



Oral History of Young Sohn

Interviewed by:
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Doug Fairbairn: So, welcome. My name is Doug Fairbairn. I'm here to interview Young Sohn, a long-time executive entrepreneur, leading technologist of Silicon Valley, and it is September 28th, 2023 and look forward to this conversation. So, welcome.

Young Sohn: Thank you, Douglas.

Doug Fairbairn: So, in these oral histories, we really like to start at the beginning. Tell me a little bit about where you were born, when, a little bit about your family life, especially as it might have influenced your future direction in technology. So, just go back and tell me about early days of family life and that sort of thing.

Young Sohn: Great. Well, I was born in Korea, like many entrepreneurs and management in Silicon Valley tend to come from everywhere, which makes this place great in my view, other than weather. I was born there and then my family decided to emigrate to the U.S. when I was 15. My father and my mother were at Berkeley, so they were familiar with the country and the system, and they thought it's a better place to raise the family here. Actually, the truth is my father passed away in a car accident, so my mother decided. Back then, for a woman to raise three boys was really hard in Korea. A woman couldn't get a job back then. So, my mom just said I think I better get back to the U.S.

Doug Fairbairn: She had attended Berkeley?

Young Sohn: Yeah, she was supporting my father and going to school.

Doug Fairbairn: Oh my gosh.

Young Sohn: And she decided to go back and got an internship in the U.S., and basically we were separated for a while. So I was really growing up with my grandma, because she was back in the U.S. getting her master's and then establishing herself and got a job in Washington, D.C. This is how we came to the United States, the land of opportunity.

Doug Fairbairn: So you say you have two siblings?

Young Sohn: Yes.

Doug Fairbairn: And are they in Korea or here in the U.S.?

Young Sohn: They are all here. So, we all went to school in the U.S., and then we grew up in the D.C. area, basically. It was great! I really didn't speak much English back then, so like many immigrants, you just have to dive in and be a part of, you know, American lifestyle. I just remember my first day going to this high school, coming from Korea. My mother said, oh, you should wear a suit and tie, and this is a public school. And I went there realizing, shoot, I'm the only one with a tie. You know, when you're that

age, you're very aware. And immediately I took that off and went shopping to get some better clothing that fits the culture better.

Doug Fairbairn: So, you were 15 when you came here and so what grade did you enter here?

Young Sohn: 10th grade. I was going to 16, basically.

Doug Fairbairn: And did your mother have any technical background, or were you any sign of technical interest at that time?

Young Sohn: She was a nutrition scientist, so she was, I guess food science.

Doug Fairbairn: And in Korea, had you shown any interest in technology or anything in that area, or was that something that developed later?

Young Sohn: I think when I was a kid, I liked mathematics, but I didn't think anything special because in the system there, there's so many people pushing every dimension to get to better colleges. Then I think really what happened is... I would really say when I came to the U.S., I realized that my preparation in mathematics was so much better than the local school. I got my confidence, and once you get confidence, you can do anything at that age. So that's really what happened. I realized I can be really good at this, and I pushed it harder. Like my mom said, "welcome to America, and you need to work because that's what you all do."

So, I worked as a janitor for 20 hours a week. I was a member of the Teamsters Union, and working like three bucks an hour, which back then, '70, that's a lot of money for a young kid. I even bought a car out of this. So the important thing was that I said, you know what, I'm going to clean these elementary school rooms very fast, and I got like one and a half hours left, and I used that big chalkboard doing mathematics, equations and stuff like that, just to take my time and that really helped me. So, I got my confidence, and I was like reinforcing my confidence by practicing it. Then when I was graduating, because then you get the award for best mathematics student, best science student. So those are the kind of things that build you in a new country, and this is a country where anybody can shine if they put the right energy to it.

I think I was very lucky to have that, and I had some good friends to help me too. I even had an English teacher, I remember Mrs. Jones. She didn't have to do it, but she came one hour early every day and just taught me English. She went through the Sears catalog. I'd never seen the Sears catalog in America, but it's like this is what it is, and kind of teach me how to pronounce and how to think about it. So, I will never forget that special touch that I got back then. There were not many immigrants in that school that I was in. There were like 2,800 kids, and just me and my brother are the two Korean immigrants.

Doug Fairbairn: I was wondering, it must have been socially very difficult.

Young Sohn: It was different, for sure. My mother is a very preparation driven lady, so she made sure some of their friends kids hang out to help us get used to school. So that helped. Then I played sports, and sports is a great equalizer.

Doug Fairbairn: Yeah, absolutely. So, you obviously excelled in math, and you say science, and I'm sure that given your mother had gone to university as well, that it was expected that you would then move on to university. Is that correct?

Young Sohn: That is correct, yes. Soon I have to figure out how to take SAT test, and AP classes, getting ready. So I applied for engineering program, basically, because I thought that would be the best place to get a job and apply my background. So, I went to the University of Pennsylvania.

Doug Fairbairn: How did you choose University of Pennsylvania?

Young Sohn: I had a few options, but they gave me the most money. Coming from a single mom, I just looked at the decision, basically, how do I reduce the pain and get the best education, and that was the equation. I could have gone to some other schools in Michigan, Connecticut, and others, but that was the equation. That worked out really well. Also, it's only two hours away from my home, and that was also very convenient.

Doug Fairbairn: So, tell me about your college time. Were there people or subjects that you gravitated to? Were there particular professors that had an impact on your future direction?

Young Sohn: Yeah, Penn Engineering School wasn't that big. Actually, a small program, like EE program, was only about 30 people. So, it was very intimate, and I worked with Professor Ketterer, and he actually gave me a job. I always needed a job to go to school to support, because I don't expect anything from my family. So, I was an income generator, always. Ever since I stepped in this country, I always made money, because I just didn't want to be a burden to my mom. So, then I worked 20 hours a week again at college, and worked with Dr. Ketterer. Anything he needs, he said, I need a breadboard, I need to do this, and I was working on those.

Doug Fairbairn: So, this was in electronics?

Young Sohn: Yeah, electronics, and then I also did sports. So, I was in a varsity sports program. So, I have to also train 30-40 hours a week.

Doug Fairbairn: What sports were you involved in?

Young Sohn: I went in for the soccer program, but I transferred to the fencing program, because my roommate was a fencer, and I kind of looked up, Robert, and he's kind of a big guy, he doesn't look that fast, and I was much faster than him. So I said, maybe I can join the fencing team and fly with him to different schools, because he's already flying all over. When you're in a soccer program, JV team, you have to wait until you grow up to be on a varsity team. So I just didn't want to wait. So I became a fencer.

Doug Fairbairn: So you really excelled at that, didn't you?

Young Sohn: Yeah, it turned out to be a good sport for me, because size doesn't matter. It's about quickness. It's about also outsmarting your opponent. So, I became captain of the team. We won NCAA in 1979, and then I was all Ivy [League], so I was very happy to do that track.

Doug Fairbairn: So what year did you enter college?

Young Sohn: '75

Doug Fairbairn: And you graduated in '79?

Young Sohn: Right.

Doug Fairbairn: And at that point, how did you view your future? What did you want to do, be, what were your goals at that time?

Young Sohn: Well, I actually already thought about I want to be an entrepreneur. So there was a new program at the time, and I think this was pioneered at the time, called the Technology and Management Program. It was the first initiative program that came out of Penn, Wharton School and Moore School joint combination. So, I was in the first class to graduate from the program. So. I got EE and management in the technology management programs. So mainly because I knew that I would love to be my own boss someday, but I didn't know how. So I took the classes.

After that, I got a job at Hewlett Packard, which happens to be just an hour away from the Penn campus. The reason that I wanted to stay in the Penn campus was that I was training for the Olympics, in fencing. I was in U.S. Olympic squad, and I couldn't really go too far away from where my maestro was. So the fencing gym is my real reward, and Hewlett Packard was how I paid my bills for a while, and it was a great company.

I got to meet two founders who came out to Avondale division-- Avondale is in the middle of mushroom country, but one of the things they did was gas chromatography. It was a way to analyze compounds that are out there. So I was working there on the computer side of it to analyze data that are coming out of the analytic machines, and then figure out what's in there and that was a part of my job, and it was a really fun job. I learned a lot. I realized I learned theory, but I was really learning the practice at work.

Doug Fairbairn: So, you met Bill, David Packard and Bill Hewlett, they came by.

Young Sohn: Yeah, it was great. Like meeting the pioneers, right?

Doug Fairbairn: So you took this job after graduation, but you wanted to stay around for the Olympics. How did that work out?

Young Sohn: Well, I was training, and I was top 12 in the nation. So now, as you know, six go to the Olympic Games and what happened is, then Russia, the Soviets invade Afghanistan, and so the U.S. decided to boycott the Olympic Games. So, I was disillusioned with that, and I was searching for what to do, because I was really a fencer first, and engineer second. So now I have to really re-look at my priority in my life, and I decided to go back to graduate school. So this is when I decided to go to MIT, and went back to management school, actually, because I want to really become, learning more about the management science of it and so I went to MIT in Boston in 1981.

