Oral History of Paul J. Severino
Part Two

Interviewed by:
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Hendrie: We have with us today Paul Severino, who has, gratefully, agreed to continue his oral history, from which we took a slight respite in 2008. Now we're in 2012 and we're going to continue. Thank you for doing this, Paul. I think where we left off in the narrative portion of this was you—Wellfleet had gone public and then it had grown rapidly to about, I think in 1994 you had said it was in the order of $500 million in revenue from just, you know, a meager $10 million in, what was it, 1988?

Severino: 1990.

Hendrie: 1990, just $10 million. So, you know, it's a very rapid growth. Maybe you could tell us a little bit about the things you had to deal with during this period of rapid growth. Did you have, were there personnel changes that you felt you had to make to build a stronger organization? $500 million comes as a lot different than—or it's certainly a lot bigger than a $10 million company.

Severino: Right. Well, I would say that we did our organizational changes when we were small. We actually put in a very good team of senior executives when we were actually in the $10 to $35 million timeframe, and that team of executives—and our engineering team we also grew from the early days, and that team stayed together as well, same is true of the sales organization. And so basically we had really no major changes in our management teams through that whole—that period of growth from '91 to '94 and '95. I was kind of surprised about it because a lot of people think that it's tough for a management team to kind of deal with that kind of growth, but we really had no major issues. We didn't stumble. We didn't forget about doing the right things, if you will, to make everything work well. We kept our employees very happy through that timeframe. They were pretty happy anyway being in a company that was growing that fast, but we kept them happy.

Hendrie: Now, they all had stock options.

Severino: They all had stock options.

Hendrie: Well, that will keep them happy.

Severino: Keep them happy, exactly. But basically, it really worked out pretty well, and, frankly, even for me. I mean, I had never run a company that size. My background has been, the first eight or nine years, I was a brilliant design engineer and then I did start-ups after that, and we were pretty happy with where we wound up by 1994 and 1995, which brings us into the era that changed things a little bit, which was a merger that we did with SynOptics in Silicon Valley right at the end of '94, I believe it was.

Hendrie: What was the impetus for doing this? Was it your idea? Was it their idea? Was it the board's idea or some venture capitalist's idea?

Severino: Well, no, it was, basically, as we kept growing through those years, things were getting—things in the industry were changing. There were new technologies like Ethernet switching. There were new technologies like ATM technology, which was supposedly going to take the place of the Internet in the big public networks because it could do voice, video, and data. And many people in those days thought the Internet couldn't do voice, video, and data, and here we are in 2012 and we know that that's not the case, that it's doing a great job of voice, video, and data. But at that time, this was new technology, so there was this concept of these technologies changing. Our primary competitor, Cisco, had spent a lot of—had decided that they were going to have a strategy which was going to go out and buy early-stage technology companies to get into these new technologies and they got very aggressive about that and they did many, many deals.

Hendrie: This is instead of trying to develop them—

Severino: In-house, right. You know, they had a bigger market cap than we did. They were utilizing that market cap to go out and make these acquisitions, and they did a very good job of it, I would say. They did a very good job of it. So we were looking at the—in 1993 to 1994, I mean, I was pretty much the strategic focus in the company. I kept my eye on strategy. And every year, we would do a strategic review of where we were with the board, with the senior management team. And in this particular year, I decided that I thought it would be good for us to take, to do this with some outside help. So we actually hired McKinsey to come in, and they spent, I don't know exactly how many months, maybe three or four months with us interviewing the senior management team and interviewing engineers, interviewing customers, interviewing a lot of different people in the organization. And we built a strategic plan. Now, at the same time that that was going on, there was also a, I guess there was sort of an initial connection, if you will, from the CEO of SynOptics, Andy Ludwick, to—actually to someone on my board, Russ Planitzer. They were both Harvard alumni, and they had met at a Harvard Business School reunion or something and they started to talk about it. And so Russ brought that to me and I knew Andy very well and I decided that, you know, we should maybe look harder at it. So we started this process. Obviously, the process was secret: only a few people who knew about it. Board members knew about it, I knew about it, and initially that was all. And so we started to have some discussions. When that went a little further, we actually brought in some of the senior management team as well to start having discussions. This is all going on while McKinsey was doing their work and McKinsey didn't know anything about it, obviously. We're both public companies. By the end of the effort, of McKinsey's effort, we had come up with a plan that said, "This is what we need to be doing. We need to be getting involved in these new technologies." The SynOptics plan, their own plan was that they basically made wiring hubs but they knew that they had to be doing more. They had nothing in routers at all, and so they focused on ATM and they focused on Ethernet switching. And so in the end, when we looked at this, we said, "This looks like a pretty good match. They were focusing on areas which we haven't been involved in yet and we bring a strong routing presence and so maybe we should put it together." And in the end, that's what happened.

