



Oral History of Dave Hitz

Interviewed by:
Jim Porter

Recorded: August 26, 2009
Mountain View, California

CHM Reference number: X5429.2009

© 2009 Computer History Museum

Jim Porter: Okay, we're going to start on an oral history with one of the storage industry's more active and more interesting people, Dave Hitz.

Dave Hitz: Thank you. I pronounce it Hitz.

Porter: I thought you would do that. <laughter>

Hitz: But that's okay. Most of my elementary school teachers pronounced it "heights", you know, so who's right, them or me?

Porter: I thought I'd start that way because I've heard so many people do that... <laughter> I wonder if we could get started, Dave, by starting out with your early history. Where'd you come from, how'd you get educated before you decided to get into the companies you worked for?

Hitz: Let's see. I was conceived in a seedy motel in New York near Times Square but I was born in Santa Monica. My parents were on their way to a trip in Europe for six months. For the first six months of my life I spent in Europe. Came back, I was born in Santa Monica and grew up in L.A. until I was 10. My dad worked for TRW as an engineer for pretty much his whole career. I mean, I guess, straight out of college all the way through to retirement. So classic upper middle class, middle class background, Dad's an engineer, Mom took care of the kids. When I was ten, we moved to Virginia and I went to a whole bunch of different colleges. I went to George Washington University for a year and a half, while I was still in high school. That was kind of part-time, get some extra math. Went to Swarthmore College for a year. Deep Springs College for two years. Crazy little school, 24 students on a cattle ranch in California, on the California/Nevada border. So I learned how to rope a calf and brand them, castrate them, and slaughter them. Then I finished up, finally, with three years at Princeton and I got a degree in computer science, mostly software. So that was my background before coming to Silicon Valley.

Porter: Did the ranching experience help you at Princeton with your previous experience?

Hitz: <laughter> I wouldn't say the ranching experience helped me at Princeton. I do think that it was actually valuable for the startup environment. The thing about the ranching world, and I won't say the ranching world, Deep Springs in particular, small ranch in the middle of nowhere, an hour drive from the nearest big town, big town being 5,000 people, Bishop, California. 24 students, mostly middle class, who had no clue what they were doing. So what does that environment mean? It means, when something breaks, you just sort of roll up your sleeves and do your best to fix it. You don't really know how, but there's no one around who does, and that's very valuable from a startup perspective because a startup's the same way. I mean, there you are in this little teeny company and whoever the expert at IBM would be to do this thing you're about to do, whatever it is, you don't have that person so you just kind of befuddle through it. So I think, clearly, the specific lessons were not at all the same but the sort of psychological lessons I think were very similar. Good preparation for the startup world.

Porter: Well, as a person who started a company myself with the same kind of a thing, but in a city without the ranch, we all had the same problems in getting started. It's a great learning experience, isn't it?

Hitz: It's a great learning experience in making do, you know? I think any startup, a lot of the choices you make are just real compromises based on you don't have enough money, you don't have enough people, you don't really know what you're doing so you make a lot of guesses.

Porter: But eventually you had to go to work.

Hitz: Eventually, I did. When I left Princeton, one of the women at Princeton, she was one of the system administrators there, had worked for John Mashey. John Mashey had been one of the folks at 1127, that's the lab at Bell Labs that had invented UNIX, and he was working at MIPS at the time, and Pat Parseghian was her name. She had previously worked for John and, when I was coming to graduation, she gave him a call and said, "You might want to consider hiring this guy." And I interviewed with John and it was-- so that was my first experience at MIPS. It was maybe 80 or 100 people when I started so...

Porter: Where was the location of that?

Hitz: MIPS was in, I think, either Sunnyvale or Mountain View. It was on Arques Drive. I think Sunnyvale. So maybe 80 or 100 people. So that was my first sort of not quite startup but it wasn't public yet. It was shipping some products but 80's still small enough, I mean, you have a pretty good sense of the company.

Porter: But it got you started in the California electronics business.

Hitz: Exactly. And I went from there to Auspex where I was employee 17 so that, again, I wasn't one of the founders but, at that point, the company had not yet shipped product. In fact, a lot of the definitional issues of how the product was going to work was not yet set. So that really got me closer in to, you know, how does this startup thing work.

Porter: I understood you started in 1988 as a senior engineer.

Hitz: At Auspex?

Porter: Yes.

Hitz: Boy, I'm not sure if I was a senior engineer when I started. I was two years out of school. But I think I was a senior engineer when I left two years later.

Porter: Okay. When you left, you had developed some interesting friendly relationships with a few people that were critical to you later on.

Hitz: Well, James Lau and I, who ended up eventually starting NetApp, we left Auspex together to get into the pen-based computer world. This was '91, early '91 I think is when we left Auspex and, at that point, there were a bunch of companies trying to start pen-based, there was Go and Momenta and EO. Apple had the Newton so all of these were pen-based computers and they just -- none of them ever caught on. They were too heavy, they couldn't-- it was supposed to understand your handwriting and none of them actually managed to pull that off which, I mean, today, we all carry around little smart phones, they still don't understand handwriting but they invented the miniature keyboard. They just hadn't invented the miniature keyboard yet. So James and I spent a year basically trying to do software for a set of platforms that never ended up shipping. It was at the end of that year, then, that Mike Malcolm, who was one of the other folks James and I knew from Auspex, called us up and had this idea, which is what turned into NetApp.

Porter: So were you still at NetApp when the three of you were planning to start your company?

Hitz: Sorry...

Porter: At Auspex, excuse me. Your pen-based computer company, I'm sorry.

Hitz: Right. So James and I were at Auspex when we first started thinking about this pen-based computer idea and the two of us left. I think that was January or February of '91 that the two of us left Auspex. We spent that whole year, we actually started a company called H&L Software, the H was for Hitz and the L was for Lau. We flipped a coin and I won so it was H&L instead of L&H. We then joined with another two more folks and joined a company named Aha, which was going to be software for-- and, as I said, the platforms we were writing software for never ended up going anywhere. So, by the end of the year, James and I both were out of money, had some contract work. He was doing contract work with Xerox, I was doing contract work with DEC and that's when Mike Malcolm called. He had worked at Auspex, I'd known him there a couple years before and he called up and said, "Hey, I've got this new idea for a file server." So James and I were both pretty much fed up with the pen-based thing and ready to do something new.

Porter: So when you're out of money, that's a great time to start a company, right?

Hitz: <laughter> Well, it was. One of the things that we learned from doing Aha was you better put-- well, doing the whole pen-based, you better put a sort of time limit on when is out of money and we did agree we were going to keep our consulting jobs until we figured out how to actually either figure out that this file server idea was not going to fly or else get some money flow. I believe our first investments came in April of the follow year, so April '92. We first started talking-- it was my sister's birthday so I remember the day that Mike Malcolm and I first had lunch was December 2nd, 1991, and we got our first funding in April. So I think we all continued our consulting roles until then, got our funding in April and kind of wrapped up that stuff and switched full-time to NetApp.

Porter: Well, technical founding time was April of 1992.