Doug Fairbairn: So you spent a year at Hewlett-Packard, approximately?

Young Sohn: Two years.

Doug Fairbairn: So that was probably a good experience in terms of learning the Hewlett-Packard culture, and how they ran the company and so forth.

Young Sohn: It was a great company. I loved the trust they had in people. I had this guy, Randy, he was my mentor, and he's so kind, and he taught me so much. I'll never forget that, and you want to be like that to your new people that are coming in to your work, because you want to share the same kind of sense of that sharing and teaching.

Doug Fairbairn: Well, that's great. So, you decided to go to the Sloan School of Management. Were there other options that you explored, or was that the one you focused on that you wanted to go to?

Young Sohn: I think MIT was a very good target for me, because I really wanted to combine technology and continue to explore what's possible on top of that with learning the management science. So it was the school of my choice, and Stanford would have been the other one, but back then it was a little too far away from my home.

Doug Fairbairn: So was this a two-year program?

Young Sohn: It was a two-year program.

Doug Fairbairn: And what were the major learnings experienced there? How did that change your course or reinforce your course?

Young Sohn: So there's a guy named Mitch Kapor who was in the program, and he was building this product company called Lotus 1-2-3. What happened is when I was at MIT, I was working with professors to teach executives how to use this idea of a PC, personal computer. So the Apple II was just out. So my job was setting up the class, 50 Apple II computers, figure out how to network them, and develop software to teach how to use, I remember BASIC programming. So, I have to write some programs in BASIC so that people coming in the industry, they can learn how to use the personal computer. Now, this is kind of funny, but back then this was new stuff, and someone had to teach them. And I was getting paid

like \$5,000 per class, so I was really, really motivated with two of my fellow students setting up these classes, and they all want to come to MIT for a program.

Doug Fairbairn: So what about the educational program itself? Were there professors or-- you mentioned Mitch Kapor. Actually, he has set up a foundation, and the museum is working very closely with him today. I mean, they were going to be making – there's going to be a program at the museum in the next month involving them and their program.

Young Sohn: I have a lot of

Doug Fairbairn: It's on diversity and so forth.

Young Sohn: So back to MIT. So, I really got involved with the personal computer industry side of it because of the projects I did. MIT is great because MIT is very open class. So I took courses at Harvard Business School. I took course six, which is computer science at MIT, and so you spend time in other disciplines, and that's the playground you have, and I just loved that learning environment.

But what I really decided to do was, Mitch Kapor was a couple years ahead of us at Sloan, and he set up this startup, and I was really inspired by this personal computer transition that was happening and developing software companies around it. So, I decided to set up my own company. So, I went over and see Mitch and I said, "Mitch, maybe I can help you moving your products overseas, since I come from overseas and my partner is Swiss, maybe we can go after the European market" and Mitch goes, "I want to control my own destiny." I'm like okay, all right. I tried to help him, but that was not an option. So, we decided to set up our own software company called Tektra.

Doug Fairbairn: What was the name?

Young Sohn: Tektra, T-E-K-T-R-A and the idea was really creating a first database product for the international market and then moving that into the European side as the PC is getting introduced to Europe. The only problem is Europe wasn't quite ready for the PC. So we set up a company in Geneva, because Geneva supposedly you're not supposed to pay tax if you make a lot of money back then. It's a theory, though, because it only matters if you make money. But it turned out making money was much tougher than I thought. We got to have a good product. It turned out you also need to get customers, and European customers do not buy packages like Americans do. They need the training. They need the support.

So we hired 20 students from ETH, which is the best engineering school in Switzerland, ETH. This is where Einstein was in school, and train them, help them to learn, and then go out there educating people. But that is a very slow process. So, I learned a lot about the business, and at that moment realized that maybe I better find a real job that can pay rather than keep doing this entrepreneurship. Because by then I had \$25,000 at the time from my HP days. I saved that money and used it for my entrepreneurship but that was gone.

Doug Fairbairn: So how long did you spend developing Tektra?

Young Sohn: We were doing it from the dorm room at MIT. So 1982 and then did it up to about '84. So two years, two and a half years. Meanwhile, I need to find a source of money. So Intel happens to call at my door and asked me to come in to see if I have interest in coming to Silicon Valley. So, we did. We packed and came over. Joined Intel, hoping my startup would go somewhere.

Doug Fairbairn: Who's we? You and your partner?

Young Sohn: My wife and I and my partner. We all work together. She was the office manager, and eventually I realized it's not going to work. So, then I realized Intel had to be my primary job.

Doug Fairbairn: So had you ever been out to Silicon Valley? Did you understand what Silicon Valley was all about?

Young Sohn: Hewlett Packard had several visits to the main campus. So every time I come, I just remember sunshine.

Doug Fairbairn: Yeah.

Young Sohn: I just remember people are much happier.

Doug Fairbairn: So you came out to Intel in '84. Is that right?

Young Sohn: Actually late '83.

Doug Fairbairn: And did you have your choice of jobs? Did they have something in particular?

Young Sohn: They had a very thorough interview process, and I had a job as a manager, product manager. That was the title, and my product was called 82586 and you may not know what that is, but it was the first Ethernet controller.

Doug Fairbairn: Oh, yeah, I do. I didn't recognize the name, but I certainly recognize the technology. That was out of the partnership with Xerox. Bob Metcalfe.

Young Sohn: Exactly. So Xerox and DEC and Intel, they decided to agree. Finally, some open protocol, they can share information together, right? I think the Internet wouldn't be around without that kind of agreement and arrangement that was made. So that was my product, and it goes, okay, your first job, you have to write a manual, because we're now about to introduce the product soon. So, I have to put together a manual and you have to put together training and then you have to manage the product lifecycle.

It was a good way to learn about the tech industry, about the product, managing product lifecycle, and just promoting products and being able to be involved with what I call Intel's cross-product platform team, which is tough.

Intel culture was very different than Hewlett Packard back then, and I remember in HP, I always smiled when I was coming out of a meeting. Very happy. Intel, when I come out of a meeting, my stomach is upside down. It's very accountability-driven and very much demanding and it was also confrontational. And I was not used to confrontation.

Doug Fairbairn: Constructive confrontation.

Young Sohn: But at the end of the day, any confrontation cannot be too constructive. So, I just remember I did not feel good in the first year of coming out of these meetings. I'm not coming from a culture where I confront always. It took about a year to get used to, and I became very good at it. So I became pretty good at managing what I need to do, and then in late 1984, I got a call from Andy Grove's office that they are looking for me. I went over there to see him. Andy goes "Young, I need someone to go to Korea with me and I look around, and I think you're one of few Korean-speaking product guys." Not engineer, but product guy. Maybe you can come with me. Help me to see the potential options to find a partner in Korea.

Because, back then, if you recall, Intel invented many memory products. But they were not being able to keep up with the Japanese, and the Japanese were killing them, to be honest. So our market share was going down. It's about shutting it down or finding some other option. So Andy decided to call Korea, basically. So my job was working with Intel to figure out who would be the best person. I'm 25. I'm not that experienced yet. But I am his bag boy, and we traveled there and basically, with a couple of other executives in between, right? Larry Hootnick and Frank Gill. So, we're all involved. But basically, I was now with the senior management in Intel. Mainly because my qualification is I speak Korean. The thing he didn't know is I came to the U.S. when I was young. My Korean sucked. But he didn't know.

Doug Fairbairn: Had you been back to Korea any time?

Young Sohn: No, no, no. The only Korean I spoke was at school and with my family. That was about it. So, I have to really brush up my Korean very quickly to be sure that I can conduct some business. So basically, we traveled together, and I think we spent a year. Initially, LG was going to win because they were the nice guys and they liked the partnership. But actually, Samsung is the one that really came through. Because basically, I'll give a lot of credit to Chairman Lee, the founder. His name is Lee Byung-chul. Byung-chul Lee and he's the founder of Samsung Group, and he decided this is too important to lose. So he himself got involved. We met him five times, and I'll never forget this one meeting.

Doug Fairbairn: Over several visits.

Young Sohn: Yeah, several. I'm talking about two years period. So I remember this one meeting early on that Andy is going to meet Chairman Lee. So now we're going in, and as I'm going in, some Samsung

management person stopped me. "You cannot go in. You're too young." I'm like, "wait, but Andy needs me."

So Andy looked around, goes "what's going on?" I said, "they think I'm not qualified to go into this meeting" and Andy goes, I'll never forget what he said. "If he doesn't go in, I don't go in." You know, most people may not say that, and he just walked right in with me, and I sat. I have a picture from that moment. I have such respect for Andy for standing for what he believes. I think it's another good lesson you learn from your mentors and your leaders. This is how you learn, right? Because looking at this thing in action, he could easily have said "don't worry young man, why don't you wait for me? I'll go in and deal with it."

Doug Fairbairn: So you got to travel with Andy over this period of a couple of years.

