JERRY SANDERS ORAL HISTORY

COMPUTERWORLD HONORS PROGRAM INTERNATIONAL ARCHIVES

Transcript of a Video History Interview with Jerry Sanders, III, Chairman & CEO, Advanced Micro Devices

Interviewer:	Daniel S. Morrow (DSM) Executive Director, Computerworld Honors Program
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DSM: Good morning. Today is Thursday, August 3, 2000. We're interviewing today Mr. W.J. Sanders III. Jerry Sanders is Chairman of the Board and Chief Executive Officer and one of the co-founders of AMD--Advanced Micro Devices, Incorporated.

This interview is taking place at AMD's headquarters at 1 AMD Place in Sunnyvale, California. And it is being recorded for the permanent research collections of the Smithsonian Institution's National Museum of American History, and the Computer World Information Technology Awards Foundation's archives online. The interviewer is Dan Morrow, Executive Director of the Computer World/Smithsonian program.

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This discussion, however, is private, and should any participant wish to withhold from the public record all or part of the recordings of those sessions that request would be honored for a period not to exceed 25 years. All present here are hereby both legally and honor-bound to respect such a request, and by remaining in the room accept personal and professional and legal responsibility to abide by those agreements.

If that's agreeable to all present, no mass exodus from the room having been noted, tell me when we are ready to begin and I will move forward.

I would like to begin, Mr. Sanders, by thanking you for giving us the time for this interview.

And I'd like to begin at the beginning. If you'd state your full name, tell us when and where you were you born.

JS: Okay. Well, my full name is rather elaborate. It's Walter Jeremiah Sanders III. I was born in Chicago, Illinois on September 12 of 1936. To put it in perspective, I was actually born at 6228 South Winchester, in the home of my grandparents. It was a small house in a middle class neighborhood on the south side of Chicago. That house has a lot of importance to me because, unfortunately, my parents had a stormy relationship and lived apart for much of the time between the time I was born and the time that I was five years old. I've got a brother who was born in 1941. So obviously my parents were not totally apart between 1936 and 1941, but the relationship was fairly stormy.

Those were very bad times economically. My father worked as a lineman, an electrical worker on construction projects with power lines being strung across Indiana and Illinois. So he'd be gone for periods of time on that job. My mother was quite young when they were married. My father was quite young also. In fact, my mother has passed away. My father is still alive.

In any event, in that time frame I sort of bounced around from various apartments until some time between1940 and 1941 - I know I was just coming up on five years of age. So one weekend my mother put me on a streetcar, a trolley in Racine. We used to have trolleys in those days. Fortunately, they were not horse-drawn. I'm not that old. So they put me on the streetcar on Racine, which was where my maternal grandmother's house was. Her name was Margaret Finn. She was a good Irish lady who was a policeman's widow. And Margaret Finn's house was fairly chaotic, but nevertheless, I was spending time there. My mother put me on a streetcar in Racine. We went over to 63rd Street where I got a transfer, and I got off at 63rd and Damen Avenue. Now, Damen Avenue was one block west of Winchester Avenue, which is where my grandmother's house was.

So here I was, four or five years old, and I would run from the streetcar through the alley, up through some vacant lots to get to my grandparents' house. My first memory is going up my grandparents' back stairs, going into the kitchen, and there was no grandma and no grandpa. There were just two strangers in there. As a child I had no idea what was going on. I said, "Where's my grandma and grandpa?" And they said, "They don't live here anymore." And I absolutely panicked. It was just--I was struck. I didn't know what to do. I must have shown my upset because the people who were there turned out to be actually construction workers who were doing a remodel on my grandparents' kitchen. My grandparents were just downstairs in the basement, because in those days those houses had little basements.

DSM: They were just pulling your leg.

JS: They were just pulling my leg, but of course they had no idea where I was coming from, and here I was a lost soul, right? My mother put me on a streetcar. I was five years old. I'd burned the boats. So first lesson in life was, wow, there's no going back.

DSM: Holy cow.

JS: So this interview's kind of tough for me because I really hate to go back and retrace those things. Anyway, my grandmother and grandfather pretty much raised me from that point on. There was another period after my mother and father were divorced and had remarried. My father lived next door at 6232 Winchester Avenue with his second wife, and I continued to live with my paternal grandparents at 6228. My full blood brother, Robert, the one I have in common with both parents, continued to live with my maternal grandmother.

So life sort of began for me at 6228 South Winchester-- my memory began there. I went to Earl Elementary School on the south side of Chicago, over on Hermitage

Avenue, a five or six block walk away. Which doesn't sound like much but it was really tough in the wintertime. It would be pretty cold and pretty grim.
Chicago in 1941, was of course, like everywhere else in the world, engaged in a World War. I don't remember much about that period other than the fact that the only thing I read was the comics. In fact, as I mentioned to you off camera before we started, I was reading the comics when I was three or four.

I've got daughter, she's not quite four. And I think I was reading a little better than she is at her age, but maybe not much better. She's started to read pretty well herself.

DSM: She's reading already?

JS: She's reading already. I'm pretty excited about that.

So in any event, when I started in school my upbringing was really my grandmother and my grandfather. And my grandfather had a very, very strong influence on me.

DSM: What did he do?

JS: My grandfather was actually an assistant--I have to tell you--my immediate reaction, when you said that, was that he complained.

DSM: [laughs]

JS: But actually, I think you meant what was his profession.

DSM: Indeed!

JS: My grandfather was an electrical engineer. He graduated from Armour Institute, which of course is now the Illinois Institute of Technology. He graduated in 1906. There weren't many engineers graduating in those days. In fact, there certainly wasn't any electronics, but there was electrical power. And he was the assistant chief electrical engineer for the city of Chicago. Quite a high job, actually. It was a civil service job. He had to belong to a union. The pay wasn't great, but it was not insignificant.

DSM: But in the Depression...

JS: But the Depression was over by this time. I'd remind you that now it was 1941. This was during the war.

DSM: Oh, right.

JS: So the Depression was over and wartime spending was accelerating the quality of life, at least economically, of everybody. Especially those who weren't of draft age.

So my grandfather was an electrical engineer and worked for the city of Chicago. I remember his boss's name was Snyder. I have no idea who Snyder was. I never met Mr. Snyder. All I know is that Mr. Snyder was the source of great concern to my grandfather because Mr. Snyder was a political appointee. And my grandfather had many colorful expressions. I'm not sure which one he used for Mr. Snyder. The one I remember was he couldn't find his ass with both hands.

DSM: [laughs]

JS: Mr. Snyder was my grandfather's boss, and my grandfather complained he did all the work and got none of the credit.

My grandfather was a very strong influence on me, in two ways. One, he was a very demanding person. He wasn't a particularly loving person, because he came from a family which was less than loving.

My grandmother, on the contrary, was just totally loving. So whatever sustenance and early encouragement I got as a human being came from my grandmother. Whatever standards and values were instilled upon me came from my grandfather. He was a very rigid person. And as he used to say, "You won't amount to a hill of shit." That's a little colorful, but he said, "You'll wind up just like your shanty Irish mother."

DSM: Oh, yeah!

JS: Oh, wow! Well, this says a lot, doesn't it? My grandfather had a strange view of the world, but he basically was a good person. He was a moral person. He was a very responsible person, but there wasn't much joy in his life. However he did instill upon me one wonderful thing, which I've tried to do with my grown children, and that was to get a good education. He told me that education was your only way. That was the only way.

And growing up in Chicago, as I did in those days, it was a very eclectic community, in the sense that there were very many different ethnic groups. My name is Sanders, which sounds just very white, Anglo-Saxon Protestant, which of course it is. But my friends were Danny Manzella, which is Italian as you get. Jimmy Manasas, who's a Greek. Arthur Cervenka--he was, as he put it, Bohemian. I guess that's Czechoslovakian. And this was just a cross-section and just in my school. In those days, in my high school, there were no blacks. Chicago, where we lived, was pretty much a white community, but boy, it was a very diverse community. There was substantial friction between all the various, the groups.

So my philosophy then, and now, is pretty much live and let live. Which is kind of amazing, because that says that socially I consider myself a liberal. Economically, I'm very conservative. My grandfather probably had an influence on me there. He would say that he would vote for a yellow dog if it was a Republican. Now, that's a hard thing to say when you're living in the Chicago environment where Daley was our mayor. Dick Daley, of course, is notorious for having stolen the election from Nixon for Kennedy in that infamous Cook County voting scandal, which was never ever challenged -- but life goes on.

In any event, my recollections of those early days were from grade school. I was very bright. I presume that was genetic. I had a high IQ. I never remembered what the number was. I know that it was somewhere between 135 and 165 but I can't remember what the number was, to tell you the truth.

DSM: Were there teachers that made a difference during that time that you remember?

JS: As I started thinking about that, I remember I had a kindergarten teacher named Mrs. Quinlan. What I remember about Mrs. Quinlan was that she would allow us to play in the sandbox. I thought that was really a cool part of kindergarten.

Then as I started thinking through the various teachers I had in grade school, the only one that I can remember--and it's not for a good reason, and that's why I'm not comfortable with this interview, but well, life is life--Marjorie Grant. Marjorie Grant was my eighth grade teacher.

Now, I guess I should back up for just a minute. I received what was then called a double promotion in around fifth grade. What that meant is I skipped a grade. So suddenly I became younger than all of my classmates. The reason I skipped a grade was because my grades were so good and I was just so bright that they felt they were holding me back and it wasn't challenging.

