Cisco Oral History Panel
Part Two

John Morgridge and Don Valentine

Moderated by:
John Hollar

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John Hollar: We'll start now. This is session two with John Morgridge and Don Valentine about the history of Cisco. Thanks for coming back.

Let me talk now about the Internet opportunity which came along so quickly after the IPO. Can you each talk about how you saw the Internet opportunity coming and what you saw at that time?

Don Valentine: We'll go alphabetically.

John Morgridge: No.

[CHUCKLE]

Well, I'd been in the industry for a long time, and it was clear that someone was going to solve the problem of bringing all of this computing horsepower and file storage into some kind of a network. And the model during that time was a spoke and wheel kind of a model--very limited in terms of breadth and connectivity.

And all you had to do is wander around and look at companies and what they had installed, and you knew it was going to happen. Someone was going to solve that interconnectivity. So it was a huge latent market that was waiting for someone to come up with a solution.

And, you know, it's a little strange that someone else didn't see it and go after it more aggressively. In the very short period of time that I was president, we probably went through at least two or three waves of competitors. As they came, they had part of the solution in the market, but they never expanded it. And so, actually, when I interviewed with Don, I interviewed because I knew this was a market that was going to happen.

Hollar: I want to ask you why you think that was, why others weren't seeing and capitalizing on it. But, Don, I'd like to get your take on-- John has positioned it more as the rise of the need to interconnect this wayward group of networks that existed out there. Can you talk about your vision for this?

Valentine: Well, taking a minor step backward, the Apple Computer experience helped us understand that while there was a huge market for standalone individual people to use a computer like that, that it would never become part of the major solution in data processing until it became or was, somehow or other, hooked into a network. So we had financed the company with a spectacular MIT graduate by the

name of Bob Metcalfe who is considered the father of the Ethernet. And he was sort of my tutor on networking and explained how the world would work from his vision.

To include Apple in the world was not going to be just IBM or any of the seven dwarfs. The personal computers had to be part of the network because that's where all the people would be. So we had the great experience with Bob Metcalfe and his pioneering of the Ethernet, which from my point of view was the network preliminary to the implications that people exploited when they found out about TCP/IP.

And the credit there, from our point of view, goes to an evolvingly-named entity part of the government. At one point, it was DARPA. And, at one point, it was ARPA.

The major thrust in funding came from that agency, as near as we knew. And once we began with Bob Metcalfe's help to understand the nature of networking at the lowest level, networking was easy at the IBM level, but not so easy at the personal computer level. So ARPA is the one that organized this grand plan of having all computer systems linked under some kind of a federal government guidance in case of emergency.

And eventually, you had to get all of the individuals who are beginning to populate North America, anyway, with an ability to be alert to what was happening and what the instructions were. And that would all come from the IP part of TCP/IP. We had investments we made subsequent to Bob Metcalfe that were satellite-based communication systems that began to also exploit the TCP/IP, which to me is the technical foundation and funding foundation of the implementation that eventually became what we think of now as a common, ordinary communication system available to everyone.

Although, there's some argument underway now about how it's costed and how it's priced. And, as usual, the people who own the copper want to get paid. And I can understand why, but no one else wants to pay. So you have a billion people using the network, and 10 people who want to get paid for the pleasure of their company.

Hollar: Do you remember when you met John for this job? Do you remember him saying to you, "Somebody's going to make sense out of all these networks"? And were you surprised he was already thinking in those terms?

Valentine: Yes, I was surprised. The nature of the computer companies he came from-- I mean, it wasn't obvious to me that Stratus would be exploring on the edge of this, since it wasn't that kind of a product and application support system. And the name of the other company-- was it GRiD?

Morgridge: GRiD Laptop Company.

Valentine: Yeah.

Morgridge: Which also had a networking capability. And that was the market we sold into, but it was nowhere near as broad a vision as we're talking about.

Valentine: Yeah.

Morgridge: You know, the amazing thing to me based on your comments was that there wasn't a more robust development on the East coast because all of that government money was spent in a relatively limited number of states: New Hampshire, Dartmouth, in Massachusetts. And yet, there were some startups that came out of that, like Welfleet and, to a lesser degree, maybe Chipcom. But they never really flourished. They never really got the momentum to take the market.

Hollar: And this goes to your point about other companies not solving it. Why do you think other companies didn't try?

Morgridge: I think a lot of companies tried, but they came with a pre-determined kind of belief in the solution. And so we went through a whole series of iterations where it was predicted that it was going to go to this protocol or this set of hardware equipment. And Cisco enabled a lot of that but remained, at the core, focused on TCP/IP.

Valentine: See, I would guess that before everything really got visible and rolling, all the mainframes, all the headquarters' computers were in the East.

Morgridge: That's true.

Valentine: And all of the exploitation, new products, whether they were minis or personal computers, were in the West.

Morgridge: Well, the successful ones. Certainly, we had Data General. We had DEC. We had Honeywell that attempted 3C's.

What was the other one that spun out of 3C's? I can't remember. In the minicomputer business, I don't know that any of those had the broad fabric understanding or vision.

Valentine: Well, I think they had very little vision. They only existed because IBM's product planning people made a mistake. They had the mainframe world locked. They had killed their major competitors, as such you could kill them without the Justice Department jumping on you.

So they dominated with the other mainframe people, and the window they left open was a price point that became the mini computer. And they were in Orange County. They were all over the East Coast.

But they were trying to, with a new architecture and new semiconductors, compete against mainframes. Well, the personal computers and things like that were in the West, so they would be branch offices. And when they were sending information and data back to the mainframes, they were sending it west to east. And that's where a lot of the broadcast storm happened because they didn't have the knowledge and wherewithal to hit the right mainframe. So those crashes everywhere, the wrong data packet was hitting the wrong mainframe.

And guys like Bob Metcalfe were beginning to explain the world to them from the platform of the Ethernet. He was interested in combining combinations of personal computers on the West coast through the success of his company, which I believe was called 3Com. And the people in the East were struggling largely with corporate customers and business kinds of programs, so they didn't have personal computers, or microcomputers, or whatever they called them until IBM made this extraordinary decision. Totally out of character for IBM to go into the personal computer by appointing some people who chose to go to Boca Raton and buy software.

And they bought software from the only guy selling software, who didn't have any, who had to go out and buy MS DOS because there was no product in Microsoft. Very clever salesmanship, incredible salesmanship. Maybe the greatest sale ever made in history. So the problem was originated, I think, by accident.

And Cisco's people-- five or however many the real head count is, five or six-- understood it because they were part of the problem, and they viewed and verified the problem with their opposite numbers in other universities. So this was a university noise level that was attacked by university people-- employees, not part of a development department or any other really technically endorsed category. And they came up with the fact that the switch didn't have enough intelligence to recognize a fast-moving packet. And they came up with what is a brilliant solution, a router.

Hollar: Do you recall, John, after the IPO, with the rise of the Internet, when we started, do you remember the signals that you were getting from the marketplace or somewhere else that told you, all right, this thing is going to really start to roll now?

Morgridge: Yeah, the weekly bookings.

[CHUCKLE]

And the growing backlog. You know, for most of the time that I was involved in the company, we had a backlog. And the backlog was a reflection of the fact that it took AT&T six weeks to install a T1 line, which was required to effectively use the power of a router.