Young Sohn: Oh, the best part is 1985. So we had an Intel-Samsung agreement, which has basically Samsung make products for you under the Intel brand, under the Intel patents and under the Intel quality program. So, we were basically creating Samsung as our manufacturing partner. I think Samsung had a long-term game plan, and Intel had a short-term game plan. So in 1985, as we signed the contract, now Dr. Noyce was there, Andy was there, Gordon Moore was there. They all looked at me, "young man, we need you to stay in Korea and manage this." So I kind of looked around, "sure, why not?" So, I moved to Korea, and I spent five years managing Intel Korea, Intel-Samsung joint venture project. It was not planned.

Doug Fairbairn: So your wife was Korean.

Young Sohn: No, my wife was not Korean. But she learned Korean and our kids were born in Korea and we got a special discount. Whenever she speaks, this blonde hair blue eyes speaking Korean we get a 10% discount without even asking, because back then, who speaks Korean? This is the 80s. It's not like today, where Korea is the top 10, one of the best living country. Per capita income is actually exceeding Japan. Today it's like this. But back then, Korea was really poor. It was upcoming, but nobody knew and so it was a really fun time to be there, as you see at the Korean Olympic Games, and Korea is really evolving. Samsung was evolving, and I was just part of that history. I was just contributing. In many ways, Intel contributed a lot for Samsung's progress in semiconductors, because I remember we had like 1,000 rooms per year for our engineers to come in to support quality control, process control, and a lot of other business transfer.

Doug Fairbairn: So a huge technology transfer.

Young Sohn: It was. It was one of the massive ones.

Doug Fairbairn: From Intel to Samsung.

Young Sohn: Exactly. I think that really helped, because what happened is five years later...so 10 years from that moment we signed the agreement, Samsung became number one in memory business, and I

believe that absolutely Samsung's investment, Samsung's DNA led it, but I think Intel was a big portion of the contributing factor.

Doug Fairbairn: Was the government also supporting Samsung?

Young Sohn: Oh, I'm sure back then, industrial policies, but I really don't know the details how that worked. All I know is this Intel and Samsung partnership. There I know my own office in Korea grew from zero to 200 people in four years.

Doug Fairbairn: Wow. What years were that?

Young Sohn: It was '85 to '89 that I stayed there.

Doug Fairbairn: Wow. So you were very young, but you had a huge experience.

Young Sohn: I learned so much more because I was running my own program locally with massive partners and a highly visible program at Intel. So it was a great career builder. You just have to be at the right place and lucky, right? It was one of those things that helped me to give me an opportunity to work with some great people.

Doug Fairbairn: Well, that sounds like a tremendous experience, being able to work with the top management at both Samsung and Intel. So, you've now worked at Hewlett Packard and Intel, two of the most famous companies for strong corporate cultures and so forth. What came out of that in terms of your own personal belief? Did you find yourself more attracted to the Intel approach, the Hewlett Packard approach, Samsung? Tell me a little bit about how those helped shape your philosophy.

Young Sohn: I think a lot of our management thinking does shape early, in my view, and I think it also has to do with the people you work with because those are two things that reinforce functions. I think what I learned from Hewlett Packard was really about empowering people, and compassion, and thinking about the whole community I am in. I think Hewlett Packard was all about how you play in the community, and that, I think, is very important. What I learned from Intel is about being paranoid, and really driving for the outcome, not just working at it but for the outcome, and finding the people that can help you to get there. So those two combinations. I was very lucky because every job I had at Intel, it was a new kind of assignment.

So, I was really trained to create new things, and I think I got so much empowerment setting up a Korean office when there's zero, nobody. There's nothing there. Saying "young man, go there and set up an office" since the contract is done, and "here's a \$70,000 check, by the way." So, I have no idea. I never set up an office overseas and hiring people, so you just do it. That kind of trusting that you can do it and empowering you, that was Intel. I didn't have to be old. I didn't have to prove everything. If they believe in you, you got empowerment, you go for it and you can fail, but I think they trust that you can learn from it. I learned a lot from management and I tried to practice those two things, thinking about the community and working as a team, but very driven, very paranoid, and get the results done.

Doug Fairbairn: So, what brought that to an end? How did you wind down your involvement with Intel? And then you later moved on to Quantum? Was that the next?

Young Sohn: Right. Yeah, so Intel has a program called a sabbatical program. So, every seven years you get like seven weeks, right? But I didn't have time to take sabbatical, so I waited until the 10th year. So, then I finally got sabbatical and so we bought a camper. We went around. I wanted to check out all the national parks of America, especially the west side. So, we drove to Jackson Hole. We went to the Glacier National Park. I went up to Canada, and just really explored, and we went camping for seven weeks.

Doug Fairbairn: So you and your wife and you have children?

Young Sohn: Yeah, I had two kids. So, it was a pop-up tent. It was great. I learned so much in such a beautiful country, and it's just so peaceful out there with nature, and then I get this phone call from someone asking whether I was interested in talking to Quantum. His name is John Carter. I'll never forget. John Carter was basically a headhunter at Egon Zehnder and they were looking for someone to help them to come in to build Asia, as a head of Asia, basically and I said, "No, I'm not interested in it. I'm on sabbatical." But you know what happens on sabbatical? You have time to think.

Doug Fairbairn: Disconnect a little from your daily.

Young Sohn: Yeah, because I was very happy at Intel. But actually, I think at the same time, when you're disconnected for a whole like two and a half months, I said why don't I just spend a day and just listen to what they are doing. So, they flew me to Milpitas to spend a day with the management team. I think there's a guy named Michael Brown, who was the CEO of Quantum. I really liked Michael and I decided, you know what? Now I can just work with the CEO much closer. Whereas Intel, it could take a long time to get there. So they also made me president of Asia. So I was once again, in charge.

So, one of the issues many times when you're expat, when you go overseas and come back, you forget the freedom you had, your empowerment, because you are the king when you're out there and you make decisions. Of course, you're part of a corporation, but you are empowered to make decisions. When you come back to a corporation, although I had a general management job and I was managing my P&L, still there's many, many people you have to deal with that tell you where to go.

Doug Fairbairn: So had you, before your sabbatical, had you moved back to the U.S.?

Young Sohn: Yes, I did. In 1989, I came back, and I created a business group, which is a genesis of Intel's chipset business. So actually, the way we did it is kind of funny. Because I know that you worked at VLSI, right? You were one of the founding members, What happened is that I got back from Asia, and Intel was getting attacked by this company called Chips and Technologies, and so I wrote a letter to Andy Grove because I am so close with him. I said, Andy I think you should not let your CPU isolated from chipsets and peripherals because if you don't control, you may lose your CPU socket. So, we should

create something to enable Intel x86 to sustain its position, and this is where Andy goes, okay. He called me. I got home, and my wife goes, Andy Grove called. I'm like, oh, really? Okay.

So I called him back. Well young man, what do you want to do? It's like, I think we should create a chipset business and protect our CPU position and he goes, okay. Why don't you figure out how to do it? How many people do you need? I don't know. I need about 20 people. I kind of winged it. Okay, you can have 20 people. Come down to Santa Clara and make it happen. So I came back to the corporate building, Santa Clara and now my job is to figure out how to solve that problem. So, I talked about the problem statement. Well, so now my first thing I look at, there were about seven other companies that are competing with Chip and Tech. One of them was VLSI. So I went to Phoenix to visit the business group that are working on this product called TOPCAT.

Doug Fairbairn: I've heard that name for a long time.

Young Sohn: And I met this guy named Doug Bartek. He was the head of that group and he looked at me and goes "we never trusted Intel for partnership." I don't think they are not good partners. But then after I spent some time with him, he goes "anybody that flies to Phoenix in August must be serious." So, we made a deal. I learned a lot from the Samsung-Intel partnership. I'm trying to do exactly the same thing what Intel did with Samsung in memory. I'm trying to do that on chipset. So I said, Doug, we have a CPU. You have a chipset. We can come together and we can compete against Chips and Technology and others. So we made a deal where the product is going to be an Intel product. So now I have to talk to my boss, whose name is David House. So, you know David House.

Doug Fairbairn: Oh, yes, very well.

Young Sohn: David House goes, "okay, we need to agree on name. So why don't you come on up. Let's spend some time working on our names." So, he and I get together, we talk about numbers. We're not even taking some creative names. Is it 340? Is it 350? Is it 380? Some names, which is numbers. So we're doing names and then all of a sudden, this is like 1989 with the earthquake. Holy cow! All of a sudden I see the ceiling is like moving at Santa Clara, fall and I'm still very young. I'm talking and I'm trying to present my case. But David House, I don't see David House. Like, where did he go? I realize he's already under the table. He was much quicker than me, and I'm a little nervous as a young manager presenting my case. I wasn't going to just go under the table. So, both of us went under the table and talking about the numbers. I'll never forget that one. How you have a certain moment of memory. So the product is going to be 82340. So, we agreed on name, number. That became our product and then my job was to figure out how to make that as a number one chipset business, which we did. Zero to 30% market share using the VLSI chipset.