So when I did that skipping of the grade, I found myself in a somewhat more awkward position because obviously I was younger and the social adjustment was more difficult. And because I could never keep my mouth shut I always had to say what was on my mind--something which I have learned to curb over the years—but by the time I got to eighth grade I'd had a number of run-ins with some of what I will call the mentally slower kids in my class, who unfortunately were physically more advanced than I was. I was a year younger, but way ahead of them in the grade department.

DSM: Were you a big kid?

JS: Yes, I'm six foot two now. I weigh 190 pounds, and I'm quite fit, thank you very much.

DSM: Indeed.

JS: In those days, I was about five six and not particularly distinguished in my athletic abilities. So no, I wasn't a particularly big kid. And being a little younger than my classmates, many of whom were...let's just call them Mediterranean types that matured earlier, I found myself getting punched around quite a bit.

That gets me to Mrs. Grant. Marjorie--and she might have been Miss Grant, I don't know. But everybody's got to have a crush on at least one teacher. I thought she was quite attractive, and I did my best to gain her good will. I don't think I ever did. One time she called me in for a conference. She said that I had embarrassed the school. And I thought, well, I have no idea what she's talking about. I was an eighth grader. How could I possibly have embarrassed the school? It turns out that there was a citywide history contest. Forgive me, I guess she was actually my seventh grade teacher. So I was one year younger than my classmates, and I was in a class one year away from graduation from grade school. Yet, from our school I had been the one, based on competitive testing, who was going to represent Earl Elementary in a citywide history contest.

So I went to represent the school, and actually, I distinguished myself. I got an honorable mention. I was devastated. Honorable mention. I wanted to win! I wanted to win. I wanted to be number one, but I get an honorable mention. Some of the people there said they thought that was really quite an achievement, considering the fact that number one, I hadn't had one more year of school and one more year of exposure to history--

DSM: But you're 12, 13 years old--

JS: 12 years old. And the reason she claimed that I had embarrassed the school was that I had gone to the banquet celebrating the victors-- and I hadn't worn a suit. Well, I didn't own a suit.

DSM: Oh...

JS: I had gone with a pair of slacks and the best shirt I had. I remember it well. It was probably an atrocious thing in retrospect, but it was a John Wayne kind of western shirt of royal blue, and I wore cocoa brown pants--they were my best pants. That shirt was also my best shirt, but that embarrassed the school because I didn't have a jacket and tie. So while I was sitting with all the kids from the other schools I was aware of the fact that they were wearing suits. But hey, I was a 12-year-old kid and I didn't own a suit.

DSM: Oh, man, and to have Marjorie tell you that.

JS: So Marjorie said, "If your family can't afford clothing for you, we can get you money through welfare." Well, I was incensed. And I said, "My grandfather's a college graduate. He's the assistant chief engineer for electrical engineering for the city of Chicago. My father is a responsible man. He's a lineman."

By this time I think he was a street light repairman and traffic repairman. Not what I would call a great job. But he was a good, solid blue collar worker. But I thought, this is outrageous. This is truly outrageous. I don't mean that that's what made me a rebel against authority. But it sure made me question authority's responsibility, and really looking after the needs of the people over whom they had authority.

So that's my memory of grade school.

DSM: Your grade school career, holy cow.

JS: Yes, that was not a good deal. That was not a good deal.

DSM: But certainly it had a major influence in shaping your attitude toward things.

JS: Yes, it did. As I say, competing has always been important to me. I like to win. Second thing, I'm trying to figure out when this concept of treating people fairly started. I think that was part of it. I just thought this was just an outrageous thing.

However, when I got to high school that was kind of fun.

DSM: Where did you go to high school?

JS: I went to school, it was called Lindbloom Technical High School. Lindbloom Technical, by the way, meant that they had many courses for people who weren't planning to go on to college. And of course in those days--remember, this is 1949--people weren't planning to go to college in most cases. So they tool machine shop or auto shop or wood shop or something like that. But Lindbloom Technical High School also had what they called a general curriculum, which was a college preparatory course. So I enrolled in that. I never took wood shop or machine shop or any of these jobs, which would lead to more of a blue collar worker, because my grandfather had imbued in me, you have go to college. You have got to get an education. It's the way you're going to get ahead.

DSM: Were you better on the math and science stuff?

JS: Oh yeah, I was dynamite. Actually I guess my weakest point was music. I was quite artistic--at least they thought I was. That's something I always wanted to follow, and maybe my next life I will. I don't mean that I'm thinking I'm going to have a reincarnation so much as CEOs don't go on forever, and at some point in time I will have a life after a CEO.

So, artistic I thought I was pretty good. I certainly got good grades there and commendations. Music, I just don't have a good ear. I don't have a good ear for languages. It's the sounds I have a problem with. I'm much more of a visual person. If I can see it, it's mine. I own it. If I hear it, it's not the same.

When I was in high school I had a number of teachers who had a modest influence on me. Unfortunately, I can't pull their names out right now because none of them really made a big impact on me. What was much more of an impact on me was the administration of the school. First of all, I should tell you. When I went to Lindbloom High School...

DSM: Now, Lindbloom was in the same--

JS: Lindbloom High School was a block away from my home. So I was home for lunch every day. Which was good, in that I was home every day, and I didn't have to fight the cold weather the way I did when I went to Earl, which was closer to six or eight blocks away. The difference between a mile and an eighth of a mile is a big deal when it's below zero.

DSM: Winter in Chicago, yeah.

JS: --and blowing snow.

But Lindbloom High School was very, very interesting because I was selected out of the freshman class, as was a beautiful girl named June Gray. And June Gray and Jerry Sanders--in those days I was Wally Sanders. I'm still in the Wally period. Obviously, Walter--I was Walter III. So my grandfather was Walter, my father was Walter Jr., and I was little Wally.

So I started out as Wally Sanders in high school. And as I said, I was selected. They did this little photo study of freshmen. You know, with me kissing her locker--I didn't kiss her, because they... But, you know--

DSM: Too shy.

JS: Too young, but the idea was here were two freshmen getting started at Lindbloom and exchanging looks in front of the locker and so forth. Well, that was kind of the high point of high school for me, actually.

DSM: [laughs]

JS: Because again, I went through the same kind of situation. Never able to contain what I thought was my razor sharp wit, often at the expense of people who were somewhat slower on the uptake in some of these things. I managed to be always the kid that always had his hand up first to answer the questions. And like my three-year-old, I just had so much impatience I just had to be the one to answer. I had to answer.

And after a while they stop calling on you when you always had the answer first, because that's not good for the class.

DSM: Sure.

JS: That made me very bored. So once I got bored, then I started cutting up and trying to get attention from whatever insecurity that had been either genetically implanted or the result of my early, early childhood.

But in any event, I had a pretty good time in high school. Except again, because of this smart mouth, I found out myself getting into fights--fist fights. Not in class, but after class the guys, they were going to get even with me for some of these things I did.

So I'm going to tell you something which is quite embarrassing to me, but it's nevertheless true. And it certainly shaped me. I could never walk away from a fight. I mean it didn't matter. I'd fight. I'd do the best I could. And they just kept getting bigger guys to fight me. Until finally, when I was like a junior--and again, and being a year younger than the other guys--

DSM: And physically, that year--

JS: But in turns that I'd started working out with weights. I thought, this is nonsense. I'm going to get punched around. So I started doing a little bit of barbell work, and so became stronger, became a little tougher.

DSM: So you started working out as a matter of necessity.

JS: Oh yeah, this was self-defense. This was it. This was self-defense. I thought, I'm either going to have to keep my mouth shut all the time, never speak my mind, or I'm going to have to learn how to defend myself because these guys are not going to let me off the hook.

So I'm reminded of what Aristotle said: you're always going to be subject to criticism unless you say nothing, do nothing, and are nothing. And I said, I've got to make something of my life. I'm not just going to sit in the background and say nothing.

So I wound up in just a really horrific fight, where I got kind of punched around pretty bad, but not enough to satisfy the enemy. That wasn't a good enough beating, so they sent me to the next guy, who was the fullback of the football team. And this guy outweighed me by a good 75 pounds.

DSM: So this is like sophomore, junior year?

JS: No, this is junior year. This is my junior year....and by the way, these fights became quite an event. So they'd be held out behind the school. You know?

DSM: Sure.

JS: It was pretty awful. It came to the attention of the school administration--I'm not sure how. Hopefully, maybe June Gray reported it. Maybe she felt sorry for me since I was such a sweetheart as a freshman. Anyway, I was called in to see the assistant principal, Edgar Palmer. He asked me what was going on. So I basically explained that I'm not sure what was going on, but I was having these fights. He actually called an assembly--talk about an embarrassment—he called an assembly, and advised anybody who had an interest in this subject to come to the assembly hall.

DSM: Holy cow!

JS: I guarantee you there were more than dozens of people. Whether it was a hundred people there I'm not sure. But they were all there. And basically, I think what these guys said is, there's something about Jerry that just pisses us off.

DSM: [laughs]

JS: And I thought, wow. I mean that was not the words that were used in 1953, but that's what it was. He comes in here, he wears draped pants, he wears a ducktail haircut, he wears draped pants--they were pegged pants--like zoot suit pants. And I thought to myself, what has this got to do with anything? I'm going to dress that way. I'm going to dress that way. Now I know now, I was looking for attention. But when I was looking for attention, I was also a straight A student. I was a straight A student, and of course this was infuriating, right?

DSM: Yeah. This must have mystified...straight A students usually aren't the guys that dress like that or fight.

JS: That's right. So I was this anomaly.