That strategic initiative, if you will, was the primary, I would say the primary focus of both companies and to try to put together a merger. What we do is put together a merger of equals. I made it a point to tell my board that I was not that interested in being the CEO of a now a billion-plus-dollar company, but I wound up obviously staying on as Chairman of the new entity, which we named Bay Networks. And I believe it was the end of '94 that we actually put it together, maybe early '95. So we were doing $500 million, they were doing about $650 million, and so we were a $1.1 billion when we put that all together. And there was a lot of dynamics in there. Frankly, I had a lot of respect for the SynOptics team. I think that was true in both directions. And the first year, I think, that we put it together, it was working pretty well. I think a couple things just didn't develop the way we wanted them to, but in the end, we continued to grow our business. And by '98, actually by '96 Andy Ludwick decided that he would leave as CEO. He had some health issues, and I think he just felt it was time for him to do something else. And we brought in Dave House from Intel to be the chairman and CEO. I actually continued to stay on the board of Bay Networks. It was called Bay Networks once we did the merger.

Hendrie: Yes, you didn't pick either of the predecessors' names.

Severino: Right. I stayed on the board of Bay Networks. Dave came in. He was a great CEO. He did a lot of very good things. He really understood how to run a company of that size, much more so than I would have. But I did stay on the board at his request. And in 1998, we decided that maybe it was the time to team up with Nortel. They were interested in what we were doing. We were about $2.5 billion in revenues at the time. And so Nortel came in and acquired the company in 1998 for $9 billion. So that's pretty much the story of how Wellfleet and SynOptics got together and how we wound up doing a deal with Nortel and then Nortel took the company from there. And after that, the bubble, sort of the bubble of 2001 hit pretty hard. When it all crashed and burned, Nortel really felt it, and as everyone knows, they wound up with bankruptcy maybe four or five years after that. So it was not a great outcome for the whole merger. The only thing I can tell you is that from the time we did the merger in '98 'til the time that, just before the bubble hit, Nortel stock went up four times, at least. So our $9 billion was multiplied by four because it was all a stock deal. So for that period of time, I think it was a pretty good deal.

Hendrie: Yeah, everybody felt pretty good, and those who were good at reading handwriting on the wall walked away with nice money.

Severino: Well, it was—you know, that timeframe, for the whole technology community, it was a bubble, and things went completely out of control. There was a lot of money being put into start-ups. A lot of start-ups were raising hundreds of millions of dollars, which was very different than what we raised in Wellfleet, which was $20 million total, which we only spent twelve of that, and when that all came to a head and the bubble just broke, a lot of money was lost by a lot of companies. A lot of market caps came down. A lot of companies went out of business. The whole Internet thing just, even though it was a bubble, the Internet, if you look at the times, the Internet didn't stop growing. The Internet continued to keep going. The Internet continued to keep going through the whole decade from 2000 to 2010, which is not a great

decade. But the Internet continued to grow and companies like Apple continued to do tremendously well. The new companies like Google and now all the Facebooks of the world, etc. continued to grow even through a very bad economy in the U.S. So the whole Internet thing that was created back then, I think, continues and will continue to be a major, major factor in the technology industry.

Hendrie: Can you talk a little bit about after the merger, the kinds of, you know, there are always issues of culture. There are issues of systems. There are things like sales forces that, you know, you have to decide whether you're going to keep separate sales forces or whether you're going to merge them. There are issues of leadership. Which manager, if it's co-equals, which one is going to run this and which one is going to run that? Talk to me a little bit about those kinds of issues and how you dealt with them.

Severino: Well, I think that all mergers are difficult, and the bigger the companies are, the more difficult they are. I would say that we experienced a lot of what you just said. Certainly the sales organization, we had some major issues, and the reason was that Wellfleet was a direct-sales company competing with Cisco. Our sales force was proud of the fact that they could go out and win against Cisco, which was a pretty aggressive sales organization on their own. And SynOptics sales organization was actually a channel-based organization for most of the time, although they had direct selling by the time we got involved with them.

Hendrie: But they'd grown up as a channel-based.

