get in an airplane that had propellers. He would fly to Cuba, which probably took a long time. He would check into, I'm sure, a very nice hotel. But there wasn't a communications infrastructure. He didn't send back emails. He didn't call, maybe once a week at the most, and this was when he was in Brazil or Argentina; people didn't communicate. So companies did business so differently. Now people are constantly in contact. You just don't go and not be in contact.

DSM: It is really a different kind of empowerment.

GE: Right, so businesses then operate differently, and if people don't start applying this technology, they won't be competitive. You couldn't be competitive today if you're not using email, if you're not using telephones aggressively; you don't have call centers to serve customers. All this technology is something that you really don't have a choice on. It's not like the PC ,which was a productivity aid. This is something that changes the way people do business. I think it's easy to confuse the Internet as sort of the next thing on the PC; it's really the next thing that really reduces the cost of interaction. It's much more akin, as I said, to the telephone or the railroads.

My favorite example of what it's like is rural free delivery of mail; here's something that really didn't come into being until the early part of the 20th century. In this country, mail was delivered to the post office and you had to go get it. So that had a huge impact in rural America, in a country where it was expanding rapidly, and there were farms, so people had to drive in.

So the government put in place two things that fundamentally changed the way business was conducted. One was rural free delivery, in other words, everyone could get mail delivered to them; and the second was parcel post. Countries like Germany and England had parcel post and we didn't. So you could cheaply send stuff. So that it enabled whole business models, like Ward's and Sear's, and it really changed. The cost of interaction changed so drastically that you could then do business fundamentally differently.

And that's what the Internet is bringing to the world; it's that kind of change. I think we get too hung up in some of the bits and bytes and PCs and stuff. Ten years from now, fifteen years from now, people will look at this very differently. They won't see the PC as the center of gravity. They'll see the high bandwidth, cheap communications, and any number of devices will connect.

DSM: That's one of the questions I wanted to be sure to ask. Who do you see doing stuff that you really think is admirable now?

GE: Well, I think the people struggling to make access to information seamless and mobile. I really don't believe the PC is the center of gravity. I think we both have the same kind of watch, looks like we do. But I see something like this in the future will be connecting, for example, to get sports scores. Last night, I'm so used to being connected, I didn't want to go to sleep. I was tired. I knew I had to go to sleep, but I could not believe that I wasn't going to know who won the election. It's a good thing that I didn't wait until they called Florida for Bush then wake up in the morning--but you're so used to knowing things instantly that the first thing you do in the morning is check email and voicemail. So the people who are really going to make a difference are the ones who are going to make life actually seamless--so you're not a slave to this device, but it's actually something that is with you, that you can check the things. I really believe that I will see getting off an airplane into a cab, connecting with a hotel, letting them know I'm coming, get checked in, get identified, get authenticated and authorized, I show up at the hotel, someone hands me the keys and either helps me with the bags--a little thing, but that kind of connectivity isn't going to be done with PCs. It's going to be done with devices. News and information will be delivered in a very different way.

So I think people that are struggling with how to make these devices that are telephones, and these devices that are computers, and these devices that are like Palm Pilot, how to get that all together, I'm not saying this very articulately, but that's what I think is one of the things.

The other thing that is going to happen is that people are going to have access to information so easily that the focus won't be on gathering, but the focus will be on analysis. And let me tell you what I mean. When I was a kid, we had the World Book encyclopedia. I said my parents were sort of frugal, so we bought the World Book instead of Britannica, nut we had encyclopedias. And if you have a school assignment, I go home, I have to do this. Well, go look it up in the encyclopedia, or go to the library. So I can remember trudging to the library, doing a lot of research. Today, the information is going to be so available that more energy is going to go into thinking through and analyzing it and evaluating it and putting a perspective on it, and I think that's a good thing.

DSM: I can do more research on Saturday morning on a weekend that's fun than I can do in a month.

GE: Exactly. If somebody tells you about a new company, "Have you heard of Gadget." The first thing you do is go www.gadget.com and say, "Oh, I see." I can't tell you how many times when I'm on the phone and someone calls me says, I just joined so and so. I immediately bring up their website. But it's going to go much further than that. People are going to have access to information. They're going to be able to gather stuff in a much more convenient way.

