



Oral History of Stanley T. Myers

Interviewed by:
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Recorded: September 22, 2009
Mountain View, California

CHM Reference number: X5516.2010

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Duane Wadsworth: Stanley T. Myers is the President and CEO of Semiconductor Equipment and Materials International, SEMI. Headquartered here in San Jose, California, SEMI is a global industry association serving more than 2000 global companies that supply the semiconductor, display, photovoltaics, MEMS, and solar industries. Offices around the world are in Austin, Bangalore, Beijing, Brussels, Grenoble, Moscow, Seoul, Shanghai, Singapore, Hsinchu [Taiwan], Tokyo, and Washington, D.C. Stan also is a member of the Executive Advisory Board of our Semiconductor Special Interest Group here at the Computer History Museum. Welcome, Stan.

Stanley T. Myers: Well, thank you very much.

Wadsworth: It's a long and most interesting history that brings you here today, September 22, 2009, to record the Stan Myers story at the Computer History Museum. Let's go back right to the beginning and your growing up, being born in the Great Middle West.

Myers: Yes, I was born- well I don't know if it's the Middle West or the Plains States, but I was born in McPherson, Kansas in 1936.

Wadsworth: And you went to public high school?

Myers: Actually I moved from McPherson to a small town called Medicine Lodge, Kansas, and about 18 miles outside of that. I was one these kids that went to a one-room school for my kindergarten, first grade. It was first through sixth grade, one-room school, about 18 miles outside of Medicine Lodge, Kansas.

Wadsworth: And I bet your teacher was Miss<pause>- do you remember her name?

Myers: Well, Miss, Yes, Mrs. Jones was her name.

Wadsworth: Oh, Mrs. Jones.

Myers: Mrs., not Miss, and that was pretty important in those days. I used to tell the kids I walked to school each day, although it was two miles to the school, uphill, both ways in the snow. Of course they didn't buy it. But actually, we did have at that school a stall for horses and many of us on certain days would ride our horses to school because the dirt roads were too muddy

Wadsworth: When you went to college, tell us about your college years.

Myers: I actually decided to go to the University of Kansas in Lawrence, Kansas. The decision I had to make-- I wanted to be a math teacher and physics teacher, which were my favorite subjects, or do I go

into chemical engineering? And so in that first year at college I made the decision to go into chemical engineering.

Wadsworth: And as an aside, in May 2007 you were inducted into the Chemical and Petroleum Engineering Hall of Fame at the University of Kansas.

Myers: That's correct. It was quite an honor to be named to that Hall of Fame.

Wadsworth: What was your first job out of the University of Kansas?

Myers: Well, my first job was actually during the University of Kansas. I worked 40 hours a week as a Chief Chemist for the Lawrence Water Works, while I was going to school. Then when I graduated from college I went to work for Monsanto Chemical Company. At that time it was named Monsanto Chemical Company, now it's just Monsanto.

Wadsworth: And what did you do there?

Myers: I started in the first 12 months that I was with the company, they had hired 98 new engineers and then there were some hard times, a typical recession and they laid off all but five of them. I was one of the five they kept and they sent me to their silicon operation in St. Peters, Missouri. And frankly that's how I got started in the semiconductor area.

Wadsworth: What year was that?

Myers: That would have been 1960-1961 time-frame.

Wadsworth: The semiconductor industry already was in existence with earlier operations obviously starting in 1947 at Bell Labs on to GE Syracuse, Sylvania and Raytheon in the East. Monsanto was never in the other crystal business, other than silicon, such as germanium?

Myers: Only in silicon. They were one of the original Siemens licensees for the growth of silicon, both in float zone and pulled crystal. TI, Merck, DuPont, Dow Corning, all took Siemens licenses around late 1959, early 1960, that time-frame.

Wadsworth: Was there some reason that Monsanto did not enter the germanium field?

Myers: If there was I don't know. They were very involved in making their own polycrystalline, and very involved in the float zone, at that time making thyristors, high-power silicon products.

Wadsworth: Who were the competitors in the early days against Monsanto in the silicon business?

Myers: Well they were both internal and external. Internally in the industry, Texas Instruments made their own silicon wafers, so did IBM, Delco. Many of the old companies made their own and bought outside too. So there were many outside competitors also, but the Japanese had not yet got involved in the silicon business.

Wadsworth: And what about the Europeans?

Myers: Well of course they were. there were no big companies there other than Siemens, but they were involved in the high-power thyristor area and float zone-- primarily float zoning.

Wadsworth: How many years did you stay at Monsanto?

Myers: Total years at Monsanto were 18 years. I progressed through engineering assignments and then finally into business unit leadership and then eventually I took over the whole silicon division of Monsanto.

Wadsworth: And is that what brought you to California?

Myers: Yes, absolutely. I was told to move to California by the then President of Monsanto, John Hanley, and had his first board meeting of Monsanto's ever, in San Francisco and welcomed me to- after he told me to move here.

Wadsworth: Was that a big adjustment for you, to come to the West Coast?

Myers: No, the big adjustment came when they asked me to be promoted and come back to St. Louis and my family told me to write them on the weekends. They weren't leaving California.

Wadsworth: California is a difficult act to follow for sure. And tell us about the growth of Monsanto after you moved to California on the silicon side.

Myers: Monsanto grew- their biggest growths were in the agricultural area. But in the area of producing the raw silicon, the epitaxial wafers, the real growth began basically in 1975 to 1985 timeframe.

Wadsworth: One of the things that's been said of the chemical industry in general, be it cosmetics or whatever, is that profit margins are enviable. And when you consider something like Round Up that we associate now with Monsanto and obviously products before that, did silicon come up to those profit expectations that a major chemical company like Monsanto expected?

Myers: Absolutely not. We felt like the battered wife syndrome. We were continually beat up for lower prices in the market place, and we got home and the other divisions would beat us up for not making any profit. So it was not-- it was more like the profitless business that we were in. But we did have some good years.

Wadsworth: But of course, it was always that glamour of something new and exciting and things happening, but the bottom line is that the money wasn't there, which apparently was true with other areas of semiconductor materials.

Myers: Yes, most of the people in the business were not making money. At one time there was something over 160 companies in the world making the raw silicon wafers. Many of them were backed by big chemical companies that had deep pockets, had the ability to withstand the losses over a period of time, and Monsanto was that way. The money was patient, at least in the beginning, but the cash flow in that business was pretty much negative for about 15 to 17 years.

Wadsworth: When did Wacker Chemical get involved in silicon? Because that's an old well known global silicon supplier .

Myers: Yes, Wacker was also a Siemens licensee and about the same time Monsanto did, probably the late '50s, early '60s.

Wadsworth: Siemens held the basic patents on silicon growth, is that why they were licensing companies?