Severino: They'd grown up as a channel-based and they grew up as a major partner of Cisco.

Hendrie: Ah.

Severino: In fact, Cisco and SynOptics would go into major clients together. SynOptics would provide the wiring hubs and Cisco would provide the routers and they had a relationship. I think SynOptics figured out, Andy Ludwick and his team figured out that Cisco was coming after them with Ethernet switching, and they did a good job of doing that, by the way, Cisco. They did come after SynOptics with Ethernet switching. So SynOptics was moving fast in the Ethernet-switching space. But I would say that we had a lot of those issues, but in the end, they didn't really slow us down a lot. We grew from $1.1 billion in '95 to $2.5 billion in '98, three years, but it wasn't enough, actually, because right at that time is when the whole World Wide Web thing had really started to take off, in the mid-'90s, and Cisco's business was just exploding because of that. They really owned the whole Internet space, the public Internet space.

Hendrie: Okay, all the routers used by the ISPs were mostly Cisco’s.

Severino: Right. Of course, that's where they had started as a company back in the days where they were doing university-based networks. So they just exploded in that space, and at the same time, they were buying companies, so they were on a pretty good tear and we were trying to keep up. So I think that those issues were there, but in the end, we just couldn't grow as fast as they could because of the fact that the Internet explosion on the public side was pretty extensive.

Hendrie: Yeah, and your big market area was the enterprise, for commercial enterprise customers.

Severino: We probably had a 50-percent market share there with Cisco, so they did good in enterprise as well. They did very well. But I think the thing that upset the balance, if you will, was the Internet side, was the public Internet side. They were doing very well there. But they got involved in a lot of things and they bought a lot of companies and we did too, actually. We did a number of acquisitions at Bay Networks, did an ATM acquisition. We did a lot of Ethernet-switching acquisitions. And that really expanded our portfolio as well. The only thing I can tell you, I wasn't involved at all in the Nortel and in the aftermath of Nortel, but I think that they really kind of did not have the sales structure, if you will, to go out and compete in the enterprise space, especially against the Cisco sales organization, and I think that they suffered because of that. And I never saw the numbers about where the Bay Networks product line went after that. I wasn't privy to that, so I couldn't really make a comment about that, but, certainly, when the bubble—and Nortel had done very well in the fiber optic environment, in the fiber optic-network environment.

Hendrie: Yes, in the optical.

Severino: In the optical, yeah. They were doing—they were coining revenues and profits and that. And once that went away, it was very tough for them to—

Hendrie: Why did that go away?

Severino: When the Internet bubble burst, people stopped buying fiber.

Hendrie: Oh, because everybody projected the traffic was going to go down. It didn't, but they thought it would.

Severino: The traffic actually probably didn't go down much, but the problem was it wasn't going to grow the way anybody thought it was going to grow. And there was enough fiber installed at that time to really—in fact, there was so much fiber installed that it was just amazing. And it took a long time for anybody in the fiber business, in the fiber optic business, you know, the fiber optic, not just making the

fibers but making the electronics that goes with the fibers. It took a long time for them to come back after the bubble.

Hendrie: What role did Ciena play in that, because with their wave division multiplexing, that certainly exploded the amount of fiber without Nortel getting any business, without the fiber stringing people getting any business.

Severino: I mean, it changed the whole thing. It actually changed everything in terms of the amount of bandwidth that was available. But that technology was being done by Nortel as well.

Hendrie: Oh, Nortel also had...

Severino: Yeah, they all had—everybody went to wave, WDM. Everybody went there, and there were some start-up companies that were getting formed that I actually was on the board of one called Photonics here in Massachusetts that raised like $180 million and it was two, actually, two women scientists from Lincoln Labs, and, you know, when the bubble hit, there was nothing. There was no market anymore. So the company dissolved.

Hendrie: It was another of the bubble-bursting casualties.

Severino: It was, and there were a number of them, as you know, at the time, Gardner.

Hendrie: Yes, I do. It was not a good place to be.

Severino: But, you know, the whole Internet thing through the decade of '90 to 2000, and even prior to that, in the '80s, actually. It was a 20-year, kind of a 20-year cycle there, that was, I thought, you know, absolutely a pretty amazing time. There were things that were going on that the world didn't even understand, but there was a core group of people did understand it and that core group of people developed this whole concept of an open-standard Internet that had these certain performance characteristics and certain capabilities and standardized protocols so that we all could build these products that everybody can interconnect with. And even, you know, none of us at the time had any idea that it was going to become a worldwide revolution like it did, that it was going to take over the communications of our entire world. But it happened because the big companies were not in it, the politics was not in it, and the people that were doing it, you know, were doing it because they loved what they were doing. And the Internet Engineering Task Force, especially, was a very important group that got things done, made things happen, and made sure that they worked.