Hitz: That was the incorporation date so we were doing quite a bit of work from December through April, mostly definitional. I mean, we were writing business plans and doing some high level, architectural proof of concept, did we really think we could make this work? And the reason that we incorporated in April was we got some folks who were willing to give us money. Three individuals originally, I think, signed up for 50 K each and you don't want to give money to three random guys, you want to give money to a corporation so that you'll own stock in it. So, in order to accept their initial angel funding, we had to have a corporation.

Porter: The angels all like a corporation to deal with.

Hitz: Well, I mean, that's what you're investing-- the whole goal of angels is to make money back so you want to buy some stock in something and it turns out. I don't think, legally, you can buy people any more so you have to make a company for them to buy.

Porter: Well, the company you started was quoted as being "smaller, easier storage system". Is that a description of what NetApp was in the beginning?

Hitz: Yeah. We had -- James, Mike and I had all worked together at Auspex and, just to kind of put this in perspective, most computers back at that time had disk drives attached to them. I mean, for people who have a PC, there's a disk drive in your PC. There was something emerging that Sun actually invented which was how about access the disk drives over the Ethernet? And Auspex had been one of the early companies to get into that business, not just like Sun, which was using regular purpose computers for that, Auspex said we want to build a box just to do that. The Auspex boxes were big. I mean, think of a home refrigerator. They were wide and, you know, eight feet tall and full of disk drives. I think the cheapest one was 100 K but you were more likely to spend a quarter million. The goal for NetApp was really to build file servers for the rest of us, right? It was a little bit like the Apple model. So how do we build something much smaller, much cheaper? We actually were thinking originally dentist's offices or, you know, very low end, legal offices that the Auspex would be doing the big iron stuff but that we could do a much smaller, simpler system. So we actually built-- we mostly wrote software and we built this thing out of the PCs of the era so it was a 486, Intel 486 chip. So it was a very small hardware, physically, you know? The first one was like this but it was also very, very easy to use. We watched people plug them in and have them up and running in five minutes compared to many hours for the competition. That was the starting point.

Porter: Well, looking back in some of the records, in January, 1993, supposedly the first beta system shipped and then, on June 21st, 1993, production shipments of the fast server, the model 400, shipped. Then you had a real product then.

Hitz: We did. Gordon Bell, who was one of the first four investors, came in and did an assessment of us early on. He had a methodology, Gordon Bell and a woman named Heidi Mason, and they had the Bell Mason assessment for startups and so they ran us through this thing, looked at our numbers and then watched us as we progressed. He said we were one of the few startups that he had ever seen that

actually shipped sooner than they were expecting to. So he called that the fantasy factor. So, you know, normally you think you can ship in one year and you actually ship in two years so that's a fantasy factor of two. Our fantasy factor was less than one and the reason for that was we could never get venture capital funding. None of the venture capitalists understood our idea. "You're going to build a file server for UNIX systems out of a 486 system?" And so we just never got any funding and it was that, you know, they say necessity is the mother of invention, we threw out so many features that we were planning on putting just to get something to market because we knew the only way we would ever get funding would be to sell something to somebody. And the venture capitalists might not understand our technology, might not understand our vision but we figured, if we could sell something to somebody, they would understand that. Sure enough, that's how it worked out. We did the whole product development from, you know, all the way through '92 and up to June of '93, based on angel money and first customer shipped June of '93 and I think we got the first venture capital August/September/October, somewhere in there. So once we actually shipped something for money, it took them about three months to figure out that there was a real live market there.

Porter: From the museum's point of view, it's interesting that Gordon Bell was one of your original founders. If anybody should be credited as the founder of the Computer History Museum, it's Gordon Bell and his wife, Gwen, of course. Gordon had that background of being the father of the VAX at DEC and then he and Glen moved to California and all that technology artifact collection that had been a museum came with him and it became the guts of this museum in which we're now sitting today. Gordon is the founder.

Hitz: And he's been an investor, I know, in a lot of startups. I think what was interesting about NetApp as a start-up company, we had a lot of business ideas, almost all of which turned out to be false. We thought we would sell through indirect channels and we ended up needing to hire a direct sales force. We thought, as I said, that we'd be selling to lawyer's offices and doctor's offices, very low end kinds of environments and that was completely wrong. We ended up selling largely to tech companies and to large environments and then eventually to enterprise. So a lot of the business stuff that we believed was wrong. On the technology front, our belief was that we could build a much simpler style of doing the storage over the network and that we could do it with much cheaper hardware, the 486-based systems. The technology side, I would say, we pretty much nailed and the business side we were completely screwed up on. The venture capitalists, I think, who wouldn't fund us, a lot of them were evaluating our business side and they were right. It was all screwed up. But people like Gordon Bell, he had a technology background, I think Gordon was evaluating the technology side and said, "I think there's something here." And I don't know whether he was smart enough to say, "Their business stuff is all screwed up but hopefully they'll figure it out" or if he just wasn't looking at that. But it really, it definitely was a technology idea that was the germ of this business.

Porter: And the IT guys who ran all those computer rooms for those large companies liked your idea, apparently.

Hitz: They did like it. I mean, early on, we went and talked to them as potential customers. Here was the challenge for the venture capitalists. We were modeling ourselves after Cisco. If you look before Cisco, people used general purpose computers, UNIX workstations, Sun workstations for their routers. Cisco came along and built a box that was just for routing. It did less than a general purpose computer and so the conversation we kept having with the VCs, they would say, "So your box does more than a

general purpose computer so it's better?" And we'd say, "No, no, it does less." And they'd go, "Well, why would I pay you money to start a company that does less?" And we said, "No, no, it's focused. It'll do it better." The other analogy that we used was a toaster. If you want to make toast, you could go put in on your burner, you can put it in the oven and it's certainly the case an oven's a lot more of a general purpose tool than a toaster. A toaster? What good's a toaster? All it does is make toast. But, man, if you want toast, a toaster really does a good job, you know? Try making toast in your oven and you'll discover how awesome a toaster is. And that really, for storage over the network, it was that idea of making a device to do just that one thing, focused. Not run programs, not do spreadsheets, not be a tool for programmers, just store the data.

Porter: Your timing was good because those networks were starting to become very important to those IT guys, weren't they?

Hitz: The timing was incredibly good. We started in '92 or '91/'92 and our mission, as a company, was storage over the Ethernet. And, back then, the Ethernet was pretty much of a small nerdy tool. I mean, the market that we were really targeting was very low end environments. Pretty quickly, we figured out that engineering workgroups were a good target market for us. We figured the total market might be a few hundred million and, if we could get half of it, then that would be 100 million and 50 million was enough to go public. But what happened was, along about '94, '95, the internet started coming on strong. Pretty soon, I remember, that was the days of the first Mozilla browser and Netscape and all of that stuff was mid-'90s. And so, as every major corporation in the world started saying, "Wait a minute, what's this network thing? Maybe we should be doing this network thing." We raised our hands and said, "Hey, we specialize in storage over the network" and we ended up being the storage provider to AOL, to Netcom, which eventually became part of MindSpring, a lot of those early internet companies really became the folks. That fuelled us. For the period from when we first shipped, '93, to through 2000, which is the tech crash, the dot.com bust, we at least doubled annually. Starting from nothing up to a billion in our fiscal 2001. It was largely fueled by all this internet stuff. So the timing, I mean, nobody could have planned that. We were just lucky.

