



Oral History of Don Listwin

Interviewed by:
Chuck house

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House: Okay. It's a pleasure to have you, Don. If-- I'm Chuck House. We're here for the Computer History Museum Cisco Heritage Project.

Listwin: Happy to be here.

House: Why don't you give me your name, rank, and serial number?

Listwin: <laughs>

House: Who are you, where were you born, and how were you raised?

Listwin: Well, I'm Don Listwin. I... currently working as a CEO in a med-tech company for stroke. And I was born in Canada, in a little town called Saskatoon, where I did my engineering degree, and then found my way to California.

House: This is circa 80s?

Listwin: Yeah. So, you know, I was with a small networking company called Develcon, that did data PBX for minicomputers-- HP, DEC, and others. And we decided that, as a Canadian company, there was this little place called Silicon Valley we didn't quite know what was all about, so the company moved five of us from Canada down here-- young product managers and engineers-- to try to figure out what this business of Ethernet was. And that's how I ended up in California.

House: Okay. And Metcalfe was underway with 3Com?

Listwin: Yeah-- that's right. So I ended up-- this company, Develcon, ended up getting in trouble, but... and ultimately got taken over. And I ended up going to a little company called SBE, in the East Bay. And it was actually called SideBand Engineering, but it was an old CB radio company that had acted as a public company shell, and they had started building OEM components for the VME chassis. Exciting stuff.

House: Yeah, really.

Listwin: And turns out-- so I went there to be the Head of Marketing, and one of the customers was Cisco Systems. We actually built-- SBE built the first Token Ring module for the AGS router at Cisco.

House: Okay. Did you build one for HP, too?

Listwin: I don't know. I don't remember. <laughs> I specifically remember the Cisco one, and I had been there-- it was a small public company, \$20 million a year, which was pretty much a hobby company for the founders. It had been 20 million a year for a very long time, and they--

House: No future here, but a job.

Listwin: So, it turns out a guy named Andy Lockhart, who I worked with at Develcon, had-- I had sponsored him to Stanford MBA School. And he graduated, and when he was done, he reached out to John Morgridge, as an alum. And ultimately, *he* went into Cisco, first in business development, and then ultimately as developing our Japanese franchise. And so he reached out to me and said, "Hey, there's this great new place that sells data networking to enterprises." And I was at SBE, which was an OEM hardware manufacturer, which was not as much fun. So I-- in probably the biggest risk of my career, I took a 50-percent pay cut, from VP of Marketing at SBE, to a product management job at Cisco.

House: No kidding?

Listwin: Yeah.

House: And they couldn't have been very large.

Listwin: No. And, as you'd made in your notes, I ended up with badge 410. But back then, we manufactured everything with employees, right? No contract manufacturers. So, from-- you know, the number of professionals...

House: Probably 30 or 40?

Listwin: There were 50 or 60, I think, but-- so, a very small number that were working there.

House: So you knew everybody. You knew where the bones were buried. <laughs>

Listwin: You are-- it was-- you know, we were in East Palo Alto, and I have a funny story. One of the... there were two stories to the building. And so I'm in my first series of meetings, in the first month. And so I'm at a meeting on the floor downstairs, I'd never been to before. I went to the men's room. And as I'm going to the men's room, I hear the distinct sound of high heels. So I come out of <laughs> the cubicle, and there is one of the ladies, Joey, who's there. And she looks at me, and I look at her, and I go, "I'm so sorry." And I wash my hands, and I leave. And it turns out the buildings had the bathrooms the other way, <laughs> upstairs and downstairs. So that was my first welcome in the first month. How do you like me so far? But yeah, those were the days. East Palo Alto-- a very dangerous place, that time. It was number-one murder capital of the world.

House: That's right, it was. Yeah.

Listwin: And, you know, I remember I--

House: So, this is circa 1990-- somewhere in there?

Listwin: Nineteen ninety. That's right. Early nine-- I joined in August of 1990, and so that period was of high growth, but it was a kind of a weird place. And I don't know if you interviewed Bill Kelly, but...

House: Yeah. Oh, yeah.

Listwin: Yeah. So, Bill was there, and we--

House: Talk about a character.

Listwin: Yeah, he's a real character, and...

House: Terry Eger and Bill would qualify right at the top.

<both laugh>

Listwin: Exactly. And so Bill was there late, as was I, one night, for Interop, getting ready for the tradeshow, and he came running in, huffing and puffing, because the gunshots had gone across between Manufacturing and where we were. So, from what it is now, in terms of this global power, you know, Bill ducking bullets and us seeing police raids at the side of the building is a very modest beginning to where the company is now.

House: Debbie Gross told me she got a call to come interview for some guy named Chambers, and she says, "I drive up, and I thought, 'This can't be right.'" <laughs>

Listwin: Yeah. Yeah. Well, good story about Debbie. She started with John, and she was just frustrated and-- because things were always so dynamic. And I went for lunch with her, and I said, "Debbie, just think of this as baseball. Right? You keep looking for the fastball, and the only thing your boss throws are curveballs. So if you get that in your head, you'll do a whole lot better." And of course, she stayed for 20--

House: Oh, she's still there. Yeah.

Listwin: Twenty, thirty years, whatever.

House: She may have retired now. I don't know, but...

Listwin: Yeah. I think she left when John left, but for a very long time, so...

House: Oh, my God.

Listwin: Yeah.

House: So, did you come to work for Andy?

Listwin: I came to work for Doug Tsui. So, Doug was the head of Product Management.

House: Doug Tsui-- how do you spell that?

Listwin: T-S-U-I. I'll see if I can get--

House: Oh, yeah, I've seen that. Yeah, okay.