So he basically told the assembly, this isn't right. He didn't use the words, but...having fights, this isn't right. If there's a problem, if he's doing something out of line, let me handle it. This is a school administration problem and this is a personal thing. This is just not right.

So he took me aside and he asked me, "Why do you wear these clothes and why do you do these things?" I mean compared to the way kids dress now, I wasn't that out of line. I wasn't the only guy who wore this kind of stuff. But I was the anomaly.

DSM: Were you a loner?

JS: Oh no, absolutely not, absolutely not, I had some very close friends. And those are the close friends that changed my name from Wally. They said Wally just didn't fit.

When I went from five foot six and 125 pounds to six foot one and 175 pounds and quite fit, suddenly I was Jere the Bear. Because my middle name was Jeremiah, so I went from Wally to Jeremiah to Jere the Bear and Jerry. And I've been Jerry ever since a junior in high school.

DSM: So this transformation physically takes place...

JS: In high school--

DSM: Junior year--

JS: Sophomore to junior year, yeah. By the time I graduated as a senior, I was pretty much full grown. By the time I was 17 I was six one, and I don't remember my exact weight, but I know it was in the 170 range as opposed to where I'm at now at 190.

DSM: Did you play sports or...?

JS: I played in grade school. I went out for the football team at Lindbloom, but again, I was a target of animosity. I thought, I'm putting myself at great risk here on the football field, where they can legally vent their hostility or animosity.

So to make a long story short, the transformation went on. And the reason I remember Edgar H. Palmer so much is he said, "Why do you lift weights? I said, "I just want to get strong; I want to defend myself." He said, "Well, why don't you just swim?" And I thought to myself, what? This guy's going to now tell me how I'm going to get fit? Because somehow lifting weights is narcissistic and swimming is more sport. I didn't get it, but I thought, you know what? You're not going to tell me how I'm going to live my life.

By the way, things did calm down after that. I learned to control my, shall I say, my digs or humor. And also, out of self-defense, be pragmatic--I don't want to get into a fight every day. I'm really not a violent person. I'm a live and let live person. That's why I just couldn't understand all this hostility.

Anyhow...Edgar Palmer called me in and so we discussed it. Yeah, he said that they had a problem, as we were coming up toward graduation. And I said, "Well, what's the problem?" And he said, "Well, you know, we have three people--Sarah Pistelnick, Diana Pelusak and you--who are very close in your grade points. And we're in the process of making the valedictory selection--who's going to be the valedictorian?"

This conversation was interesting to me. I listen to these guys talk about, well first, Mr. Palmer talk about Sarah Pistelnick, whom I knew, and Diana Pelusak, who I knew, but not particularly attractive girls, certainly not girls that I had any real interest in.

But I asked the killer question. I said, "Well, who had the highest grade point?" And he said, "Well, they're all very close. They're within tenths of a point, or hundreds of a point." And I said, "Yes, but who had the highest grade point?" And he said, "You did." And I said, "Then it's very simple, I'm the valedictorian." He just said, "That's not very sportsman-like." And I said, "No, I think it is." I said, "I am the one that had the highest score. I should be the valedictorian."

I've always believed in meritocracy. When I started AMD, the whole concept was meritocracy, but I'm getting well ahead of my life now. But right then I thought, I won. I should reap the rewards of my victory. I wasn't asking anybody to step down and share the podium with me, and I wasn't about to give up the podium.

You asked me a little earlier, was I a loner? I was quite the contrary. We had a group of very close friends, again, quite an ethnic, diverse mix. Ralph [Vavada] was a very good friend, still alive, still lives in Chicago, a general contractor, still contacts me. Wally [La Macky] was probably my closest friend in those days. He is a recently retired dentist. Devastated by the fact he wasn't elected present of the ADA, the American Dentist Association. He tried so hard, so I feel sorry for him, that he never really achieved that because that was something he really wanted to have as sort of the pinnacle of his career.

A guy named Chip [Sokol]. His first name was really Romauld. Who's got a name like Romauld?--so that's why he became Chip. But these are the guys I hung out with. John Paul [Shoelan], whose nickname was [Shang]. He was the athlete in our group. Great gymnast, used to ride motorcycles. Unfortunately, he died a few years ago of lung cancer because he was just a chronic smoker. Mike O'Rourke, another good Irish guy who is a pilot these days, and as far as I know, he's still flying for, maybe Continental Airlines.

In any event we were really a close group, quite a diverse group. And they just found it remarkable and wonderful that I was the valedictorian because obviously Sarah Pistelnick and Diana Pelusak were much more the studious types. Well, I shouldn't say obviously, but if you knew them, you would say they were much more the person you'd expect to be the valedictorian.

So I gave my valedictory address. And I remember parts of it to this day because I referred to the fact that if you place a frog in a pail of hot water, the reptile will kick its legs and jump out of the pail. But place a frog in a pail of tepid water and slowly increase the temperature, and the frog, unknowing of the change in the environment, will boil to death. And this, in my view, is the way most people are. They aren't aware of the changing environment around them, and they don't adapt to it. And I called upon everybody, as a 17-year-old high school graduate, to recognize the changing environment and adapt to it. It was kind of fun.

My grandfather and grandmother attended the ceremony. It was only a half a block away. My father, oddly enough, didn't attend. It was too far to go. That didn't feel real good. But hey, it was better than my college graduation where none of the family showed up.

DSM: You were saying your grandfather made it clear in no uncertain terms--

JS: Oh, he said, "You really have to be a college graduate. You really have to go do that." Now, what did I want to do with my career? I didn't have a clue. I knew I was good in math. So I wound up saying, "Where am I going to go to school?"

I had some scholarship opportunities, but the one I selected--and by the way, in a small way I still give back to it--was the George W. Pullman scholarship. George W. Pullman was the inventor of the Pullman car, made a fortune, and put some of that fortune into a foundation, the George W. Pullman Foundation, to help on a competitive basis, competitive scholarship testing employees' children during the absence of any employees' children, just the general public, with college scholarships.

Well, even back then when I graduated from high school in 1954, George W. Pullman scholarship had more money to put out for scholarships than it had qualified children of the Pullman Company, right? Because there just wasn't any, industry had gone from trains to planes and so forth, and now the Internet.

So I took that test and I won. Again, I achieved a cash stipend per year for college, and I chose the University of Illinois, Champaign-Urbana, which was fortuitous because it's a great school. It's one of the top engineering schools, and moreover, it's one of the top electrical engineering schools. It's been in the top five for the longest time, great school. And of course, this was serendipity. I went to the University of Illinois at Champaign-Urbana because the stipend was a cash stipend. The tuition was low, and that left me free cash to have a better life.

DSM: Sure.

JS: So it didn't really require me to have a job during the school year. So I went down and I started in chemical engineering. Why in chemical engineering? Well, in those days I went to my vocational counselor. I was looking for what pays the most money.

My grandpa said I had to be an engineer. He said, "You've got to be an engineer. This is where the money is. This is where the jobs are. You'll always be able to make a living." My grandfather is extremely conservative. You have to be able to make a living. "So don't set your sights too high. Get a college education, be an engineer, you'll always make a living." My grandfather, of course, having survived the Depression, having raised four children, and unfortunately for him, a grandchild, was very sensitive to be able to make a living.

Chemical engineers made more money to start, according to the charts I saw, than any other engineering profession, so I went into chemical engineering. But I found out when I got down to the University of Illinois, the chemical engineering curriculum was part of the liberal arts college, because chemistry and chemical engineering were a part of liberal arts, where all the engineering activities on the engineering campus were on the engineering curriculum college engineering.

So for a number of reasons, I changed to electrical engineering. Thank God to this day that that's what I did, because that just led me on a career to be an electrical engineer, which prepared me for the great success that I've had for life.

And in college there were a number of professors who were important. But the one that stands out in my mind, and I don't know if he's still alive--I hope he is--but his name was J.P. [Ruina]. And he taught information theory. Taught me about Black's information theory, Black's theorem, and sampling, and all the things we now take as second nature, all the things that which really are part of why we can send video and audio in digital form over the ether, if you will, so it's really very exciting.

But what J. P. [Ruina] said to me was, "Jerry, don't be a dilettante. You have incredible intellectual capability. You can go as far as you want in engineering. You have great capability. Don't be a dilettante." He said, "I have a fear that you don't want to get immersed in the detail. Don't be a dilettante."

I found that interesting because I don't consider myself a dilettante, but I find that the fact that I'm capable of having a level of penetration on many subjects as a generalist using my God-given intellectual capacity. I am a much more successful CEO, and have been much more successful with my career than had I pursued a drill-down philosophy and a specific engineering discipline. And yet, I think I've had the ability to drill down when necessary within my business environment to be successful.

A *Fortune* magazine article about me once said, "Jerry floats above it all." Yeah, until he sees a problem, at which time Jerry pounces. And let me tell you, many people aren't happy when I pounce because my Socratic questioning method is fairly good.

DSM: Well-honed over time?

JS: Well-honed, yeah, and I'm a hard guy to snow.

DSM: You almost didn't finish university though, I gathered. Not for any academic reasons, but a serious problem in your first year.

JS: Yeah, well, you're on target. My first semester was down at Champaign-Urbana and I pledged at Phi Epsilon, fine fraternity that my cousin, Eugene W. Lewis, was a member of.

They wanted me in there big time, just as they wanted him in there big time, because they were on social probation for grades. So they wanted to get some brains in there to help bring the grade point of the fraternity up, and I went there, and I was enjoying it.

DSM: So this is your freshman year?