And so all you had to do was look at the numbers. And the orders were coming not just from universities, which was certainly a major part of the initial customer set, but from global companies, which almost automatically told you you had to be global, as against just in the US market. So Cisco, very early on, went both east and west.

And those markets quickly became 25%, 35% of the total volume. And by the time, probably '95, they were probably 50% of the total volume of the company. And, at that point, Intel and Microsoft were still debating whether this was a real phenomenon.

Hollar: Let's talk about the acquisition strategy that you then moved to. The notes I have here were about the first transformational acquisition involving expanding Ethernet switches and bringing in Crescendo and Mario Mazzola.

Valentine: Can I make an observation before we switch?

Hollar: Sure.

Hollar: Absolutely.

Valentine: Because John and I were talking about this in the car. And one of the great things about the venture business is you're in an opportunity to learn constantly. One of the large number of things that were brilliantly recognized and executed was the pricing of the product.

We have, in general, at Sequoia lots of trouble and difficulty in persuading 25-year-old entrepreneurs that you've got to price the product higher. And our agenda for that conviction was the fact that a 25 year old cannot run a company on 35% or 40% gross margin. They need 60%, 65% gross margin in order to compensate for the mistakes that we know they're going to make-- not specifically know-- but, in general, know they're going to waste a great deal of investment capital.

And Cisco was early on-- and no influence from me or other investors-- able to recognize the need of, first of all, pricing the product very high, sustaining a very high price, and continuing to make enhancements to

the product that provided them with the opportunity to continue at a high gross margin level or increase the high gross margin level. So one of the miracles of the launch of Cisco was the creation of an enviable cash flow that was early on very positive when most companies are negative. And I remember conversations not seriously had but not often had either about what are we going to do with all of this cash we're accumulating? Now, startups do not have accumulation problems. They have just the opposite problem.

And here we had no need to persuade the founders and the first people there to price the product high, and to continue to price the enhancements, and as different kind of protocols were added, to charge extra for everything. And it's one of the great decisions that's not obvious but extremely enviable that Cisco did as part of doing business. Now, I attribute that a great deal to the fact that John was not 25 when we financed the company. What were you? 35?

Morgridge: No. No. No. No. No. Oh, when you financed the company? Oh, I was probably in my early 40s.

Valentine: See. He had been around the track a number of times at a number of different computer companies and participated in learning the advantage of high prices, high profits, high gross margins, and the magnificent achievement of all time, high cash flow.

Morgridge: And I learned that also from the negative side in my prior experience and the impact of high gross margins in terms of just what you can do, what options you have. You know, I remember one of our competitors-- well, kind of a competitor-- came to me and said you ought to sell through-- what do you call them? Not-- reps.

Valentine: Reps.

Morgridge: And you can sell through reps with lower gross margins, at least, theoretically because you eliminate a lot of that upfront sales cost. And he didn't understand that by doing that, you very, very much narrow the options that are available to you, what you can and can't do. And, as Don points out, mistakes you can make and cannot make.

One of the reasons Cisco was able to do all the acquisitions is that it, in effect, generated so much cash that it could afford a mistake here or there along the line. And you expect that when you acquire. If you're going to acquire, you're going to have, perhaps, success a little better than the venture capital business but not a whole lot better. And so you better be in a position where you can afford the mistakes.

Hollar: I know I asked the acquisition question. I want to get to it in just a second. But let me ask the other question, and the answer may be very obvious. But why was Cisco able to command such high prices for its product and sell them in such volume?

Morgridge: I think it could because the need was so strong and the alternative was not very favorable. And once you establish that position and then you build that brand, then you can live for a long time by continuing to add and enrich the total offering, not just the hardware but the software, the kind of support you provide, all of those other things that are meaningful in creating a viable business model.

Hollar: The support part in Cisco's recipe was always important wasn't it, from the very beginning? The customer support--

Morgridge: Yes. Right. Because, there again, you know, product problems at, at least, some level, could be solved by just sending replacements, and then taking the time to figure out what happened, and fix the actual issue. So we authorized employees at pretty much the lowest level to raise the red flag and say this has gone on too-- and it's a relatively short window when you're in the network business. They want it all the time. 99 is not good enough.

Hollar: Let's talk about acquisitions now. What led you to make that big acquisition with Crescendo? Can you talk about the background of that a bit and what you were hoping to achieve?

Morgridge: I would say, you know, the background of that was part of the size of the Valley that was focused in this space. And Mario was not an unknown commodity in Silicon Valley. He had been with, what, two prior startups, I think?

And so that team existed, and they brought not only engineering and understanding of the underlying market, but they also brought capabilities as to outsourcing manufacturing. Randy Pond came with that group, was a part of our finance team very early on. So one of the things that acquisitions provide is-- and particularly, in a growing company is a continuing source of new talent. And I don't know that every company realizes this, but new talent not only at the lowest level but at the level up through so that you're continuing to refresh junior and even senior management positions, which I think is important in a fast-growing company.

Valentine: Let me provide you with a different perspective because I quibble about the word acquisition. To me, these were not acquisitions as defined in the dictionary. These were selected recruitments of engineering teams with very few fragments of a real company.

Morgridge: Yeah.

Valentine: They didn't necessarily have marketing. They didn't have sales. They didn't have manufacturing. They were not whole cloth companies.

These were early phase startup businesses because we financed a number of companies that became part of Cisco by no divine plan. It's just that they recognized that we had 30 engineers working in an area where they didn't have 30 engineers. So this I recognize, and I began by pointing out that it's a quibble, but these were not acquisitions from my point of view.

This was the new form of recruitment. Follow the venture business. Follow where they're making investments in areas in which you'd like to have a product.

I can remember having a big meeting where we drew a mosaic on the board of all of things we could do in-house and all of the things we couldn't do in-house, and there were far more things we wanted to do, and we were flooded with money. So it wasn't money. It was people.

And the internal engineers say, whoa, whoa. We can do that. Yeah, but who? We don't have any 20 people to apply to that next product.

So it became, in an evolutionary sense, a recognition of there being lots of opportunities to add to the main thrust of the product direction and have other teams of engineers not recruited as employees but recruited as an entity. But this was a very purposeful mosaic drawn of a world in which we had overwhelming opportunities and insufficient numbers of engineers.

Now, this is a company about to celebrate their 30th anniversary. Revenues are somewhere near $50 billion and cash is somewhere near $50 billion. Not many companies can do that. And this strategy was part of doing it. And Mario was the first target.

Morgridge: Yeah. I mean, Don makes an excellent point. And it did become a model. And the model was not only what we brought in but what we had developed that leveraged what was brought in: a huge sales force, a brand name, a personnel department, a marketing department, all of those assets. And the market was there, and we would acquire sometimes very small companies.

I mean, to Don's point, we'd actually price them based on the number of engineers they had. And, at some point, you might be paying a couple of million dollars per engineer that you were bringing on board. But the outcome was that you could very quickly, in a relatively short period of time, leverage your assets and their asset into a robust business opportunity. So that model evolved very quickly over time.

And then that early period probably from '95 to 2000, was replicated over and over again. Did all of them work? No. But many of them did, and based on the gross margins, we could afford one or two that didn't turn out so well.

Valentine: The interesting irony-- because we talked about this briefly at lunch-- one of Mario's team members-- and you might think this is an all international group that he came with. There was one big gruff Italian guy. What was his name?