Porter: So following your initial shipment in '93, in March '94, the second generation servers, FAServer 450, 1300, 1400, came along just in time to take advantage of what you were just talking about.

Hitz: Yeah. All of those systems were basically the same thing. I mean, we were just adding new features to the software and we were buying the next faster Intel motherboard. Remember, we literally went to Fry's, the local computer store here, to look at what motherboard we might want. We ended up buying one from a different company than Fry's so, I mean, when they came out with a faster one, then we bought that. So, from a hardware perspective, we weren't doing very much at all. I mean, we were buying the stuff and bolting it together but most of what we were doing was the software. Yeah, we were just-- as I said, originally, doctor's offices, dentist's offices, that was stupid. We never sold one to them. Then into the engineering workgroups. That was, you know, people doing software development, people doing chip development. That was really where we started but very quickly coming into the internet folks.

Porter: With all those changes, also in '94, Michael Malcolm was replaced with a new CEO, Dave Warmenhoven.

Hitz: Dan Warmenhoven.

Porter: Dan. I'm sorry.

Hitz: Yes.

Porter: Dan, until very recently...

Hitz: Until last Wednesday, in fact.

Porter: ...remained as CEO and we'll talk about that change later. Apparently, you needed a change in management style to take advantage of all these changes in the market that you were seeing.

Hitz: Mike Malcolm, it wasn't just changes in the market. I would say more it was changes in the company. Mike Malcolm's background, he had done at least one other startup, maybe a couple, but his background was as a university professor. He got his Ph.D. at Stanford and he was a professor at Waterloo and, during a lot of the initial development of NetApp's technology, I view myself as being kind of like a grad student. I never got a master's degree or a Ph.D. but I was working on this stuff and Mike was my advisor. I mean, he was the CEO but he really was the sort of technical sounding board for me. James as well but Mike, you know, he'd been a professor teaching a lot of grad students. I imagine that his management style at NetApp was a lot like it would have been as the professor running a group of grad students at the university, very collegial, very roundtable of equals. I mean, he was the boss and he didn't hesitate to share his opinion but we could fight back. The place, I think, that Mike's style became less effective was as the company started to grow and it started getting into issues of multiple layers of management and span of control and delegation and all of these kinds of issues. My personal feeling was that we really needed someone with more of that sort of traditional growing an organization corporate background. It was an ugly time between Mike and myself because he felt that he could and should keep doing it and James and I and Charlie Perrell, another founder, went to the board and recommended that they find someone else. [NOTE: Charlie wasn't one of the original three founders, but since we had no sales and marketing experience, we retroactively made Charlie a "founder" when we hired him a few months later as VP of Sales and Marketing.] It was an ugly time. I think it's important for me to say Mike is the one who called James and I. It is not the other way around. I mean, he's the guy who had the germ and said, "Why don't you guys join me?" And, after he left NetApp, he went and started another one that also went public. Lightning doesn't strike in the same place by accident so I absolutely think that Mike is a genius, spotting new markets and new opportunities. I still think he's not the best guy to be running a multi-million dollar public company, you know? But it was a very hard time.

Porter: One of the people you've commented on is another college professor, Clay Christensen, who wrote his very famous book, "The Innovator's Dilemma". Now, when Clay was working on his master's thesis, he came to see me. I provided him copies of a dozen or so years of the market studies on the disk drive industry, which I had published, and his whole master's thesis was on that rapid change and product development and rapid industry change that occurred in disk drives.

Hitz: You know, I love his quote about the disk drive industry. Clayton Christensen said, "Disk drive companies come and go so fast they're like the fruit flies of the business world, excellent for studying multiple generations in a short period of time." I guess he did get a lot of that information from you.

Porter: Yeah, I invited Clay to be a speaker a few times at other events. He has turned into a very high-priced consultant to major companies.

Hitz: Well, you mentioned that I mentioned his book, "The Innovator's Dilemma"...

Porter: But you like his style? It helped to influence some of your thinking, didn't it?

Hitz: A lot of it was after the fact. It helped me understand what had happened to NetApp. NetApp started out targeting very low end businesses and we moved up market surprisingly quickly. A lot of that was just using Intel technology. I mean, if you remember back, early '90s, PCs were not quite toys but they were tools that individuals would use for their own stuff, personal computing. It was what Intel did going from the 486 to the Pentium and just all through the '90s, the performance got to where you really could build high-end workstations and even servers out of Intel chips. So it was a very, very lucky choice that we chose to use that platform because, basically, for free, I mean, just every new generation of Intel chip, we would get twice as much performance. A lot of our up market move was based on that. So Christenson's argument is that almost always it's better to be the low end guy moving up. It's better to be the new UNIX computer going after the mainframe than it is to be the mainframe. It's better to be the PC going after UNIX. So, for a long time, we were really that low end technology moving up and it was reading Christenson's book that helped me understand what happened to NetApp wasn't an accident. I mean, I wish I'd read it before. <laughter> Very useful. It came out when? Late '90s? early 2000s? It gave me a lot more perspective on what was going on.

Porter: Well, in the meantime, NetApp had gone public in '95 and the divergent strategies, which were taking place in the industry, were network attached storage known as NAS, and storage area networks, known as SAN. How did NetApp work in either direction and why?

Hitz: You know, the story of NAS, which is the network attached storage, and the SAN, which is the storage area network, it was such a religious issue, I have to say. When we started, we absolutely believed that NAS was the one true path, storage over Ethernet and SAN, that was the old, ugly version of storage. I mean, we just believed that and it turned out it was a low end/high end kind of a thing. SAN was a much higher end market, NAS was a much lower end market and Ethernet was getting better and faster and working its way up. At some point, we realized that we really had to sell both and the reason was that a lot of our customers were interested in both. I remember talking to one customer who told me, and this was a guy who just loved NAS, but he was a pragmatic guy, he said, "I wish you guys would sell SAN as well." And I said, "But you love NAS..." his name was Nick, actually, Nick Christenson. I said, "You love NAS. Why do you want SAN?" He said, "Well, the problem is some things don't work with NAS so I also need to buy SAN and then I go to my purchasing guys to look for some SAN and my purchasing guys say, 'Well, why don't you buy it from NetApp?'" And he says, "Well, but they only make NAS" and then my purchasing guy, Nick, said this was the story he was telling, he said, "My purchasing guys tell me, 'Well, go find a company that will do both because we don't want so many vendors.'" And he's, like, "So I don't even like SAN but if you guys would just sell it to me, then I could just work with

you." The best analogy I've come up with is it's like an ice cream shop. I mean, NAS, SAN, these are these complicated technical things but think of it as being like chocolate and vanilla. You can have all the fights you want about whether chocolate's better, whether vanilla's better but, in the end, some people like chocolate, some people like vanilla and, if you're going to run an ice cream shop, you probably should have both because the husband's going to want to come in and he likes chocolate and the wife likes vanilla and she won't want to come to the same shop. So it was-- it sounds so silly, you know? These technical things. Maybe if I say it's like Mac versus PC, it might give people a little bit more perspective on how different are they really? I don't know. But people can have big fights. It was a major transition for us to decide to do both and, in the end, I would say that was one of the things that became very important to our success was that openness to doing both. I don't regret, in retrospect, I don't regret the period where we only did the one. I think one of the big rules of companies is you have to figure out, at a certain size, what do you have permission to do? And then, when you're a bigger company, you have permission to do more stuff. It's like a little kid. There's a certain age where you tell your little kid, "You're not allowed to cross the street." That doesn't mean they're never allowed to cross the street, right? That means for that age. I think, for a small startup in Silicon Valley, to choose one technology and say that's what we focus on, that's what we think is best, that's what we're going to do, completely appropriate. As you grow, there gets to be a certain size where you should say, "Well, how about we broaden out and do more than just that one thing?" So I would say, for us, broadening out from NAS to doing both NAS and SAN together, technical and nerdy as that sounds, but in the storage industry those were distinct competing zones and, for us to broaden out and do both of them, that was a real sign of our maturation as a company.