One of the things last night watching the elections was, I had on CNN, which I think does a good job, on the background, but they couldn't compare to what was on the web. If I wanted to know what was happening in Florida, I could get exactly what was happening. I had all the exit polls. I could look at them. I didn't have to wait until every hour it came around. It was all there. Everything was there.

DSM: The governor of Florida was on the web.

GE: See, that is changing how we think, and our access to information is being driven by this technology. And I can only imagine what people must have felt like when the telephone became very popular, or the railroad, where people could communicate in fundamentally different ways.

DSM: Well, I think for those of us, being sort of an outsider and a chronicler of the industry, you're definitely prejudiced about the positive side of the industry. But when you were in the Navy you were in a submarine with the technology to destroy civilization. Is there anything about this technology revolution that worries you, that seems to have a down side?

GE: Actually, I go back to a history professor I had in college, in 1965. He was a political science teacher, and one of the things he would say was, "If we had more spies, we'd have less wars. That the more people know, the less there is to worry about, and the more you realize that there were multiple sides to things." He was being very cynical, but I think we attribute in ignorance things to people, capabilities, or thoughts, that just in full knowledge aren't there. So I see my 6-year-old growing up with a fundamental different view of the world than I had. He sees the world as a much more heterogeneous, much more complex, he sees ethnic differences that I never saw; cultural differences. He sees the world as something that people can reach out and touch. He knows the Internet is somewhere to go get information. Now maybe he's focused on the latest Pokemon video--

DSM: But he doesn't have to take your word for what's the truth.

GE: He's learning. Even now, this is true, he'll come up to me and see if there are any new Pokemon. I say, "Well, there aren't. I checked." He said, "No, I want to see." So he doesn't really know that it's Amazon. He doesn't quite get it, but he looks there, and says, "Let me see that one, make it bigger." Or we'll go out and look for dinosaurs, and search for dinosaurs to see pictures, and without thinking about it, he's learning that there's a way to access information if you want to know something. He's six, but he's not unusual for six. Many kids are doing more than that. Once you learn to read, it just opens up what you can do. So I think yes, there are risks, but to me the biggest risk of the Internet is that it makes things like language and culture more homogeneous. And I think that's a bad side effect.

I interviewed a great candidate the other day. He grew up in Belgium, but he spoke Flemish, and his family was Dutch. You even have to say, even in Holland, English is becoming a dominant language. Cultures are getting more normalized. I mean there are MacDonald's everywhere, and not that I have anything against MacDonald's, but we are losing some of the differences that we have, and I think the Internet contributes. So on the one hand it's great to learn about it, but it does have sort of a leveling effect of things.

DSM: In some places in the world people in authority are really terrified.

GE: Well, I think the Internet will bring down repressive and repulsive regimes. But the Internet is not going to solve the world's problems, where for thousands of years there has been fundamental conflict. I don't think the Internet solves problems in the Middle East or the Balkans or things like that. I don't want to pretend that I know much about it, but I don't believe that there are problems that more information doesn't solve.

DSM: But nearly every new wave of information technology, the postal service, telegraph, telephone, television, they all believed that there was going to be the end of all wars, and the era of human peace. I think this technology may empower a large enough critical mass to pull it out.

GE: Knowledge has helped; access to information. I think CNN in its own way has changed the world a lot more than we realize. But we forget here in the U.S. that the world gets a U.S. perspective. CNN is a U.S. perspective. If you read the *Economist*, you can see that the U.S. has its own perspective.

But I think if people ask me, "What should we do with this?" If there's one thing we have to do at least in this country is, we've got to fix education. I really think if there's one thing, that we could apply this technology so that every individual had an equal opportunity. We're kidding ourselves if we think that if you're born in East Palo Alto you have the same economic opportunity to education as if you're born in Saratoga. These are local communities here. This just isn't true, and if we don't do something about that, we will have missed an opportunity and created a huge problem.

So I'm less worried about what this technology does sort of in a negative way, than hope it's applied to something that could make a huge difference. There is no reason to believe that the individuals independent of race or national origin aren't probably on average the same level of ability and capability; it's just what's developed early in making that happen, and if this could be applied to that, it would make a big difference. I know people here in the Valley have fought very hard to make that happen. It was sort of disappointing that Proposition 39 failed yesterday. I think if we're smart, we will really focus on applying this technology to that problem, therefore creating a much wider base of talent, increasing the amount of competition as a net benefit.