Hendrie: Resolved conflicts and made decisions.

Severino: Right. And, you know, the IETF—I wasn't personally involved, but we had people from Wellfleet that were personally involved. And they kind of boondoggled their way around the world to do this. They went to exotic places to have their meetings, many times. From what I understand, they liked to drink the best wines available, but they did a great job and it was a unique time in history, I think, in terms of that coming together. And it changed the world. So, it was a lot of fun.

Hendrie: ...some pretty amazing times.

Severino: It was a lot of fun.

Hendrie: Yes, amazing rate of change.

Severino: Yeah, a tremendous amount of fun, great people, and, you know, we were tough competitors, but in the end, we were basically trying to do the same thing. We were trying to make this new paradigm, you know, exist and make it work well.

Hendrie: Well, you, among the things you mentioned was, coming up when you did the merger with SynOptics was ATM, because it held in the—or at least in the eyes of the major carriers, of putting all their traffic into one technology. Talk to me a little bit about your observations of what happened there.

Severino: Well, there were two new technologies that were important back then. One was Ethernet switching, where basically prior to that, you know, you had a wiring hub and you would bring wires out and you would put a number—you would connect, basically connect all of your users into a wiring hub and they shared this bandwidth. And Ethernet switching was pretty much—and the problem was that as more and more corporations and large companies were doing this, they found that their performance was going down because they just didn't have enough bandwidth in the wiring hubs. And so they wound up buying more routers, if you will. One of the benefits that we had on the Wellfleet router was because it was a multi-processing architecture, we actually—our customers actually had to buy less—more routers than our competitors.

Hendrie: Fewer additional routers.

Severino: Few additional routers. We didn't see the Ethernet-switching thing quite as clearly because our customers weren't complaining about performance as much. Cisco saw it very clearly because they didn't have an architecture that really allowed them to add more bandwidth in the router, if you will.

Hendrie: Why was that?

Severino: Well, because of the architecture. They used a common processing architecture. We used distributed processing. So every time we put more connections in, we put more processors in.

Hendrie: Right, where you put more connections in and it still all has to go through the same processor.

Severino: In the Cisco environment, yeah. That's how it worked for them. But beyond all that, the Ethernet-switching thing to me made a lot of sense. It basically allowed a user to have the full bandwidth of the connection, and by then, we went from 10 megabits to 100-megabit Ethernet, in those days. In fact, there were new 100-megabit Ethernet switches coming out all the time, and as a result of that, you know, the performance of the network just went up.

Hendrie: Yeah, tremendously.

Severino: So Ethernet switching was a good technology. ATM, on the other hand, although it was a technology that seemed like it was going to allow for a lot more to happen on these networks, in other words, voice and video, in the end—and, you know, I wasn't an expert on ATM like I was on the Ethernet and on routing, because it sort of came at us from a whole different angle, if you will.

Hendrie: Yeah, right.

Severino: But we got involved in it and I kept saying to myself, I don't believe this is going to take off because it's way too complicated. We've got to stay with TCP/IP. We got to just stay with it. And we can make more performance happen in that environment without going to this new, all this new technology. And in the end, that's exactly what happened. It was too complicated. It was too difficult to make work right. It just didn't give the performance that everybody thought it was going to give. And then more and more of the IP world started to put, say, "We could put voice on IP," VoIP, voice over IP. That was the first of it. And then video started to happen. And, you know, now it's clear that that one protocol was the right way to go, to keep that protocol in place, to keep the routers in place, to not to have to change everything out, not to have two different networks, and, frankly—

Hendrie: And have end-to-end all on the same protocol.

Severino: Right. Frankly, it's, you know, it's proven that it can do the job, and the technology continues to get better and better and better, thank you, thank you to Moore's Law.

Hendrie: Yes. Well, you know, it isn't all—comment on this, but it appears to me that it isn't always necessarily true that what is actually going to work best in the long run, just all TCP/IP, is in fact what happens because of the vested interests of corporate entities.

Severino: Right, although the ATM stuff was—and like I said, I can't recall all of the pieces of the puzzle because it wasn't a big factor for us in the end.

Hendrie: Yeah, it was something you had to <*inaudible*>. It wasn't a core technology.