Porter: What kind of a role and position did you take during that evolution? Did you take a position defending the older way or did you take a position advocating the changes?

Hitz: You know, it's funny. James Lau, the other co-founder of NetApp and myself or the two remaining ones, of course, Mike had been the original founder but he was gone by then. I believed that we could do it just with NAS so I was the guy being on the side of the religion of NAS is the one true way. James was the guy saying, you know, if we really want to maintain long-term growth and if we really want to have more relevance with our bigger customers, we really should do both of these two things. And so we argued about this and I don't mean in an unfriendly way but I mean we had our difference of opinion on this for quite some time. I remember Dan actually invited James and I to talk to the board of directors. Also, Dan, remember, was the CEO at this point, Dan Warmenhoven, and so James and I both sort of argued our position to the board of directors and Dan said, "I'm not asking you to tell me what to do and this isn't a problem. I mean, it's not a bad problem, we're just trying to figure it out but I thought I'd share with you where we're going." And I think that says a lot about Dan, you know? His willingness. A lot of CEOs hide any conflict or dispute from their board but Dan had a very open relationship with them. So, anyway, we went and talked to the board and I remember Don Valentine, who was, at that time, the chairman of our board, his comment to me, this was coming into the crash period, the dot.com downturn, he asked me a simple question, he said, "Have any of your customers ever wanted to buy SAN from you?" When I said, I mean, I remembered the story of Nick, who had told me he wanted to buy SAN from us and I said, "Well, yeah, some of them have but..." and he cut me off and he said, "In this economy, I have a simple suggestion. If somebody would like to give you money, I recommend that you take it." <laughter> I just thought, I mean, it's that kind of clarity and vision that lets him be the chairman of the board, right? Never mind technology, never mind religious arguments. Somebody wanted to give you money, right? Are you running a business here or what? I just thought that that was a very clear and simple lesson. We did go onto to do both and actually that turned out to be one of the key advantages

that we had of people who needed both of those. Too much technology stuff but the ability to do both of those things turned out to be good because the market was evolving to one where both mattered.

Porter: So did your philosophy and your position evolve?

Hitz: Well, now you hear me supporting it, that we did the right thing so, yeah, I came around. You know, it's funny. A lot of times, I've disagreed with James and with other folks and I do feel like those kinds of disagreements can be very healthy because disagreeing, you're flushing out what all the ideas are. You're sort of trying to discover the truth. I mean, sometimes you can say, "Well, I disagree with so and so because they're an idiot." But the people like James, I worked with for years, I know he's not an idiot. My new philosophy is, when I disagree with someone really smart who I trust, usually I think it's because they know something I don't or maybe I know something they don't and we just haven't unearthed that thing yet. You know, in the case of the NAS/SAN, the thing that I was missing, I really felt that the NAS was better but the thing I was really missing was some customers really do want both and, if we want to be the ice cream shop selling all flavors to all people, at some point, we're going to have to satisfy what they want, you know? We can try and convince them all we want but people have their preferences. So that was my kind of lesson, my broadening there.

Porter: Well, internally, one of the slogans that I've noticed had come up internally in the organization was, "Double or die."

Hitz: The hyper growth period was a painful period, starting roughly '93, when we shipped, through 2001. I mean, it's great. We were at least doubling every year. Actually, I think one year we only had 80% year over year growth but doubling our revenue, doubling our head count, just double, double, double, double. And lots of stuff breaks when you double. It's chaotic, it's painful. Just think about it. Here's a simple statistic. If you're doubling every year, then half of your employees have been there less than a year. Three-quarters of your employees have been there less than two years. How do you build a culture? Any tool you buy, you know, you're payroll, your accounts receivable, any business management tool that you buy or process that you build, double a couple times and it's broken. So a lot of people said, "Why do we have to grow so quick?" And it was a good question. Maybe we should just slow down a little and what's the big hurry? In that situation, I was really influenced by a book by Jeffrey Moore called "Inside the Tornado". He had the example of two companies that had two different philosophies. One of the companies said, "We're going to grow as fast as we can." They believed doubling was the speed they could grow. They did that. Every year, they hired as many again sales guys so that would feed the pipe. The other company said, "You know, if we grow faster than 50% per year, we won't be able to serve our customers well." So they limited their growth to 50% per year and, after a number of years of that, the size difference is just so enormous, the one company crushed the other. These were database companies. The one that decided to go for 2X growth per year was Oracle and I'm not even sure of the name of the other one, which is kind of the point. It was Informix or one of those other ones. You can't serve your customers all that well if you don't live. There are certain times, I believe, in the growth of a market where you just have to grow as fast as you can because that's how much customers want to buy. If you don't sell it to them, someone else will come along and sell it to them. So we really believed, during that period, if we didn't double every year, we had the risk of dying in the end from it. So double or die was sort of the rallying cry to help people understand we're not just doing this because it's fun that everything's broken, we're doing it because we think we have to, to survive. I actually believe, when you look at the history, NetApp hit a billion right around the time of the

tech crash. A billion was big enough that we did have a good amount of money in the bank and we did have a solid base of customers and our revenue fell to about 800 million but that tech crash killed an awful lot of companies. I think, if, at that point, we'd only been a quarter, you know, 250 million or half a billion, 500 million, I'm not sure we would have survived. So, in the end, I think growing while the growing was good may have been what kept us around.

Porter: So what did that growth do to your internal business culture?