Morgridge: Yeah. Uh--

Valentine: Anyhow, while you're thinking about that, we were talking today about a company started by Jayshree Ullal who was one of Mario's team members from Crescendo 20 years ago, 25 years ago. And started a new company, nice company, went public. Sequoia's an investor, along with other people. Now public.

So Crescendo lives on is what I'm suggesting. Mario is no longer the leader. Jayshree is the Chief Executive of this company.

Hollar: Why were Mario and Crescendo the first target?

Morgridge: Why were they? Yeah, I can't-- I can't answer that, specifically. Certainly, it was not totally product. A lot of it was market at the development level, knowledge that existed in the four or five engineers that came, including Jayshree, including---? He's still there at Cisco.

You know, an interesting example of this strategy was in the switch business, where in a period of one plus years, Cisco acquired three companies which had products that went from entry level all the way to a large switch. When you acquire, you are, in effect, buying time. Time that you did not invest. But someone else did, so you get the asset that they had invested in developing. And in a period of a year plus, we became the dominant vendor by three acquisitions across a spectrum of products in the switch business.

Valentine: Let's review for a minute the time. What year did you join Cisco?

Morgridge: I joined in '88.

Valentine: OK, so let's assume, since I don't remember when the acquisition of Crescendo was made--

Morgridge: It was made in '94.

Valentine: OK, so six years after founding, I can testify fairly confidently that there were not that many alternatives of venture-funded companies who knew anything about the category of networking or anything about the magnitude of the problem. Not a lot of people had gotten on to this yet. Despite the tremendous success of Cisco, it wasn't that visible.

And there were not that many choices. So it was easy to know a company like Crescendo, just being launched a couple of years after Cisco was launched, but having technical momentum, but not any of the visible momentum in the market. And I think it was a matter of opportunism, of looking at the problem because Cisco and Sequoia were perfectly compatible on the concept that we're financing applications. We're trying to build a company around a technical application that solves a major magnitude problem, much bigger than Y2K.

This was a problem where crashes were happening everywhere. Business was stopping nationally in different data processing centers. So you look around the field. What's available out there?

And it was almost all-- we're very narrow-minded at Sequoia. We never invested in the East. We don't think of technical solutions coming from the East, despite John's fandom for Stratus and other companies.

So the decision, to me, was made a lot by the problem and the application solution of having a router but no switch. And in order to be a complete supplier to the people with the problems, we needed to have a switch. So you cast around in the 408 area code, and you find Crescendo. I think that might be a reasonable approximation of what happened.

Hollar: And you talked about this strategic mosaic that you drew. At that point, were you making decisions in each one of the boxes in that mosaic about where you wanted to grow next and who you thought the target was going to be? Is that how the strategy rolled out?

Morgridge: Well, some of it was customer feedback. In the case of Crescendo, it was actually Boeing that said if you-- we always claimed we had a switch within the router. I mean, if you asked our engineers, they said, oh, it can switch. It can do switching.

But our friends at Boeing said there's this little company, and if you would acquire them, we'd buy a lot of that product. So some of it was feedback from kind of progressive networking users that helped kind of formulate what was next in terms of an acquisition. I'd say it worked reasonably well over a period of a decade, probably starting about '95 until 2005, something like that. I think it's more problematic today for a lot of reasons.

Valentine: The Cisco mosaic had a big impact on Sequoia because with each passing year, I knew more and more about how networks were being built and going to be built. And we began investing further and further, deeper into the network with the intent of serving them up to Cisco. Or, if not Cisco, Synoptics or one of Cisco's--

Morgridge: Competitors--

Valentine: Emerging competitors.

Morgridge: 3Com.

[CHUCKLE]

Valentine: And it was a very helpful understanding that worked for me progressively because somewhat by just appearing, and listening, and asking questions, I got to understand how big the problem was, the magnitude of the solutions, and the fact that there was no way that you could hire people fast enough to work on individual segments of the solution. So we had-- I don't know-- in the final analysis, we may have made 10 to 12 investments with the purpose of fitting into the solution of the network problem and offering them to Cisco early on so that we didn't have to duplicate all of the functions that you would have in a company that you were planning on building all aspects of. Very big teaming solution from my point of view.

Hollar: That's like being able to see around the corner.

Morgridge: Well, you have a lot of eyes looking around the corner. And then what you can do is you can pick the ones that saw most clearly. And part of that is looking at the market and their impact even early on, and listening to your customers-- the progressive ones-- early on, and then acquiring those segments before they become where they're very attractive return to both the initial employees because it's a small group.

You know, it might be only 50 people or less. So everyone gets a disproportionate share, including the venture capitalist, as against, let's say, growing it to 5,000 employees and a multitude of follow-on investments and then splitting it. So there was a model that served both sides of the equation reasonably well.

Valentine: I want to introduce another aspect of what Cisco was doing in addition to the mosaic, which was a product planning tool. They inaugurated regular meetings called Networkers. And it was hardly an unconventional thing to do, but Cisco did it differently. They had the customers run the meeting.

So instead of having company people up there explaining the product and pontificating about how great it was going to be, a lot of the people who conducted this meeting were customers of different kinds of companies who were talking about product development that, from their point of view, thought to be important and where there were other customers in the audience who thought the same way. So we had interaction among the customers talking to the customers, which I attended and thought were incredibly important to the conversation in the installed base about things that people were using, and not using, and why they should be using what the other people are using. And it was done on a highly technical basis. And you didn't have any sales pitches by Cisco employees. You had sales pitches by customers.

Morgridge: Well, and we actually did not permit the salesman to attend. Engineers and service people were our representatives at those sessions, which usually lasted a couple of days. And it started out in a Holiday Inn and then ended up at Marconi over a period of probably five or six years.

Hollar: And what kind of influence did that have on your planning?

Morgridge: Well, you may think you know-- you may go out and talk to a customer and get a request or an idea. You, as a salesperson, come back in, sit down with an engineer who knows the product far better than you do, and you kind of try and convince him that this is a good idea. That doesn't work very well.

What works better is to say come with me, and you take him. So these sessions were exposure of the engineering organization directly with the customer and the customer's requirements. And it had a tremendous impact on then what was scheduled and what was developed.

Hollar: Was anyone else doing this at the time, or was this a Cisco innovation?

Morgridge: I think it was a quasi-innovation in the sense that, historically, companies went out and told the customer kind of what they were doing. And you're going to like it when it's done.

Valentine: I would disagree.

Morgridge: Oh, that's right. Don was in sales for--

Valentine: No, I would disagree because people like IBM had user conferences. And they pontificated to you about the 370 is going to be better than the 360, and here's why.

Morgridge: Right.

Valentine: The Networkers was different because the company was making no pitches. And it was a user conference, clearly, and intended to cross-fertilize customers. So they would talk to one another as well as talk to engineers at Cisco.

But, basically, it was an entirely different way to have a user conference, far more beneficial because the customer's chose everything. They chose the agenda. They chose the sequence of the subjects that were going to be talked about in terms of perceived importance.

So, yes, it was a user conference. But the part of the company that was not represented was the sales and marketing people who tend to take the IBM approach in let us tell you what the future's going to hold for you, and here's how it works. And you're not going to have to use these cards for inputting data. You can use the next product that we're going to have that eliminates index cards. Much better system, totally open, customers arguing with customers.