Listwin: And so Doug ran Product Management, reporting to Kate, who was the VP of Marketing at the time, and they were trying to fill out some Product Management, because it was essentially Sales and Engineering.

House: Sure, sure.

Listwin: And the customers. And it went very quickly, <laughs> among those three entities, and we were trying to do a little bit more planning. So I came in, and my first job was in Network Management. So that turned out to be a challenge, and... trying to figure out what we were doing. So I ended up, in the first month, with lunch with John Morgridge. So he met every new person who came in. He had lunch. And I said to John, I said, "John, we don't have a Network Management strategy." And he looks at me, and he's just got his glasses. And he takes them off, and he goes, "Son, I always have a strategy. You may not understand it, you may not agree with it." Right? And I love John to death. I'm going to see him in a couple of weeks at the Morgridge Center. And I said, "Well, what *is* our strategy?" And he said, "To do as little as possible, without the customers getting mad." And I thought, "Well, this is the wrong place for *my* career. I got to get out of here." So I very quickly transferred into becoming the... *not* the IOS product manager. And that job mostly was running after Engineering, trying to figure out what they'd built in the last 24 hours, and telling the sales force. Because the customers would come in, and Sales would come in, and they'd FTP a new load. It'd have three new features, and we'd try to figure out what they were. So, was really no product management, per se. <laughs> It was all product marketing, just trying to keep up.

House: Did you find that fun, or was it frustrating as hell, or kind of both?

Listwin: Well, it certainly wasn't-- you know, my experience, I was a VP of Marketing at the other place, and had some more--

House: Yeah. You had process. <laughs>

Listwin: Yeah, and it was-- but it was pretty dynamic. And then what happened is, we started thinking about SNA. So, as a protocol company, one of the first projects I did with a consultant is write 16 protocol notes, which was, "Well, how does Novell IPX work?" "How does Banyan VINES work?" Because we were a multiprotocol system. And TCP/IP, while it was coming up, was way behind XNS, for example, right? So that was one of the things I did, as the software product management. So it wasn't Product Management; it-- you know, it was Marketing, which is fine. But SNA came up, and Doug asked me, he said, "Well, do you have any experience with IBM?" And I said, "Oh, yeah, I know them. I can tell you 3270 Gateways, and 3278s, and 3745s, and the whole thing." And he said, "Okay. Well, you're the guy. Go build a strategy for SNA." And so he and I together built this multiphase strategy, which I now do for lots of long-term marketing visions, of here's-- you know, here's five steps to get to nirvana, and ended up

getting Joel Bion as my partner in that exercise. And it was hugely successful, largely due to Joel's just incredible dedication. He's a fun-- hopefully, he's interviewed, but--

House: We-- I've interviewed... yeah.

Listwin: One of the funny things--

House: In fact, he's the one that told me that I was the guy that bought their first system. I have no idea. He says, you know, "You're the guy, man." I said, "You didn't give me any founders stock." <laughs>

Listwin: In the early days with Joel, he was frustrated because things started slowing down, because there were more and more people. And he said to me one day, he said-- he's like, "Working around here is like the Star Trek *Enterprise*: a thousand people on board, and you only ever see seven of them do anything." <laughs> So I thought, "Okay." But he and I worked together on that, and first did simple things, like bridging, and then did routing, and... and the big coup for us is, we ended up finding an IBM fellow-- a guy named Bill Beausoleil-- who saw the Internet coming, and saw that it was going to be bigger than what traditional IBM people, like Ellen Hancock, were thinking. And--

House: So he was still at IBM?

Listwin: He was IBM, as a fellow, and there was about 50 at the time, right? And they had about a \$25 million budget. And they were politically untouchable. He invented the bus-and-tag architecture for IBM. And we went to him and said, "Well, we want to do a channel-attached router." Which, of course, is-- the 3745 is the channel-attached router. But I said, "For the IP traffic, we should just have something go directly to the mainframe." And so we built it together. And when it finally was known inside IBM, this went all the way to the board of directors.

House: Oh, it had to. Yeah.

Listwin: And the board said, "The reason why we put fellows in place is for them to do stuff like this, when we have our head in the sand."

House: No kidding?

Listwin: And so I'll tell you what, we--

House: Were you at that meeting?

Listwin: I was not. No, no, no, no. But we heard about it from Bill, and...

House: How do you spell his name? You remember?

Listwin: I'll have to get back to you on that¹.

House: Okay.

Listwin: I mean, he was the senior guy 20 years ago, so...

House: No, I hear that. Yeah.

Listwin: And...

House: Was he out of Poughkeepsie, or Frisco, or--?

Listwin: Yeah, he--

House: He wasn't here at Santa Teresa?

Listwin: No, no, no, no, no. He's from back East. And... and so the next Interop, we had an IBM mainframe in the Cisco booth, with the channel-attached router, and that was the biggest news at Interop...

House: Oh, it had to be. Yeah.

Listwin: Actually having SNA. And then we hired people from IBM, that came in and actually took over and ran that strategy, which turned out to be very successful, and probably, for me, my first big win in the company.

House: Would it be like '92, or what do you remember?

Listwin: You know, I would say that was in the '92, '93, '94 period. And so that was--

House: And now you're able to play with the big boys.