Myers: Yes, not only silicon growth as we know it as Czochralski growth, but also basic patents in float zone, they also had fundamental patents in the epitaxial area. The technology really flowed out of Siemens.

Wadsworth: How would you describe, inasmuch as industry customers such as Texas Instruments, IBM, Fairchild, even Raytheon Semiconductor, were growing their own silicon wafers, they were obviously very close to their customer..... themselves. Technologically, how did Monsanto keep up with having that distance from the customer that an internal operation would have?

Myers: It's basically speed and competitiveness. You have to compete against the internal people and of course you always question whether they assigned all the costs to it. But in general it was speed and quality.

Wadsworth: How international was the Monsanto early silicon business?

Myers: The early silicon business probably didn't really become real global until the early 1970s, but Monsanto Company itself has been global for years in agriculture and the heavy chemicals.

Wadsworth: Monsanto on the West Coast, got into light-emitting diodes [LEDs]. Was that part of your operation too?

Myers: Yes, I had part of that operation for a period of time. The LEDs were quite important. I worked for George McCloud, which you may know, for a period of time and that business again wasn't that lucrative, but it did spin off a lot of businesses that now are looking pretty good. Solid state lighting I think will be one of the technologies in the future.

Wadsworth: But did Monsanto leave the business, the LED business?

Myers: Yes, basically sold it out.

Wadsworth: I see. And were they also growing the three-five elements (compound semiconductors) materials for LEDs?

Myers: Yes, we were doing the three-five materials, the gallium arsenide primarily, gallium arsenide epitaxy, but we also were doing gallium phosphide and indium. Many of the people at Monsanto hold many of the patents, or at that time they did, in indium and gallium arsenide and many of the other compound semiconductors.

Wadsworth: Was there ever a time when it was felt that other materials such as gallium arsenide would be a threat to the semiconductor side of Monsanto's silicon business?

Myers: From a performance standpoint it certainly could be a threat. From a cost standpoint, they were just eight times the cost of silicon.

Wadsworth: Yet, didn't gallium arsenide achieve a military radiation hardness business that is still existing?

Myers: Oh, absolutely. If you'd pay for it it's a high quality product.

Wadsworth: What's your biggest takeaway from your years at Monsanto?

Myers: Well, you know it was the early years. My wife was my high school sweetheart and she went off and got her registered nurse degree. I went to college and she came back and paid for the rest of my college. We were just starting our family, so there were a lot of takeaways from family experience as well as how Monsanto treated its employees. Monsanto was an absolutely beautiful company to work for and I only really left that company because I didn't want to move back to St. Louis.

Wadsworth: Well, with all the talk about life and life balance, family balance, and job balance, it seemed to work for you as you just celebrated your 52nd wedding anniversary.

Myers: Yes, about two weeks ago. We've been married for 52 years.

Wadsworth: That's certainly an enviable record, congratulations.

Myers: Well, you congratulate her. She had to put up with more for a lot of years.

Wadsworth: <laughs> Well, we know that you didn't stay at Monsanto more than 18 years, you said, so what happened after Monsanto and why and how?

Myers: A small company here in the Bay Area had come to see if I had any interest in leaving Monsanto much before I had to make the decision whether to go back to St. Louis. That company, you probably are familiar with, Siltec was the name of the company. In the end, after about a year of discussion, I went with Siltec. They were then a private company and then in the early '80s we went public and got wrapped up in the very hard times in the mid-80s and so I took that company over as CEO, it would have been about '85 timeframe. And it was heading for a chapter 7, probably, not 11, we were in real trouble, and I convinced some friends of mine in Rhône-Poulenc a big French pharmaceutical company to put money into the company. And got Arthur Anderson to back off from a threatened qualified opinion, and B of A finally upped their bank line and we went ahead and then I sold the company to Mitsubishi, at that time, Mitsubishi Metal Company.

Wadsworth: What appealed to you to leave the likes of a Monsanto for a small silicon company?

Myers: Well, the only reason I left Monsanto was because we didn't want to move and Siltec looked like a great opportunity. I liked very much Bob Lorenzini, who had founded and started Siltec, and the people that worked for him. And I thought they'd be a good team to join, and so that's why I left Monsanto then. It was like getting a divorce after that many years, you know.

Wadsworth: I'm sure it was. Well Bob Lorenzini is well known in silicon circles and I believe he started out at Knapic Electrophysics, didn't he?

Myers: Yes he did.

Wadsworth: Which was at the time in Palo Alto, and then he founded Elmat after that?

Myers: He started Elmat which was an equipment company more than a silicon making company. And then he sold that company to General Instruments, and then started up Siltec. And eventually we bought General Instruments "Semimetals" back from General Instruments

Wadsworth: Did the equipment side go with Siltec too? Did they sell growers?

Myers: Yes, and that became eventually what was called Siltec Equipment Division. But when I took over Siltec, we renamed it to Cybeq . I don't know if you've heard of Cybeq. And then after we sold the company to Mitsubishi, we spun it off as a separate entity.

Wadsworth: Along the way there obviously there were technological improvements in silicon such as dislocation densities and so forth. Could you tell us a little bit about that and what kind of contributions Siltec made while you were there?

Myers: Siltec made a lot of contributions. I don't know if they were firsts, but certainly in improving the development of zero dislocations, I think probably Monsanto was the first one to come up with the zero dislocation crystal. And probably IBM was the first ones to come up with edge-grinding effect. In fact I was told to go over to IBM in France one time to witness what they called the "guillotine test", and in that they'd take the silicon wafer, drop it six centimeters down and if it didn't chip, they'd keep the wafer, and if it chipped they'd send it back to the vendor. So it was kind of interesting, but the whole thing was from chipping-- if you don't edge-profile the wafer it'll chip and then it'll ruin the wafer.

Wadsworth: Discuss what the various dimensions were, because obviously we knew silicon growing grew from what, half-inch, to whatever it is.

Myers: Half-inch to one-inch float zone, and crystal growing was more like two inches to four inches, then we changed to 100, 150 and 200 millimeter. Now the bulk of the work is being done is on 300 millimeter wafers with potential future going to the 400 or 450 millimeter.

Wadsworth: What are the basic differences between float-zone silicon and Czochralski-grown silicon?

Myers: Float-zone historically has been grown in a very high vacuum, maybe 5+ millimeters of mercury. So it's basically a very high purity intrinsic crystal, where Czochralski and the crystal growers is grown in a quartz crucible and pulled out with a seed. So they are fundamentally different processes.

Wadsworth: Were there problems at Siltec in that you didn't have the large chemical company infrastructure that you had with Monsanto?

Myers: Right. The creativity and innovation and speed were very important in Siltec and kept them alive and competing with the big guys, but it took deep pockets. A lot of capital investment required, and in the end that's why we ended up having to sell to a bigger company.