Hollar: Let me ask you about integrating these acquisitions now because that could be a hard thing. How did you come to develop your--

Morgridge: The model?

Hollar: Integrating it? Yeah.

Morgridge: Well, certainly--

Hollar: How did you--

Morgridge: Certainly, one of the solutions was, remember, if you get the company early enough, you don't bring along a lot of additional baggage. So the key integration was the engineering organization. And the model that was used was that whoever was adopting this had to be the primary recommender so that there was a buy-in prior to the acquisition on the part of engineering to integrate this engineering capability.

Hollar: So that sounds very bottom-up.

Morgridge: Very bottom-up. Very bottom-up-- even to the degree that the implementation planning team ultimately became personnel from acquired companies so that they knew how to react, what the timing would be, when you had to do the personnel stuff, and when you had to arrange the merger of the communication networks, and so on, all of that. And the company got very good at doing that.

Hollar: Was there one person inside the company who had multiple responsibilities for all this integration?

Morgridge: Well, we had an integration team, yes. But as to one person, basically the one person was the engineering lead that recommended the acquisition. In some of the bigger companies, it might be the president of the company with Chambers. But, generally, it was the acquiring division, engineering division at Cisco, and the company that was being acquired.

And for smaller-- and I'd call small 100 or less-- you could certainly use this model because they don't have a big personnel department. They don't have a marketing department. They have a limited sales organization. So you don't have all of those problems.

Hollar: There were a couple of stories that I did want to get into. And this is the result of a couple of our curators doing research on this. First of all, one of our curators did want me to ask you specifically about your impressions of Mario Mazzola when you met him, and what--

Morgridge: I think the best impression of Mario was not when I met him but when he resigned the first time. And we had a party for him, John did. And he cried. And he was back at work the next week.

So that gives you a little bit of a feel of how we felt about the organization. And I don't know how many times-- he probably attempted to resign two or three times. And, in a couple of those circumstances, we did the spin out, and Mario took it external, kept it small, developed it, then re-acquired.

Hollar: So that was a spin-out of spin-ins--

Morgridge: Correct.

Hollar: How was that received? Well, a couple of questions. Did that prove to be a good strategy? And then, secondly, how was it received?

Morgridge: Yeah. I think it depends on who you ask the question as to whether or not it was a good strategy. The alternative probably would have been that Mario would have left some time ago. I don't know if that's a decade ago, five years ago, sometime. And probably, a venture capitalist would have lured him into developing something.

The offset is that I don't know that I've ever seen the specific results of the products that he brought back into the company, and it has an unfavorable side effect internally because if the product is highly successful, then the buy-out is predicated on that. And a relatively limited number of engineers who theoretically left the company benefit disproportionately. And I would say that Jayshree is probably a casualty of that process. You'd have to ask her, but that would be my observation.

Hollar: Don, did you develop a view on this, the technique?

Valentine: I developed an opinion and relationship with Mario. Mario is a great engineer for a small group. I carefully don't use the word engineering manager. He in a small team of people, largely Crescendo people, were terrific working together.

But going back to the image of the mosaic, Mario would look at it and say, well, I can do that. Well, we don't have any people available in your group to do that. So we're going to do something different.

Well, he didn't like that answer. He wanted things to come to and through him that were important product technical decisions, and the company was growing rapidly. Other talents were emerging.

His organization-- it almost appeared as though you had to be non-citizen to join the former Crescendo group because we had Italians and Indians mixed together. I'm not sure there was a common language for a long time. But if, in fact, Mario was ever allowed to resign, not some venture capital guy would get a hold of him. I would because I would know early on that he, and Jayshree, and if we could remember the other name of the guy that was the lieutenant--

Morgridge: Yeah.

Valentine: He was the ha--

Morgridge: I can see him, but I can't remember his name.

Valentine: He was the hammer in the organization.

Morgridge: Right. Big guy.

Valentine: And I'd have financed him in a heartbeat knowing that I either could build a company around him. Or we'd go back to Cisco at some point in time when the equity of the situation wouldn't be so confusing and reintroduce the new product idea that I had just financed. So great asset, but the company was growing so rapidly, you couldn't have Mario in front of all these engineering fronts. There were too many fronts. There were too many things happening-- the very fact that the entire switching product line was acquired.

I don't think anything was developed in-house for years. We just didn't have any people to work on it. So it was a very empirical environment. That mosaic dictated a lot of acquisitions, a lot of investments and strategies about which to do first, second, and third. And Mario was in the front of that organization once he landed.

Hollar: Did that mosaic strategy have a name? Was this Operation Mincemeat or anything like that?

Morgridge: No. But the mosaic was constructed periodically, as the market shifted and changed, and things like security came up, and things like more finite prioritizing of traffic, all of those. So the mosaic was not static. It was dynamic.

Valentine: If it had a name, it was in Italian.

Morgridge: Probably.

Valentine: But I never knew the name.

Hollar: I want to also ask you about asynchronous transfer mode. The development of the strategy to begin to do that, where that came from and how you actually built that into the company. Can you speak a little bit about that?

Morgridge: Uh-- you know, I don't know. I don't know where that-- what acquisition or when that became prominent at the company. So I really can't answer the question for you.

Valentine: I think it might have happened, in part-- maybe not a significant part-- when we failed with Ellen Hancock.

Morgridge: Well, we failed with Ellen Hancock. We subsequently tried to do it internally. We, in effect, kind of blessed TCP people as new IBMers.

And we tried that, and they developed a product line which we subsequently tested, unfortunately in a bank in Mexico. And it was after that that we went to Raleigh because we knew there we could get people who actually were blue bloods and could develop a more palatable operating solution. And then, ultimately, we bought that division from IBM.

Hollar: In your own mind, can you tick off, in that period, the major transformational acquisitions and--

Morgridge: Well, there was-- I just can't call them up.

Hollar: Right. That just needed to be a question, a little background.

Morgridge: A little background.

Hollar: A little research on. OK.

Valentine: Did we introduce Ellen Hancock before the conversation?

Hollar: We covered Ellen quite extensively in the first session, yeah, which is why I'm not doing it now because--

Valentine: Yeah, because I thought that was one of the great transformational happenings in the company.

Morgridge: Was--

Valentine: Was our failure to persuade Ellen Hancock to do business with us.

Morgridge: Correct.

Valentine: And ending up having a major facility in Raleigh, North Carolina.

Morgridge: And that's why we went to Raleigh. We went to Raleigh because IBM was there. And we knew we could find a solution with people there. IBM is here, but they weren't the people that were it in that piece of the business.

Hollar: Making that decision.

Morgridge: Well, not making-- the engineering organization here was, I think, basically random access kind of capability, as against the communications capability, which was in Raleigh, the park. So that's why we made that decision to go there.

Valentine: Huge decision.

Hollar: Let me talk-- we've got two other sections that I want to get to. One is about in the companies, and specifically about your selection of John Chambers and John's progression, his career, through company and ultimately succeeding you, John. And then to talk a little bit of about riding the dot-com boom and bust, and the rise again.

First of all, let's just talk about John. Can you just say a few words about John's career through Cisco? And I think one of the things that we like to do in these global kind of corporate oral histories, especially when there's been succession, and it's been successful, is just to find out as people--

Morgridge: How it came about.