Listwin: Well, yeah. Now, another fun story, though: John Morgridge and I are in New York, and we're going to see these new customers. And one guy, a young guy, says, "I want availability like IBM. I want reliability. I want connectivity." And Morgridge looked at him the same way, and he took off his glasses, and he looked at him, and he says, "Well, then you don't want us. You want IBM." And he stood up to shake his hand to leave. <laughs> And the guy goes, "No, no, no, no! Hold on, hold on, hold on!" And he said, "Look, this is who we are. We're the TCP/IP and multiprotocol company, and we can do some stuff for the IBM stuff for you. But we're not IBM." So it was... so, for me, in your questions, a lot of the formative culture and teaching...

¹ [Editor's note] The name is correctly spelled above.

House: Came from John.

Listwin: Early, came from John Morgridge, before all the things I learned from John Chambers.

House: Well, this is why we're interviewing people like you, because you don't find that in the books.

Listwin: No. No.

House: You know, Chambers ran everything. <laughs>

Listwin: Yeah. So...

House: And I don't mean to disparage him, but we've got some great stories about Morgridge that just-- through this mechanism, that we would never have heard, otherwise. I love that one. That's-- just stood up and said, "See you later."

Listwin: Yeah.

House: Oh, God. So... so you had your first big win. Kind of, then what happened? Were you acknowledged within Cisco, at that time, pretty well?

Listwin: Oh, well, inasmuch as everybody was, but it was-- it certainly helped the Sales guys. And at the Sales meeting, it was kind of like people going, "Hey, you know, versus our competitors, this is a key differentiator that we didn't have in the past." So then we ended up-- I ended up getting promoted at some time, into the Head of Product Management, and then that was my next big job. And we really had to build out true Product Management, because there were so many demands coming in. You couldn't just have a thousand customers asking for a thousand features. And so there were people like Brett Bilger and others, who had been there before me, but we brought in other people, like Nick², from the IBM side, and we built out a team, and that was probably one of the most fun periods of the time. And...

House: So your engineering degree was engineering; it wasn't marketing.

Listwin: No. I'm-- electrical engineering was the--

House: Did you get an MBA along the way, or--?

Listwin: I did not.

House: These are all...

Listwin: No. All Hard Knocks MBA. All Hard Knocks.

² [interviewer's note] The complete name is Nick Francis.

House: That's the best kind.

Listwin: Yeah. So, at that time, that's when that organization then reported in to John Chambers, because that was the period when John and Terry were still there. And Terry did *not* work for John, ever. He made *that* clear. And then, ultimately, Terry... well, ultimately left, and then John consolidated on Sales and Marketing. So that was, I think, a-- it was a good period. And Frank Marshall had come in, and had started running Engineering. Then, as things continue to go, I and others, I guess, made the case that, you know, maybe it's time for an idea of a business unit structure. And we-- people were asking for smaller routers, and there were a variety of different things. So we ended up moving into this business unit structure, where Frank ended up taking over Core, which was the biggest part of what we were doing. And myself and Kevin Kennedy, who we had recruited in, we went and said, "Well, we'll go build the access business." And, you know, Morgridge again was very smart. He said, "Look, the big risk to a company is always the second product line." Because you got to get product, market, and channel right, and... and so we did-- again, Joel came on our team, and I think we did a pretty good job with the first access units; you know, first \$5,000 pizza boxes. But we were still selling them to big enterprises. So we still only had one channel in motion. When we tried, ultimately then, to go into small-medium business, I launched an initiative called Cisco Pro, which was a dismal failure.

House: Oh, really?

Listwin: And I probably screwed it up no fewer than two times, because it was a channel play, and I didn't understand it. And so we ultimately went and bought Howard Charney's company, who was selling small switches through the channel to small-medium business.

House: Was that Granite?

Listwin: That's right-- Granite. Granite. And so-- and that was probably our third switch purchase.

House: Yeah. They'd done it at StrataCom.

Listwin: StrataCom was ATM, so I can talk about that. Anyway, so Charlie--

House: It was the one that Mario was with.

Listwin: Mario, yes, was Crescendo, and I'll talk about that. That was super important. But with this-- and this is a little further on. With this, I said to John and to Howard, "This is a channel play. You guys are-- I don't know." <laughs> And he took that over, and ultimately created very successful channel structure, killed the Cisco Pro name-- it's just Cisco-- and figured out the right packaging of the product, and the right channels to be successful. The first acquisition we ever did was Crescendo. And back then, there was this big debate about routing and switching, and routing and switching. And I think the company finally came to the understanding that, well, just moving packets could be our mission. We didn't have to route packets or switch packets; we just had to *move* them. And buying Crescendo was the first step in that, and I remember John and I in there, negotiating with Mario. And he wanted a certain number, and

this is how naïve I think, certainly, we were: I came up with this brilliant idea that two million shares, at \$46 a share, was the right way to go. And Mario said, "Yes." And of course, those two million shares turned into who knows *what*. But back then, they had what was called pooling of interest, from a tax perspective, so those people who got those shares didn't have to pay tax on them. The government subsequently took away that capability, but it was a tax-free transaction on both sides, and probably one of the most-- it was *the* most important acquisition, because Mario and his team ended up building the switch business, which I think, to this day, is bigger than any of the businesses in there. So, you step back and you look at some of the acquisitions, it wasn't just the technology, because the half-life on that stuff is-- it's <inaudible 00:19:05>; it was the teams: so, Mario's team, who ultimately built the huge enterprise switching businesses, and Howard's team, who ultimately built some product. But the real value was in leading the efforts in the channel, and--

House: So, back up a minute. You say you and John negotiated with...

Listwin: With Mario.

House: With Mario, and John Chambers or John Morgridge?

Listwin: John Chambers. John Chambers and I were sitting in his conference room, and... yeah, it was an interesting time. We were very new at this. The CFO was called John Russell, at the time.

House: I knew John from HP.