Wadsworth: And I guess the same thing might be lacking there that was at Monsanto, called profit?

Myers: Yes, that's one of the things that you have to have. That dirty word called profit.

Wadsworth: Sooner or later.

Myers: Sooner then later.

Wadsworth: And you stayed at Siltec for what, 17 years, correct?

Myers: That's correct. Actually when I took it over and we spun out Cybeq as a separate company and Siltec was probably a \$20 million company then. Over the period of time after selling it to Mitsubishi, we grew it to about a \$250 to \$300 million company. And that would have been in the late '80s.

Wadsworth: Tell us about how you approached Mitsubishi, or how they approached you.

Myers: That's interesting. I happened to be in Zurich, Switzerland for a SEMICON show and I got a call from a friend of mine in Tokyo saying, "I think Mitsubishi might be interested in your company. Can you be here in 24 hours?" Well, pretty close. I got from Zurich to Tokyo in 24 hours, had our first meeting with them, the interest was great. They, Mitsubishi, was trying to make a decision whether to come into the U.S. green field, or purchase an existing company. The negotiations took about six to eight months, in the end they bought Siltec and kept me on for 11 years.

Wadsworth: That must have been a big cultural change; a gaijin working for a Japanese company.

Myers: I think it was a big change for both of us. We had a lot of fun and they were absolutely super bosses. But the thing we got with going with the Japanese was it was very patient money. It wasn't what'd you do this quarter, next quarter? Knee-jerk this, knee-jerk that. They put in so much money and they look for the long-term return on it. And we eventually got that for them.

Wadsworth: Did they move many Japanese personnel from Japan to California?

Myers: Not a whole lot. They certainly brought in a shadow for me. It was a Chairman who happened to be a brother-in-law of then President of Mitsubishi Materials, Inc., then a guy under me. It was the old sandwich effect, you know, get a guy on top and underneath, if this guy in the middle can stand the heat, okay, if not he pops out. They turned out to be just absolutely good partners, great people. When I left there, they not only gave me a gold watch, they gave my wife a gold watch, maybe they were trying to get rid of me. They also gave me a plaque and here we get all these kinds of plaques from people, but this particular one was 18-karat gold over an eighth of an inch thick, engraved. And they've been super friends since the time I left. It was just a good experience.

Wadsworth: How would you contrast, managing styles between, say, Monsanto and what you experienced at Mitsubishi?

Myers: Yes, again it goes along with the patient money. Mitsubishi- and I think its typical Japanese too, but Mitsubishi was a very conservative company. Remember there's forty-some Mitsubishi companies. They don't all have that name, but the particular ones I worked with were very conservative. And they were what you and I as an American would see a target and shoot at it, they'd approach it, size it up, zero in, and eventually say, "That's the way to do it." Nine times out of ten we agreed on it, but it took a little more time, and it was slower, but in the end we were very successful in what we did.

Wadsworth: Was Mitsubishi growing their own silicon for the Japanese market?

Myers: Yes, you know there's-- it's really a long story. Most of the Japanese, not just Mitsubishi, that were in the silicon business growing for that market, didn't have the size for commercialization, so they had partnerships. They had Mitsubishi Chemical with Monsanto Chemical, so I knew some of these guys in the past. But Shin-Etsu [Chemical] as we know them now, one of the leaders in that industry had relationships with Dow Corning, who was also Siemens licensee. So there was a number of inter-relationships and learning that was happening between the Japanese and the Americans in that period of time.

Wadsworth: It's interesting how the large chemical companies dip their toes in the water in electronics and semiconductors. I mean I think if Union Carbide had an operation here in Silicon Valley, DuPont certainly had been active and still is, and some other areas, but they didn't end up being the big players, did they?

Myers: No, I think part of the thing was the rapid cycles, the growth, you know the manic-depressive cycles I always called it. And most of them jumped in at the manic time and didn't have the heart for the depressive times in the cycles.

Wadsworth: But there were times when it was felt that as the economy of the country, the world had its cycles that in fact the semiconductor industry was immune to some of these cycles, or at least to the volatility of the cycles. Was that true?

Myers: Well there was certainly always the concept that the cycles were over, we're never going to have cycles again, or the magnitude is greater, but the frequency is longer. And in the end, any time you put in capital, you put it in, in a stair-step fashion, but the market growth is more, some kind of a steady, and it's been an upward growth for, except for a couple of times, in the last 40 years. So you've always got excess capacity, or you're short. And it was always the catch-up game that I think finally scared off most of the chemical companies that were in it. They weren't used to those major swings that happened.

Wadsworth: Throughout the cycles and so forth, there have been periods where there was a shortage of polycrystalline silicon [the beginning material of all single crystal silicon growing]. Is that right? Now did the sale of Siltec to Mitsubishi alleviate that, as far as poly goes?

Myers: No, not really. Certainly Mitsubishi had more poly locked up, and so it was more stable-- but this was prior to the photovoltaic solar cell applications. So I would say we were probably more secure in

poly, but at the time Mitsubishi bought Siltec they expected us to have our own raw material security and poly is a raw material.

Wadsworth: And there were sources in Europe for that too, right?

Myers: Oh, absolutely. One of the major sources was Wacker.

Wadsworth: With your time you spent in the silicon business with Monsanto and Siltec and then Mitsubishi, the largest number of years have been what you're doing now with SEMI. So how did you originally get involved with SEMI?

Myers: I went on the SEMI Board, I think it was 1987 or '88, when I was then CEO of Siltec or Mitsubishi Silicon America. And I was invited to go on the board, and like any board member elected by the members, one of the first or second, I guess I'd be the second real materials guy to go on the SEMI board. It was primarily dominated by equipment people at the time.

Wadsworth: Let's go back to the very beginning history of SEMI before you were on the board. SEMI is now coming into its 40th year, is that correct?

Myers: Next year will be our 40th anniversary.

Wadsworth: And as with many situations, organizations start up as frustration with some other organization. Isn't that what happened with SEMI also?

Myers: Yes, in the early days in the early 1970- late '69 or would be '70 obviously when SEMI started up was a frustration with the IEEE show up in San Francisco. And they felt like they were a small part of a big show and didn't get recognition and a small group of people spun off, started SEMI and started their own show called SEMICON.

Wadsworth: What year was the first SEMICON?

Myers: 1970, I believe was the year.

Wadsworth: And where was it held?

Myers: I think it was at the Cow Palace in San Francisco actually. Before it was held at the [San Mateo County] Fair Grounds [here on the San Francisco Peninsula]. I think they had one year at the Cow Palace. If not, the first year was at the Fair Grounds. You'd probably know more than I do on that one.
<laughs>

Wadsworth: <laughs> I believe it was at the Fair Grounds the first year, and it was '71.