Hollar: About these things, how does it happen? And when it works well, how does that happen?

Morgridge: Well, Chambers was at Wang. And he was probably a Senior Vice President. I think he had-- Asia was kind of his domain. Prior to that, he had worked for IBM.

He was out here interviewing. And he was interviewing. Strangely enough, the head hunter that sourced me was handling Chambers but never mentioned him to us. And I think the reason he probably didn't is that he viewed him as a bigger company kind of executive. At the time John joined us, we were probably $50 million, maybe more than that, $50 to $100 million, and he was coming from a billion dollar company, which was in rapid decline but was still a big company.

And he was out here interviewing with database companies, all of which I think are now gone. And Terry Eger who was our Sales Vice President and, at that point, had kind of come to the conclusion that he was

going to retire. He knew John from IBM, and he said he's out here interviewing. You should talk to him. So that's how it occurred.

And I would say that if it had been a year earlier, he probably wouldn't have joined us. We would have been too small, even though we were growing very rapidly. So the timing from our standpoint in terms of attracting him was probably optimal.

And I had decided that I was going to step down. I was probably, at the time, 60 maybe. And I figured it would take a while to cross-train someone into the job. And so that's how it came about.

And, as you might expect, he got pretty strong recommendations from his employers. I don't know that I talked to the Wang directly but might have as part of that because Wang knew he was leaving. And we had to kind of guarantee the lifestyle he was coming from into the lifestyle he was going to have here. And I don't think at that time he had the same appreciation for stock and stock options that perhaps he had subsequently.

Hollar: Don, what are your recollections?

Valentine: I don't recall even interviewing John Chambers. Did I?

Morgridge: I've got to assume that you probably did. Although, he was hired as Vice President of Sales.

Valentine: Yeah.

Morgridge: And he was hired in 19-- either the end of '90 or early '91.

Valentine: When did we go public? 1990?

Morgridge: 1990, February.

Valentine: So he came after the public offering?

Morgridge: Oh, yes, he did. Yep. Yep.

Valentine: See, Terry Eger, one of my favorite sales managers over the ages, was encountering being in a big company. And he was neither suited to run the sales force of a big company. We were doing $100 million. This was the world's greatest face to face salesman.

Morgridge: Great strategist.

Hollar: What made him so good?

Valentine: It didn't matter to him where the customer was located. If the customer was on a canoe in the middle of Hudson Bay, he'd find a way to land a sea plane in the middle of Hudson Bay and talk to him.

Morgridge: He was tenacious. And he was very good with secretaries. So he knew a lot about his targets.

Valentine: Just the ideal, from my point of view for startups, you have to recognize, I'm dealing with a company that has five employees. So someone like Terry that I had recruited and hired before John arrived was one of the early people in a lot of the respects of the company, including my vague recollection of the fist fight. He was one of the two people in the fist fight.

Morgridge: He was a very strong personality, and this was a company of strong personalities, particularly one of the founders. The other founder, are occasionally. And some of the other people that we-- or I-- hired were also strong personalities.

So he could maintain his own under any set of circumstances, but he was basically a first rate salesman and sales strategist. I called him the router barbarian because you either bought from one or was scorched earth. I mean, he was tenacious.

Valentine: To me, the ideal of ingredient for a startup.

Morgridge: Absolutely correct.

Valentine: He built a backlog. He understood the importance of bookings. And I didn't have to ask. After he said hello to me, he would tell me about the most recent bookings that week, including yesterday.

So I was not very happy when I knew the company would finally outgrow him, and he would not be interested in the bureaucracy that builds in all fast-growing companies. And there's no way that he could

ever work for Chambers because Chambers was from a big company, and there was all kinds of structure, and methodology, and important ways you did things. Terry didn't do things like that. The only way you found out where he was is somebody in the office knew where he bought his last plane ticket. But, for a startup, if I could have had every startup we did have Terry Eger-like person, I'd hire him in a minute.

Morgridge: There were a couple things about Terry. Number one, all of the prospects were his. He might work through a salesman, but it was his prospect. Number two, the day I arrived on the scene, Terry Eger was in the conference room with eight engineers telling them what various customers required.

So he had an unusual kind of makeup. He was technical beyond what you would have thought. He was very tenacious.

And in the whole time that he worked for me, I don't think he ever attended a single meeting I had. I mean, I had one-on-one meetings with him, and I talked to him more on the telephone more than I would have liked because he never wrote anything down, as far as I could tell. But he was very verbal, and he used voice mail constantly, both with his sales organization and internally. And he was very good with the engineering organization, surprisingly enough.

Hollar: But he wasn't an engineer?

Morgridge: He was not an engineer. He went to the University of Pittsburgh, I believe. And I can't remember what he studied. But he had somewhat of a photographic mind where he could absorb and keep detail.

So it was an unusual kind of-- and he was a terrific-- I mean, I can remember him selling IBM. We had a meeting. Helen was not there. Hancock was Helen.

But their head lead, and he just kind of--it was like a smorgasbord of our products. And he was describing what all of these would do, and how this works, and it was-- he had an amazing, amazing capability. He's the only salesman I know of that would go into a presentation and point to a person and say "if she stays in the room, I won't present because I know that she's biased or he's biased for our competitor." I mean, he was a gutsy guy.

Valentine: I have two conclusion observations for you about Terry. Occasionally wrong but never in doubt.

Morgridge: No, that's true.

[CHUCKLING]

Hollar: Good comments.

Morgridge: He could talk and talk. I remember once he was flying back from Florida, and the plane got into weather, and gas, and so on. Every time they touched down, he called me, haranguing about something that was going wrong at the headquarters.

Valentine: Vital member of the startup.

Morgridge: Yep.

Hollar: And how long did he stay?

Morgridge: Well, he stayed--

Valentine: He was there beyond the public offering.

Morgridge: He was there beyond the public offering but not much. So he joined in the spring of '88, I think you hired him. And he left-- it wasn't any more than four years.

Valentine: Is it worth explaining why I hired him, since I was not an employee?

Morgridge: I don't know that anyone else could have. Well, the most important thing about Terry is that if you look at the original stock offering, and you look at how much stock people got, would you care to guess how much Terry got? Non-founder sales, 5%. That's the kind of sales manager he was. Of course, he was selling a guy that-- he didn't sell you on that. He sold the then president.

Valentine: We explained this, I think. We had a caretaker president.

Morgridge: No, this was be--

Valentine: Yeah, Chuck was there, I think.

Morgridge: I think it was before-- was he? I don't know. I don't know when Chu--

Valentine: I think we hired Terry, but Chuck was there.

Morgridge: Oh, he was? OK.

Valentine: This is Chuck's… that we installed for want of any kind of an executive on the property that knew how to tie his shoelaces. And--

Morgridge: Or wanted to.

Valentine: Terry didn't really work for him. I mean, it was organizationally drawn that way, but Terry never worked for anybody but Terry. And there was no way to hire him unless I hired him. And he takes credit. I don't know what the conversations were.

He said "Do you know why you're the chairman?" And I said "because I put all the money in?" He said, "No, you're the chairman because I said you should be the chairman."

[CHUCKLING]

That's it.

Morgridge: That's it.

Valentine: So there was an informateur from the sales manager.