Listwin: Yes, of course. And so we had to announce the deal the next day. John Russell wasn't happy with the process, and at about ten thirty at night, after we'd done all the employee letters, he called Barbara Beck, who's the head of HR, and myself, and said, "These are all wrong. They can screw up the tax treatment. You have to do them again." So we're tired, frustrated. We go back downstairs. We're working on this. Barbara has one of those blow-up punch dolls in her office, and I wind up and just whale on this thing, right? *Doosh!* Unbeknownst to me, I do an L3-4 tear in my back, from the punch.

House: Really? Oh, God!

Listwin: So, Ken is the Corporate Development guy.

House: So you collapse on the floor?

Listwin: Well, I don't. It's a slow deterioration. Two o'clock, he-- I'm waiting there. He says, "We're done, because they're doing all the legal work, and we're going to announce--"

House: Two in the morning?

Listwin: Two in the morning. We're going to announce before the market opens.

House: Oh, sure.

Listwin: I go home for an hour, and then I can't get up. So I say to my wife, "Okay, you have to drive me in for this... you know, five thirty meeting." I've had an hour's worth of sleep. So I have three cups of coffee, which is a mistake after the fact, because you can't move, you can't go to the men's room. But that's a side story. And John puts the Polycom on the floor, and I lay down on my back by the Polycom, and he's on his chair, hunched over, and we do our first acquisition conference call with me prone, and John like this.

House: Oh, what an image! <laughs>

Listwin: And-- you know, stock went up, which means it was free in the land of accretion/dilution, and that was the beginning of a very successful run of acquisitions led by Ed Kozel, predominantly.

House: So, I just have to ask: Have you ever told that story in public?

Listwin: I don't think so.

House: That is a priceless story. Huh? "I'm prone on the floor with the L3-4." <laughs> Oh, my God!

Listwin: Right through the Q&A, all of a sudden, I got to go to the men's room, because I've had too much coffee. I'm pulling myself on my knees. It's just ridiculous.

House: How fun. What memories we have! <laughs>

Listwin: Yeah. But stock went up, and that was the number-one--

House: There we were, yeah.

Listwin: So we got one of the best teams in the world, and it was essentially free to Cisco, and they made a ton of money.

House: Oh, my God, yes. So, where was Morgridge in that negotiation? Was he supportive, or--?

Listwin: You know, at the board level. This was now...

House: Was he no longer president, or CEO?

Listwin: I don't know. I think he was, but I think John had then just taken over Engineering. So, John's consolidation had been Marketing first. Then Terry left, then he got all of Sales and Marketing, Customer Service. And then Mr. Morgridge made him run that for a while, and show that he could really make that happen. And then Engineering, which was the key signal to everybody, then Product was the last.

House: So he was essentially COO of the running parts.

Listwin: Yeah. Well, he was essentially what I would call, at this point, early on, the Chief Revenue Officer, and then became the Chief Operating Officer, without that title.

House: He's hunched over, and you're laying on the floor. I love it.

Listwin: And so-- but John Chambers had been out seeing customers during that time. And so, yeah. Yeah.

House: Oh, that is just the-- so, you'd mentioned Koziel. Say a little bit about Ed.

Listwin: Well, Ed was the strategic leader, and he was the one that kept our heads out of the clouds. He always saw the next level of threat, and pushed everybody, and... John Chambers created a system where, if you wanted to do acquisitions, there were a variety of ways to do it. So, if a business unit said, "Hey, I need this product," you could stick your hand up as a business unit. As we got more mature, you could go and make that happen, with support from Corporate Development. But there were times when Corporate Development would make the case to John and the board, "We need to be in this new area." And we had the Xerox photocopier problem. You could always make more money on the next router.

House: Oh, sure.

Listwin: Right? And so it's like, how do you get to the adjacent space? And so Ed was always the one that pushed people, and made them think about existential threats when new things happened, and when ATM-- the ATM IP conversation came up, he was always the, I think, the clear, strategic thinker, from a technology perspective, in the company; and then created... well, has now emulated a very successful integration model for Cisco. And ultimately, that became successful, because you only had to look around and see, of the three people in the room, one of them had been acquired. So it wasn't as though there was a whole bunch of rejection DNA on acquisitions. Mario was at senior staff. Howard was at senior staff. These people were not relegated under people; they were put at senior staff, for the reasons that we purchased the companies.

House: Neat. So, let me back up here and ask a couple of kind of just context questions. So, when you joined, you were employee 410; 50 or 60 professionals. The company was doing... how much revenue?

Listwin: We were just post-IPO, so my guess is we were in the 150 to 200 million.

House: Okay. So, even though you came in as a product manager, it was a much bigger company than what you were with over in the... Develcon company.

Listwin: Yes. Indeed. And you know what it said: Where were we? That was just at the Sandy and Len departure period.

House: Okay. Were you there before, or...?

Listwin: I-- when I got there, Sandy was literally moving offices from one place, where I think it was operational, to the other, and... and then all of that <laughs> boardroom activity that transpired.

House: Did you ever get to know them?

Listwin: No. I mean...

House: I mean, other than you met them.

Listwin: I met them in passing, a couple-- two times, and-- you know, but my first job, there's a story about Sandy, though, <laughs> is that, when we came in, Kate said, "Hey, you have Director of Product Management experience. You know product lines, and things." So I said, "Yeah." So we have no documentation, literature, for our customers. Because Sandy's point of view was, if they weren't smart enough to figure it out themselves, we didn't want to sell to them.

House: <laughs> Yeah, right!