We decided to create a platform. Because I said you cannot just sell chips by itself. We need to create a solution. So, I went to Taiwan and basically, I remember the seminar... Back then, if you remember, the late 80s, all the laptop were made by Japanese. So, my position was Taiwan can build laptops too and we can help you, and we created a program called VIP. VIP stands for VLSI, Intel, Phoenix Technologies.

We're going to work together to create a reference platform that we will give it to you and you can replicate it

Doug Fairbairn: And build PCs

Young Sohn: And create laptops. So this is the beginning of notebooks and we create this initial kick, which was solution-driven. So what's new at Intel, it wasn't about the P&L of this new business. It gave them a new marketing CPU, which is called solution. So that group, as you know, is a very important group today. But back then, it was a new concept. Because Intel was selling CPUs and memories and others, but not as a solution. Not with operating systems. Not with ready-to-go programs, and so we had a lot of fun for three years, and we built that business and then I took a sabbatical, as you know. So then I went over to Quantum.

Doug Fairbairn: Interesting. So after the sabbatical, did you not return to Intel? Did you basically start Quantum at the end of your sabbatical?

Young Sohn: That's exactly what happened. So, I accepted the job offer, and I quit after sabbatical. So, this is why I spent at Intel about 11 years.

Doug Fairbairn: So what was the, from a technical point of view, or business point of view, what was attractive about Quantum? You had a booming business at Intel, it sounds like. So there must have been, not only like the CEO, but there must have been something about the company and its products.

Young Sohn: There's just three things. One was that I wanted to go back to Asia. So I can set up my own Asian organization, which I did in Singapore. I also had a chance to build a plant, to build products in Singapore. So that was new to me, and I wanted something that I can really hands-on. Second thing is that I became part of the inner management team. So all the key decisions were made. The technology was very challenging, because now I am not the chip guy, but now I am a subsystem guy. If you recall, Quantum was born because basically Apple decided to use SCSI instead of IDE interface and SCSI was niche, or just a better idea, better I.O., but it was niche and Apple always wanted to push better technology, and so this was a good fit.

So we grew to be a-- I think that my division grew \$6 billion in five years. Mostly driven starting with Apple, and then adding Compaq and other PC names, and then we acquired the DEC group as well to get into the high end of servers and others. So, it became a very big business, but eventually we decided to merge that business with a company named Maxtor. So as that happens, then of course my job was going to go away because Maxtor is in a way buying Quantum. So, I decided to move on to another job.

Doug Fairbairn: And did you go looking and they came after you? Or how did that transition happen?

Young Sohn: Actually what happened is I was a board member of this company called Oak Technologies, and Oak was really one of the pioneers for, if you remember the CD, and then maybe most important contribution Oak made was when the MP3 was popular, people were downloading MP3. But

then how do you make it your product? And this is where the burn CD idea came, writable CD. So Oak pioneered the writable CD solution, and through that Oak took off. It had graphics competing with NVIDIA. It had a storage business. But storage was the one at the time that really took off. So it was doing well. But there was an issue with the CEO at the time, Dave Tsang, who wanted to retire basically. So, the board asked me whether I would be interested in being a CEO of the company, Since the Maxtor-Quantum deal is happening, I decided to migrate to a new job, being my own boss rather than working in a joint venture entity.

Doug Fairbairn: Right, so did that mean coming back to the U.S.?

Young Sohn: Yeah, I came back to the U.S. already during Quantum days. I became president of drive business. So then all the hard drive business was under my P&L.

Doug Fairbairn: So were there any, what were the major challenges once you were running this whole drive business? What were the major challenges or developments that took place during that period?

Young Sohn: That's a very interesting question because there is a book called The Innovator's Dilemma. If you read the first page, it will say that if you want to study humans, you study fruit flies because they have a fast life cycle. If you want to study tech product life cycle, you study this drive business because they have a very fast life cycle, and the business is in a way highly, highly execution-driven.

There are very complex electromechanical technologies that are coming together. So this drive sounds like just some storage, but it has the technology that are really magnetic properties, the motors, the head. They can be able to detect the media that are going under. Someone described it as a 737 flying six feet above the water and not being able to crash. And being able to put amounts of storage density that are required. So that was a challenge, but you have to do it in a very quick time because your life cycle is such that you're only as good as your last product. And the typical life cycle is nine months. So it was very fast cycle game. So we even wrote a case study at Harvard Business School, how to manage the fast cycle, and then the second one was about how do you manage that? You cannot manage from functionality. You cannot manage from top down. You have to manage with the best people in the team to do it.

Doug Fairbairn: Working closely together.

Young Sohn: Working closely. So, we call it product team. So product, it's like a company X responsible product and all the functional representatives, like procurement, cross-engineering, marketing, communications, even HR. They have a cross-functional team and they're like startup of its own. Their job is to manage that product. Because you have to have multiple products to be in the pipe to be successful. And you got also different categories, right? You have a 5 ¼", you have a 3 ½", you have a 2 ½". So you have to figure out how to build the right product with the right category. Then going after each product will create a billion or two billion dollar revenue. So, if you miss that, you can really hit companies that are running on very thin margins.

So I don't know if you remember, there were 250 disk drive companies.

Doug Fairbairn: Oh, I remember, yeah.

Young Sohn: And eventually consolidated into a few and Quantum was number two at the time. So, it's consolidating already. But you have to be on your game, otherwise someone else will take over. So, there was a game. So I think there, what I really appreciate was this fast cycle, and the only way you can run fast cycle is really using the best people that are in the job, and having cross-functionally working together under the common purpose of getting the product out. Good product team.

Doug Fairbairn: So, this was at Quantum. What about Oak? What were the challenges there?

Young Sohn: So basically, then I have moved, become a second CEO of Oak Technologies. Actually I replaced the founder, Dave Seng, great guy, and we built a business. It was one of those, a company that went spectacularly well along the curve of year 1999, year 2000. I remember our stock went like, I don't know, six to 30 bucks, 35, and just moving up as we were shipping the burn CD programs, basically, and then dot-com bust came in 2001, and just crashed and all the demand went away. So we have to figure out how to work on it. But the R&D spending of companies like Oak in a multimedia space is very big. So we have to continue to work on graphics, working on the storage programs, and working on even printer programs. So we were working on multiple programs.

But my conclusion is that for Oak to be sustainable, we need to get together with another company that are doing something similar. The Israeli company called Zoran, Z-O-R-A-N and we basically decide maybe it'll be better to combine the two companies. By combining, we can be able to compete better against people like NVIDIA or S3 and being able to have your own space. So that was the thesis behind it. So we decided to merge, 2003.

Doug Fairbairn: So was this, you were doing writable CDs, you were doing graphics, and what was the third business?

Young Sohn: Printing.

Doug Fairbairn: So did all three merge with Zoran, or just the--

Young Sohn: The whole thing merged with Zoran. So it was a 52-48 merger. So Zoran was 52, we were 48 and Ravi decided that he wanted to be CEO. So then I was forced to take a golden handcuff, I guess, move on, and--

Doug Fairbairn: Back on sabbatical.

Young Sohn: Back on sabbatical again. But it didn't last too long. I guess I got a call from Avago, which is Agilent really at the time, and Agilent Semiconductor presidency is open. Would you be interested in applying for that job? So it was a very quick decision because culturally I had an HP experience.

Doug Fairbairn: I was about to say, you're coming back to Hewlett-Packard because Agilent is a spin-out of Hewlett-Packard.

Young Sohn: Exactly. So Ned Barnholt was my boss. Great man, a wonderful leader and I decided to work for Ned. So I was head of the semiconductor group and did that. Then we decided maybe it's better... Agilent at the time was too many businesses, and it couldn't focus on really one. Because if you remember Agilent, it was test and measurement. It was also medical instruments and also had been investing in the biotech, drug discovery, and it also had a semiconductor business, and semiconductor business takes a lot of investment.

Doug Fairbairn: And that was mainly for internal use, right?

Young Sohn: It originally came that way. But then to survive, they were going outside. So this is the genesis of Avago, right? The seed became Avago and I recommended that we spin that group out, and create its own entity as an independent semiconductor business, because I think pure play would be better than mixed play. Then Silver Lake heard about this and decided to make a bid and they bought it out. So it was my second sabbatical.

Doug Fairbairn: Silver Lake was going to spin it out. I mean, they were funding the spin out, right?

Young Sohn: They bought it out with KKR and so now it's up to Silver Lake and KKR to figure out how to make, how to get it going. So that's kind of what happened and then I took the sabbatical from there, and I took some time off actually thinking what I want to do. Maybe I will do an investment venture capital. Thinking around this, so I spent a lot of time at Sand Hill Road looking at investment side.

Doug Fairbairn: Before you get to that, what happened to Avago?

Young Sohn: Oh, so what happened is Silver Lake bought it, renamed it under Avago, took it public. To go public, they hired Hock Tan.