Hitz: The number one thing, affect that I think growth has on culture, we had a very decentralized organization. Dan was really good at saying, "Here's the mission, here's what we're trying to accomplish, you go figure out how to do it." I think, at high growth rates, that's absolutely necessary because there's no way the management team can figure out all the stuff that might be happening. Every time you're doubling, stuff's breaking all over and you just need people to roll up their sleeves and try and fix it and you need to let them. And I learned a lot. As we started going from selling only to tech companies to selling to larger, we started selling to automotive companies and some of the big old-time businesses, it baffled me how things were run because we would go talk to IT people who had almost no authority. Somewhere at headquarters, there would be some committee that decided exactly what equipment they're allowed to buy and you got the feeling that the whole company was run by accountants with green eye shades and sharpened pencils and, you know, figuring everything out. And I just thought it was the stupidest business model there was. How could they survive? But what I realized, and this is the effect of how does the company's position and growth affect it's culture, if you're a big automotive company, and I mean now we've just had all the meltdowns of automotive companies and all that but go back ten years. If you're General Motors, you've already got half the market or 40% of the market. You're not going to double your size ever. How are you going to make more profit for your shareholders? You're not going to do it by growing enormously. You're going to do it by making things a little bit more efficient so that, instead of having 16% profit, you have 17% profit. So you just tune every little thing. Nothing's changing that fast so you can afford to do that. Our little company doubling every year, everything was changing so much we had to be very decentralized. And so that style of very decentralized, very free-wheeling, not a whole lot of rules because any rule you invent this year probably won't apply again next year. That was very much the style. So the big trick with that whole style of corporate culture is, if that's your model, how do you have any kind of control? And that gets back to the whole question of values and how you put in place a corporate model where people are at least aiming sort of in the same direction. Dan had, at his prior company, which was NET, Network Equipment Technology, they made PBX phone switching kind of stuff, which everybody now just gets that from the phone company but people would have their installation. It doesn't matter what it did. Anyway, he joined NET as the chief operating officer and, shortly after he arrived, he discovered that that company was just shot through with fraud. I mean, the sales guys were making up POs, forging POs from customers, shipping equipment to customers that they hadn't ordered, shipping equipment to warehouses with secret addresses, I mean, it was ugly. As Dan started finding this stuff, as it became exposed, the CEO ended up being fired, the V.P. of worldwide sales was fired, the chief financial officer was fired. There was a shareholder lawsuit. The SEC started investigating. The stock price went from \$36 to \$6. One of the things that Dan just hated the most about this whole thing was they were hiring on the basis of all the fake revenue that they didn't really have. So, as part of this, they ended up laying off a third of the workforce. So Dan was very, very focused on this whole issue of company culture and corporate values, which at first I didn't really understand what he was getting at. As I got to know him better, I came to understand that what Dan was really saying is, "I never want to go to that place again. I never want to run a company where the SEC even has the slightest hint of wanting to come in." So that was a very strong focus of his always was the culture. So even though everybody was allowed to kind of run free and solve problems in their own way, he still had a very strong,

I think, moral is maybe the wrong word or maybe the right word, but a moral compass from a business perspective of how things should run.

Porter: Okay.

Porter: ...going through the background with Dan and what he did to find an appropriate philosophy for running a rapidly changing company in an industry like NetApp was participating in. You were still faced with responding to all these competitive approaches which were trying to get the same business you were getting. Let's talk a little bit about how you responded to some of those and who the most important competitors were during that period of big growth. EMC is your big competitor today I guess and they probably were then, weren't they

Hitz: To be honest, during most of the '90s, EMC was not really on the list. In the early part of the '90s, as I said earlier, we were doing NAS, which was storage over Ethernet, and they were doing SAN which was this whole other, originally mainframe and then later a very high end way of doing storage. We didn't view them as that much of a competitor and I don't think they viewed us, especially in the mid '90s when we had this sort of super high-- any more than I think the high end UNIX vendors like Sun today. They've been bought by Oracle. They never really took the PC seriously for years and years. Eventually, the PC went head on against them and it was a big battle but for years, they didn't take the PC seriously and I would say it was the same with EMC and us during most of the '90s. Our original competitor was Auspex. We had thought that we would be building a much lower-end system coming in underneath the Auspex. But very quickly, the Intel chip got better so fast, very quickly we were going head to head with Auspex. So that was our big competitor early on and also Sun. Sun had invented the NFS as the name of the specific NAS technology that UNIX used. Sun had invented that and they were competing with General Purpose Computers. So Sun and Auspex were the two big competitors through most of the '90s. At the tail end of the '90s, Dan Warmenhoven especially and also Jeff Allen who was our chief financial officer, and James Lau as well I believe, all of them were feeling paranoid that our business was so concentrated. Seventy, eighty percent of our business was going to high-tech companies like Cisco was a big customer and to the internet companies, the Yahoo!-style companies. And they just felt that that was way too concentrated. And so in the late '90s, '97/'98 I think, Dan started an initiative to go after a bunch of just broader industries and we named a bunch. I can't remember them all but it included telco, telephone companies, major manufacturing like automotive companies -- I mentioned that earlier -- banking, finance companies, government stuff. So we really were trying to branch out enterprise storage we would call that now, just businesses running their business as opposed to tech companies doing techie things. It was that transition where we started competing more head to head with EMC. In fact, it was that transition that forced us to be more open minded about what style of storage we would do to do the NAS in addition to the SAN. So I mentioned often you see a business driver and a technology driver together. The business driver here was that we were selling to a broader group of customers, not just the tech heads but more business-y people. The technology side of that then was to do SAN instead of NAS and so those two went together. The thing I have to say about that, Dan and Jeff were paranoid that we were overly concentrated and when the tech crash hit, the 2000/2001 dot-com crash, it was very, very lucky for us that we had started that transition because I'm not sure we would've survived if we hadn't had the-- There was a six month period after the tech crash, if you looked at our 10 largest customers from the previous year, none of them ordered a single system for six months. Some of them ordered a little bit more disk to attach to the same system. We would've tanked if we hadn't had some alternative to switch to. In fact, by the time of the crash, about 30% of our business was coming from other styles of business, these others that I mentioned, the telcos and major manufacturing, and over the following three years

after that, we managed to get to the point where 70% of our business was coming from this other stuff. So roughly three years, we were a billion, we dropped down to 800 million, and then came back up over this roughly three-year period back to a billion. During that time, we went from 70% tech and internet to only 30% tech and internet and 70% other stuff. So that was a radical transformation of the company in that period. Kind of ballsy move I think on Dan's part to make such a big bet in a downturn, we cut a lot of programs and said we're going to focus in this different way and invest. We did a layoff during that period partly so that we could invest in these new things. On one hand, it feels pretty nervous to make investments like that in a downturn but on the other hand, the result was very positive for us. Coming out of the other side of the downturn, we were positioned much, much better.

Porter: I noticed in 2004, your total sales were up almost at 1.2 billion. You had come back that year.

Hitz: Yeah. We were barely over a billion dollars – one billion seven million - in 2001, down to 800 million and then up to 1.2 billion. So 20% growth during a period that for most of the industry-- If you look at it from the 800 back to 1.2, it's 50% growth. It was a real turnaround as we broadened our market.

Porter: You must've attracted a few additional competitors during that period, too. They're not blind.

Hitz: I'm not sure whether we attracted them or whether we bumped into them. Certainly that was the period where we started bumping a lot into EMC. Some other folks came after the NAS business, which had been our bread and butter from the start. Certainly, EMC came into that business but a lot of the competitors we ended up having because we went into the SAN business and there were already a lot of players. That was a much larger, more mature market. So folks like IBM and HP and Hitachi, along with EMC were all in that business. So the bulk of the competitors that we face today, I wouldn't say it's because they moved towards us. I would say it was because as we broadened our focus, we expanded into their space. But there are also a collection of startups that have been coming after us. So far, we've been growing fast enough that the bigger folks have been more of an issue than the little guys coming up behind. You always need to keep your eye on them but so far, that hasn't been for us the biggest business issue.