Severino: We acquired a company, and there were some people using it, but it never really took off the way everyone thought it was going to take off. It was a very complicated protocol, from what I remember, and TCP/IP and the routing protocols, they just weren't as complicated. And by the way, they were working and they were being installed everywhere, and so thank goodness that it happened that way. I think it would have been a setback, frankly, to go to a new technology.

Hendrie: Well, one of the issues that I assume as these touted TCP/IP, or just as these networks got more complicated and proliferated, was network management. Could you tell me a little bit about what happened there?

Severino: Well, it was interesting. Back in the early '90s, late '80s, we were building routers and we had really no—our early routers had no real network management in them. You could go in and look at them. There was a mechanism to kind of look at what was going on with the router, but we weren't managing the network. We were looking at what the router's doing, and it's got these packets going through it, etc., but we weren't really managing it. And at the same time that that was being done, the late '80s, especially, there was a group called the Open Systems Interconnect (OSI) committee of ISO, the International Organization for Standardization, I think it was, and some of the big companies, including HP, decided that they were going to go in that direction and they made a major investment in those protocols, those OSI protocols. And I was starting to—at Wellfleet we were starting to build networks, especially on Wall Street for some pretty important financial-services companies like Goldman Sachs and Bear Stearns and Chemical Bank and those kinds of folks, and they were pushing us hard about we need more management of this network. So we started to look hard at it, and, you know, we're a start-up company just getting going, basically, and the OSI stuff, we got a lot of that information. And to develop the OSI network-management software it would have been a bigger project than we actually had already done to build our routers in terms of number of people. But interestingly enough, at the time, I got a call from Marty Schoffstall, who was a Rensselaer alumni who had done the New York State Engineering Network, NYSERNet, one of the early Internets, and also had started a public Internet company, and unfortunately, I can't remember the name right now. It'll come to me.

Hendrie: Is PSI...

Severino: PSINet, that's what it was.

Hendrie: Were you an investor?

Severino: Yes.

Hendrie: It just came to me.

Severino: PSINet, right, Marty was the Chief Technical Officer. So Marty had an idea for a protocol called SNMP, which is the Simple Network Management Protocol. And he had this idea and he wanted to implement it, and I said to him, "Marty, you couldn't come at a better time with this idea." He said, "I want your assistance. I want your support. I want to get some money from you guys. I also want to have some of your engineers involved." And I said, "No problem." So SNMP was developed, and, frankly, it was exactly what we needed. It allowed us to, with standard commands, go into the router and be able to pull information, no matter whose router it was, and so as a result of that, the customer now had a common standard protocol to manage his routing environment and that became sort of the network management for routers. And the other one, the OSI one, never, ever showed up. Again, it was about how the Internet happened. It was people like that who basically had ideas, who wanted to get something done, who knew that they needed to get something done that was not going to take forever and ever and ever to get done and have big committees about it, just get it done. And that's what made the Internet do what it did, be successful, and come out there and work. And when there was a problem, people worked together. It didn't matter whether you were from different companies. You worked together, because we had a common goal, which is we want this to be the best network and we want it to grow, and so everybody worked together on that. And I think that was the major element of difference between—even though we were competing for customers and we were competing with each other, when it came to what was going to happen on the Internet with protocols, the right things happened.

Hendrie: Politics disappeared.

Severino: They did, and I think as you sort of compile all this information, I think a common thread that you probably should hear, from people like Bill Joy, for example, who did the Berkeley Unix environment, which used TCP/IP and Unix on VAXs and became a very popular environment, and took the same technology to Sun Microsystems when he founded Sun, is that all those things were being done in collaboration in a lot of ways, in collaboration with companies and with research that was going on all around the country in various universities as well. So, it was a great time.

Hendrie: Yes, it was. Good. So what do you, when you look back, what do you think of as the accomplishments or the things you're proudest of doing during your career?

Severino: Well, I think, you know, it was nice to be at the right time at the right place. It really was. But in the end, it was kind of interesting. When I was at Prime Computer, we were struggling in the early days of Prime to go out and compete in the minicomputer market, and we had a customer in California that basically had decided to buy two Prime computers because they were promised a connection between the two—a high-speed connection between the two computers. And I was asked to do something within a three-month period to make that happen. Because networking was not really common, you know. Back in the '70s, networking computers together was kind of a new concept. Anyway, I built a very simple interface between the two computers, but I asked my boss at the time, Bill Poduska, I said, "I had an idea that maybe I could do something that will actually daisy-chain these printed circuit boards that we're going to plug in so that we can connect maybe six or eight computers together." And he said to me, "That's great. I like the idea," he said, "But you got to make two work first. And so I actually did that in three months and we made the two work and we plugged them both together and the customer was actually happy enough that he paid us.