Doug Fairbairn: Hired who?

Young Sohn: Hock Tan, the CEO of Avago. So Hock Tan came in as a CEO and then, as you know, it became Broadcom because they bought Broadcom.

Doug Fairbairn: Oh, it went into Broadcom.

Young Sohn: Yeah, exactly. So this is why Hock Tan is still CEO of the combined company.

Doug Fairbairn: I see.

Young Sohn: He's been doing it since 2006.

Doug Fairbairn: Yeah, I didn't remember that transition.

Young Sohn: So that's what happened. Meanwhile, I became advisor to Silver Lake, helping them to figure out what the right combination should be. And what do you do with the business. So that was part of it.

Doug Fairbairn: How big was that business when they bought it?

Young Sohn: They spent \$2.66 billion. It's about a \$2 billion business. They didn't pay a lot of premiums. I can't tell you that much if you think about what was in it. But at the time, that was the market, right? And they had some great businesses, but also had some poor business. So, it had a really good RF business that was investing in for many years. But actually, as you know, usually it takes time to see the output of your investment, and they had this really great product that was filters, programmable filters, acoustic.

So using the acoustic, so using the waves, you can build control. You can program your filter characteristics, and that was one of the key technologies. The Agilent never made money because it would keep investing, investing, investing. In fact, I have to protect it because we think it's coming, it's coming, it's coming. It only came because the smartphone was coming, and they needed many, many different radios and you needed to program it. When you program it, it made sense.

When you're doing it, just one filter, it didn't make sense, and it was the product that was ready to go at some point. Finally, when smartphones came, it made the right home and this is one of the reasons why Avago became a very powerful, successful company because it's single-sourced and it's very critical and the amount of RF only goes up, so it multiplies. They need more filters and so it became a really good business. Of course, it had many other things, but I think that was one example of a hidden jewel that didn't materialize but was invested under the hood.

Doug Fairbairn: Timing, timing, timing.

Young Sohn: Timing is important and not everybody gets a benefit of the investment. You know, it depends on when you reap the benefit.

Doug Fairbairn: So, then you moved on. You were working, you were doing some consulting with Silver Lake.

Young Sohn: I was advisor to Silver Lake, and I was investing at this firm called J.P. Morgan. They had a venture arm, so I was helping them to basically invest, which became Panorama Capital. So I was a venture capitalist. I would call, I was looking into it. So I was going in, helping to look at the deals and eventually what happened is then I got a phone call from Lip-Bu Tan. He said Young, could you help one of my companies?

Doug Fairbairn: Had you known him before?

Young Sohn: Yeah, I have known him before, and never really worked together as closely. But Dado and Lip-Bu called me. They said we need a CEO that can help this company in Thousand Oaks [CA] called Inphi and they have a great team. So, I said, you know what, let me go take a look, and I spend the day, I get back, I like the guys. There are a whole bunch of Ph.Ds that are really, really smart and they were early, they were early because they were trying to do 40 giga[bit] solution when the market is 10 gig[abit].

Doug Fairbairn: For what?

Young Sohn: For the fiber optic communication in the backbone. So they were too early, but they were also doing all the core components. So they had a lot of engineering, but they couldn't materialize, they couldn't generate revenue for what they have. Because it was a post-bubble, the market didn't exist. So, what do you do? So, I went there, 27 engineers.

Doug Fairbairn: What year was that?

Young Sohn: 2007. And so I said Lip-Bu, Dado, I think maybe they should think about some other business as well. Not just doing optical things because it may take some time to get there. But their core competency is a signal integrity, managing signals in different media and it's really an analog scale. So why don't we apply that into a bigger market like servers? And so, they had some project going on already and we doubled down on it, and so we actually made a mainstream business, and that become a revenue generating business.

But underneath, we were investing in where the future is going, which is really the 40 gig, 100 gig. They said it's coming, it's just too early, but let's get prepared, and so we're going to create a cash cow with our server business and creating a technology that can be able to support this.

Doug Fairbairn: So in the server business, this was for interprocessor communication?

Young Sohn: Memory modules, if you look at a lot of the memory cards, you need something to amplify signals and being able to switch it, being able to branch it. So that's what they were doing. So what you're doing is you're working with all the key server guys designing, and then work with the memory guys to put that into their equation. So that was the synchronous interface chip to memory and the CPU and enabling to run large memory pipes. So that was the business that kind of...

Doug Fairbairn: It was in Thousand Oaks. You were up here?

Young Sohn: Oh, I commute to Thousand Oaks. Oh my God, Southwest Air. Every Monday morning, 6:30 a.m., Burbank Airport and then I come home Thursday. But I didn't know what I was signing up because I was just looking at it, saying maybe it's something we should do and I kind of liked the guys. Let's give it a try. I didn't know I was going to do it for so long. But so I did it because I love the people there and actually, Thousand Oaks is a very nice place. Very nice place, very calm. There's more life there.

But I was commuting, and we then built the PHY business and the PHY that we built is a 100-gig PHY. It's the first 100-gig PHY that can go into the routers, in the backbone of routers. But you got to have a customer, right? So then I have to go to Cisco, convince Cisco to be the sponsor, because we couldn't have money to invest on this project because it costs like \$20 million at the time.

So, we got Cisco to be convinced to be the sponsor. Then I knew that I have revenue coming, I have a project, I have a story, now I can go IPO. So, I basically tacked it with a cloud-enabling backbone fabric company. That was our position and went to IPO 2010. It was a very difficult year, right? Remember 2008, 2009 was a difficult year. I think 2010, there's only like five tech companies who went IPO.

Doug Fairbairn: Yeah, just coming out of it, right?

Young Sohn: Yeah, we were one of them. We went November 14th, we went IPO. I remember with 176 employees that year, I made 36 millionaires out of the people that was at this program. And remember, they've been at it for over 10 years. This is not one of those instant millionaire type of companies. By the time we got IPO, it took 10 years to get there.

Doug Fairbairn: But you had to pick the right target application for it and get the partnership with Cisco.

Young Sohn: Those are two.

Doug Fairbairn: To make it happen.

Young Sohn: Yes. But we had a good gene. We had a good technical talent. It was applying it to the right place and applying it with the right partners. Actually, the PHY, we didn't have a lot of talent for PHY, so I had to hire people to enable that. But that was all part of how you build a company, right? And how do you undo the puzzle, and so we went to New York Stock Exchange and rang the bell. But eventually, Inphi got bought out by Marvell, as you know, a few years ago for \$10 billion. So that was a good outcome for all the Inphi family members that were there then and all the way.

Doug Fairbairn: So, the challenge in that business was taking this great technology and research and development work that had been done and finding a market for it, right? Finding a way to generate revenue.

Young Sohn: Right. It's a classic [situation where you] started too early in the market, running out of juice, running out of cash. What do you do? How do you repurpose? But using their DNA and then building the-- but also building a bigger picture than just one so that you have a better--

Doug Fairbairn: Having a vision of what it could be.

Young Sohn: Yeah, exactly. A bigger story and basically, cloud. I mean, 2010, when we went cloud, people thought we were crazy because cloud wasn't very cloudy. It was very not clear.

Doug Fairbairn: Cloud was cloudy.

Young Sohn: Yeah. I remember I came down to a staff meeting. I said, okay, guys, coming out of Burbank airport, driving in to see what we should do. I said we're going to be a cloud enabling company. They all looked at me and goes, what? You know, we are down here. What do you mean? You're talking about clouds? Is he young, drank something or what, you know? They all said. I was thinking something else. But I just said, to enable cloud-driven compute infrastructure, you need to have a lot bigger plumbing. To have a big plumbing underneath, you need our chips. We are the guys that are driving, helping to move big data, so we can enable data-moving plumbing for clouds. That is our position and that actually worked pretty well. Successful IPO.

Doug Fairbairn: So, before that, I saw on your resume that you had been involved in a company, Synex?

Young Sohn: Not much.

Doug Fairbairn: Not much? Okay and MIT Media Lab, you had some fun there?

Young Sohn: So there are some board roles that I played. So that was MIT. There is a person, Negro Ponte and I got to know him, and he said that he wants to create this \$100 laptop. Remember, in my early days, I worked on laptops and now he wants to do a \$100 laptop. So, he needed some help. So, then I said I'm actually taking sabbatical. So I got time and I was thinking maybe I'll go back to MIT and join MIT Media Lab and be a professor. That's what I was thinking, actually. So I went back, spending time with him, met all the professors in MIT Media Lab, and I realized that I don't want to be a professor. I don't want to be in academia. There's a little too much of their own things going on. But I want to help their project.

So I became a member of the team. I became an advisor and I traveled to Asia nine times to find the right partner that can build this MIT-conceived project. It was a lot of trips. But I knew everybody there and Samsung, LG, Hyundai, they all said, no, no, no, no. It's not mainstream. We don't want to do this. So, I went to Taiwan and there we met Barry Lam, the founder of Quanta. Quanta was one of the large laptop companies back then in Taiwan. So Barry goes, you know what? Not only I'm going to make it for you, I'm going to donate money to MIT to support this college. Oh my god. So we got actually a double win.