Myers: That's where we had the most fun; at the Fair Grounds.

Wadsworth: Yes, that certainly was where a lot of fun. It was very different organization at the Fair Grounds and SEMI also. Well, who were some of the early key players in the formation of SEMI, which is a trade association?

Myers: Trevor Law, Fred Kulicke, of Kulicke and Soffa, which is a 60-year-old company now or a little more, and then of course Hugle, Bill Hugle was there, and I think there was three or four others. Trevor Law, who I think you knew.

Wadsworth: He was Dr. Trevor Law from Fairchild at the time. Was he still with Fairchild when SEMI started?

Myers: Yes, I believe he was, he started Galamar after that, I think.

Wadsworth: That's correct. And what was Galamar?

Myers: Galamar went into the silicon business. It was a combination of three names: Trevor Law, Dan Martin, who now still works at-- not still, but now works at SEMI, and Milt Garfield .

Wadsworth: I'd forgotten what happened to them. They ceased business, didn't they, somewhere along the line?

Myers: Well I think they were backed by Applied Materials and there were some tough times and eventually Applied sold them.

Wadsworth: And was the original charter of SEMI to have the SEMICON shows, or what else did they do in the beginning?

Myers: Well, in the beginning it would have been in the early '70s, they began to get involved in global standards, which were not a government-to-government kind of standards, but it was more a consensus, a user-supplier standards development. And I personally got involved in those standards because IBM had a different diameter and notch and flat on a wafer, and the Japanese had three flats on a wafer and the rest of the U.S. had two flats- so we began to standardize the silicon wafers at that time. Thank goodness we did that.

Wadsworth: Well, you had your friend George from Monsanto days, who was a real pioneer in the silicon standards.

Myers: You mean George Moore?

Wadsworth: George Moore.

Myers: Yes, George worked for me actually in St. Peters plant at Monsanto for a number of years while he was getting his degree, and then later left Monsanto and went to work for SEMI, much before I did. George was a dear old friend and I hired him out of school, actually.

Wadsworth: That's interesting because it had nothing to do- he came to SEMI before you were...

Myers: Yes, he came-- Bill Reed knew him. We- Bill, my predecessor, and I at SEMI, were both Monsanto people and after Bill went to SEMI in the early '80s, then he brought George over, and then set up the standards and the market statistics program.

Wadsworth: Both of which survive today well.

Myers: Absolutely.

Wadsworth: Who were the original corporate members of SEMI?

Myers: Well it's kind of interesting, our three biggest companies in the '70s no longer are there, if you think about it. PerkinElmer, GCA, and General Signal, they were our three biggest equipment companies in the '70s and they're not on the books today.

Wadsworth: Because there are many spin-offs.

Myers: There became a lot of spin-offs and this kind of thing.

Wadsworth: But there are still some companies that were original that are there, like Applied and K&S and others.

Myers: Applied, K&S since they won, of course there the founder of K&S was one of the founders of SEMI.

Wadsworth: Who was the first president of SEMI?

Myers: The first President was Bill Hogle, but the longest running President of SEMI was Howard Moss and he was from TI. He had four terms. That's when we called the position President, now it's Chairman and not President.

Wadsworth: Wasn't it a little unusual for a trade association to have a President at the customer level, when you're setting standards and all these other things?

Myers: I don't know if I understand your question, try me again.

Wadsworth: Well, it seems that the trade association is made up of companies that supply the semiconductor industry, materials and equipment and the customer is a separate issue. And from an arm's length point of view, isn't it unusual to have the customer involved with these standards settings organizations and all the other things that SEMI did?

Myers: Well not really. What you have to do is make sure the anti-trust laws are followed, and followed very diligently, because you can get in to a problem of, not pre-competitive data being shared between customer, between competitors. So as long as you have the anti-trust laws fully covered, then it's not unusual to do that.

Wadsworth: At the time Howard Moss was president there weren't many other semiconductor companies as SEMI members, however, were there?

Myers: That's correct.

Myers: Well at that time there wasn't an Intel, -- they were a little bit later, but not much to speak of. They were a very small little company. It was larger companies like IBM, Raytheon...

Wadsworth: Motorola?

Myers: ...Motorola, TI, so it was a different set of players at that time.

Wadsworth: Well Howard Moss wasn't the only President who came from a customer either, was he?

Myers: I'd have to think through the list, but you're probably right.

Wadsworth: How about Phil Gregory who was Purchasing Manager of Raytheon [Mountain View].

Myers: Oh, Yes, Phil Gregory was the first Managing Director and he came out of Raytheon. Because I remember I used to sell wafers to him when was Raytheon Purchasing Agent.

Wadsworth: These were all very, very colorful figures who unfortunately are no longer with us, but an important part of the history of the early days at SEMI.

Myers: You bet.

Wadsworth: And where did the income from SEMI come from?

Myers: SEMI's income primarily is from trade shows, and being-- and dues, but trade shows are the biggest income. And that money is then spent to stay as a non-profit on standards, on publications, and a number of things.

Wadsworth: And you, of course you started on the board, and you served on the board for several years, and then you became CEO and President in 1985, succeeding Bill Reed. Is that correct?

Myers: No, I came on the board in '87.

Myers: Yes, I was Chairman of the Board in '94, before I joined SEMI. A number of board members asked me if I'd be interested in taking over when Bill retired. And I made a decision. It's time to give back to the industry that I had taken from for a long time. So I made the decision to go with SEMI and the primary purpose was to learn the industry better, broader than a single-company focus and to give back to an industry I believed in.

Wadsworth: Well it was very fortuitous because of course you were a member of the board for awhile and then became President and CEO and sadly Bill Reed died not that long afterwards.

Myers: It was just a few months after that.

Wadsworth: You were already in command and I think made for a very successful transition of leadership on the board. Well, let's talk about SEMI. As its, I believe was, and maybe still is the only global trade association. Is that correct?

Myers: Well there's a number of associations that consider themselves global in different areas. In the high tech field probably it was the first high tech global association. But like most associations, they start off as regional or national, then they go international, then they go multi-national. All associations are still struggling to really be global. That's a term you use, but it's very, very difficult to get to where you actually are operating an organization that's global. And so I think we're getting much closer in SEMI, but we've got a long way to go.

Wadsworth: Well tell us about global. What does global mean? -- where were the offices and what happened where?

Wadsworth: SEMI starting out in the United States is one thing but to become global and offices and shows around the world---- what was the first effort or show outside of the United States for SEMI?

Myers: It was in Europe, actually, it happened in Zurich, Switzerland. And the first SEMICON outside the U.S. was in Zurich.

Wadsworth: Was that a major effort to do that?