JS: This is my freshman year, my first semester. But I graduated in February because of this double promotion thing where I skipped a grade. I was a February graduate. So I went down to the University of Illinois for the February to June semester.

Then I went back to Chicago, and it was close to my 18th birthday. It was in Chicago in the fall of my 18th year that I went to a football game, a Lindbloom High School football game. And at that game, I ran into some former football players whom I knew who had become friendly with me and invited me to go to a party with them that night.

DSM: Not the same football players that once beat you up?

JS: No, no, no, in fact they said it was my courage to stand up to these bigger guys that actually made a lot of the guys who thought I was being picked on to become my friends.

People were polarized over me. There were those guys, they just wanted to make sure that I got my comeuppance. I wasn't sure what I was getting my comeuppance for—maybe for being a smart aleck. But there were other ones who thought, "Hey, this guy's distinguishing himself pretty well. He doesn't back away. He doesn't run for cover. He gives it his all."

We went to a party--and you have to understand at this point in time I don't smoke. I didn't, I don't now, and didn't then. In those days I wouldn't have a drop of alcohol. Not just because I was 18. I just thought this was in conflict with my weight training and my sense of good health. No alcohol, no tobacco, forget about it.

DSM: Sure.

JS: So we're at this party and there's a certain amount of drinking going on, mostly beer. And these were kids, I'd say in the 18 to 25 range. Past high school, but you know, young adults, whatever.

And Jim [Numsic] got into this brouhaha with a guy named Bob [Beocheck], who was the leader of a gang called the Shy Nine. And Bob [Beocheck's] girlfriend and Jim [Numsic] started to dance. And so there was a challenge. So they went outside to fight it out, right? Mano-a-mano, Jim [Numsic] and Bob [Beocheck].

DSM: One on one?

JS: Well, that's the way it was supposed to be. Okay, so it started out that way, and then things started going badly for Bob [Beocheck]. Jim was doing pretty well.

So a couple of guys jumped in to help Bob [Beocheck], at which time I said, "I can't tolerate this. I've got to go help my friend." So I weighed in, at which time Jim [Numsic] and Milo [Purello] ran for the car and left me there.

DSM: And you're there by yourself.

JS: There I was, by myself. There is no glamour in this thing. If this was a movie they'd say, "Well, after the first few minutes in the reel he was distinguishing himself." But it wasn't very long before they tackled me, they got me down, and they just literally nearly kicked me to death.

The fractured my skull, broke my nose--that's why you're photographing from the left. So my nose is not more crooked than normal, ribs--I mean just a disaster. And they left me to die. They literally left me to die.

The police were called because this was going on in the street of a Chicago, suburban neighborhood.

DSM: I heard last rites were given.

JS: The last rites were given. Thank goodness, my next door neighbor, a young man named Roger Iser--good old Roger--he wasn't about to leave me there. He didn't know what to do. So he threw me in the trunk of his car, literally, and drove me to the Little Company of Mary Hospital--which wasn't far away at Evergreen Park near 95th and Ashland Avenue--and dropped me off at the emergency ward at Little Company of Mary and said I was hit by a car.

He gave them my name, and I was unconscious. They gave me my last rites. My mother, I don't know if my father came out, but I know my grandfather came, and they didn't expect me to live. But thank God, they said to me later, "God, you're so fit. Obviously you're young, strong, no alcohol. Better take care of yourself, Jerry." I survived. I survived.

I still carry literally the physical scars. I don't think I have any mental scars. I think it taught me a great lesson, though, who your friends are. I don't think I've ever learned the lesson to not jump into a fight when I think somebody's being unfairly handled, although it might not be a physical fight anymore. But I think my view is people should be fairly treated, and know who your friends are.

And I listened to these guys when they ultimately came to the hospital to visit me to tell me their reasoning. Well, Milo [Purello], he couldn't jump in because he was on probation or payroll because he had been convicted of attacking black people with baseball bats. And actually, some of them had died.

DSM: So he couldn't.

JS: So he couldn't possibly get involved because this would of course, he would wind up in jail. And Jim [Numsic] said he had a wired jaw from an injury from playing football.

DSM: He might get hurt.

JS: He might get really hurt. What am I, chopped liver? So I listened to these guys: "Yeah, I understand." But I never spoke to either of them again. I mean it's like I had my own fantasies--wouldn't it be wonderful to get even with those guys that did this to me?

It turns out, I was told that Bob [Beocheck] was found beaten to death in a gang activity in Denver some years later. But he was destined for that. These guys were all prosecuted, I might add, for aggravated assault. Those who were pled it out. They were all given probation. It was a joke. This was even back in 1954.

DSM: Unbelievable.

JS: So life goes on.

DSM: How long were you out of school then?

JS: A semester. I missed six months of school and then I went back in. When I went back to school, and I still had my scholarship because my grades were great from the first semester so I was fine with that, still had the scholarship.

I went back to school in Champaign-Urbana was the downstate campus, but there was a campus in Chicago which was called Navy Pier. The University of Illinois was at the old converted Navy pier. So I went there for the first, the next year and a half. I did my first two years there, then went back down to Champaign-Urbana where I graduated in June of 1958 with an electrical engineering degree, Bachelor of science in electrical engineering. And then I had to go figure out, how am I going to go make a living?

DSM: Well, 1958 with an EE degree. You are in the middle of the Eisenhower period. You must have been hot stuff then.

JS: Well, you know, it's kind of interesting. Maybe I was hot stuff, but I wanted to live in Southern California.

DSM: Oh, is this where the myth of...

JS: Well, it turns out, yeah, the myth begins. In 1958 there was still a draft program going on in the United States, the Korean War, the carryover.

The issue was going to be well, you know you're going to get drafted unless you have a deferment. So that meant I wanted to work for a company that would give you a deferment because you were working in a critical industry. So that meant the aerospace and defense industry. There was no war going on, and I didn't want to give up two years of my life if I was drafted. I certainly didn't want to enlist and give up four years of my life. So I just said, "Well, let me see if I can get a job working in the defense industry."

And I went to work for McDonnell-Douglas in Southern California. Of course, McDonnell-Douglas was subsequently acquired by--actually at that time it was just Douglas Aircraft, subsequently acquired by McDonnell, as McDonnell-Douglas. Now that Boeing had acquired them. Those were the origins, over on Ocean Park Boulevard in Santa Monica. So I took a job there, and it was my chance to go to the West Coast, where I wanted to live.

DSM: Was this the first time you'd ever been to the West Coast?

JS: No, I actually visited California with my grandparents. They have a daughter, still alive, Olive, who lived in Portland. So they wanted to visit her, and we visited Portland, San Francisco and Los Angeles.

Now remember, in those days I was quite enamored of the whole bodybuilding scene and chasing girls. And so going to Southern California as a 16-year-old, and a bodybuilder, and going to Muscle Beach and seeing these beautiful girls in bikinis, I thought I'd died and gone to heaven. I must live in Southern California. So I wanted to live in Southern California.

So when I screened my job opportunities, I accepted a job as an engineer with Douglas Aircraft Company and moved to Santa Monica, California. Couldn't get much closer to the beach than that.

DSM: Okay. What car did you buy? What was your first car?

JS: Well, that's interesting. When I was in college, I was working during the summers as a helper in the electrical worker's union putting in the lighting on the Eisenhower Expressway and the Congress Expressway in Chicago. And I made enough money that I bought a 1956 Chevrolet.

When I got out to California in 1958, I had my 1956 Chevrolet, and I owned it--there was no payments on it. But of course a 1956 Chevrolet 210, which was the model, because Bel Aire was the top of the line--I couldn't afford that. But the 210 wasn't a convertible. We must have a convertible, right?

So what did I do? I found some car dealer who was prepared to give me a trade-in and set up some payments for me. And I got a 1958 Corvette.

DSM: Oh man.

JS: So I had a 1958, yellow Corvette, I lived in Santa Monica, and life was good.

DSM: Indeed. And working for a sexy company like Douglas.

JS: Well, it wasn't the most sexy company, because I will explain to you how it works. When you're an engineer in those days who goes to work for a company in aerospace, something like that, you go through a period where you are basically a draftsman. They put you on a drafting table and you make changes to wiring diagrams, and fairly mundane stuff. In fact, you very quickly find that all of your shirts have a graphite line across the waist from leaning over the drawing boards.

DSM: Thank goodness for the Corvette and the beach.

JS: So the Corvette and the beach, of course I'd wear a t-shirt to the beach because I didn't want anybody to know I was working.

Anyway, while at Douglas it turns out that there was a guy who had been an engineer at Douglas Aircraft Company who had had the desk that I was assigned when I got there, whose name was Ty Hardin. And Ty Hardin was put on to replace, as I recall, Clint Walker, on a TV series, because Clint Walker had wanted more money, and Clint Walker was let go from the show and they brought in Ty Hardin for this show.

So everybody talking about how Ty Hardin and so I got, I thought, gee, wouldn't it be great to be an actor and to just have this wonderful life. I was young. I was 21 years old. It sounds like a great life to me. A man there said, "You know, my aunt is involved in this business. You should meet her." So I met his aunt, and it was really quite an experience. She was an older woman. Of course, when you're 21 years old, everybody's an older woman.

DSM: Yes.

JS: And she heard me out, and she said, "Well, what talent do you have? Do you sing? Do you dance?" "No, I don't sing, I don't dance."

DSM: I got great math scores.