So now we have a manufacturing partner. Now we have to find the right content to add into our-- So we decided for all the MIT Media Lab software that was developed on it. This is the first online educational software that was actually transferring into a disc media. So things like Logo I mean, this is an old product. But these are the kind of things that kids want to play with, right? So we're going to embed that educational software. Then we went to the United Nations, because Negro Ponte had some connections to the UN. Apparently, his brother was a UN member, presently at the United States. So that was handy and then we met the whole bunch of Brazil, India, and others, Nigeria. They all want to get \$100 laptop for educational purposes. So we built about 4 million of them. But clearly it wasn't industrial. It was a very interesting project that has several technical contributions.

One of them is mesh network. Because a lot of classrooms, they don't have a network. How do you connect? So, this is where mesh network really evolved, and then cranking the power generating. There was a whole idea of really battery-driven management. How do you generate power, support a classroom without having electricity, right? We're talking about really basics and then how do you get a really \$100 laptop? In other words, how do you make it really cheap? And then how do you get free content? These are all contributions that were made. That was possible what we are enjoying today. But that was like the genesis of how MIT Media Lab was driving. So I think what I like about Negroponte's idea was it may not be a commercial success. It may not be 400 million units. But it drove a lot of technologies to enable the future technology enablement. For instance, Taiwan then soon created the better version of our laptop called Netbook. So Netbook came out, which became genesis of today's iPad. So it's interesting how you see this iteration is coming. It doesn't come overnight. It kind of evolves and someone has to open that door and I think that was the contribution. So, I was involved about two years pro bono supporting the project.

Doug Fairbairn: Sounds fun.

Young Sohn: It was great. I learned so much and it's very different. It's not very commercial. So motivating lab, faculties, a lot of NGOs, a very different kind of skill than actual commercial side.

Doug Fairbairn: That's great. Well, I'm glad we talked about that. So your Inphi sold to Marvell. You went IPO. Did you leave after the IPO?

Young Sohn: I left after IPO because I felt I was doing too much commute. Five years of commute to Thousand Oaks. Every week was too much and on the top of that, I kind of did my mission of taking company from 30 people to IPO, and so I told the board I think it would be better to now transition to bring a new person in to continue to harvest, and then I will move on to some other projects.

Doug Fairbairn: So after that, you were on some boards on Cymer.

Young Sohn: Yeah, exactly.

Doug Fairbairn: What does Cymer do?

Young Sohn: Well, Cymer is a very exciting company. Actually, it's out of UC San Diego. There are two to me that are great tech companies came out, Qualcomm and Cymer. But Cymer is less known because it's an equipment space. It creates the lasers. Remember Star Wars? Star Wars program in the late 80s and 90s to detect objects that are coming. So they need the powerful lasers. UC San Diego is working on that. But then the Star Wars program kind of went away, right? So then what do you do? So, they decide to repurpose that for developing different types of things. But one area they realized they can do it is lithography. It's about lights and it's about creating a fine light, fine wavelengths. So EUV, at the time it was DUV, but DUV, EUV, all these technologies are coming out. So, enabling lithography using the latest laser technology and this is what Cymer's mission was, and they were leader in the light source, along with Canon and Nikon. Three companies really dominated at the time. But Cymer became the winner. As

it became the winner, it decided to invest in next generation technology called EUV. Now, if you think about the wavelengths of the chips today, anything below 5 nano, you really need EUV to get the precision, and so EUV was born out of the lab in San Diego.

Doug Fairbairn: So, this was acquired by ASML. So that's the laser technology which goes into their EUV lithography machine?

Young Sohn: Absolutely. That's why they bought it. I was at the board at the time, and I think we're going to spend a billion dollars a year investing in this project eventually, and Cymer was only a billion and a half dollar company. How do you invest so much in a project? So, we decided we need to have an obvious person that can invest in this, ASML, because they built the whole system. We are building a subsystem. So let's team up with ASML to make this one happen.

Doug Fairbairn: Was the original funding from Department of Energy or from US government?

Young Sohn: I think there was even DARPA initially, and then Energy, and then Intel. Intel actually put a lot of money in.

Doug Fairbairn: Oh, Intel put money in.

Young Sohn: Yeah, to support the ecosystem. Because they needed it as well. But eventually, ASML bought it, and it took another good eight years to make it commercial. So, I think for Cymer, it's a good thing that we sold the company.

Doug Fairbairn: Good thing you sold.

Young Sohn: And because I think it would have been a real [inaudible?]. But eventually, the return comes. It's a great technology, great enabler.

Doug Fairbairn: It's the only one out there, right?

Young Sohn: And ASML with EUV today is a single source. Their market cap is over \$300 billion.

Doug Fairbairn: Each machine is \$150 million or something.

Young Sohn: Yeah, and these machines are over 200 million euros. So it's not cheap.

Doug Fairbairn: And sole source to the most critical piece of technology for semiconductors, right?

Young Sohn: Yeah, TSMC, Intel, Samsung, everybody needs it. It's a kind of interesting story. Actually, I had two boards that are really critical role in industry. One was Cymer, which I spent 13 years. So it was a very good long journey. The other is ARM, ARM Holdings and I didn't go early, but I was ARM customer and then when ARM went down around 2005, post-bubble, they went down. They want to rebuild the

board, and they invite me to join the board. I'm very honored, and I spent 12 years with ARM helping the company and until then, eventually got bought out by SoftBank.

Doug Fairbairn: You know, VLSI Technology made the first ARM chip.

Young Sohn: I remember this.

Doug Fairbairn: In 1985, using the tools that we had developed.

Young Sohn: Wow, that's amazing.

Doug Fairbairn: Yeah, that whole story is truly amazing.

Young Sohn: You know, VLSI is a very critical company at the right time. Any one of them could have been NVIDIA.

Doug Fairbairn: Yeah, we could have another conversation about that.

Young Sohn: Yeah, we can.

Doug Fairbairn: So, you spent a fair amount of time with Silver Lake Partners. And then the next major... Well, with Silver Lake Partners, were there other sort of major companies that you helped launch or steer or made a significant contribution to in terms of your guidance?

Young Sohn: I think there are a number of projects that come and go. So as an advisor you get involved. But I'm not privy to talk about the project natures. But I just say that that one, the Avago story, is very clear because I was the CEO and makes sense. But the others, I don't want to comment on it because I'm just one of many contributors to helping them.

Doug Fairbairn: So then Samsung, 2012.

Young Sohn: Yeah, right. So during my sabbatical, I'm just doing an advisory role at Silver Lake and investing in companies of my own. In fact, actually, it's funny. In that sabbatical, it was a very productive time because I got invested in companies like Zoom. So it actually worked out really well. When Zoom, I don't know if you know the Zoom story, but in June 2011, December 19th, I met the CEO. Eric Yuan goes, you know...

Doug Fairbairn: Is he Korean?

Young Sohn: No, he's Chinese and we have a mutual friend, and we were talking, and he goes "I cannot raise money. Nobody wants to invest in another video conferencing company. But I know exactly what problem to solve. You know, I think there are three things I can do." So, what would that be? One is the whole WebEx, they need a laptop and it takes a long time to set up. You need Wi-Fi. I can do it with 3G. I

have a compression engine that I developed. I think I believe I can be able to do it much less bandwidth and smartphone is going to be everywhere, so I can enable people to use not just a laptop, but smartphone. And I also think the cloud is coming, so I can give you a cloud link and so you don't have to download the whole thing and run it in your computer. You can just hit the link, and it goes back, and then you run out of a cloud.

When I heard that, and then third thing is, I'm going to give it free to consumers and charge enterprise. When I heard one, two, three, I said, you know what? I think it's enough technical merit. I think you know what you're doing. So I'll write a check, but it wouldn't be the last check because you'll need a lot more money, but let me help you. So a few of our friends put together \$750,000 that I think went in, and eventually, as you know, became a very, very important tool during pandemic.

Doug Fairbairn: Then the pandemic arrived, and all of a sudden.

Young Sohn: It went crazy. Nobody expected it. I would have been very happy. They were just hitting double-digit billion exit. I didn't expect they would get triple-digit billions. So I learned that investment can be really fun, and supporting startups is also part of what we do, right? Because we learn so much. Why not share and encourage the new entrepreneurs to be the next Intel?

Doug Fairbairn: Yeah. So Samsung, how did that come around again to Samsung?

Young Sohn: Yeah, so Samsung knew me from 1984, '85 timeframe. So, they always want to ask me to join, come back, and I just said no. I'm very busy with my projects, but I always had a good relationship. They are my customer. They are also building my chips. So we always had a relationship that are ongoing for a long time. But at that moment, I didn't have a lot to do because I was a free man, and so I said maybe I'll just do one day a week to help you.