Myers: Well, that happened before I went on the board and certainly before I was in this job. I think it was handled not by SEMI -- we didn't have an office in Europe then. And it was handled by a group out of the U.K. that put on shows and events for companies and organizations.

Wadsworth: And after Zurich what was the next out- of -the -country show?

Myers: It would be in Japan.

Wadsworth: Were you on the board at that time?

Myers: I had just come on the board after the first shows were done and again that was done by an outside service in Japan. It presented at the Harumi Exhibition Halls at the time.

Wadsworth: In those days was the make up of the board inclusive of European and Asians?

Myers: Not at that time. The first European and Asians were brought on the board after those two shows were started.

Wadsworth: Do you happen to remember who they were, the first?

Myers: The first Japanese board member was Takayama-san a dear friend. He's 92 years old now. And has been an absolute faithful supporter of SEMI since day one.

Wadsworth: And he's an emeritus board member now, right?

Myers: He is an emeritus board member. I hear from him almost monthly still.

Wadsworth: A true gentleman and SEMI couldn't have any better friend.

Myers: He was a true person.

Wadsworth: There probably were start-up problems going outside the country to do trade shows. What were some of the early problems?

Myers: Well, I think, the early problems basically were around communications and location. And at that time, they were done by companies outside of SEMI so there was always revenue/profit splits. It was a typical partnership kind of problem. But since then, we bought out both in Europe and in Japan those outside companies. Dick Yamashita, Did you know him?

Wadsworth: Yes.

Myers: And he owned the company; we also bought out Anne and Gavin in the U.K. You may have known them in England and we basically replaced them with our own. Paul Davis set up the office in Brussels in Europe. And Steve Nakayama set up the office in Japan.

Wadsworth: Although you talk about using outside services to handle trade shows, weren't the original U.S. shows not handled by SEMI?

Myers: No. The initial ones were done by Golden Gate Enterprises run by Rich Banks. .

Myers: It was before my time but I do remember Golden Gate did it before we brought it in house.

Wadsworth: When and why was the decision made to bring it in house?

Myers: Not being on the board at the time and neither was Bill Reed my predecessor I really don't know the answer but I think they felt like the revenue could be better used. They were paying a third party and giving them profit that could be better used inside the not-for-profit organization.

Wadsworth: And I gather in those early years that the growth of the shows was also good?

Myers: Absolutely. Very good.

Wadsworth: Do you remember any numbers of what the booths or attendance was?

Myers: I think the original booths were about 100 and we got up in the U.S. to about 3,500 booths. So that was over a period of 15 to 20 years. And most of the shows had that kind of growth until after the typical dot-com, dot-yawn, dot-gone and that whole level of support of shows began to wane about the early 2000s.

Wadsworth: Did the early U.S. shows attract foreign exhibitors?

Myers: Big time. SEMICON West is still our biggest foreign exhibitor attraction even though it's not our biggest show.

Wadsworth: That's interesting. And, of course, that probably was for access to the U.S. market. However, that's changed hasn't it?

Myers: Yes. Well, most of these shows have a number of different draws. You have the investment community for public companies. You have exchange in networking in the standards area and the publications area. You have the marketing people there. Certainly, the platform is much broader. In the beginning it was showing and selling equipment. Equipment is more sophisticated, too expensive to bring into a show now. So the dynamics of the show has changed from a flea market to a very sophisticated industry networking event.

Wadsworth: Yes, I can recall when there was concern even in the early days at the San Mateo County Fairgrounds about the dirt and the cow barns and all of the other things.

Myers: The horse stalls.....

Wadsworth: The horse issue-- well yes, and other parts. I remember there was concern about equipment running with that sort of environment.

Myers: Exactly.

Wadsworth: And in many cases it didn't run. With the growth of the trade shows, tell us about the growth of the standards effort because that's a very important contribution SEMI has made.

Myers: Yes, we've become a premier standards development group not only in the semiconductor industry but flat panels, photovoltaic. And it's a customer, supplier, user consensus in building standards. And that's become a very unique and very I'd say important thing that we do for the industry.

Wadsworth: Wasn't the first standards group was on silicon wafers and standards?

Myers: Exactly.

Wadsworth: And you described why that was important. What are the other areas that standards made sense?

Myers: It gets into the area of environment health and safety. Certainly in the area of standard equipment and hook ups in terms of electrical power hookups, software standardization. These are very, very important instead of trial and error and everybody doing something different, the industry couldn't afford it if it wasn't standardized.

Wadsworth: Those were standards were called SECS, right?

Myers: Yes.

Wadsworth: How was that spelled?

Myers: Not, S-E-X. It's S-E-C-S. And they're still very important standards. And interface standards now are becoming more and more important.

Wadsworth: Were there standards set for packaging and chemicals and things like that in the industry too?

Myers: Yes. In fact, I think the final manufacturing area is becoming more and more dependent on standardization for R&D efficiency, for cost savings. There's a number of reasons to do that.

Wadsworth: Were there any other competing agencies setting standards or did SEMI have a world to its own?

Myers: No. I think in that particular arena we don't call them competing agencies but there are certain ones that were doing things. ASTM add a lot to SEMI standards. At this point, I, a few years ago, negotiated to buy their standards so we would be the one for the silicon wafer standards. We now own all of those. But many of these are government to government standard setting bodies. Where SEMI is very unique in a consensus customer supplier setting body. But many of our standards are shared. So it's not really a competition area as much as where does the standard best fit.

Wadsworth: One of my favorite people involved in the standards effort I used to refer to him as my favorite government employee was Bob Scace. And Bob was at the National Bureau of Standards, which became NIST...National Institute of Standards and Technology in Washington, D.C. But I remember what a loyal person he was and how important it was to have someone from the then National Bureau of Standards involved with SEMI.

Myers: Yes, Bob has been involved even since after he left GE to go to the National Bureau of Standards. And there he worked with Dr. Bullis, Murray Bullis who actually worked for me in Mitsubishi and then left and then worked at SEMI. Both of these guys came out of the National Bureau of Standards and very, very supportive and key players in building the standards regulations that we have to abide by.

Wadsworth: What about test equipment standards?

Myers: We've done a few of those but we're just beginning to build in that area. We just put a partnership, a special interest group with CAST in SEMI. And CAST is made up of SEMI members that are in test along with non-SEMI members in test. And we're working together with them now and standards are a very, very important activity with that group.

Wadsworth: There's two levels of test. There's on the wafer testing and then after the wafers are diced up there's, of course, finished device testing. Are you covering both those areas?

Myers: Both areas.

Wadsworth: The EHS effort, Environmental Health and Safety---tell us about that and how SEMI got involved with that because that's fairly recent.

Myers: Yes. I was on the board at the time. It felt like SEMI ought to have an EHS division and so working together as a board member with the SEMI staff at the time we brought in Amy Bordeaux who was in standards anyway, so we brought her out of standards and developed an EHS division, right around the time I moved from board to this SEMI position I have now.