Hendrie: <*laughs*> That's always good.

Severino: Which is what Prime was looking for.

Hendrie: That's the definition of happiness.

Severino: Which is what Prime was looking for at the time. But I left Prime after that, right after that.

Hendrie: Did you ever finish the...

Severino: I never got to test the daisy chain, but about two years later, after I was at Data Translation, my partner and I were in New York City on business and the National Computer Conference was there, the NCC. Remember the NCC?

Hendrie: Mm-hm.

Severino: This was in the '70s, maybe it was the late '70s.

Hendrie: It hadn't died yet.

Severino: Hadn't died yet. And so we went to it and Prime was there and Bill Poduska came up to me and said, "You got to come over and see this." And he had five or six Primes together, connected together, on my network.

Hendrie: Oh, wow. That's great.

Severino: So that was the first kind of view I had about networking. But when the Ethernet spec was published is when I actually decided that it was time for me to go off and start a company. I wanted to find a new area and this area seemed the place just because of that experience I had with connecting those computers together at Prime. I thought that that was a good place to go get started. So that brought me to the Ethernet and brought me to a start-up company, of which I became the CEO, which we talked about in the past on this interview. But I think that doing that company kind of brought myself and my colleagues, people that came to my company, my start-up company, Interlan, into the network industry, into networking in the early stages of the network industry. And without that, we could not have done the Wellfleet company. We couldn't have done it. Because we really understood where this was going and we knew that local networks were installed because we helped to do a lot of that. But we knew that the next thing, then, was getting those local networks to connect to the wide area, if you will. Still, because of where we came from, we had no idea about the Internet, but we did have an idea about the fact that these enterprise companies were going to have to interconnect their information. The Wellfleet idea was to provide the capability to do that, no matter what protocol they were using. So we got into this thing sort of because of 1981, Ethernet, competing with Bob Metcalfe. It was, again, great fun, great people. Ralph Ungermann, I mean, the whole group of people, Bridge Communications, you know, the whole group of people that were involved in that, Ungermann-Bass. I mean, it was a great time. And then, doing the Wellfleet thing obviously was a huge challenge but a huge success, and it was very satisfying, I think, for all of us that were involved in it, including our investors. <*laughs*>

Hendrie: Yes, yes.

Severino: And I think, frankly, you know, it probably was one of those things that happens only once in a lifetime, and frankly, in '98, when we sold Bay Networks to Nortel, I looked around and I said, "You know, I've done—I've worked for four start-up companies, I did three of my own, and I don't really see a good idea in front of me yet right now, so I think I'm going to back off." And frankly, I think it was the right thing to do. It gave me a chance to stand back, and frankly, you know, people that started companies before the bubble had a very tough road to hoe once the bubble happened. So I just think it was a great time. I think it was a challenging time. I think it was a great place, time to be there. The people were great. The investors were great. It was a good time the whole time we did it, and I thought it was a lot of fun. And, frankly, it changed the world, so what else could you ask for?

Hendrie: What more could you ask for, exactly. All right, that's good. We should take a break because we're out of tape.

Severino: Are we pretty much done?

Hendrie: You know what, yeah. Why don't we just wrap up now? So I have one more wrap-up question, and that is, what sort of advice would you give to a young person who has a technical bent, who's interested in technology, or science? Do you have any things you would tell them to do, the sort of lessons you have learned through your life?

Severino: Well, I think that the country right now needs people to become technologists and to be in technology. I mean, that's a very important part of our economy, but also of our competitiveness as a nation. In my work with Rensselaer, I see a lot of great young people who work hard, are very smart, and are doing very well. And I basically tell them, you know, you have to decide what you really love to do, and I'm happy that you're doing it in technology or in science. I think the world is going to go through a lot of technological changes going forward, and I think that it's a great career to have, in technology. I think technology is spreading now to the medical community. You know, doctors do a great job, but they need technology. You know, the whole genomic medicine era is here, and it's all technology-based. So we need to continue to have great people to do that. And I just tell them, do what you love to do. If you want to do a start-up company, you've got to understand what it's all about, you've got to work with the right people, you've got to make sure that you are prepared.

END OF INTERVIEW