JS: I got great math scores. I'm an engineer. So I probably said something inane as only a 20-year-old, 21-year-old would say about, "I thought I could be a leading man. These guys don't sing, they don't dance, right?" She said, "A leading man?" She said, "Let me tell you something. I know a young man who has been trying to become an actor for years. He's been taking courses, he's very handsome, and he has not been able to do anything yet with his career. And if you saw him and looked at yourself, you'd see why he's much more qualified to be a leading man than you are."

The end of the story, his name was Efram Zimbalist Jr., and yes, I think so. Okay, so yes, I recognize, okay, I'm no Efram Zimbalist Jr. She said, "Actually Jerry, you kind of look like a cowboy. So I can see you maybe getting a part in some cowboy thing." I thought, God almighty, cowboy. I don't even know how to ride a horse.

So I thought, wait a minute. But then she asked me the great question. In life, there are always great questions which just clear everything up. She said to me--my wife will kill me when she hears all this, I'm sure--she said to me, "Why do you want to be an actor?" And I said, "Because I want to meet all these beautiful actresses." Right?

DSM: Sure.

JS: And she laughed and she said, "Jerry, the actresses don't go out with actors. The actresses go out with the producers, the owners of the studio." She said, "If you want to meet actresses, make a lot of money." And at the time I thought, wow, I never even thought about that.

But in any event, so somewhere along the line it got to my mind that in the society we live, even if you wanted to have a number of actresses as potential mates, whatever that meant, you had to make a lot of money. So I decided, yeah, you got to find some way to make some more money. I always thought I would just make it by what I will call the one company progress. You know, just find a good company to work with--

DSM: Be a good engineer.

JS: And just be a good engineer, work into management, and maybe, ultimately, you could move to the top. Although in the time frame of the '50s, people didn't think the way they do now in the early 21st century, that they're going to be a CEO at 30, that they're going to be a CEO at 27. It was like maybe when you were 60 you could be a member of senior management and maybe you would get a chance at getting a top slot for a brief period of time.

So I'd gone from Douglas Aircraft Company to Motorola because I was interested in semiconductors. I saw that as a much bigger opportunity than just being one of a zillion engineers in an aerospace company. Of course then I promptly got drafted. Got my draft notice.

DSM: Oh heavens!

JS: So I went down--

DSM: 22 and you got a draft notice?

JS: Yeah. Let's see. It was 1960, 1959-1960, I got my draft notice.

DSM: 23 or 24.

JS: Oh God. So I went down for the physical and I told them about my injuries and all this. And they listened to me and they said, "Yeah."

DSM: They looked at you.

JS: Looked at me and did some x-rays, and came to the conclusion that I was marginal, because I'd had a separated shoulder. This would cause, they thought, some issues. So they gave me a classification which was, I think they called it 4-S at the time. It was either 4-S or 5-S, but it meant only be called in case of a national emergency.

Since there was none, so I thought, wow, I dodged a bullet. And I dodged it with honor. Here I am, I'm fine. But then I though, now what are you going to do with your life? In those days, the military and what role you were going to have to play in the military was a factor in every male's life.

DSM: Sure.

JS: And you really couldn't plan your life until you knew what your role was going to be. Once that was sort of settled, I said, "Okay, now what am I going to do with my life?"

DSM: So that's the origin of the Hollywood career.

JS: Yeah. There was never any--

DSM: That's great.

JS: I never took an acting lesson in my life. I never did anything to pursue it other than I thought, gee, that'd be an interesting thing to go pursue. I think the only reason I thought I could even do anything like that was I thought I had great creative talent.

I also thought, since I had a great memory at the time--pretty good even now--but I had a great memory at the time...learning lines and being able to stand in front of a camera, I thought would be a pretty easy thing.

I now know a lot more about the emoting. I wear my emotions on my sleeve. I'm a pretty easy guy to read. An actor is a person who's not easy to read. Truman Capote once said actors are, “Just empty vessels waiting for a role to fill them up."

JS: Truman Capote, what was the name of that book that he wrote.

Male voice: ~~In Cold Blood~~.

JS: Yeah, ~~In Cold Blood~~. Yeah, Truman Capote made the statement, "Actors are empty vessels waiting for a role to fill them up." And of course, that cost him a lot of his friends, as well as many of the other scandalous things he said about people that caused his late life to be less than happy.

JS: So going back to college years, when I was at the University of Illinois, and I was in Champaign-Urbana, I would come home periodically, once I got my '56 Chevrolet, which meant the last two years I was in the University of Illinois I'd go back and forth from time to time on the weekends.

I'd also send my laundry home. I used to have these laundry boxes, believe it or not, and they were aluminum. You'd put your laundry in there and you'd send it home, and it'd get laundered and they'd send it back to you. When I'd go home I'd also pick up miscellaneous canned goods--peaches or pears or something to augment my frugal lifestyle--trying to survive on a scholarship at the University of Illinois.

When I graduated and I was going to be moving to California to take my job with Douglas Aircraft Company, my grandfather presented me with an itemized list of the number of times my grandmother had done the laundry. He put a value on that. I forgot what value he put on it. I'm sure it was fair. And he listed how many cans of peaches, pears, and all this stuff--and he presented it basically as a bill he had paid.

Frankly, I don't think he expected to be paid. He knew I didn't have a quarter at the time. I mean he knew there was no way I could pay him back then. Whether or not he ever expected to get paid back per se I really don't know, but it was an indication of my grandfather.

And of course that made me feel...God, there wasn't much love there. I mean if people can express their love emotionally but they do it by cooking dinner for you or helping you out when you're in trouble, that's because that's the way they show how they feel. But then to send a bill for it, well you know, while you were bleeding all over me about the sadness of your life, if I was a psychiatrist I've gotten a hundred dollars an hour, so here's, I'm giving you a discount so you'll be a hundred bucks for the two hours. That sort of sets you back.

But as I said, my grandmother was a very loving person. My grandfather wasn't so forthcoming with his affection, but I know he was very proud of me. It's unfortunate that he never got to see how much success I really had. My grandmother died actually in 1968, when I was in the process of raising the money to start AMD. My grandfather died in 1976, when AMD was at death's door as a company, so he never really got to see the great successes of AMD or his grandson. But he was very proud of me, that I had done what I had done.

Plus, as I said, the aforementioned cousin, Eugene W., and Jerry were the only Sanders bloodlines that had ever gotten a college degree, other than my grandfather--several generations. So I'm happy to say that he'd be proud to know that his three great-granddaughters are all college graduates. Two of them are lawyers. He might not have been proud of that, but I think he would have

DSM: [laughs]

JS: And that we've got another one on the way that's also going to distinguish herself, maybe as an engineer, we'll say.

DSM: Well, for an engineer, that generation saying anything affectionate would've been a hard thing anyway--

JS: Tough, yeah. That's tough.

DSM: Real tough.

DSM: How did you make the transition from being on the engineering side of business to--how shall I phrase this?--a real appreciation of the sales and marketing side? That's an unusual--

JS: Okay. Well, I have to tell you, to this day I do not think of myself as a salesman. I'm always amazed when people refer to me as a salesman.

DSM: Well, it's that Arthur Rock quote.

JS: No, no. I'm not sure where the Arthur Rock quote was, but whatever the quote was, well, as you know, no salesman ever made them money running a company.

But to deal with the issue, when I was at Douglas Aircraft Company I was given the assignment of designing an air conditioning control system for the DC-8 jetliner. It had been designed using something called magnetic amplifiers, which is an archaic technology. And it turns out because of the variations on the power supply on aircraft, the specification for the 28-volt power supply on an aircraft is pretty loose, and magnetic amplifiers do not work well with spikes of voltage. So I was given the assignment of redesigning it.

The first thing I recognized was we're going to have to get a better power supply if we're going to do a magnetic amplifier design. We were committed to a magnetic amplifier design to get a stable power supply, and then we'd have to build our own power supply regulator because the power supply of the aircraft was defined.

So I started looking at how you design a power supply, and how do you regulate the voltage. And I got involved with something called Zeiner diodes, which is a semiconductor device type which Motorola had become a leader in. So I contacted Motorola to get information about their component, the Zeiner diode, to help me design this power supply regulator and power supply system for this application. I met the salesman, and he didn't know anything. He was absolutely devoid of all technical knowledge. He handed me a book on the power supply design and Zeiner diode regulators, and invited me to lunch. He bought me the best lunch I'd ever had since I'd graduated from college. He was driving a nice car, he was well-dressed, and I thought, you know, there's something wrong here. Here's the guy who doesn't know anything and he's got all this.

Later I saw an ad in the paper for Motorola. It was advertising for sales engineers. I applied for the job. I figured this would be a way for me to make more money. So I got an interview scheduled and it was in Hollywood, oddly enough. The office was on Sunset Boulevard. Joe Van Hoplin was vice president of sales at the time, and he was doing the interviewing. I'll never forget it because at this time I had one suit to my name. I was an engineer, but engineers don't need to wear suits to work, as I said, especially when you've got graphite across your shirt.

I had one beautiful navy blue suit, and I'd worn this every time I needed to wear a suit. As I was going into the men's room to make sure I was looking tidy and had presented myself well for this sales engineering job, I noticed that the collar of my jacket had worn through and the muslin was showing.

DSM: Oh, God.

JS: I thought, oh my God. So I quickly ran into an office supply store, got some Scripto ink--because Scripto ink in those days was blue--and I rubbed the Scripto ink on the white muslin so the blue suit looked blue. Hoped he wouldn't notice this. But then I had a blue finger, which he did ask about, and I said, when I was filling my pen I somehow got ink on it.