Wadsworth: And what kind of things are being discussed in the EHS portion?

Myers: Oh my goodness. They cover the gamut from helping members to address operational and equipment safety, fire, and health concerns to more proactive activities that address concerns over products like PFOS [Perfluorooctyl sulfonates] and PFAS [perfluoroalkyl sulfonates]. These are products that have been targeted for chemical restriction. If their use is banned, the industry shuts down. So they're very, very critical and it is important to show they are used safely. Most of the regulatory activity on chemical use and hazardous materials in products is coming out of Europe. The REACH and RoHS environmental regulations apply to all industries, not just semiconductors, and a huge amount of activity is taking place in that area. [Note significant edits to this paragraph by Stan Myers, 1/2010]

Wadsworth: Well, SEMI seemed to have vision early on to put an office in Washington D.C. and also I believe an arrangement in Sacramento, California.

Myers: Right.

Wadsworth: Tell us how that works in relationship to these standards?

Myers: Yes, we originally put the office in Washington D.C., again, before my time but I was a good supporter of it and that was on a number of other things. Investment tax credit was one. But the biggest thing in those days was export permitting because we had CoCom, Comicon. There was big unilateral as well as multilateral restrictions on a flow of materials, chemicals, gases, silicon and equipment behind the Iron Curtain. So we got very involved in the export controls area.

Wadsworth: Well, there are a couple of infamous Silicon Valley stories relating to that.

Myers: I know of those yes.

Wadsworth: Very interesting. When we talk about being a global organization, how do you balance the global aspects with a U.S. centric quality such as the EHS lobbying in Washington? How are you able to spread that global aspect of the standards and things like EHS globally?

Myers: Both of those we do through setting up committees in each region and then tying them together with a central committee, like there's an international standards committee and it's made up of the chairman of the committees from China, Taiwan, Korea, Japan, sit on the international standards committee. And that all falls under the oversight of the standards committee on the international board.

Wadsworth: You were an advocate of the regionalization of the various parts of SEMI, do you want to talk about that and how you came to decide to do that and how it was implemented and what the problems were in implementing it?

Myers: Yes. Well, certainly what we needed was regional advisory boards is what we call them now to make sure the voice of the region was heard by the international board members for the guidance of long-term for SEMI. So it would have been about eight or nine years ago we decided to set up regional advisory boards in each region. Now, they are truly advisory boards with no fiduciary responsibility but usually one or more international board members sits on the regional advisory board in the region they're from. And so we're getting communications in from the regions to their regional advisory boards to the international board. So the whole attempt was to open up the voice of the industry and our members and get better communications to the decision makers.

Wadsworth: But weren't there various presidents set up in the various regions including the United States?

Myers: We had committees. We had a North America committee, a Japan committee. But we didn't have them operating them as a routinely meeting advisory board.

Wadsworth: No, I meant like the president of SEMI Japan, the president of SEMI North America.

Myers: These all came along at different times depending on the size of the region and what was going on. We had the president of-- at the time we really named them all presidents. They were not reporting to me directly. Now, the eight regional presidents plus the local staff report directly to me. But before then those regional committees and regional presidents were reporting to another person reporting to me.

Wadsworth: I think people have commented about the quality that you've been able to attract to the SEMI board. Could you tell us about that and how you've been able to attract the people and some of the key players that you have attracted and the global makeup of the international board of directors?

Myers: Fundamentally, we go to the leadership in the region plus myself and talk to the top people in our major companies. The biggest problem is a balance on the board because SEMI is made up of chemicals people, gas making people, silicon wafer manufacturers, equipment people, front end, back

end, or final manufacturing. So it's a broad gamut. And then it's big company, small company. So if you look at the segments they become mind-boggling to look at the number of segments. So the bigger problem on the board is finding the right person that fits a category that balances that board for our 2000 membership.

Wadsworth: You've been able to attract people at the high level, the CEO level to the board.

Myers: Absolutely.

Wadsworth: Can you tell us some of the people you had in the past?

Myers: Certainly. Jim Morgan of Applied Materials and now Mike Splinter of Applied. Ken Levy was an outstanding leader on the SEMI board and now Rick Wallace, the CEO of KLA is on the board. Steve Newberry the CEO of LAM for the U.S. people. Probably one of the best performing board members I've ever seen in the time I was on the board throughout the time I've been in this job is Higashi-san, Terry Higashi, CEO of Tokyo Electron and his predecessor Akira Inoue. These were two people I highly respect as leaders and they followed Takayama-san who owned his own company Hakuto Co., Ltd. in Japan. So we've had some very, very senior outstanding leaders on that board.

Wadsworth: Tell us about China? And do you have any board members from China?

Myers: No. But right now I'm in the process of recruiting the president of Suntech. Suntech is the biggest, right now, photovoltaic cell maker in the world. Dr. Shi [Zhengrong, Chairman and CEO of Suntech Power] I've approached him. I'll be meeting with him soon to become a candidate and voted on our board. He would be the first Mainland Chinese board member.

Wadsworth: Before you had a trade show in China you, of course, had trade shows in Japan, Korea, Singapore. Tell us about getting started in China and what's-- how big it's become.

Myers: We originally started with the trade missions in China in the early 1980s, '82, '83, '84 timeframe. We had our first show in China in Shanghai in 1987. There was a period of time in that first three years we didn't have a show but in the beginning and when I first came into this job and I was on the board we were alternating Shanghai one year, Beijing, Shanghai, Beijing. About three years after I came in this job I decided we're not going to rotate any more. We're going to do it all in Shanghai. That did ruffle some feathers in Beijing but it was nicely done. And they understand that's where most of the industry is or was at that time. Now, China is expanding all over the place so Shanghai and Beijing are the two places we have offices. We do have an office now in Beijing primarily for government relations, central government relations.

Wadsworth: Have your Mandarin language skills helped the organization?

Myers: Yes. I'm very good in Chinese. No. The people are very tolerant with people that can't speak the language.

Wadsworth: Speaking of language in as much as you have board members from all of the world and, of course, Europe too. How have you handled the language situation over the years, say at the board meetings?

Myers: We do simultaneous translation at most of the board meetings depending on the board member and their requirement for that. And it's primarily English/Japanese because most of the other regions, the people are very good in English and most of the Japanese are but some just need it more than others.

Wadsworth: In your tenure you've seen the spotlight shift not only in just the customer base meaning the semiconductor customers as far as the emphasis importance but also the manufacturing base from the United States to Japan and Europe, of course, has been there and now China. How have you managed that? Because it's been an ever changing focus hasn't it?