Porter: One of your original philosophies was to keep the equipment simple to use. Is it still your philosophy?

Hitz: It's a lot more complicated today. That's a frustration of mine but I think there's also a sort of a realism to it. When we started, our goal was to build very small boxes, like I said, for doctors' offices, dentist offices, small workgroups. Today, we are putting systems into some of the world's largest corporations, hundreds of them, thousands of them, in some cases scattered around the world. And I guess my observation is, when you're doing that, the problem you're solving is so much bigger that the solution is going to be more complex. So the question is not, is the solution simpler than it was because the reality is, over time, our solutions have gotten more complex. The real question is, is it simpler than the alternatives to solve these really big problems. I do believe that our solutions are still simpler than the alternatives to solve these really big problems. There's a philosopher named Bo Lozoff and actually, this quote is related to one that Oliver Wendell Holmes said, but Bo Lozoff said "I believe that there's two kinds of simplicity. There's simplicity on the near side of complexity," and he said that's just naiveté. And there's simplicity on the far side of complexity and that is true simplicity. What he meant was when you're

trying to be simple, sometimes you can be so simple that you're not really dealing with the real issues. But if you're going to deal with the real issues-- We sell today, as I said, into multinational corporations with multiple political groups within the corporation, multiple sites, different time zones. That is a very complex environment and so it's a much more complex solution that we have. As I said, it's a frustration of mine but I actually think it's not an uncommon evolution for people to go through.

Porter: Simplicity may have a lot to offer to the existing IT environment where they are going through many, many changes -- virtualization, de-duplication, movement toward clouds. The IT executive is confronted with all of these things and he's under pressure to use less space, spend less money, use less power and if you can offer a simple solution to some of his problems, you must have a real reception.

Hitz: Yeah. When I look at the big trends today, and so here we are, 2009, what does it look like from 2009 going forward? You always get into trouble when you make kind of what's going to happen. But there are three things that seem to me to be just the big trends for the business that we're in, which is selling large amounts of storage into big datacenters. The three trends that I see are cloud computing, server virtualization, and flash memory instead of disks. I define cloud computing as I'm a business guy and I've got a business problem. The old way I would solve my business problem is I'd buy an application, I'd buy a server, I'd buy some storage and I'd run it myself. The new way, the cloud computing way is someone else buys the server, someone else runs the application, someone else does all of that stuff and I access it over the internet and pay them per time I use it, pay them some monthly fee or transaction fee. So I don't own any of that stuff and that is a big, big trend away from-- It's kind of like in the old days, people used to have their own electrical power plants. Literally, factories would have their own electrical generators and eventually, these companies called "utilities" would do all of that. So I think that's the potential promise of cloud computing, not 100%, not fast. This is a five or ten year kind of trend, so that's trend number one. Trend number two is server virtualization, of running lots of separate servers on the same physical hardware. And I think these two trends go hand in hand. I think one of the ways that these cloud vendors will do this efficiency is to use server virtualization, but a lot of companies will do that themselves as well, companies like VMware, or Microsoft's got Hyper-V. The open source version is Xen. And the flash memory, there's been so many technologies over the years that were going to kill disk drives -- bubble memory, all of these different things and disk drives just won't die. But I think flash is the first one that has a real opportunity not to kill disk drives but to displace them at the core of the data. What I see with flash that's interesting is, all of these other technologies never got off the ground. They were going to do something but they never really got off the ground. Flash is absolutely off the ground because every cell phone has it, every camera has it and it's moving-- We talked about Clayton Christiansen, things moving up market. Flash is moving up market. The last laptop that I had had flash memory and not a disk drive and I don't expect to buy in my life another personal computer with a spinning disk in it, and I just think that that stuff's going to move up market more and more and it's so much faster than disks. I think what'll actually happen is disk drives will basically become like tape drives. They're the slow, random-- You know in the old days how mainframes had these tapes going back and forth like this. They didn't even have disk drives yet. I did the math. Compared to the CPU speed of those old mainframes, the tapes going like this were faster than disk drives are today, compared to the CPU speed of today. Disks are just becoming increasingly the bottleneck and so flash I think's going to-- That's a very storage centric view. When I've talked about these kind of big industry things to folks with a broader perspective than mine -- again, I'm selling enterprise datacenters -- they say "Those aren't the big trends. What about personal cell phones and mobile computing and everything networked?" And I say all of those are true in the big perspective but if you're stuck in the datacenter, which is what we're selling into, I think the cloud computing, server virtualization and flash are going to be the big, big -- I call them

10-year trends. They're not things that change over one year. They're things that change over five or ten years but anyway, those are the three that I see.

Porter: NetApp is not entering some of those areas as a participant, like in cloud, but you're offering ways for your customers to work with it, aren't you?

Hitz: This is a controversy that we've had of should we literally sell storage as a service over the internet. That would be for us to, I think that's what you're saying, to directly enter the cloud compute market. Our answer has been no. We would like to sell equipment to other people who sell those kinds of service. So we've got customers like AT&T, T-Mobile in Europe; Telstra is the Australian telephone company; British Telecom. All of those are large customers of ours and so the question is does that qualify as a cloud strategy? Here's my answer. Does Microsoft have a PC strategy? Notice that Microsoft does not sell any PCs and yet I would argue that they were a pretty fundamental component of the PC industry. I think anybody would grant that. So I think there's a similar opportunity. I think that for us to be the enabler of people building these big clouds is actually a great way to participate in the cloud market without actually doing that ourselves. I was just over this morning at VMware and talking to Steve Herrod who's the CTO of VMware. We're doing a joint presentation at VMworld talking about how NetApp storage and VMware, what we've done in partnership with them to make our storage work well with their virtual machines and all of that, APIs to let-- if you're doing VMotion from one place to another, where you can do NetApp data motion to get the data to go along. Again, I don't want to go too technical here but I think the cloud ecosystem is very much the target of our company at this point, not the only but one of the big growth opportunities that we see.

Porter: So NetApp has continued successfully to evolve as the market evolves?

Hitz: I do believe that willingness to keep asking "Are you doing the right thing," is one of the most important requirements of ongoing success not just in the storage industry, in the compute industry. There's a test called Myers-Briggs which measures a bunch of personality traits -- introversion, extroversion. One of the things it measures is comfort with change. Are you a person that likes to say "Here's what I'm doing. This is the direction I'm going. I want to keep going the direction I'm going." And historically it turns out that a lot of executives have been people who were very focused on continue doing "I was building gravel. I'm going to keep building gravel."

Porter: They probably don't belong in the compute industry.