Anyway, I had interviewed with Joe van Poplin. We hit it off pretty well, but he said, "You really have no experience. We can't possibly make you a sales engineer. But we do have some application engineering jobs and some headquarters sales application, sales support jobs in our headquarters in Phoenix, Arizona, and I'm going to recommend that they make you an offer."

And they did. I took that job. I moved to Phoenix, Arizona, and I became a headquarters applications engineer, sales support. So when people had technical questions they would call in about their Motorola's product--how to use it—and I would help them. I did quite well there. I established a good relationship with the people of power, and very quickly they assigned me to the Chicago sales office.

DSM: You went back home.

JS: I went back home. And there I was with a company car, a blue Ford with black wall tires. I still had my '58 Corvette, but I ran into some speeding ticket problems with that, which I'll get to in a minute because they kind of relate to my career.

DSM: Sure.

JS: There I was back in Chicago helping out the sales force. I remember two guys, Bob Thomas and Ray Kimball, who were the sales engineers in the Chicago area. They were hired because they were great sales guys. I remember Bob Thomas. He was impeccably groomed and he looked the salesman, but he was another of those guys--give the client the book and take him to lunch. So he needed a lot of my help. But I also played on this to learn how he sells and what are the selling techniques. I learned from him about selling.

DSM: Oh, so going with Ray Kimball--

JS: Going with Bob Thomas, I learned from selling. Ray Kimball had been hired from Cinch Manufacturing, a connector company, so he knew all the customers. So watching the way Ray had developed a relationship, I very quickly figured out one of my credos for AMD is that the salesman is the custodian of the customer. The salesman must have the relationship. Sales are built on relationships. Relationships are built on trust. So if you want to be a high-minded person in sales and marketing, which I think we are and that I try to be a role model for, is build a relationship, base it on trust. All great relationships are based on great trust. No trust, no great relationship. I learned that from these guys. They weren't technical, but I thought, if I can take my technical skill, couple it with their sales skill, I could be one successful guy.

Ultimately--and it wasn't very long--within a year they'd given me a sales territory. They gave me every rat and dog in southern Wisconsin, Michigan, Illinois and Indiana--northern Illinois, northern Indiana--because all the good customers had been carved out.

DSM: Okay, who was your first big victory after that?

JS: Magnavox in Fort Wayne, Indiana. Magnavox in Fort Wayne, Indiana was a huge consumer electronics company, but they also were doing some military work so they had some military contracts. I was assigned that territory. It was part of my territory I went down to.

What I found out was that the only thing we really had that they could buy was something called top hat rectifiers. A rectifier is basically a diode that allows current to only flow in one direction. In order to make a television set work you have to get high voltages, and it has to be direct as opposed to an AC current, so you have to be able to rectify the current so you get the voltage so you get the appropriate swing for the CRT, for the picture tube.

Well, we were making top hat rectifiers at Motorola but hadn't been very successful selling into that marketplace. I made us a huge success and I became the number one sales guy in the rectifier group, outside of automotive, for Motorola. I was a hero and I got to speak at the sales conference, talk about this.

DSM: Not too shabby for an engineering side man.

JS: That's right. But at the same time I was trying to sell a transistor that Motorola had called a 218 34, which was a silicon epitaxial transistor, and they were competing with Fairchild silicon epitaxial transistors. The Motorola spec was much better, but it had fatal flaw: they couldn't make it. Despite the fact that they couldn't make it, they could make something which was so far off spec that most people rejected it out of hand.

I was successful in selling it against Fairchild's perfect planar epitaxial transistor. So this brought me to the attention of Fairchild, that if this guy can sell this garbage when we've got this great product, we need to talk to him.

DSM: That'll do it.

JS: I had no interest in leaving Motorola, because I believed that Motorola was going to be the place for me forever. But there was one little problem with Motorola that I had at the time. I had gotten a lot of speeding tickets with my Corvette, and my license was temporarily suspended. It was very difficult to be a sales guy covering southern Indiana, blah blah blah, without a car.

So the Motorola top management said, "Fire the guy. He can't work. Fire him. Get rid of him." John Gray, who was the regional sales manager for the Midwest--said, "He's a good guy. We don't want to do that. Let's see if we can't figure out a way to make it work." You know how I made it work? I took my kid brother, five years younger than I was, I had him drive me. I made him my driver, so I had this guy for the months that my license was suspended drive me to Fort Wayne or to Kalamazoo or wherever the hell I had to go, so I could do my sales job. That was unbelievable.

So I kept my job, although I had that little thing about ,how do I feel about top management. I know my immediate manager is a good guy, and Kimball and Thomas and others were good guys, but that bothered me a little bit. But hey, life is life. They didn't know me. It was just easier. But again I learned another lesson. I care about what happens to everybody at AMD. Even if they do have a temporary problem, the solution is not just treat everybody--it's a meritocracy. I think because of how good I was, I should've been given a little special consideration.

DSM: You don't leave them hanging.

JS: You don't leave them hanging.

Now, if I wasn't a big contributor and I wasn't a big producer, okay, that's life. But I was. And if nobody's going to distinguish between the meritorious performer and the less capable performer, that's not a good sign. So anyway, Fairchild advised me to come to California to meet the management. How could I ever pass up a weekend trip to California? Meanwhile I got the ticket and I also arranged to spend a night in Las Vegas on the way back. I figured I've never been to Las Vegas. Let's go to Las Vegas--I've got this ticket.

DSM: So this is '59 or so?

JS: This was actually '61. It was early '61. I get on a plane and I go out there, and I meet the Fairchild people, and they were extraordinary. They were wild and crazy, but they were also extremely bright.

DSM: Who did you meet out there?

JS: Well, I met a number of people. I met Tom Bay, who at the time was the director of marketing. He's probably the first person in my life that I could call a mentor. And for a period of time Tom Bay, I would say, was my mentor.

I met John Reddy, who was kind of a wild and crazy guy who was running the diode plant. He was very intense, very energetic. God, I can't remember why I can't remember the sales manager's name.

DSM: Bob Noyce, did you meet him then?

JS: I'm about to get to Bob. I hadn't met Bob at that time except to say hello. I was very impressed, and that's when I made my determination. I looked at the products they had, I looked at the caliber of management they had. I met Bob Noyce, and I had never met a smarter guy in my life as Bob Noyce.

Bob Noyce--you say who are your heroes? There was a very brief period-- I think it was 1945; my hero was Phil Cavarretta. He was the shortstop for the Chicago Cubs, because when I was a kid baseball was everything to me. He had a .355 batting average and I'm almost certain that that was 1945 and it was Phil Cavarretta. And I went to a baseball game and I caught a foul ball--and he signed it for me. I kept that Phil Cavarretta baseball. God knows where it is now. I've got a Joe DiMaggio one now, but I didn't catch that one. That was a gift from somebody who knew I was a baseball fan, or I was in those days. When you're an AMD CEO, you have no time for anything

except the company. Trust me. But in those days I was a baseball fan. Yeah, he was a hero. But I never had any heroes. I wasn't a hero type.
But Bob Noyce was the closest thing I ever came to having a hero. And I'd say Bob Noyce really was my hero. I'm getting ahead of the story, but Bob Noyce is really why I made the decision to join Fairchild. I just thought this guy is so smart. He's just a brilliant guy heading a brilliant team of guys. I thought, wow, this is just a great group.

So the reason it's important for me to pull the name of this sales manager...Don Rogers. God, how could I forget Don Rogers? Don, forgive me if you ever see this. Don, you were the real reason I went to there, because he just pitched me and why I should be with them. We hit it off. I don't think Don even had a college degree, but man, he knew relationships, he knew selling, he knew taking care of customers. I loved this guy.

And we went out and drank far, far too much. We were drinking mai-tais till 3:00 in the morning--or whatever time the bar man finally decided he couldn't run the risk of getting shutting down anymore--in Tiburon, where Don lived. Now, if you know the geography out here in California, Tiburon is about a two-hour drive from Silicon Valley. But that's where Don lived. And he made that drive every day.

So I slept at Don's house that night, as far as I remember. But late into the evening, he said, okay, he met all my demands, and he said, "Then are you going to join us, Jerry?" And I said, "Yes, if the job is in Southern California." Well, that just was out of left field. They wanted me to take over a job in the Midwest. And I said, "No, I want to get back to California." And he agreed, but there was a problem. The guy who ran the West Coast had never even met me. So he just said, "Yes, it's a done deal." The next morning he said, "You know, we've got a little problem here. Now you've got to meet this guy."

DSM: So who did Don send you to see?

JS: His name was Bailey. I want to say Ray Bailey, who was a much more subdued character than Don, who was not happy that he was given me as his new guy. I think it was pretty clear he didn't really have a vote. He just really had to take me on. He really had to take me on.

Anyway, so I said, "Okay, yes, I'm coming on board." So I went back to resign. When I resigned, they tried to turn me around, to get me to stay. And I said, "You have to understand this. I want to get back to the West Coast. It's where I want to live. It's where I want to build my life. I want to go to the West Coast."

So they introduced me to a guy-- he was just a pompous ass with a GE background who, by the way, later on in life actually worked for me. At one time he actually worked at AMD for me. It is just amazing to see how things evolve over time, but at this time he said he would consider giving me a chance under certain circumstances. And I thought, the difference between the management team here and the management team at Fairchild...this was no contest. So I left Motorola and went to work for Fairchild, and I have to tell you, it was terrifying.

DSM: Well, I've heard a story about you were sort of handed two boxes of files and...