Listwin: And we thought, well, we'd maybe want to be a bigger company than that. So one of my first jobs was to build tech-spec docs, product line, and so on and so forth. So we were an engineering...

House: Well, just building the app notes for the protocols. <laughs>

Listwin: Yeah. So we were an engineering-driven company that turned into a sales-driven company.

House: Well, and a superb acquisition, M&A company. I mean, my God.

Listwin: And, arguably, customer-driven through sales. But for a while there, it was sales.

House: So, let me go from there-- 150 million-- to the Mario acquisition, and then from there to the Granite acquisitions, probably, what, five years or so?

Listwin: Well, but then there was Kalpana in there, with Charlie.

House: Right.

Listwin: Right? And that team. So there were a whole series of switching acquisitions and, you know, it's 15, 18 years ago, <laughs> so I don't remember them all.

House: But the question I want to get at is, it had to just be dynamic as all hell.

Listwin: Yeah, it did, and at some point, you almost felt like, "Why do we have all these different switching products?" And ultimately, they bifurcated into the low-end products for small-medium business, that Howard Charney ran, and then the Catalyst series, which-- you know, the first Catalyst launch was very difficult on the company, because we didn't hit the quality metrics that we needed to, and we had to pull back for six or nine months.

House: Oh, really? I haven't heard that before.

Listwin: So we had a very tough time on that first product launch, and it was the biggest system anyone had ever built, and so I understand, and... but that's part of, I would say, a big wakeup call in the maturation of the company, and it was the, I think--

House: I guess that's kind of what I'm after is, on the one hand, it had to be dynamic; on the other, you have to be making a few mistakes here and there.

Listwin: Oh, for-- yeah.

House: What was the mood? Did people-- I mean, it just had to be, you know...

Listwin: Well, things were-- despite making mistakes, like me saying how I messed up Cisco Pro, things were still growing, you know, like crazy. The stock was going great, so there was a lot of enthusiasm. And I used to say to people, "Look... don't confuse efforts with results." And, "Hit eight for ten, not five for five." And the third thing is, "Don't make the same mistake twice on the eight for ten, right? Or you will get fired."

House: Yeah. Yeah, that'll do you in.

Listwin: But this was about pace and moving quickly. When we went into the business units, that gave us some more velocity, and we had the IBM business unit and Access, and Access ultimately was run by Kevin Kennedy; built that to a \$5 billion business. So the whole enterprise space was going very well, and the small-medium business, led by Howard, was going very well. And the carrier space, the service providers... first time ever, a sales team misses a number. Because we're trying to sell enterprise products to AT&T, and they're saying, "Are you kidding me? The power's wrong. The rack's wrong. The *barcode's* wrong. You got to put *this* barcode on, from us." And that's when, again, I was one who pushed for and said, "I think we have to go to a bit of a line of business structure." And we had a offsite meeting, where I used the stereo analogy. I said, "Okay, look, think of music delivery in four different platforms. Here's"-- and I think it was a Sony Walkman, back there, right? "Here's a Sony Walkman. This is a consumer product. It's tightly packaged. It does one thing. It's got a few buttons. All right? Here's a boombox." So I had the boombox. "This is the small-medium thing. Got some more knobs and whistles, but it's pretty tightly-- you know, right? Here's the component. This is the enterprise. There's a tuner, there's an app, there's a turntable, you know." And then I put a picture of a Michael Jackson concert. I said, "That's the service provider, and we're trying to sell *this* to *them*, with the mixers and the giant"--

right? And we got to build these things. And that's when companies like Crescendo and Ascend were coming into the market, and they were just kicking our tail, because we were selling the wrong thing.

House: That's a great metaphor.

Listwin: And so this is when Kevin DeNuccio, who had come to us from the East Coast, and had done... I think it was Bell Atlantic integration. But he had big experience, and he was the sales leader there, and that's when they had missed. So we went to the sales meeting, and Kevin Kennedy and I had then gone. And on the line of business, I said, "I don't know. Give me one. I don't care." I didn't want to make it political, about, "I need this or that or the other," right? So, okay? So we ended up with this line of business, which was about a half a billion dollars a year, at some dumpy little hotel around the area, because you missed your numbers. Right? Probably, the first time in the history of the company.

House: Morgridge is still approving expenses...

Listwin: Yeah, and validating parking. And so you're at the podium, and Kevin Kennedy had become my partner. And in all of my successes, Kevin has equal or more share, to be clear. And DeNuccio's up there, and we've got this toast, and he's got this champagne. And I go to drink the champagne, and I gag and spit it out. It's so bad.

House: Is that right? <laughs>

Listwin: And I go... I go, "Okay. We're going to give you products that you can sell. We're going to double the business from year to year, and when we do, I'm going to buy Dom Perignon for everybody in this room next year."

House: Something that's drinkable, for God's sake. <laughs>

Listwin: And so we did, and they did, and I bought Dom Perignon for... every year that I was there, until the last year. And the last year, I ended up leaving just before that. I offered to do it, but Mr. Chambers was very generous, and said, "No, I'll pick up the tab for that." But we built that business from half a billion of the wrong product, to a run rate of 10 to 12 billion of the *right* products, including Cerent acquisition for fiber to begin in that. And we ended up, obviously, continuing to dominate in the enterprise, but then right-- began to build the right products, like the Cisco 12000, for the core of the Internet, and hiring people who really knew how to run those types of technologies.

House: That sounds like a great run. So, what happened when... quit-- you left?