Hitz: The classic example, you hear of this, is someone that kept making buggy whips after the invention of the automobile, or somebody that wanted to keep making gas lamps. But in the old days, those kinds of transitions were a lot slower because of Moore's Law, everything doubling every 18 months. The rules just keep changing and so one of the observations is, in the tech industry, you need a lot more executives that are willing to just keep asking "Okay, what I was doing last year, that was all well and good for last year, but what of this year is different?" I think your observation of "Hey, last year we were all focused on how do we sell to the--" we have a tool called the Storage 5000, "the 5000 largest corporations, government agencies, any kind of entity that's buying storage?" We were focused on selling to the 5000 largest of them. We're not abandoning that strategy but in addition these days, we're thinking there's going to be the cloud provider 50, or the cloud provider 100 and that's going to be the 100 biggest

companies that are providing services to not just the big enterprises, but to mid-sized enterprises. How do we go after those folks, target them and work with them because that's a pathway through to a whole set of customers. We'll never get to that many people ourselves. So yeah, that's the big-- When I think about strategy, a tool that I use for thinking about corporate strategy is to look at what I call eras, and I define an era as a period where the top five goals that you have in this period of time is fundamentally different from the top five goals in this period. So when I look back at NetApp's history, when we first started roughly '91, '92 through going public in '95, our key goals were all about defining who we were as a company, what products are we selling, who are we selling them to, how are we going to reach them, direct or indirect channels. It was very definitional. From about '95 through 2001, our top issues were all about dealing with growth. How do we double every year? How do we hire that many people? How do we get to that many new customers? How do we find the new customers? How do we avoid all of our processes breaking? You look at the top five list in that startup period and the top five list in that hyper growth, it was not at all the same top five. Then the tech crash hit and suddenly, how do we go after enterprise customers and how do we recover all the revenue we lost? Again, the fundamental shifts. I do believe that not just NetApp but the whole IT industry is going through another shift towards this whole model of server virtualization, shared infrastructure and often outsourced. It's difficult to say exactly what this era will turn out to be. My theory of eras is when you look back at history, no one called it the Victorian era until long after it began. It takes quite awhile to figure out what the key pieces of a new era are.

Porter: As a founder of NetApp and as a person who helped steer the direction of the company throughout most of that era, what kind of a role have you been taking in recent years?

Hitz: Let me ask the longer question of what roles have I had over time. At the beginning, I was a programmer and an evangelist, out telling the story to VCs and early customers. At some point, maybe '95/'96, I dropped the programmer role and became really a technical architect and still an evangelist. In '99, I became the VP of Engineering, which was maybe 250 people at the time and I grew it to 750 people. That was through the tech crash period and I had that role for six years as VP of Engineering and that was an interesting role. I learned a lot having hundreds of people reporting to me and I forget my budget was \$100 million, \$200 million, somewhere in there. I learned a lot but it was not my favorite thing. During that period, I wrote what I called a future history, which was an era analysis, both of where we'd come from but more importantly, where we were headed. This was during the transition into the enterprise era and it turned out that talking with people, getting their opinions about what this new era was going to feel like, kind of consolidating that, I loved that. So in 2005 I think it was, I left the full time executive role, the VP of Engineering and took on much more of a strategy direction kind of role and I found that to be much more satisfying. I think I'd rather not be King Arthur. I'd rather be Merlin, fewer direct reports, trying to figure out the future and work the magic. So my role since then has been, I call it sometimes Chief Corporate Philosopher because I ask questions like "Where did we come from? How did we get here? Where are we going? How will we get there?"

Porter: You're acting like God looking over the shoulder of the folks who have authority and saying "Are you sure you're going in the right direction?"

Hitz: God is a funny way of putting it since technically speaking, I report to them. So I think it's much more of a diplomatic advisor role than it is a God role. The authority that I have comes from two places because there is an authority of being a founder. I have some authority because I have a history of not 100% but at least more times than a coin toss being right and so when you've got that history, people

tend to pay attention to you. The other thing I think I have going for me is that I think people understand that I have NetApp's interests at heart overall because I'm not running a particular organization that I'm trying to-- "Oh, we should make marketing bigger or we should make sales bigger, or only if my engineering organization was bigger." People often have a question of motives and I think because I currently have a role with no direct reports and because of my history with NetApp, there's no question that I'm just trying to do the best thing for the company as a whole. It's kind of related to a culture thing. It's amazing. Employees in an organization will follow and trust a manager that they believe the heart is in the right place. They'll follow him anywhere. Whereas a manager that they think is like trying to line their own pockets, that doesn't work so well.

Porter: Has it been a challenge to you to define your own role as it exists today?

Hitz: That has been a challenge. The first time it was a big challenge, when we transitioned from Mike Malcolm to Dan Warmenhoven as CEO, that was actually a big challenge. As I'd said, that was kind of an ugly time and Dan actually sent both Mike and me to work with an executive coach/corporate psychoanalyst, whatever you want to call it to try and come to grips with the new situation. The coach I worked with, a guy named David Kyle, really interesting guy, very good at sort of getting into your head and trying to help you out. But I had recently been the best man at a good friend of mine's -- Kendrick Royer -- wedding. What's the job of the best man? The job of the best man is do your best to make sure everything runs well but just keep in mind that this has nothing to do with you. So as Dan came in and he's the new CEO, and what is my role? This was just something that had happened around then. This was '94. David recommended "Why don't you think of yourself as Dan's best man. He's the CEO. Why don't you run around, do your best to make him successful but just remember this isn't about you." I thought that was such awesome advice. So I did that back then in the '94 timeframe and then after I was no longer the VP of Engineering, that was part of that same style of thinking again was what I applied. I hope that I can be of some assistance to Tom Georgens, who's our new CEO as of last Wednesday in the same kind of a way.

Porter: I guess some of us had known Tom in his previous companies where he's been regarded as a good producer of results.

Hitz: Tom's a smart guy.

Porter: He's been with your company a few years and now has moved up to the CEO role. I guess you're looking for more good results.

Hitz: That would be ideal. It's interesting. Dan's original goal was to retire when he was 50. He's I think 59, maybe 58. I think he'll be 60 in just over a year. His father was an executive at I think at -- Who makes the frozen vegetables? Birds Eye, I think it was Birds Eye -- and had worked very late. By the time he retired, there was some traveling and stuff he wanted to do but it never happened. Anyway, Dan's goal was to retire by age 50. That was early in his NetApp tenure so he pushed it back to 60. But that's always been kind of in the back of his head, that he didn't want to wait until he was too old to do these things, until he retired. So when we hired Tom Georgens four years ago, one of the things we interviewed him about was "Are you a prospective CEO candidate?" He was very interested in that. He was running the LSI business unit at the time.

Porter: And you liked his style.

Hitz: Yeah. Dan had actually had a list of folks that he thought were potential successors in a variety of people. He narrowed the list down and thought Tom was the best bet. So the way Dan described it, when we hired Tom, it was never the plan to make Tom the next CEO. It was the hope. But he had to prove himself. Dan really hoped Tom would be the guy but then he kept putting all these roadblocks in Tom's way and Tom had to work his way through them. I think the place that Dan really became convinced "Yep, this is the guy," was a year and a half ago, or that Dan had become convinced. A year and a half ago, he made Tom the Chief Operating Officer and President. So President and COO, that's kind of most of the company at that point reported to Tom, who reported to Dan, everything except finance and HR. Dan at that time became Chairman of the Board. When you look at that combination of moves, that's a pretty strong signal to anybody who was watching, I think, that there's at least a likely succession path here. Sure enough, 18 months later, Dan formally made Tom the CEO, and Dan's now Chairman of the Board.

Porter: You have a function of writing what's known as a blog at your company, which I think is widely read. I did read your comments on Tom Georgens, all very favorable, of course.