JS: You got all the stories. I couldn't believe it. Here I am, I'm in California. I am told that the territory that I am being given had been a territory that was Carl Steffen's territory, who had been recalled to active duty because he was a Naval Reserve pilot. This is 1961. And of course we're getting into the Vietnam era now, right?

DSM: Sure.

JS: So he was recalled. So suddenly this territory was there. So the guy that had been covering the territory in his absence is Don Valentine. Don Valentine is a very famous venture capitalist.

So I show up, and I don't even know where Bailey is. I said Ray Bailey but that's a lawyer at Intel. I'm pretty sure his name was Don Bailey. By this time, he had gone up to headquarters. I show up. And he basically just hands me two cardboard boxes with the files for my accounts. I mean I didn't even know where this--in fact, in those days I thought Sepulveda was pronounced "Sepul-veda." I mean I didn't know anything!

DSM: [laughs] This is great!

JS: You have to appreciate this. I have no money because let's face it, I'm still only out of school a few years. I have really accumulated no substantial wealth. I've got a small amount of money.

DSM: Barely 25, I guess.

JS: Oh, I wasn't even that. This was 1961. I was going to be 25. That's right--I was 24, because my birthday's September.

So I get there, and I'll tell you, I thought, what have I done? So now I start calling on customers. I remember the first call. I started calling on people like Lear and also had Hughes Aircraft Company, but in these days, I was just trying to dig in and just find any opening. And basically, the technique of an RFQ--request for quote--would go out, and it was very formal and here's the specification. Well, Fairchild didn't make any of those transistors because they were all designs from older companies. What you had to do is go and start over, find an engineer who was designing a new radar system or a new aircraft control computer or a new anything, and start in at the beginning. And all these bids were coming out but...guys were wasting their time with these bids. Well, my view was, I'm not wasting my time with these bids. We don't make these devices. So the guy said, "Well, if you can change this spec and change that spec..." And I said, "This is bull. This is not going anywhere."

DSM: Got to find out what the problem is.

JS: Got to start out at the beginning of the pipeline. Well, this is why Don Rogers and I--he fell in love with me. Because I was winning designs, starting out, and we got everybody to convert. So when they went to the next generation of design, instead of designing around a TI solution, or a Motorola solution, or a GE solution, they were all Fairchild solutions.

DSM: Which with that group of guys--that's strength and love anyhow.

JS: Yeah, which was to start out with our technical superiority. I had this one technique I used to use. The planar transistor that Fairchild had invented had very low leakage. That is, when it wasn't turned on there was very little current to go through--there's always some leakage, some current that flows, if there's any voltage across a device at all--but very low orders of magnitude--which means thousands of times lower than in some of these grown junction devices that TI made. And at temperature, it was very pronounced. Except at a grown junction, it was infinitely more pronounced than at elevated temperatures. So I would hold a match to the transistors while they were in the cathode, in the scope. Of course, nobody's running these things at 451 degrees, so therefore this match is hotter than whatever they run. What the leak would do is go off the scope on the grown junction and it would be okay on my transistor. [laughs]

So I convinced these guys that if you wanted reliability--and there were people's lives at stake. Airplanes could crash.

DSM: Oh, this is great.

JS: So that was a selling technique that had nothing to do with technology. They used to call me the Pied Piper, because all those guys would come out and I'd give them lectures on planar transistors and why these were more reliable, and this was driving the competition crazy.

So I was quite successful. Tom Bay, who was my other mentor at Fairchild was wonderful on the technology, but didn't have what I'll call the showmanship. The combination of Don and Tom and myself was really terrific. So it was a great marriage. And then it was Bob Noyce as the technologist. It was just a phenomenal thing--

DSM: What a group of people. You were at Fairchild from '61 to about '68.

JS: 1968, yes.

DSM: So you were there when some of the guys that brought you to Fairchild were beginning to do some other things.

JS: Yeah, it was an extraordinary period. It was an extraordinary period, because when I went to Fairchild I liked the people. I was young. I don't think I was always making the greatest career decisions. But I did decide that that was a great, great place to go--smart people, great technology, and also put me in Southern California.

Because of my success in selling, they quickly promoted me and I got married in the '65 time frame to a wonderful girl who gave me some great kids. That marriage lasted a long time. We got divorced in 1972.

DSM: You had three girls.

JS: Three girls, yeah. 1972. So three daughters.

So anyway, so here I am. I'm at Fairchild, I'm moving up in the management ranks. Don Valentine has moved up to replace Tom Bay as worldwide director of marketing. Tom Bay has gone to run another division of Fairchild. Bob Noyce is the general manager. Then Charlie Sporck was running production. So you have these icons. Bob Noyce running the division--Fairchild Semiconductor--the grandfather of all this technology in Silicon Valley. You have Bob Noyce running the division, Tom Bay leaving to go be the general manager with a different division of Fairchild, Cameron Instrument, Don Valentine becoming the marketing guy, Charlie Sporck being the production guy. And I'm brought up, I'm given what's called product marketing--or brand marketing, if you will--and all the tough jobs.

Then he brought in three of my colleagues; one guy to run sales for the computer business, one guy to run sales for the industrial business, one guy to run sales for the consumer business; all of which I had been involved in before. But now I'm given the toughest job--the military market. I had all the marketing, all the advertising. I thought, wow! I've got all of the tough stuff and I'm not recognized as being any different than the other four.

When Charlie Sporck left to start National, he basically hired me to be his vice president of sales and marketing. I never ever went. I never accepted it. Charlie and I had a wonderful dinner while he opened up some Champagne and some caviar that Peter Sprague, the chairman of National, had brought back from his Iranian venture--because he had chicken farms in Iran. So we're drinking Champagne and celebrating the birth of my daughter. And this is the 1967 time frame. So we're celebrating the birth of my daughter. Charlie is trying to persuade me to join National., but he signed an agreement with my good friend and mentor, Tom Bay, that he wouldn't hire anybody directly from Fairchild. So he was going to basically work a deal--

DSM: Sure, work a deal with Tom.

JS: No, he wasn't going to work a deal with Tom. He was going to have me work somewhere for three months or six months as a holding pattern. That smelled a little bit to me. I didn't like it very much. I really felt that I wasn't going to be the top marketing guy at Fairchild, because Don Valentine and I were contemporary--Don's a few years older than I am. So I thought that's not a good deal.

Nevertheless, I thought, well, if I'm stopped here at Fairchild and I have to follow until this guy who's a contemporary of mine leaves, I've got a chance to go be the top marketing guy, which is what I saw in my future...at National I was going to do it. So I resigned to Tom Bay, and he said, "I can't accept your resignation. You're too important." He had the president of the company, the parent company, call me to give me more options, that I'm going to be groomed, that there's no reason why I ultimately couldn't be the head of the whole thing. I thought, wow, this was my dream. Someday I would be CEO, whatever that meant to a 33-year-old kid.

DSM: Sounds like Tom Bay's a good man.

JS: And Tom Bay's a good guy. He's a good guy, and " so Bob Noyce pitched me hard-"You don't want to do this. You can't do this. Don't do this." So I told Charlie, "I can't do it because Tom Bay said, 'We will fire Don Valentine this Friday.'" They said, "We'd rather have you as the top marketing guy than Don, but you've got to give us some time." And I said--because I was, again, pretty young--"You've got till Friday." And he said, "Don isn't even in town." I said, "When does he get back?" And he said, "Friday." I said, "There you are."

So on Friday Tom Bay met Don Valentine's plane and told him that they'd made a decision, that Jerry was going to be the marketing guy and he was going to go. Well, for a while Don and I stayed friends, but then after a while Don wasn't real happy about that. And to my amazement, Don Valentine went over to be the vice president of sales and marketing at National! And I said to Charlie, "I don't understand this. You told me you were very unhappy with Don as your sales and marketing guy at Fairchild. Now you go over to National. You want me because you always said I was the one you wanted, and now you hire Don." He said, "You weren't available."

DSM: Whoah--

JS: And that cracked me up. With all due respect, this is not my value system. This is the best available guy theory. Now, best available guy theory doesn't work for me. It may be on an interim basis, but my view is hire from the top, strive for excellence, and just tough it out.

DSM: And do what you've got to do to make it work.

JS: Do what you've got to do to make it work. Whatever people you're given, that's your team. But that sort of surprised me.

Anyway, Charlie said, "You made a terrible mistake. Fairchild has no future." And of course he was right. Fairchild, parent company wasn't giving them the financing they needed. The company was not making the appropriate investments. People were leaving in droves to go to National and elsewhere. Ultimately, Tom Bay was pushed out and Les Hogan and the whole Hogan's Heroes, the whole team, the top team of people...

DSM: The Motorola guys--

JS: ...the Motorola people came to California to take over Fairchild. So there was a whole new layer of management. Meanwhile, I'm on vacation in Hawaii. This is a bizarre story because I'm on vacation in Hawaii and I hear this story, and I think, wow, this is not good. Even though Les Hogan, who's a guy I knew and I thought had a good regard for me.

DSM: Yeah, it sort of comes full circle for Jerry Sanders--

JS: Yeah, except, but here I am now. So I thought, wow, what's going to happen? I learned through Dick Hodson that they'd already hired my replacement. There wasn't a marketing guy at Motorola that came with the team. They tried to get Tom Connnors, who was the marketing guy, but he said, "This is illicit, what you're doing, taking the entire team"--and by the way, I agree. I thought it was illicit if not illegal. Certainly it was reprehensible to take the entire management team in one fell swoop, leaving the parent—this to my ethic and morality that was just an awful thing to do, just a disgrace. Tom felt the same way.