Myers: It's a very dynamic time. I couldn't say change of focus but certainly what we have to do is have the right events and the right people in the area spending capital money having a good high cap ex budget because our equipment guys live off of that. And then we have to put the emphasis in the regions where the consumable, our members that sell consumables can be there and be represented where the fabs are.

Wadsworth: And the emphasis in that now tends to be Asia, doesn't it?

Myers: Yes. Asia in general. It's been Taiwan and Japan and Korea but it is shifting a little more now to China. Most people see China still as the future. It's not the leader, but certainly Korea and Taiwan have been very consistent in spending capital expenditure for equipment.

Wadsworth: What's the best measure of the trade shows? Is it the number of exhibitors or the number of attendees?

Myers: Well, attendees have to be first because the exhibitor is there to see an attendee. And then the technical and business content of the meetings around the show. So those are very, very important ingredients to make the show successful for an exhibitor.

Wadsworth: And how do the various shows line up ranking wise as far as say attendees?

Myers: Well, Japan has been the leader for the last few years. This year Japan is way down both in terms of the exhibitors and we suspect it will be in attendees. But SEMICON Japan and SEMICON West are the two major shows still. I do see growth in China, especially, because we're putting together the flat panel display show, the solar photovoltaic show, renewable energy show and the semiconductor show all at the same time first time next year.

Wadsworth: What about your market statistics, tell us about the various functions that that performs?

Myers: Well, in general, we do some forecasting but not a lot. In general, we collect market statistics in the individual product category areas. And if you're a SEMI member then it's distributed to you in your particular sector of the market. And we do this-- we partner with SEAJ in Japan in the semiconductor arena and beginning to partner with them in the flat panel display market statistics. We also do studies for specific focus studies in different market categories, whether it be test, assembly, package area or whether it's a certain sector, segment of the front end. So we do special studies, but in general the monthly market statistics, we do that either in partnership around the world or on our own to produce a book-to-bill ratio, that kind of thing.

Wadsworth: I'm glad you mentioned book-to-bill because, of course, that's been something that seems to be tied to SEMI for many, many years that the financial analysts look at that and it's an anxiously awaited number. How do you collect these statistics that go into making the book-to-bill?

Myers: Well, our members send the statistics into a third party rather than SEMI and they collect all of the numbers and we get it in aggregate to look at the whole industry. And at the book-to-bill, for instance, on a monthly basis that's just North American equipment makers send the information to the third party back to us then every month we report a book-to-bill. Every quarter we look at it because Japan SEAJ does it on a quarterly system so then we've got the global book-to-bill. But on the quick month-to-month we do that just with North American producer.

Wadsworth: What's the highest and what's the lowest that you've seen in a book-to-bill?

Myers: Probably the highest has been 1.2, 1.3. The lowest has been 0.4 which we hit in early '09, the lowest we've ever had.

Wadsworth: Point four?

Myers: Point four-one I think or something like that. That is absolutely the lowest book-to-bill on record since we've been keeping numbers.

Wadsworth: What is the estimated total equipment and materials sector worth? How many dollars, globally?

Myers: When you put both sectors together we're probably in the range now of \$48 to \$50 billion. Prior to 2000 we were approaching about \$80 billion. And then we took the downturn and we came back up to about \$80 billion again and now the two together are about 50 billion. And equipment is the worst. It dropped from its peak in 2000 of \$47 billion globally to about 15 billion in '09. They've just been clobbered.

Wadsworth: Isn't the total semiconductor market not including the numbers you just quoted estimated at something like it was \$250 billion, is that close?

Myers: That's what it was. Yes. This year it's probably going to be close plus or minus some dollars probably around 200 billion.

Wadsworth: It seems to me, though, one of the interesting things is the expansion in the markets that the members of SEMI have gotten into with the photovoltaics and solar and so forth and those numbers aren't counted in that 250 billion there.

Myers: No.

Wadsworth: So it's a much larger universe that your members are serving now.

Myers: Probably the most difficult time I had and you may have been on the board at the time is convincing our board which was all primarily semiconductor people that SEMI itself as an association needed to broaden the scope. We needed to consider flat panel display, photovoltaics, MEMs, flexible electronics, flexible displays, plastic substrate, those are the future, and now LEDs and solid state lighting. But for many years SEMI lived off of pure play semiconductor and that doesn't really exist anymore.

Wadsworth: And yet, the name is somewhat restrictive isn't it?

Myers: Well, not really SEMI does really stand for the "Society of Electronic Manufacturing International."

Wadsworth: Okay.

Myers: That means I don't want to change SEMI but I can change the tag line underneath.

Wadsworth: You won't have to reprint the stationary, the logo stays the same.

Myers: Stationary is expensive.

Wadsworth: One area you have not mentioned which is very important and anticipated yearly are the various conferences. Could you enumerate those for us, please?

Myers: Well, we put on SEMICON shows certainly in Moscow, in Europe, this year it'll be in Dresden, Tokyo, Seoul, Taipei, Singapore, Shanghai and Seoul. And we will be adding to those shows now what we call Solarcons or our partners in the photovoltaic area. And we partner with Intersolar and SEMICON

West and certainly we do in Munich. We do our own Solarcon show in Korea. We're partnering with TAITRA [Taiwan External Trade Development Council] in Taiwan. And we may partner with Intersolar also in India now. We've set up an office in India and our first photovoltaic Solarcon show will be in November in Hyderabad. Our office is in Bangalore.

Wadsworth: What about the conferences?

Myers: Well, a huge number of conferences we put on are around the world. Some of them have common names and some of them don't. Our big global international trade partners we put on in Hawaii once a year and that one is about 25 years old. Since then we've started what we call GFPC, global flat panel suppliers conference, and that's, again a global one. Then we put on many regional ones. ISS, SBC, SMC, and we put these on in different regions as well as in the other regions we have a number of conferences with our own acronyms and focus. All in all between standards conferences, EHS conferences, shows, etc., we probably put on 200 to 250 events a year around the world.

Wadsworth: I think there's an interesting history about the trade partners. Can you tell us sort of the reasons that it was set up and what it accomplished and what it's become now?

Myers: Yes, well everybody wants to change the name now because it's not for what it was originally set up for. Back in the period of time when there was huge trade friction between Japan and the U.S. mid to late '80s and it escalated all the way to government to government. These were our customers, our members' customers going into a government to government trade friction. The decision was made by the SEMI board and by our colleagues in Japan that we don't want to get involved in a trade friction and the government is involved and everything. Let's get together and build partnerships. So international trade partners conference started on the premise that suppliers and customers can get together and suppliers and suppliers can get together and form partnerships, not necessarily legal partnerships but understanding industry and learn to resolve frictions without interventions of governments. That's how it started and it was highly successful. Today it's a meeting place for very, very high level customers to speak, present and network with our members at a CEO level. So we still use the name but the reason for it is quite different right now.