So the Chairman asked me, so I said, okay, I'll do one day a week, and then what happened is it became two days a week. Because what they did was I couldn't be just advisor to Chairman and CEO. They need to give me a title to be effective at an organization like Samsung. So, they made me a president and Chief Strategy Officer, which is a title sounds like just a title. But actually like in military, if you have a title, you have a duty, and you have obligation, and you have certain hierarchy at Samsung. So now you have to fit in. So then all of a sudden, one day, two day, became a full-time job. I wanted to do like three years, thinking that I will just support where I came from, support people that I liked, and then help them with some new ideas and move on. 11 years, I'm still on it, actually. I'm still chairman of one Samsung company and still advisor to Chairman. So in a way, once you have the relationship, it goes on.

Doug Fairbairn: Right. So, you had the title president, but you didn't have the organizational responsibility that normally comes with that, right?

Young Sohn: So, there are three presidents. Each president has organizational responsibility. One is semiconductor, one is mobile, one was the consumer electronics. Well, what I got was everything else.

So I have to worry about M&A. I have to worry about investment, but most importantly, creating innovation. Through innovation, creating a new business. So I have that organization.

Doug Fairbairn: Is there anything you can speak about in terms of major developments in that regard?

Young Sohn: Oh, I think if you actually go through YouTube, some of the things you may see, but I'll give some examples. Like we announced one of the platforms to measure your body, to understand better your body through what I call voice of the body. So how do you learn more about our bodies through understanding, through sensors. They can be able to monitor your temperature even, your heart rate variability, your blood pressure, and even eventually glucose levels. They can help you to understand your ability to metabolize those things. So, these are some of the things that we really earmarked, and we said we want to understand better.

But actually, body is not like IT. It's much more complex and unknown. It takes much more time. So it's ongoing, but you see some of the products like Samsung mobile watch now has ability to measure blood pressure, and they came out of that program. There's some autonomous driving project that people may not know that was ongoing. Some of the technology enabled better imaging technology, better algorithms that are now going into imaging sensors that are going into Tesla, for instance. So, there's a whole bunch of innovations that are fusing like this that are creating-- The best business that came out of Samsung that are new last 10 years is probably biology. Samsung is actually very big in drug discovery, drug manufacturing. Nobody knows about it because it's very new, but also it makes it for other people.

Doug Fairbairn: Technologies to enable that or to actually do the drug research themselves.

Young Sohn: Oh, very good. So the way it started is, is there a way we can leverage Samsung's DNA for biology? And we learned actually the manufacturing know-how of semiconductor can be relevant to drugs. The ability to have a very clean, ability to track your wafers, ability to have a regulatory gas and all those infrastructure. We learned that actually there's a lot of manufacturing knowledge we can apply to creating a drug production. So we become foundry of drugs.

Think of TSMC of, let's say, for instance, antibody drugs. Samsung is one of the largest makers of antibody drugs for other drug brands. In a way, the way Samsung started memory business with Intel. There's certain parallel learning that are going on, but that's how it began and then next thing you do is then you develop your own drugs, and that's the next step that Samsung is embarking on.

Doug Fairbairn: So one of the companies you said you were involved in or you're still chairman of is Harman.

Young Sohn: Right.

Doug Fairbairn: Tell me about sort of you acquired, Samsung acquired Harman, correct?

Young Sohn: Right, exactly.

Doug Fairbairn: What was the driving force there? Harman is in so many different businesses.

Young Sohn: Right.

Doug Fairbairn: Tell me.

Young Sohn: In 2016, my title was chief strategy officer as well. So my job was to figure out where should we expand our business, and at that year, we decided automobile is going to be a very important part of our future because of four things. Electrification, because of connectivity, because of the interface with the mobile. So the content is moving from home to your car, to your work. And the user interface requires a display, and those are the four things we saw that's coming. We said we need to double down on understanding this business. But if you're not in the business, how do you learn about the business? So we decided looking at the target that can bring that capacity and capability. Harman had one more thing. Harman is also a sound company, audio company. It has 70 years of audio history and Samsung has really good video, but our audio wasn't as strong. A combination of video and their audio together, we can give a much better user experience. So this is the thesis behind our M&A.

Then I looked at all options for supporting this thesis and Harman came into our radar. The problem was it's too expensive at the time. It was like \$124 at the time when we were looking at it. So, I said I think the right time is not now. Let's wait. So we're waiting, waiting, waiting and then it went down to about \$84, because auto business was slowing down. So, then this is where I called a friend, help me to introduce the CEO. So I think we met in public. We met September 7th, first time, 2016 and then seven weeks later, we made the M&A deal and announced November 14th. Most people think the large Korean companies are slow, but actually when they know the target, they can go much faster than you can imagine.

Doug Fairbairn: So there are many pieces of Harman, and many of those can work with or bring advantage to various segments of Samsung. The audio working with the display group, and there's some automobile communications technology.

Young Sohn: 5G.

Doug Fairbairn: Also V2X.

Young Sohn: Yeah, exactly. So that is basically a network detection so that you know where the other, let's say, cars or other signal generating, as long as it's the same wavelength. So, I think there's a lot of interesting synergy. But Harman is also a very well-known brand. JBL, right? I mean, basically they're the number one audio brand if you take out the earplugs. So, I think that is the business that also has tremendous sub-brand that we can be able to take advantage of. But I think what Harman brought really is automotive relationship. Samsung's automotive profile is really big now. They are in battery business, they are networking business, display, memory, SOCs, and Harman is an integrator of these. Obviously, Samsung component sells to all auto companies, but having a tier one that are right in your home helps you to improve knowledge base and customer contact as well.

Doug Fairbairn: So the other thing you're involved in is Cadence. You've been on the board of directors there for the last 10 years or so. Was that through the relationship with Lip-Bu Tan? Or how did that come about?

Young Sohn: Yes, Lip-Bu was on my board when I was in Inphi and when I decided to retire from Inphi, he asked me whether I was interested in applying. I did, and joined the board in 2012. The role and importance of the design technology is really critical, right? You cannot design chips, you cannot design systems without software that are enabling it, and most people don't know it, but we take things for granted. When you see large chips coming out and it's working, whether it's NVIDIA chips or Intel chips, whatever, it's because we have great tools that are helping us design better, being able to test out the corner cases so that when you have 100 billion transistors coming out, it's working. It's not magic. It's because all the engineering went in over the years and you're in there too, to enabling this ecosystem.

Doug Fairbairn: No, I'm very familiar with that challenge. So you're also involved in the Extreme Tech Challenge?

Young Sohn: Right. So 2012 again. You know, it's funny.

Doug Fairbairn: 2012 is a big year.

Young Sohn: Yeah, because you have time. When you're taking a sabbatical, the time of retirement in between, you do some things. You don't just sit down. So, I decided, you know what? I want to spend more time on my passion and also do something about technology for better, technology for good. So I was wondering how I can do that. So my friend, Bill Tai, who is a phenomenal investor, we also invest in Zoom.

So, we are in it together and he and I together worked on a project called Extreme Tech Challenge. Which is basically, in the beginning, a bunch of kitesurfing guys getting together in Hawaii, justifying what are we going to do to do something good. So, it was a more fun gathering and discussing it and looking at some startups that can contribute to the world. That was how it began. Then over the years, the program got bigger and bigger and bigger and then the program even went to Brazil, and the program even went to Europe. So all of a sudden now, we are getting scared. So, we decided, that was phase one. So we're still managing it for fun. Nobody's working full time. Just kind of doing it as it comes and we called our friends for help, and it kind of worked, you know? And then the phase two was when I decided, at Samsung, I decided I want to make this something bigger. So, I decided to make it as a mainstream program. So I decided to spend more time on it and hire people to actually run it as a nonprofit.

Doug Fairbairn: Tell us briefly what it is.

Young Sohn: All right. Extreme Tech Challenge is basically the largest global competition for startups for supporting UN 17 sustainability. So extremetechchallenge.org and we have a number, thousands of startups apply and then we give them visibility through the championship at TechCrunch and other events. And these companies then get visibility to get funding, and I think that over the years, we tracked

our companies that applied that are in competition in the final. They have collectively raised like \$4.2 billion from venture funding. So my job is done when they get funded. My job is really encouraging them to do the right thing, supporting sustainability, and then making sure corporations, venture capital communities support it. So, creating a highway for startups for sustainability areas around the world. So now we have an event in Norway for the water. We have an event in Japan. So we have events around the world. Most of them run through the volunteers. We have several hundred volunteers that are supporting this program and it's becoming the largest global startup competition.

Doug Fairbairn: Fascinating and now you've started up another venture firm, Walden Catalyst Ventures.

Young Sohn: So, I retired in 2021 from Samsung and I'm still advisor, but in a way the operation already I'm done. So I was thinking how I want to spend my time and Lip-Bu Tan was also planning to retire from Cadence at the time. So both of us said, you know what? We're both retiring from operation, but we are both investing together for the last 20 years. Why don't we formalize this together? So we took his Walden, my Catalyst at Samsung, combined the name called Walden Catalyst and then we combine some of the team members and made a fund. Working on really back to our roots. I am really working on how the Silicon Valley was made, which is really around core technology. So we are investing in chips. You know, we've been investing in chips when everybody ran away investing in chips. I don't know if you recall 10 years ago, if you said you're investing in chips, nobody would talk to you.