Morgridge: Well, and he also-- and this is not unusual. He realized that what the company needed to have done, he didn't want to do it. And that's really where he came to the conclusion. I remember he walked into my office and said "I have 78 voicemails waiting for me."

Hollar: And that's just the hallmark of someone who didn't want to manage all of that?

Morgridge: Right.

Hollar: He wanted to be out there selling.

Morgridge: Yeah.

Hollar: And what the company needed at that point, he didn't want to--

Morgridge: It needed more structure than he was interested in doing. He probably knew how to do it because he had worked for IBM, which is a very structured company. And he had worked for Datapoint. I don't think Datapoint was anywhere near as structured, but--

Valentine: Anybody that prescribes you have to wear long black socks up to your knees is the wrong company for anybody to work for. See, now, have you talked about Chambers yet?

Hollar: No. I haven't, but we are going to get to him.

Valentine: Well, he had to feel that he hadn't done much of a job about diligence. I'm just guessing. Because there's no way he would have anticipated--

Morgridge: What he walked into it?

Valentine: The structure of our sales force. If you've seen the movie or the play "Music Man," Terry was the music man.

Morgridge: That's a good analogy.

Hollar: So he was the bandleader?

Valentine: He was the bandleader. And the band better goddamn well go where he wants to go.

Morgridge: Right. He led them.

Valentine: So I think Chambers walked into probably a perfect nightmare.

Morgridge: Although, I would not give Chambers the credit for building the organization. Don LeBeau actually did that.

Valentine: Right.

Morgridge: He went out and established offices, hired people. And by then, we could afford it. And we were growing at a pace where we needed it. Domestically, he really did the--

Hollar: So he was the one who came in and imposed the structure that you needed?

Morgridge: Right. I think Chambers realized it was required, but Don LeBeau was actually the one that I think did that.

Hollar: Now, John, you told me a story about how quickly Cisco got to a billion dollars in revenue. And I think John had said something to the effect that when we get to a billion dollars, that's it for me. Can each of you talk a little bit about how quickly that happened, and what that meant, and what you had to say in order to try to--

Morgridge: Well, we went public in '90. And I left at the beginning of '95. And, at that point, we were about a billion and half. And we closed that year at $2 billion. So four years.

Valentine: Now, allegedly-- and it could be one of us has a fallible memory-- allegedly, when I was recruiting John and talking about compensation, there was sort of an, oh, by the way, which he reminded me in 1995, that he said he was going to leave when sales were a billion dollars a year. Now, I'm not sure I had a calculator in 1995, but I didn't calculate how fast you had to grow to get from where we started when John joined and where we were when we had this negotiation. And he ended up with more shares than Terry, just so the books are balanced. He reminded me that we're approaching a billion dollars, and we had no succession plan in place.

I was incredulous that anybody would want to do what happened in this company, what he did in this company, and want to leave it as it's approaching the crescendo. And we argued-- not negotiated-- we argued, on my part, for another $500 million so that we'd have a chance to have a succession plan, to have some order in the company, customers-- so they understood what was happening-- no hint of anything not working. Cash is pouring in over the transom-- no reason to leave. But John was determined, for reasons that I've never understood, to leave.

Now, it may have had something to do with one of his prior companies. It had maybe nothing to do with whatever achievement-- maybe he wanted to run for being the Governor of New Hampshire, for all I know. There were buttons circulated in the company.

I have one of those. It's one of those badges you pin on. It says "Morgridge for Governor." I thought maybe this is a hint of what's going to happen next.

And I said, well, you know, why would anybody want to be the Governor, especially in a state like New Hampshire? So we had this stressed period of time for a while. John very graciously agreed to do another $500 million.

It was like skiing or sledding downhill after it snowed 5 feet in Buffalo. Everything was in place for that to happen without any real perspiration being created. Terry was retired. So your email traffic was down massively. And who was--

Morgridge: Voicemail.

Valentine: Voicemail. Who was the other contender?

Morgridge: Well, internally, the Vice President of Engineering, Marshall--

Valentine: Bob Marshall.

Morgridge: Would have-- would have liked the job.

Valentine: Oh, I misled you on the question. Who was the other member of the fist fight with Terry?

Morgridge: Oh, that was Bob Burnett.

[CHUCKLING]

Who we shouldn't-- well, Terry didn't pick the fight. He just took him down verbally, and so Burnett popped him one. Burnett was quite a bit bigger than he was.

Hollar: And he was the head of engineering?

Morgridge: He was the head of engineering at the time.

Valentine: By the time this happened-- just as a measure of history-- Sequoia had probably financed 700 or 800 companies. And never have we had two events, which we had at Cisco. One is the fight by two major executives, publicly.

Morgridge: No, no. It wasn't public. It was in my office with the door closed.

Valentine: Yeah.

[CHUCKLING]

All right.

Morgridge: We didn't fight in the halls.

Valentine: I'll amend that part of history. And the other one with the drive-by shootings when we were located in Palo Alto, and the engineers were complaining.

Hollar: And that's just because that's the way Palo Alto was.

Morgridge: That's the way it was.

Valentine: You'd find the spent cartridges on the ground.

Morgridge: Right. When you'd come in Monday morning. We had a drug bust in our parking lot.

Hollar: Not related to Cisco?

Morgridge: Not that I know of.

Hollar: Let me ask you, John. You were there when the dot-com run-up happened, and then the meltdown happened. I always like ask everybody who was involved in that, a chairman of the company, what that was like?

And whether you saw it coming? And what it was like to try to weather it? And then to come out on the other side. Can you talk about that a little bit?

Morgridge: You know, I've always been of the mind that the Chief Executive Officer ought to be a pretty positive, optimistic individual, which Chambers certainly was. The other requirement is a pessimistic and very conservative CFO. And it's a balancing act. And I would say that there were-- and some of this is in retrospect-- but there were certainly indications of that coming collapse, which actually collapsed, I can't remember what year it was. In the end of--

Hollar: Well, it started in the Spring of 2000, and then--

Morgridge: Yeah. It was probably-- I remember it as occurring in the Fall between the first quarter and the second quarter where right up through the second quarter, the company externally was projecting that they were going to make the numbers. And we had enough trend data because we kept daily trend data, and they'd have it for many, many years. And so they know what the holidays look like, and what kind of business you can expect. And you can very easily odds the chances based on looking at what's transpiring.

And Chambers chose to remain optimistic when-- and I can remember that we had a board meeting. We had a board meeting in November. And they were still saying they were going to make that quarter, the second quarter. And it was clear that-- I mean, if you'd looked at the data-- and we had a good quarter, which is what he was betting off of, in the first quarter. But the indications were that it was failing rapidly.

And instead of kind of backing off, he kind of pushed down on the pedal. And, as a result when it actually happened, it was quite traumatic, both internally and externally, certainly. Now, the thing he did, which I think is a good strategy is that the response was very quick and was fairly steep. Some would argue that it should've been steeper, but I don't-- that's a relative judgment.

Hollar: Did it feel like the dive was going to be as deep as it was and it was going to take as long--

Morgridge: Long to get out of it? No, I don't think that was obvious. Although, there were other companies that preceded Cisco in other industries that probably foretold what was going to subsequently happen.

Hollar: Don, you got a 360 degree view of this because you were involved with so many things. From the standpoint of looking at the impact on Cisco, what it could be, and then what it ended up being, did you have a view?