DSM: We're almost at our cutoff time. Two questions I want to ask, one of which I've asked everyone I have interviewed. You've been pretty actively engaged in Microsoft suit, and some say that's going to be a major turning point in the history of information technology. What are your thoughts on that?

GE: Well, to sort of crack that, I mean I wasn't really involved. Bill asked me if I would testify about the industry and the history of the industry and try to put it into perspective, and I did that. And I don't regret doing that. I don't feel that I was testifying for Microsoft, I was trying to put in perspective that the world has moved from a PC-centric, and that Microsoft, independent of the Justice Department, has a whole host of problems. And I think over time people will view that while their practices may have been over the edge, and they may have done some things that were way aggressive, that what really won out for the competition was that as technology marches on, it's hard for the leader today to keep up with it tomorrow. So while the Palm Pilot is the center of gravity and the Internet is the center of gravity today, just like, how could DEC be bought by Compaq? It's hard to conceive. IBM was invincible. How could anyone beat them? How could some little college dropout in Seattle outmaneuver IBM in the PC market? It happens, because it's very difficult to continue to build the next generation while you're protecting the current. So that was my involvement, and my only involvement. It was a life experience to get cross-examined by what's his name, yeah. But his tactic was sort of the Barry Scheck school of cross-examination, which is try to focus in on people's ability not to remember everything vividly. I don't see myself as being really in the center of this.

DSM: I didn't mean to imply--but your perspective on how important this suit is--

GE: The suit is very important, but what's even more important is the success of technology in continually creating new opportunities and new leaders. If I look at the world, look where Sun has come in 10 years, and look what's happening to Microsoft, and this excites me, that opportunity is earned, not owned; and market position is earned, not owned, and this is one of the great things. And I think that while it might be corny, free enterprise is a good thing, and the government is well advised to treat lightly. That's my sort of two cents worth on this issue. And today's people wanting to get Microsoft will be tomorrow's people wanting the government to tread lightly. That's the irony to me.

DSM: Last question is about your own role in this revolution. One hundred, two hundred years from now, people are going to look back at this time and this place, how would you like to be remembered in your role?

GE: Well, I'm not sure that I will be remembered over two, three hundred years. I think the impact of what has happened in Silicon Valley and the U.S. and the world in applying the technology will be remembered; and sure, it will look quaint. But it made a huge difference. I think 300 years from now people will respect what happened. I sort of think of myself as one of the thousands of people who staked out a mine in the Sierras. I was lucky enough to find gold in my mine, so I did well personally. I think I was lucky to be a part of it, but I don't see that my destiny is to be remembered as much as having had the opportunity to contribute. I think that the people that are going to be remembered, certainly Bill Gates and what Microsoft did will be remembered; but what we all did, hundreds of people, thousands of people, who did this, starting doing it when nobody thought it was important at all and thought we were silly. I can remember not being able to get a bank account for a business because people couldn't understand what we did. You couldn't get any traction. I tried to lease time on a time-sharing machine, and they wouldn't do it because they just couldn't perceive we were a real business. So I think that the real legacy here isn't so much of individuals so much as where this whole thing went forward I think, to change the world in its own way. I really do. I think it was an incredible opportunity; like the railroads, to be involved in that. There are a lot of books now, and it wasn't I guess as nice and sweet and ethical as people want to believe it was, but in the end we changed the world. I mean the railroads just changed things.

DSM: Are you reading Stephen Ambrose's book?

GE: Yes. So my 6-year-old loves jigsaw puzzles, and we have this 1000-piece puzzle. He's actually very good at puzzles; it's very interesting. Can't write very well, but he's amazing at these puzzles, and we have one that's like the railroad. It's this big puzzle, and then it has like 50 people's pictures around the border, and it shows trains and all the different railroads, bunch of big, B&L and all these different railroads, and he'll ask me, “Who are all these people?” And I'll look down, “Oh, I've heard of this guy, Carnegie.” But most of the people you've never heard of. And this was just 50. So it's not as if you remember everyone who built the railroad, but the impact of people doing that and taking that risk changed the world.

DSM: Thank you so much for your time and insights.

GE: I enjoyed it.