Hitz: I do like the guy. One of the things that's been fun about writing this blog, there's lots of ways that a company can share information. So there's press releases and different kinds of announcements. But for a lot of those, it's not really appropriate to tell the back story, the story behind the story. So often in the blog, that's what I try to do. For instance, in the case of Tom Georgens, in my blog I told a little bit the story of "Okay, you guys all read the announcement but here's how it came down. We hired him four years ago and these pieces kind of--" You wouldn't put that in a press release but it's nice to have a way to share that with people. When I have the most fun with the blog is not-- It's no fun at all just to kind of go through the press release and say the same thing. For me, it's satisfying if I have a little bit different perspective, or a little bit like how did this come about or why does this make sense, do we think.

Porter: One of the overall results of your time in the company, on 9/25/2007, you and Jim Lau received the IEEE Reynold B. Johnson Information Storage Systems Award.

Hitz: That was cool.

Porter: It was cool. I speak as a person who knew Rey Johnson personally and thought very highly of him and thought very highly of that award. It was delightful that you and Jim received that award. It was in recognition for the contributions you've made there.

Hitz: Yeah. What's been interesting about that award, if you look at the early-- So this is a storage system award, focused really on people doing storage invention, storage research and making inventions. The one for us was largely about the appliance idea, the storage system to do just the storage and also the waffle file system that we did early on at the company. If you look at the early awards, almost all of them were really about disk drives. They were about the physics of the spinning media and the surface chemistry of them and the magnetism. They were all very low-level physics, electromagnetic and over time, it's really moved up the stack, I would say, to assuming the disk drive is going to be there and

the disk drive is going to do what it's going to do, but what's going to be the pieces on top. I think the raid system from the Berkeley guys was one of the things, Kirk McKusick, who did the file system, the Berkeley file system and ourselves. It's kind of moving up the stack, more into the assemblage of storage stuff.

Porter: Very notable. Another interesting note is the company being named in Fortune's number one company in the United States to work for.

Hitz: Isn't that great?

Porter: You guys must've done something to create a real atmosphere for Fortune to name it as the best company in the United States to work for.

Hitz: I absolutely believe that was Dan. I'd told you the story of NET and how frustrated he'd been with all of the issues there. When Dan showed up, creating a set of corporate values was high on his list and that's something he just wouldn't let go of. It's interesting. What makes a company a great place to work? The company we displaced was Google and there's always press about Google. They hired the Chef from the Grateful Dead and you can get your back rubbed at work.

Porter: They hired the ex-CEO of this museum.

Hitz: A lot of people think that that's what being a great place to work is about, but Fortune actually outsourced the selection of this award to a company called The Great Place to Work -- something Institute, The Great Place to Work Institute and they're looking for three things. They ask hundreds of questions but there's really three things they're looking for. Number one, do people like the folks they work with? You show up, eight hours a day, 12 hours a day, however many hours it is. They don't have to be your best friends but do you like them? That's a good start for a great place to work so that's number one. Number two is, are you proud of the work you do? You don't have to be saving babies. It doesn't have to be the best thing but the test I use for that is, when you go home, would you tell your kids or your mom or your spouse "Here's what I do. I'm on the right side. I'm not ripping people off. I'm proud of the work I do." So that's number two. And number three, do you trust management. Notice it doesn't even say do you like them. Do you trust them? Those three things, when you think about them, none of those are expensive. We got this award just as the economy was melting down in 2008/2009 and I've had a lot of people ask "But can you still be a great place to work in a downtime?" How much does it cost not to lie to your employees? That's kind of the heart of trustworthiness and management, is be honest with them. Last I checked, that didn't cost a lot of money. Liking the people you work with, it's not like it takes more money to do that. But those are the kinds of things. When Dan really focused on building a company that had a good-- The way Dan put it, he wanted to build a model company. He wanted to build a company that people would want to come work for, a company that customers would like to do business with, and I think that's what he achieved.

Porter: I think both of you achieved it. Your new book on castrating bulls--

Hitz: Hand me that thing. Check out the knife on the cover. That's the tool you use.

Porter: That would be a useful knife in a lot of computer rooms I'm sure, with some of those IT executives.

Hitz: Can I tell you the story of that title?

Porter: Yes, please.

Hitz: I have had this experience -- I'm sure a lot of people have. You work really hard on this resume and you've got the thing and you send it into places and they interview you and you're really wishing they would read that resume you wrote. Yet, you're in a lot of interviews and the person across the way from you is trying to pretend they've read it but they haven't really and they're saying things like "You went to Princeton University I see," or "Your prior job was at MIPS, I see." It's clear they haven't read it. So I put at the bottom of my resume "Prior experience: herding, branding, castrating, slaughtering cattle." And I actually had a special column, software spelled W-E-A-R, softwear leather. Anyway, so that was on there. One woman who was interviewing me, she clearly hadn't read my resume and she looks down, she gets to the bottom and she does a double take, very clear what part she's just read and she looks up at me and she says "Management experience I see." So that was the inspiration for the title, How to Castrate a Bull. But it's also about risk. I think when you're in a startup, you often have to do things that are risky. I'll tell you, when you're just learning how to be a cowboy and you jump over a fence and there's an 800 pound bull calf and you've got your knife, that's a risky situation as well, figuring out what are the appropriate risks to take and what risks should you shy away from. That's pretty essential to successful startup entrepreneurialism.

Porter: I think you've written a title which has probably gotten more press coverage as a business book being published in almost anything I can remember in the past.

Hitz: It is good to come up with a catchy name, isn't it? Thank you.

Porter: Has that worked out well?

Hitz: It's been a great tool. When I was writing the book, I really had a number of different audiences in mind. The number one audience was the NetApp employees because a lot of this is the story-- So what is this book? This really is the story of NetApp, the story of my participation, the different roles that I've played, but it's also my attempt to take this and broaden it out into a broader explanation. What are the lessons I've learned? What are the challenges of hyper growth? What are the challenges and the opportunities of going through an economic downturn? So I was trying to capture all those different-- the story of NetApp, the story of my own involvement with it and then the broader business lessons, pull those all together. One of the things that was very important to me was that this was something NetApp employees could look at and say "Yes, that captures my experience and I'm proud to be at this place." Obviously, the partners that we work with, the customers that we sell to were a broader audience but then I think anybody doing startups or even someone who's at a large company, because the story really goes

from NetApp as a startup through the hyper growth years, our conversion to an enterprise company and becoming a Fortune 1000 company. I think people at a Fortune 1000 company might be wondering "What were the old days of my company like?" I know that every company's different but I also suspect that a lot of successful companies have a lot of those same stories of successes and failures and going through an economic downturn and making the right stories or the wrong stories. So I've tried to capture that.

Porter: I'm sure that title will do a lot to increase the awareness of you as an individual and to increase the public's awareness of NetApp.

Hitz: The second is more my goal than the first. I'm happy not to have everybody in the world know who I am but I wish everybody, at least in the computer industry, would be familiar with NetApp and our story.

Porter: The results are excellent and I would like to thank you very much for your time here today for I think an industry perspective that's very useful to a lot of people and a very interesting time for a lot of people to get to know you and your thoughts. So thank you again Dave for the time today.

Hitz: You're welcome and thank you.

END OF INTERVIEW