Listwin: Well, great opportunity. I was on the board of Software.com, and Ed Kozel, again, had begun saying, "Hey, software's coming. We need to start to understand." And so he had led a series of investments. For example, TIBCO-- we had done some investing there. And Software.com was a company that did large-scale e-mail-- sold to AT&T and others. And I was on the board, and another company that they continue to see-- Phone.com-- neither of which were dot-coms in the eyeballs. They

both had software technologies, had all the mobile technology, and they wanted to do a merger of two public companies-- very challenging. And I thought of it as a great opportunity. You know, it was pretty clear that Mr. Chambers was going to stay for some time to come.

House: Yeah, he wasn't showing any sign of retirement.

Listwin: Yeah. And... and I had a great run, and had a good reputation. So I took this job, as this merger of two public companies, changed the name, and...

House: So that became Openwave?

Listwin: Became Openwave. Very challenging four years of my life, both on a personal and professional level. The company was terribly over-hyped. It was back in the days where there was a lot of money managers and people hyping, and trying to short and long stock, and... and I went. We combined the two companies. And the analysts were looking for something like \$900 million for the next year's revenue, so that would be 2001. And I did the--

House: Great year, though, yeah.

Listwin: I did it-- I did the road show in New York, after we merged, and said, "We'll do 700." The day I started in New York, on Monday, the stock was \$80 a share. When I showed up in Denver on Thursday, it was \$50 a share. And when I left Denver, it was \$42 a share. During that meeting with the big fund whose name escapes me right now, they had no PowerPoint, or whatever. They were just there, mad, right? Because they'd lost hundreds of millions of dollars, as had everybody. And I had a new suit on, that I got for the trip, and they had just a white easel and a marker. And I went to go explain why I didn't say 900. Right? And as I went, it had the edge where you put the pens, and I tore my pants while I'm doing this. And I go and I-- but I feel warm. So I stick my hand-- it's an L-shaped tear-- and I'm bleeding profusely.

House: Oh, really?

Listwin: Yeah. I'd lacerated myself. So... <chuckles> so I go to Alan Black, who's the CFO, and I go, "Okay, you tell the rest. I have to go here." And so I come back out with a compress on, and go, "Look, I can finish some Q&A later, but I'm going to have to go to the hospital." <laughs> And that was the launch week. And it just went from bad to worse, including laying off 1500 out of 3,000 people, including 9/11, including the death of my mother-- a very, very challenging time. I think, at the low point, in financial terms, we had about \$4 a share in cash in the bank, and the stock was trading at 40 cents.

House: Really?

Listwin: Yeah. And so that-- for those of you who weren't around in that time, that's when the whole thing began to collapse, and... you know, as Morgridge always said, the stock market is this delicate balance between fear and greed. And the greed portion had given way to fear. And ultimately, again, I had a number of people—Jon Shantz, Kevin Kennedy, and others-- who came and joined me at Openwave,

and rebuilt the company and product into a decent market gap. And I... my mom had died, and I was about to go embark on my cancer work, which we can talk about. And I said to Kevin, "This is your-- you should have this company." But he had joined JDSU board, that I'd originally been on, and when my mom got sick, I stepped down and Kevin took the place, because they wanted someone who was a purchaser to have the voice around the table. And through happenstance, they had let go of their CEO at the time-- it was a much bigger job-- so he went that way. And the Openwave board did a search and brought in a new player. So, for me, I had, with most of the heavy lifting from Kevin Kennedy, turned it around, got it back to 1.2-, 1.5-billion-dollar market cap: a reasonable value for what we were doing. And we were at a strategic crossroads, where the company had to decide, "Well, you should become a systems player, like a Cisco, or you should become a software client server player." There was a couple of options. And moving that forward was another five-year journey, and I had decided I'd had a big win with Cisco, a medium win here, and... you know, my mom had died of badly diagnosed cancer. And so I decided that I could take some of the money I'd made, and begin to see if I could make a difference in early detection of cancer.

House: So that was the catalyst to move in that direction?

Listwin: Yeah. I mean, my first wife ended up ultimately dying of vaginal cancer, my dad had colon cancer, my uncle died of prostate cancer, and my mom died of ovarian cancer.

House: You had plenty of incentive.

Listwin: Yeah. And especially, my mom was my best bud, and she was misdiagnosed as having a bladder infection. And it happens a lot to women who are typically going through menopause, and so the symptoms of ovarian cancer are very similar to-- you know, you're bloated, and you're-- and so women ignore most of the symptoms. And she got antibiotics, and ultimately, when my sister, who's a nurse, dragged her into a hospital and they did a scan, they found the ovarian cancer, which ultimately killed her. When you go look online to the databases, you see a curve that's pretty clear, that goes "early-stage survival versus late-stage survival," and you look at, "live, nine times out of ten, early; and die, nine times out of ten, late." So I set out to do some work in early detection of ovarian cancer, and some 15 years later, we are the world's largest global research network for early detection.

House: Is that the Canary Foundation?

Listwin: So, the Canary Foundation was the-- my-- is still the foundation I run, which is the catalyst. But, for example, now we have the Canary Center at Stanford, that is full-on, 250 researchers that are self-sustaining. Recently, centers have opened in Cambridge, in the UK; Calgary, in Alberta in Canada. A new philanthropic gift into Boston has just been received by one of the big institutions that has not announced yet, but they're going to announce in February. So, much of the work, the trailblazing that we did, has now turned into these programs, where we're saying, "This is a combination of biology and engineering, which is going to solve these problems." And Stanford has sort of paved the way, by teaming with us in this enterprise.

House: I love it. My mom died of ovarian cancer, also, you know, so I can relate.

Listwin: Yeah.

House: So let's back up. I had another question. Did you know John MacFarlane? You were on his board.

Listwin: I knew--

House: Did you know Judy Hamilton?