Doug Fairbairn: I'm well familiar with this challenge.

Young Sohn: But Lip-Bu and I were supporting because Lip-Bu had his belief and I had Samsung. Samsung is a chip company and so we continue to have to do it. So both of us are continuing to supporting chips. And frankly, the last five years, there has been some great successful outcomes. Habana went to Intel, Nuvia went to Qualcomm. Companies like, I don't know, SambaNova is trying to push the envelope of the way our AI is. Hopefully some competition to NVIDIA and others.

So basically, we are encouraging this new generation of companies. We're even supporting companies that are doing RISC-V to support the next generation. Because ARM architecture has been around a long time. So ARM is a great company. It's going to continue to do well. But having an open architecture gives some more ownership for everybody. With a much lower barrier to get in. So, I think it's the next thing. So, we invest in next wave and next inflection point and this is what we love to do with our fund.

Doug Fairbairn: So are you looking beyond chips? I mean, are you open to various other technologies that you're looking at?

Young Sohn: Right, I think the reality is that chip is just one of the puzzles to enable to push new technologies. So our focus is in AI and data. Anything that are enabling scalable AI and data infrastructure. So I talked about the next generation. It'll be great to create NVIDIA 2.0, for instance. It'll be great to create Snowflake 2.0 that can do a lot bigger analytic engines that are much cheaper and faster. It'll be great to create a company that can create next open AI. So these are the kind of things that we're looking at within the AI space and investing.

Doug Fairbairn: So have I missed anything important? How's your family? Have your children followed in your footsteps?

Young Sohn: Well, actually I have three children and they are all around home, which means Bay Area, and one is a sound engineer. So his passion is the music and he's a DJ and he works part-time with me as well in my family fund. So, remember I mentioned about Zoom and companies like that. It was really my family fund that I created to invest in startups, and he's working in that area as well.

But his primary interest is music. Then my second son is a data scientist, and he is really into looking at data-driven companies, especially intersection of biology and tech. So, his background was like he worked on biome study, and he realized how little we know about connection between stomach and your brain. But it's huge connection, but we don't know. So he'd like to know more about using data to understand our body. And then in the process, he began investing in companies with me. So, the family fund again. So he's doing that. My daughter is in marketing and she's working in the marketing company, SoFi and she's their marketing person.

Doug Fairbairn: Which company?

Young Sohn: SoFi.

Doug Fairbairn: Anybody who understands data and data analysis or whatever is in high demand these days.

Young Sohn: Yeah. In fact, he went to school in Europe in the Leuven University. Leuven University in Belgium has a really good semiconductor centers, but they also have very good data science and the best thing about going to school there is it's free. I remember he came to school and said I need \$400 for my thing. I said, do you miss any zeros there? Isn't it like \$40,000? He goes, no, no. It's free in Europe. Like some extra bonus. I couldn't believe that.

Doug Fairbairn: I have a nephew who discovered that too and went to school in Germany. It's free.

Young Sohn: Great education too. Sounds wonderful.

Doug Fairbairn: So, one of the things we like to ask people like yourself is since you're working with all these startups and people with new ideas, what advice do you give to people entering the business or people going into college? Things, what should I pursue? Where do you think the opportunities are?

Young Sohn: I think what's important is the mindset and believing in himself or herself that they can learn, they can fail, they can learn again, and just believe that first failure is not the end, but you can actually learn. Because I had a first failure. I could easily shy away from entrepreneurship. But I always try new things and even if you are in a company, big company like Intel, you can still be an entrepreneur. The managers love entrepreneurs that bring new ideas, challenging ideas. One of the things about entrepreneurs is they own it. Ownership, and ownership is important no matter where you go.

Doug Fairbairn: Well, that's great. Did we miss any major topics? Things you'd like to...

Young Sohn: Well, you can ask me what my hobby is.

Doug Fairbairn: What's your hobby? Oh, I'm glad you suggested it.

Young Sohn: Well, I do have a lot of hobbies.

Doug Fairbairn: It sounds like your hobby is investing, but what is your hobby?

Young Sohn: Oh, no, I'm a big believer of life balance, work balance. So actually, I love exercising. So every morning when I get up, I will try to work out for about an hour. This morning, I swam. Yesterday, I did cycling before work. So I like to do first thing in the morning because there's no excuse. Once the day begins, there's many reasons why you don't want to work out. Then if I really don't have time, then I'll do yoga, and then I'll do 100 push-ups and 100 sit-ups.

Doug Fairbairn: 100 push-ups and sit-ups?

Young Sohn: Oh, and 100 jumps. This is a minimum time, but you can get maximum exercise. So this is a combination. But my hobby really is about traveling. I love to learn about other cultures because I come from other cultures, and just learning about others is always things to do. I'm learning some French right now. I learned some German and spent some time in Germany. So, I like to continue to evolve myself. Some people do Sudoku. I will learn some new languages, because I can then relate, and you can use it better. You get some survivor languages that are very useful. It makes it friendlier when you meet people around the world, because they feel much closer to you when you do that, and then I do kitesurfing. That's probably my passion.

Doug Fairbairn: Yeah, you mentioned that. Where do you do your kitesurfing?

Young Sohn: Well, I have a place in Hawaii, so I used to do that there. But also Bay Area is really good. There is always some wind, actually, in the summertime under the Golden Gate Bridge or the Waddell [beach], which is usually the wave style. Now, there's some white sharks out there, too, so better watch out. Then sometimes, when there's no other option, I go to the Delta. The Delta is always blowing.

Doug Fairbairn: It is always blowing. So have you actually gone under the Golden Gate Bridge?

Young Sohn: I got rescued by Coast Guard.

Doug Fairbairn: Oh, you got rescued.

Young Sohn: You know, so my second year, it was 2005. Bill Tai and I were out there, and he goes, Yeah, Young, come on over, follow me. So I'm just following him and then he didn't tell me there's a big wind shadow the big towers. The towers are great for hanging bridges, but horrible for wind people,

because when you go behind it, it's a dead spot, and I'm just flying, flying and then all of a sudden, I just bang. My kite went down and popped. My body flew in the air because someone hit the brake, because there's no wind. So when you're going 25 knots and then to zero, your body will fly and things will happen to you. So I'm like now dragging out to the ocean, and I'm like, Shoot, I'm going to be in the white shark territory. You know, there's a red buoy, which is the kind of a last place where the ferries come and go around, the tourist ferries. I'm not going outside of the red buoy. I'm thinking, uh-oh, I'm in real trouble and then one of the friends who watched this called 911. He's using his BlackBerry.

Doug Fairbairn: BlackBerry, old technology.

Young Sohn: BlackBerry saved me. It worked. So then within like 15 minutes, Coast Guard came and rescued me and then we came back in and they didn't charge me, actually. I thought they were going to charge me. Actually, the funny part is that it didn't quite, so as that happens, I got under the Golden Gate Bridge. But this is 2005, and as I got Golden Gate Bridge, because I have to park my kite, bring things in, I saw this Marine with a machine gun pointing at me, thinking that I could be a terrorist. That was a scary moment. I said, yeah, mayday, mayday!, I need help. Please get me a ranger. I need to go back.

Doug Fairbairn: Well, that's a great story. I'm glad you brought it up. That's just the sort of thing that we're looking for here.

Young Sohn: I met so many interesting people like kitesurfing. You know, there's a certain tempo that are there. Speed, risk-taking, and a lot of entrepreneurs that I met are actually coming to events like this and I meet. I remember this one, probably on a better investment, this lady heard about our gathering kitesurfing group that are looking at startups. So Melanie Perkins, 23-year-old teacher, she had this idea of creating a product for basically designing your web design better. So she created this company called Canva.

Doug Fairbairn: Oh, I know about Canva.

Young Sohn: From Perth. So she came over, presented to us, and some of us said invest in her. That's how she got funded.

Doug Fairbairn: My wife is a huge fan of Canva.

Young Sohn: Well, she had an opportunity because she met some entrepreneurs that are willing to back her and we're actually still involved in supporting her, my friends.

Doug Fairbairn: So she's a kitesurfer as well?

Young Sohn: Well, actually she pretended to be, but she actually did not kitesurf. She just wanted to show up to get our attention, with her fiance. It's so funny, yeah. So there's a lot of stories like this. You know, entrepreneurs do what you have to do to get attention of money guys. And the money guys, if you see someone who is really trying hard, you got to give them a second chance.

Doug Fairbairn: All right. Well, I think that was a great couple of hours and I really appreciate your spending the time with us. Great insights and great stories. So thank you very much.

Young Sohn: Well, thank you. It's been my pleasure. Thank you.

END OF THE INTERVIEW