Valentine: Yeah. I had the vantage point of history, which the management at Cisco didn't have. Whatever you want to call those couple of years, we had that in the personal computer business: too much capacity, inventory, sales collapsed, no big deal. We had that in disk drives in a couple of subsequent years.

So every half a dozen years or so, there's always been this kind of an excess capacity, excess investment, too much inventory. And it sort of routinely happens. It's happened in every major category.

And it doesn't surprise me that we're now in sort of the social category. And one big acquisition has already collapsed. A guy's from Australia, the newspaper guy-- he bought a company. I think he paid $580 million, one of the early social companies.

Hollar: [INAUDIBLE] Rupert Murdoch.

Valentine: Rupert Murdoch, exactly.

Morgridge: Right.

Valentine: Easily forgettable person. Anyhow, so much for the editorial. He didn't think about what happened to 13-year-old kids when they became 16.

[CHUCKLING]

And he--

Morgridge: Or that the population of 13-year-old kids is declining, worldwide pretty much.

Valentine: These things happen. The venture community has been through six or seven of these. Were they less bad as 2002? Yeah, maybe, because in 2002, one of my indicators were that 12 pet food companies had been financed selling pet food on the Internet.

And I'm thinking I don't know what a top looks like from the Wall Street guys' point of view, but I don't think we have this many pets in North America, unless you include lions and tigers. You're not going to sell all that pet food, and the channel will be stuffed with it. And the indicator we have always looked at based on our background-- we always look at the inventory in distributors.

So big companies that have independent manufacturing have a different issue, but people who subcontract manufacturing use distributors to accumulate all of the raw material which then goes to a place that does the assembly. And we check the inventory in the distributors, and they were loaded with stuff. And assembly had started to slow down radically.

And it's sort of wondrous what the time of year was. Sometimes the Chinese New Year interferes with this kind of stuff. Sometimes it's Christmas.

But all of the indicators that we tended to look at in terms of inventory buildup-- and we were very negative on the Internet selling all this crap-- we stopped investing in the category, long before that hurt. And we didn't get hurt very much because we didn't own a place that sold dog food or canary food.

Morgridge: There are two factors that influenced it in Cisco's case. One was the company had become large enough where the economy was a fundamental piece of future business, as against exploiting a largely untapped environment. And the second thing was, coincidental with that, there were efforts internally to take the company into a couple of new realms. And they were demanding that product be available.

And those new realms, both based on the economy and on our entry into them, proved not to be anywhere near as robust as anticipated. That's the reason that there was, as a result of that, a large inventory write-off because, to Don's point, we wrote off inventory even if we had committed but not signed a contract. So we wanted to keep that supply chain, and we were rich enough at the time to keep them relatively whole.

Hollar: And to weather it.

Morgridge: Weather it, right.

Valentine: The attitude at the company-- and I'm not a good judge of it at this point in time-- has to be like the fans of the San Francisco Giants baseball team.

[CHUCKLING]

They expect to win the World Series every other year. So here you have this phenomenally successful company, have all of these dollars in the bank, all this momentum, brand name that you would die for-- like Coca Cola-- and how can we be wrong? We're looking at everything.

And there was never a misstep. So the logical thinking was either there's never going to be a misstep, or it's going to be a giant misstep. So they had a giant misstep.

Hollar: Well, and came back from it, too, though, right?

Morgridge: Pretty well. Pretty well. You know, I think the company has set a landmark in the sense that it's been successful for 30 years.

But the real success comes at 50 or 100. I mean, those are a long-life companies. And I think there's a good question as to whether or not it's one of those.

Valentine: Well, there aren't many in the US.

Morgridge: No.

Valentine: There are no 100--

Morgridge: Well, General Electric.

Valentine: $100 billion companies--

Morgridge: That's correct.

Valentine: That are still around in the S&P.

Morgridge: Yeah, right.

Valentine: From whoever was there-- we have three names that repeat 20 years later. I mean, places like Eastman Kodak are going out of business. So the sustainability and the ability to diversify does not seem to be the strength of American industry.

Take out the natural resource companies. As long as they can find that stuff and charge $100 a barrel in contrast to the $63 it was this morning, they're impregnable. But there aren't any companies like that.

I mean, Intel's been stalled a long time. Microsoft stalled a longtime. Microsoft missed the entire phone, pad, everything business.

Morgridge: Right. And still is around.

Valentine: And is still around because they have a monopoly on the market of selling the business. Office still is the primary seller. So they're fine but not growing. The new guy may be taking them into new water, and maybe you'll have a resurgent Microsoft, but basically, we don't get companies bigger than Intel and Cisco. They go away.

And I don't know why that would be different. Certainly, the tax environment is not contributory to building bigger and bigger companies. So the nature of governmental regulations and taxes prohibits all the mistakes made by companies like Eastman Kodak are sinful.

I mean, you're fighting against Fuji for shelf space in film. Give me a break. I mean, everybody's taking pictures with the telephone. How do you miss that?

Hollar: Let me ask you first. Do you think Cisco, as a company, could have happened anywhere other than Silicon Valley and why?

Morgridge: I think Don would be better answering that.

Valentine: Well, if you want a highly prejudiced answer--

Morgridge: That's why I gave it to you.

Valentine: I'm the place to start because I've been here a long time, and it's the only place, as far as I know, on this planet that, going back to 1965 or somewhere like that-- I mean 1955-- where the ingredients were so perfect. You had unlimited land. And you had a couple of very clever developers, like John Sobrato and John Arrillaga to lead the charge of building concrete tilt-up buildings and largely renting them.

Stanford University is a great example of what having land means to the operation of a school. Right now you have the Board of Regents arguing with the government of Sacramento about what they should do about tuition, whether the universities just have so much autonomy. I mean, there's a lot interference that didn't exist 40 years ago. This is all happening currently, but it used to be as freewheeling as Berkeley's

reputation used to be. So you had great inexpensive, great universities. You had fabulous leadership in the engineering and computer science department of these schools.

An unknown school that's very important in the ingredient is San Jose State because Berkeley is famous for developing science. Stanford is famous for implementing science. And the real work is done by BS-degreed guys from San Jose State that are loaded into these companies.

It's a state that's targeted by international students to come here to go to school, come here to start companies. Our office if, in fact, you sat in it for a week, would lead you to the opinion that we're not an equal opportunity investor. We only invest in non-citizens because those are the ones who come through our door.

We get requests now from Russians and other places in the eastern part of Europe, but you don't get many people who want to start companies. So, from my point of view, the EU is dead, and the countries in it with exceptions are dead. So what's going to happen to all of the assets we've always had here? Are they going to be replicated anywhere?

Well, the Japanese are very close. They have 100 million people, nice big market. But they said a long time ago, Japanese only—.

One of my favorite stories is one of our companies, some time ago, we couldn't hire any engineers. The head of engineering's name was Chi Wei Fu, Chinese man. And one of the members of the board said it's a puzzle. I mean, all of our companies are hiring. Well, why isn't our company hiring?

Well, we went to Chi Wei, and one of the people said let me see the job description. Well, the job description said this kind of a degree, that kind of experience, and you have to speak Mandarin. Oh. That eliminated 90% of the engineers because we have engineers that have come here, immigrants and immigrants forever. And they're a rich part of the population of engineering problem-solving.