Listwin: I know Judy, yeah, as well. John... you know, quite well, because he was early on, and... so, yeah, John was the CEO of Software.com, and we were trying to build it out, bring in a CFO, which, with John, was always a bit of a challenge... <laughs> kind of having some structure around him. For a while there, the board was having a conversation about him stepping down, and he was going, "Yeah, maybe I should step down." And I said, "I don't know why. I don't know-- this is a technology play. You just need to build some people around you." And ultimately, it was my relationship with him that brought together the Software.com/Phone.com, because neither of those guys, I think, either felt they could do it or *wanted* <laughs> to do it. And lucky for them, they didn't. <laughs> But yeah, John stayed on for some period of time, to be the Head of Engineering there, and... and then--

House: So, I knew that group before you got there, and I've been associated with UCSB for quite a while. And I was running Spectron Microsystems in Goleta, and so I got to know John. And my wife has done two companies with Judy.

Listwin: Oh, okay.

House: And so, you know, but-- so I didn't mean to go down that path.

Listwin: No, no.

House: So, this whole cancer thing-- I mean, it's pretty rare for a double-E guy out of Canada, who's a networking guy, to say, "I think I'm going to go into this very different field," even if it is bioengineering.

Listwin: Well... right. I mean, a bunch of it was hubris; <laughs> just thinking, you know, "What *can't* you do?" And a bunch of it was the idea that maybe there was more engineering to be had here. And af-- you know, in hindsight, 15 years later, I give the engineering community on this problem an A, and the biology community a C. I mean, we've made far more progress on understanding this because of what's happened in the engineering side of things, right? We can-- the sensitivity of platforms is just enormously different. Illumina, as the worldwide leader in sequencing-- and in fairness, it's chemistry and biology and engineering and physics, all together. <laughs> But when I first started the field, we couldn't attract anybody, because there's no industry money to pull.

House: There's no industry yet.

Listwin: There's no industry. There is old industry-- the blood tests-- which then go by truck, to airplane, to processing centers. And the model is a mainframe model. There are seven giant processing centers in the U.S.

House: Oh, is that right? I didn't know that.

Listwin: Yeah, and Abbott Labs has as many trucks as UPS.

House: Really?

Listwin: You just-- they're just working at night, picking up samples, taking them-- right? And so it was clear to me that one of the puzzles was the economics. Right? We needed to have the PC--

House: Talk about a channel partner problem. <laughs>

Listwin: Right? We needed to have the PC of diagnostics, not the mainframe of diagnostics. And of course, that's what is emerging now, is all of these point-of-care, single prick of blood. Even in genetics, they'll spit in a tube, and off you go. So a big part of it is, how do you change the economics? And in hindsight, I sort of figured out, what I think I'm good at is market development and tech development, because I always did the new things at Cisco, and this was a new thing. Now, the vision was Dr. Lee Hartwell's, a Nobel Prizewinner; gave me this gorgeous Nobel pin.

House: There you go.

Listwin: And he was the one who said, "Hey, we're going to have a blood test, followed by an advanced imaging test." Because no surgeon in their right mind's going to cut *anybody* open with just a blood test, right? We have five percent of the world's population, and fifty percent of its lawyers. So... right? We have to have a confirming test. And so that's the--

House: Say that again. Five percent...?

Listwin: Five percent of the world's population in the United States, and fifty percent of its lawyers. Right?

House: I hadn't thought about it that way.

Listwin: And many of them are in the medical field.

House: Yeah, yeah, yeah.

Listwin: Right? So...

House: And they show up daily.

Listwin: So that was Lee's vision. And so we began building teams, and so we now have-- we have institutes, we have centers, we have affiliates, and we actually have teams that aren't associated anywhere, physically, that work on a particular problem. For example, our prostate team is our biggest, and they're trying to answer the question for you and me, which is, if we have a high PSA and we go get a biopsy, and it's in the middle...

House: Yeah, now what?

Listwin: *Now what?* And so we've built a program, over the last decade, which answers that question, where we can actually begin to tell the doctor that, "Genetically, I know you're in the middle, but you're going to be okay. And you, Don, aren't-- you know, you're in the middle, too, but your genetics are very different, and you're going to have an aggressive cancer." And so we've actually managed, over the last 10 years, to change some of the standard of care in prostate cancer. And we're actually kicking off a program to do that for high-risk women in ovarian, who are high-risk with BRCA, or a familial history of two or more family members. So we're trying to emulate that success. And again, that will be a team that's a variety of experts from around North America, in this case. And, you know, we actually supported, in ovarian cancer, a woman. The great irony is that... <laughs> the woman who actually cared for my mother, out of Vancouver. And she was the leader in identifying the fact that the fallopian tube seems to be the site of origin for serious ovarian cancer. And when you go get your ovaries out, they don't take the fallopian tubes out. So, now that standard of care has changed, too, in Canada-- starting to change in the U.S.-- and that was a program that we funded. So, long journeys. When you're used to building a product in 18 months at Cisco, these things-- this has been 15 years, and I got another 10, probably, here, before I can say, you know, "Phase One complete." Because the big goal was to end up with industry getting involved. You know, there's a new little startup called Color Genomics: principal engineer from Google, former COO of Twitter. To me, I know that's success, because they think they can build a great product, they can help save lives, and they can make money doing it. And that's the combination--

House: What's it called? Color...?

Listwin: Color Genomics. A competitor to 23andMe; a little bit more focused. But as an example of--

House: Did they just get a huge funding round?