Wadsworth: So the *sake table talk* is how it really started with an emphasis of U.S. and Japan?

Myers: Right.

Wadsworth: And it's gone from there. And tell us the nice neutral place you picked to meet.

Myers: Well, it's always been in Hawaii. And at that point in time it was a neutral place for U.S. and Japan to meet because it's half way. But not only that, all of them like to played golf at the time. It was a great golfing place. A beautiful place to meet. But now that we've globalized it's a hard place to get to from Europe, very hard to get to Hawaii. And it's not an easy trip from Southeast Asia into Hawaii. But we're getting a better global balance at that conference. It will be in its 25th year next year.

Wadsworth: It's really an amazing...

Myers: It would have been 25 this year but I cancelled it and some people praised me for that and other people were ready to run over me in the parking lot. But because of the financial situation we had to cancel it this year.

Wadsworth: But you feel it really did help ease some of the difficult tensions that were building?

Myers: We never did get trade friction tensions in our sector of the industry. So yes, I think it had a high level of success. And the main thing, it gave high level customer suppliers and competitors an opportunity to meet where they were safe from antitrust in a very pleasant place on a non-demanding schedule that they can't run out and visit a customer or something. They're kind of there so the only thing they've got to do is talk to each other.

Wadsworth: Are there any particular people that are credited with coming up with this concept?

Myers: I suspect there's always differences of opinion but there were some real leaders in the beginning that made it happen. Ken Levy was a very, very strong leader in making it happen. Takayama-san, you know him as Shig , but Takayama-san was a strong leader there. The guy I just spoke for his appreciation day Samsung W.Y. Lee was a very, very strong leader from Korea. And certainly Makimoto-san on the Computer History Museum's oversight [Semiconductor Special Interest Group (SIG) Executive Advisory] Board which I'm also please to serve on. Some of these-- there were some very strong leaders from around the world that made it very successful.

Wadsworth: We should mention that Ken Levy is mainly associated with KLA-Tencor.

Myers: The founder.

Wadsworth: That's right. And KLA stood for Ken Levy and Associates, I think.

Myers: Right. Well, no, it didn't actually.

Wadsworth: It didn't.

Myers: I have to correct you on that. KL is Ken Levy. The A is for Anderson. Was his partner in the beginning and I think more his financial advisor and partner. So Bob Anderson was the A for KLA.

Wadsworth: Is it easy to summarize the, even though it's an ever changing palette for you, the difficulties of being global at SEMI? We hear so much talk about that now in all phases of America's economic life. But you really were a pioneer with so-called globalization.

Myers: Yes. Just coming on the board SEMI made the decision to go global. But when I came into this job I tried to really drive the global thinking throughout the organization because typically a region is going to have a prejudice to their own region. And I've tried to take SEMI at least at the headquarter level where they are totally thinking global for the betterment of the industry no matter where you're doing it in the world, a free and open market for all of our members. That's where I said it gets hard. It's easy to say global not easy to be global. So I personally have dedicated myself to try to really be a global ambassador for all of our members around the world and [it's] very hard to do.

Wadsworth: I would suspect that you don't do all of this sitting in a chair in your office in San Jose. Tell us about your travel.

Myers: Perhaps average 10 to 12 international trips a year, something like that.

Wadsworth: That's a lot. Tell us a little bit about the new directions. You've touched on that a little bit about why you feel these areas-- is that the semiconductors are not going to be as important? Or just an expansion or what?

Myers: On the contrary, Duane, the semiconductors are very important because it is the fundamental base technology for solar cells, for flexible electronics, for flexible display it's a fundamental technology. It's just that there's a consolidation going on in the major chip making but there's a spin out of other applications that come back to a fundamental base semiconductor technology.

Wadsworth: What are a few of the things you're most proud of? First of all your contributions in the silicon area, but then later in SEMI?

Myers: Yes, skipping what I'd be very proud of and many of the things I did and I shouldn't say I did, I always did something because people did it for me more than I did it myself. But the accomplishments in Monsanto and Siltec can speak for themselves. Moving into SEMI, I don't know, I think again I always felt like when you stand on the shoulders of giants you see a long way and you do a lot more. And I've always been very blessed with people, the greatest people in the world. As far as true accomplishments for SEMI I think broadening SEMI out. Bringing it into a very rapidly changing world. Attempting to get SEMI to think. And I always tell the guys, "Fundamentally think in terms of simplicity, clarity and speed," because that's basically what the world is coming to in the future. You do things with alacrity. You've got to be accountable. You've got to be focused and all of this says you've got to find the simplest way and most clear way for people to follow as fast as possible. If you look at the IT industry it's got many branches, of course, software, applications, and process and systems. I try to bring it back to where I think the contributions I can make in guidance of SEMI is that we represent the people that make the raw material and the equipment and put it together as the processes that makes the chip. And if you take the chip you can call it memory, you can call it analog, you can call it anything you want but the fundamental chip drives everything we do in software and in hardware. So what we represent may be the tail wagging the dog so to speak but it's the fundamental raw materials and resources that go in to make whether it's your camera, your cell phone, whatever it is there's fundamentally basic silicon technology there. And all you're trying to do is make it faster, smaller, cheaper, and if we didn't do that then all of the things we enjoy today and have we wouldn't have. So my dedication is how do you continue to drive that home with our membership, with our staff, and support the industry.

Wadsworth: I think that few people realize the magnitude and the reach of SEMI and let alone the semiconductor industry that it's all pervasive and everything that we really do. And the average person couldn't tell you what a semiconductor does any more than he could give a definition of electricity. You have always been known as a people person and obviously you've emphasized the importance of people in what you've accomplished. Other people feel you've accomplished a lot too. You are Chairman of the National Science Foundation Advisory Board to MATEC. And you serve on the engineering advisory board at the School of Engineering at San Jose [State] University. You're a recipient of the exemplary community leadership award by a Silicon Valley Conference on Community and Justice and just last year you were inducted into the very prestigious Silicon Valley Engineering Hall of Fame and the University of Kansas Chemical & Petroleum Engineering Hall of Fame----not bad.

Myers: Well, I think they made a mistake. They pulled the wrong name out of the file. No, these are very, very important, really non-SEMI activities, but they're important to our industry. So I have put in a lot of time with all of these people, yes.

Wadsworth: Well, it's certainly been great having you tell your story to the Computer History Museum and we thank you very much, Stan.

Myers: It was my pleasure and I really believe in this Computer History Museum. As you know, I'm a supporter personally as well as any activities they do I try my best to have our team behind them and helping them and they help us.

Wadsworth: Absolutely.

Myers: And you've seen that.

Wadsworth: We're all in this together. So thanks again.

Myers: Any time, thank you. And I kept it clean, Duane.

END OF INTERVIEW