So there are reasons why it happened here, and the question now is, is it going away? Regulatory problems, taxing problems, we can't get visas for a lot of the students that graduate here that are forced to go home. A lot of things have happened.

I'm not sure that I'm objective about the reasons for why those have happened, but they diminish what used to be a very open society. There was once a bar that was very important to the technical exchange of Silicon Valley where people used to go on Friday nights, and the engineers would exchange among the engineers what they were working on. And it was open.

There were no secrets. There were no security. Nobody cared about stuff like that. IBM donated disk drives. Xerox donated the mouse, the fancy Apple first operating system.

All of this stuff was part of the fabric of open communications in a lot of camaraderie. Where's that going to happen where there's the wealth? Because, depending upon how accurate the forecasts, we have about 350 million people, plus or minus, at least half of whom are consumers. So you have an internal market for a lot of stuff that other countries simply do not have. You have mobility that other places simply do not have.

China has got to be a recognized potential risk. To me, they've been the most capitalistic country on the planet for the last 10 or more years. They're formidable. They have huge discipline that wouldn't work here because you're rigidly refused access.

When we opened in China about six or seven years ago, we were told after careful, careful advice and consideration, that we could invest in dollar denominated currency. Well, about three years ago, they decided to change. And we had something like 60 days or six months. I forget which. But it was a trivial amount time to raise a whole new fund in Chinese money because they wanted the investments made in Chinese money.

Well, it's one of those places where you can do stuff like that. If you've never been down the seven Gorges in China and looked down and saw the cities that they had buried in water, 16 foot apartment buildings are down there. They can do things like that like no other country in the world.

Does that flexibility and empowerment last as long as Silicon Valley has lasted? Silicon Valley was really embryonically started at the end of World War II. Late in the war, we were making radar kinds of tubes at a number of companies here in Palo Alto. Palo Alto was the southern extremity of the Valley. Now, we're down past South San Jose.

Things are relatively wide open here still by comparison to China-- huge market, government dominated. If, in fact, the data is correct, huge growth rates. Probably 80% of the people do not have washing machines, or televisions, or whatever they don't have you. So you can fill up on those kinds of products for a long time.

Great universities-- India and China have universities on the scale of Stanford. Great, great students-- the faculties want those Indian students from IIT. And they want them for good reasons.

So unless we continue to over-regulate, and over-tax, and refuse repatriation of billions of dollars back in the country, which could be in the economy, we're following a different national agenda than we used to,

China is following an agenda that is very narrow focused, very disciplined. And they have huge labor unemployment. So they'll do whatever it takes coupled with great schools is a tough and formidable competitor.

In the late '60s, early '70s, we were terrified about the Japanese semiconductor manufacturers-- not terrified anymore. They took over the RAM business. Intel got out of the RAM business and dominated the microprocessor business. Business, as usual, is not going to happen here.

As far as I know, in any fair accounting systems, San Jose is bankrupt. We certainly are, if not a satellite San Jose, I'm not sure where we are a satellite of that. Certainly not San Francisco, despite the fact that lots and lots of businesses that are in the social business are going to San Francisco.

Change is great. Stop changing, and you'll die. And we've got to get out from under this cloud of being smothered by well-intended, I think, but terrible legislation and taxation. I think our government is our biggest problem.

Silicon Valley would live forever if, in fact, we didn't have the US government acting the way they're acting. And San Francisco or Sacramento is nothing more than a satellite of the federal government. If you were going to eliminate 535 people in Washington, there's a comparable number you've got to eliminate in Sacramento.

Texas has the solution. They only meet once every two years. Ought to be plenty of supervision. John?

Morgridge: Well, I would be more optimistic than Don. You know, it's interesting to me that the people from India have been very successful in this country but have struggled to try and create anything kind of at the same level in their own country. And certainly both countries, I think, have the capable human resource, but I think it's problematic as to how both will be managed. It'll be interesting to see the new leadership in India, where you can actually ship things by boat from one side of the country to the other faster than you can have it trucked across. That's not the environment that will create it.

The other advantage that is here is that we have a longer list of failures than anywhere else in the world. And failures are fundamental to the evolution and vitality of an industrial undertaking because it means there's a lot of experimentation going on, and all of it's being tested in a very competitive market, probably the most competitive of any place in the world. So I'd be optimistic.

I think it's problematic whether it can be created somewhere else. Certainly a lot of people have tried it. But to create all of these so-called infrastructure that makes it viable-- everything from investment

bankers, to good schools, to San Jose State generating a lot of capable engineers that can make a company hum-- I think it's hard to duplicate. And certainly, Boston is trying it.

Minneapolis, I think, has given up. For a while, they kind of pushed to try and be part of this revolution. Certainly, Texas has tried. I don't know how successful they've been overall. Denver has tried. So I don't think it's an easy thing to do.

And, certainly, Raleigh has tried. I can remember when I went out there when we started searching to establish out there. And I was kind of amazed that there weren't more startups. You know, if you go to the park, they're mostly big, old companies there. I don't know if that's a good comment or not because that's where Cisco is.

And, certainly, one of the vibrancies here is this continually mixing. You know, Jayshree out starting her own company. And it's repeated over.

And do a lot of them fail? But every successful one breeds-- I don't know how many people have left Google, but a lot claim to have left Google. I know that. And that's part of the human resource that makes this place come alive.

Hollar: How do you think Cisco has influenced Silicon Valley, in that regard?

Morgridge: Well, most of the major successes came after Cisco. The only ones that were kind of there but were perceived differently were HP-- which most people at the time Cisco was founded, seemed like a historic company-- and Intel. And Cisco was the first one that was a clear startup that people could remember. I mean, Don remembers Intel as a startup.

Valentine: Yeah.

Morgridge: I don't remember Intel as a startup. Of course, I wasn't here at the time. But the point is, is that it was a model that you could-- and there have been, of course, now-- what-- a dozen that fall in the same category. So that gives it a position and a kind of brand, I think, that's very hard to duplicate. It takes a long time.

As Don pointed out, this goes back to maybe the end of the '60s, maybe even to the '50s, and then straight on. And a lot of it, as he pointed out, is the result of government money. I know he complains about the taxes, but he's also been the beneficiary of government money, some of it wisely invested.

Valentine: Can I have seconds?

Hollar: Sure.

Morgridge: He needs a rebuttal.

Hollar: He does.

Hollar: Reason to be optimistic? That'll be my final question.

Valentine: It would be easy to be optimistic if we could manage to selectively have an earthquake on a couple of the main streets of Washington DC.

[CHUCKLING]

Hollar: John, what do you think, as the one who seems to be the natural optimist in this group?

Morgridge: Ah, well, certainly Don makes the point that the government has not been helpful, I would say, for the last 20 years?

Valentine: I'll accept 20 years. Although, you're being very charitable.

Morgridge: Hm. And I don't know that it's going to change dramatically. I think Don and I are fortunate to have lived when we did. It didn't seem that easy at the time, but in retrospect and based on today, it was a good time, you know? It was a good time. And I only wish that those graduating from college today have the same kind of environment as we had in their life because they're my grandchildren.

Hollar: Right. Well, thank you both.

Morgridge: Thank you.

Hollar: We'll wrap it up there. This has been great.

Morgridge: Yep.

Hollar: And I know the Cisco Archive is going to be delighted to have this in it.

END OF PART TWO