Listwin: I don't know. They might have. But I tell the story because it's-- that's what we need to attract the best minds, so they don't go build WhatsApp--

House: I think I've got a granddaughter dating one of the founders.

Listwin: Well, there you go. Good for you.

House: I could be wrong. <laughs>

Listwin: And, you know, so they're not building WhatsApp, but they're building--

House: So, one of the starter team. It's not the founder, but it's-- yeah. Just met him. It just clicked. She ought to hang on to that guy.

Listwin: Yeah, yeah.

House: So, I'm just-- I'm dazzled, really, by your story, in the sense that so few people in our industry-- and I'll call our industry the high-tech networking, hardware/software, electronics game-- ever branch out. Now, you have gone sideways into something that's much more impactful for human lives. Not that the Internet wasn't.

Listwin: No, of course. I mean, that's a glo--

House: But it's an interesting and rare transition. Do you feel that way? Do you understand that?

Listwin: Oh, indeed, you know, and--

House: Do people say, "Jesus, Don, how do you do that?" Or, "Why'd you do that?"

Listwin: I think they ask why a lot. I think most of my friends know.

House: Got to be satisfying.

Listwin: I mean, five to seven years ago, it was a real grind. I mean, it was like, wow. Because fundraising's hard, asking people for money all the time. Now I think we've reached critical mass, and it *is* very satisfying. And, you know, as... what I did to keep myself initially busy, and make money, is I did investing with my own little venture firm. But I built a company in the genomics area for software for genomics, that Illumina bought, and I'm on a company now called D-Wave, which is the world's first quantum computer. So I am very broad, and an inch and a half deep <laughs> on a lot of things; deeper, of course, on early cancer detection.

House: G-Wave?

Listwin: D-Wave.

House: D-Wave.

Listwin: D-Wave, out of Vancouver in Canada. And currently, here we are in fall of 2018. I am the CEO of a med-tech imaging company for stroke, called iSchemaView.

House: Yeah, you mentioned that as we opened. iSchemaView.

Listwin: iSchemaView. So, there's two kinds of stroke: ischemic and hemorrhagic. One's a blockage, and one's a bleeder. And these-- our founders from Stanford said, "You know, we could do a whole lot more with a CT scan." And over the decade that they developed this technology, they really gave maps of the brain that suggested whether you could care for a patient or not. The standard for years was six hours. So if someone had a stroke, and they were outside the six-hour window, you didn't get any care. This software demonstrated that there was more nuance to that decision.

House: Really?

Listwin: And in January of 2018, the American Heart Association changed the global standards, based on this company. So you could treat stroke not 6 hours, but 24. So, a *huge* global impact in health, and...

House: Different treatment technology?

Listwin: Same treatment technology, just debunking--

House: Let's keep applying it.

Listwin: Debunking the-- the sound bite was, "Brain is time." And our corporate response is, "Time every brain." You got to measure every brain, because we demonstrated through the clinical trials that there were people who were salvageable and helpable at 16 hours, and if you just left them, they got worse and worse. So this company-- software company, totally virtual, zero office space; very challenging, in that regard, for an old dog like me, where you come in the office and hang out with coffee and stuff. But we use Zoom, and this company is just... skyrocketed. I was recruited to join the board to help, potentially, with M&A in the future, and... last CEO decided to leave, and here I am doing, now, stroke, not cancer. <laughs> So, yeah, even more broad.

House: My mother had ovarian cancer. I had a stroke. <laughs>

Listwin: Oh, well, there you go.

House: And Stanford ER was really handy, and really helpful.

Listwin: Right. So that's where our software lives now, is in the ER. And so you go-- if you have a stroke, you go to ER. They do a CT scan. We then take another three minutes and postprocess it, and give a whole bunch of more information to the doctors, on what they should and shouldn't do.

House: Can we get it to Kaweah Delta, in Visalia?

Listwin: We're going to get it everywhere.

House: Let's.

Listwin: We're getting it.

House: Let's hurry.

Listwin: The company'll probably quadruple this year, in terms of sales, so it's been--

House: Wow. Are you public? Private?

Listwin: No, small... well, medium private now, I'll say. We're past the-- we're past that venture area, into growth.

House: How fun. This has been a delightful hour. I just--

Listwin: Thank you.

House: I'm impressed and, actually, awed by your story. You've... first of all, you-- I mean, an inch deep and a mile wide, right?

Listwin: Yeah.

House: Yes, that's true. But the stories from flat on your back, to the laceration, to why you're doing these things, are stories we never hear.

Listwin: And I appreciate it.

House: And I believe they're-- I appreciate you letting us capture it. I did just want to ask a little bit about-- okay, it's what, 20 years since you left Cisco?

Listwin: Right.

House: What do you think about Cisco today?

Listwin: Well, I'm impressed that Cisco is making what is a very challenging pivot into a new world, probably more successfully than any of the big companies. More successfully than HP, surely, more successful than IBM. Arguably, more successfully than Intel, although time will tell. And so... you know, I... I applaud Chuck (Robbins) for what he's doing. It's still a heavy lift, going forward, but... you know, they've made the change, and they're embracing it. So, of all of the traditional big players, I think they're one that will survive and prosper.

House: Okay. And then the other one is, of the kind of things you've done-- inch wide, mile deep; no, inch deep, mile wide-- what would you recommend a kid to study today?

Listwin: Well, I think bioengineering is just a fascinating field, and I think that if you want to work in tech, go get your comp science degree or your physics degree, and go learn machine learning.

House: I love it. Perfect. Let's end on that note.

Listwin: All right.

House: Thank you so much for this.

Listwin: My pleasure. Thank you.

House: This was great.

END OF THE INTERVIEW