So he wouldn't go. They didn't have a marketing guy, but it turns out the famous Joe van Poplin, who'd hired me, who had been the sales manager at Motorola in prior years, had gone over to become the president of ITT Semiconductor, where he was failing. So Les Hogan persuaded Joe to come back and be his marketing guy at Fairchild. Now I knew this. So I said, well, this is really great. They've already hired my replacement. He's just not there yet, and why wasn't he there? And I was told the reason he's not there is he's got a head cold and he can't get on an airplane. He's headquartered in Europe.

So I call Les Hogan on the phone from Hawaii and I said, "I would like to apply for the job of vice president of marketing." He said, "But Jerry, you are the vice president of marketing." I said, "Well, technically, I'm the director of marketing. We have no vice presidents in the division except the GM." I said, "But I would like to apply for the top marketing job." He said, "Well, you have the top marketing job." Now, I wasn't saying, "Goddamn it, Les, you know you've already hired my replacement."

DSM: Sure.

JS: Which I would have said if I were ten years younger.

DSM: So he had no idea you knew?

JS: He had no idea that I knew. So I said, "I would like the opportunity to meet with you one on one and discuss why I think I'm the most qualified guy for this position."He said, "Yeah, we can do this, Jerry, when you get back. You're on vacation, take your vacation." I said, "I can't have a vacation now. I think there's a big contribution I can make here. There's going to be turmoil with all this change." That scared him a little bit. There's going to be turmoil with all this change. It would be useful if I got back there right away.

He said, "Okay." So I made arrangements to have breakfast with him literally the next day. I packed up my wife and my kid, jumped on a plane back to California. I'm going to meet with him for breakfast and we were going to meet at what was then called the Cabana. Now it's the Hyatt House or whatever, the Cabana. And we're going to meet for breakfast. Now you've got to understand this is 1968, all right? So I'm still only a pretty young guy, this is fall of '68 so I'm 32 years old.

I go in to meet him for breakfast and instead of meeting Les Hogan, there was Les Hogan and he's brought his entire team with him; Gene Blanchette, who ran Integrated Circuits; Wilf Corrigan, now of course the CEO of LSI Logic. He brought in Leo Dwark, who was going to be the head of R&D. He brought in Andy Procassini, his QA guy. So suddenly--

DSM: You just walked into this?

JS: I walk into--and I didn't know any of these guys, except I knew Leo Dwark--to say hello to because he had been in charge of power transistors, and I had been a very successful sales guy for him in prior years at Motorola on power transistors, and that's it. And I knew, of course, Les.

Well, I started pitching what was going on at Fairchild, what the problems were, what the issues were, and so forth. And he listened, as Les would do. Les is a good guy. But Les just listened, shook his head, "Yeah, yeah, yeah, okay, yeah, sounds right, sounds right, okay. Let me think about this."

Well, it turns out I kept my job. He came over to my house for dinner, increased my salary by 50 percent. That blew me away. He increased my salary by 50 percent. Of course, I was only making 30 grand a year, but in those days it wasn't bad. 45, with the raise I'm making 45 grand. I thought I'd died and gone to heaven. He puts his arm around me and tells my wife, "As long as I'm the guy, Jerry's my guy, Jerry's my guy."

I find out from Wilf Corrigan, who I've now started interacting with, right, Wilf tells me, "Jerry, I'm the one that said you can't lose this guy. This is the best marketing guy in the industry." So the guys basically concurred, persuaded Les to push Joe into the corporate marketing job where he just waited for the opportunity to shoot me in the neck, which he ultimately did.

That's where you get these stories that I wore a pink suit into IBM. I've never owned a pink suit. I would never do that. Anybody who knows me knows anybody who's got respect for the customer and their culture, it's me. So that was just nonsense.

Then the story that we didn't have a data book that was up to date. That was nonsense. I finally got to Les, after Joe shot me in the neck, to have Les tell me why. He said, "You remember, Jerry, after we came on board, you said to me, 'Les, I understand you're looking for a general manager for the semiconductor division.'" He said, "Yeah I am, but I'm acting in it now," because he was acting in that as well as being president and CEO of the parent corporation.

DSM: Sure.

JS: But the whole company was really making its money in semiconductors. So he said, "Yeah, I am." And I said, "I'd like to throw my hat in the ring." He said, "Well yeah, I can understand that. Yeah, I can understand." He said, "Well, you're a candidate, you're a candidate, Jerry." And I said, "Well, thank you very much." And he said, "But let me ask you this. What if you're not chosen?" And that's where my brash self-confidence, or just lack of experience, and lack of really knowing how to play Les, and why I say I'm no salesman came into play. If I had been a salesman, I would have said, "Les, whatever your decision is, I know it's the right one, and I'll support it one hundred percent." That's what a salesman would have said.

But an engineer said what I said, I spoke like an engineer and said, "I can't guarantee my behavior until I know who the guy is."

DSM: Well, also given your experience over the past several months--

JS: It didn't matter. What Les wanted was unquestioned following.

DSM: Yes, sir.

JS: Now, we visited a customer, Digital Equipment, together, Les Hogan and I, not long after, before I got shot in the neck figuratively, not literally. With my history, people might ask the question.

In any event, I'm out there at Digital and Ken Olson, as you know, is the founding chairman/CEO of Digital, and industry icon. And they're making commitment to a design and a new family of computers. And we have through, largely my efforts, persuaded them to go with a Fairchild proprietary design as opposed to a TI design, which was second sourced by any number of people. We had a better solution. We had persuaded them. We had done the engineering sell. We had gotten the job done. And all I wanted Les to do was to tell Ken, "You can count on us to support your requirements." Even though Fairchild had an abysmal record of supporting requirements on leading edge technology, which is part of the reason Charlie left, and was partly capital equipment, partly we just weren't doing a very good job.

DSM: Just reassure him.

JS: Just reassure him we'd back him, and I'm the new guy. We've got a new team, it's going to happen.

So we get involved with this conversation and Ken said, so Les says, "What would you like us to do, Ken?" And Ken said, "Well, it would make my life a lot easier if you guys would just be another source for the TI product line." He said, "If that's what you want, that's what we'll do." I couldn't believe it.

DSM: Oh.

JS: Years of work down the toilet. So afterwards, he said, "How do you think the meeting went?" He said, "Is he really happy?" I said, "It was a disaster." He said, "What are you talking about?" I said, "You have just destroyed years of hard work." I said, "We have no hope of being a meaningful supplier anytime frame of interest on those products. I said, "Les, I'm sorry, I just think we have worked very hard. We had this, we owned this." Well, of course Les couldn't deal with this.

Wilf Corrigan said to me, he said, "What are you thinking? Just agree with whatever Les does. Just agree." And I said, "That's not the kind of guy I am. I can't do that and I'm not going to do that."

I guess at the end of the day he who lives by the sword dies by the sword. One day Wilf Corrigan basically got the board of directors to tell Les, "You know what Les? You're out, Will's in." So that's how he got to be the CEO of Fairchild.

But then he who lives by the sword dies by the sword because that's how Wilf got thrown out. So I guess what's my point of all of this? My point of all of this is if you adhere to your principles, sometimes you won't win, but you'll always still have your principles,. And if you have your value system, the one thing that remains intact is when you look in the mirror in the morning, you say, "I like who I am, proud of what I've done, haven't always won, but when I've lost, I've lost gracefully."

DSM: In retrospect, it may have been the best thing that ever happened.

JS: In retrospect, it clearly was. God love Les, because he's a good old guy. Had me as a guest lecturer at Golden Gate University. As he introduced me, he said in the introduction, "The biggest mistake I ever made in my life..." And he also said this in a dedication at Berkeley, Cal-Berkeley once for a new engineering lab. "Biggest mistake I ever made in my life was firing Jerry Sanders." Well, I don't know if it was the biggest mistake he ever made in his life, but I said, and I'll say it again, "The best thing that ever happened to me was being fired by Les Hogan at Fairchild.

So anyway, going back, Ken said, "Well, we would really like you to be a source for the TI product." At which time Les jumped in and said, "Well if that's what you want, that's what we're gonna do." Everybody destroying just months and months of work, and in my view, really, I never really thought about it until this very moment, but it was probably at that moment that the concept of AMD became a possibility. I had never thought about starting a company, but with my remarks to Les Hogan about what he had done, I had definitely put in place the seeds of my own destruction at Fairchild because I later learned that Les was not someone who brooked the scent, and he was a man of enormous ego, as I guess all successful executives must be. They have a strong sense of self; but in any event it wasn't long after that, that Les decided that he was going to replace me with somebody more traditional in performance. And that left me out of a job. I had no idea what I was going to do. I had a couple little kids.

DSM: So you're 32 old, couple of kids...

JS: I was 32 years-old. I had very little savings. I had a big mortgage and suddenly I found myself being put in a position where I really had no real choice, except to resign. I was given a job in marketing development, but that was just a placeholder while I was allowed to, in theory, slide away, slip away into the night. But I'm not a slip away into the night kind of guy. I did manage to persuade Les to give me one year's severance pay, so that I could land on my feet.

Well it turns out that while he agreed to do that, he was subsequently dissuaded by Joe Van Poplin who had been an instrument of my demise. Joe's a good guy but I was just in his way. But in any event, "Joe said if you do that, Jerry's liable to do something which would hurt Fairchild," what that might be I have no idea. So he suggested, rather than pay me a year's severance pay as a lump sum, just keep me on the string and pay me for a year. Well, that was not going to work at all. But Les as it turns out, rose to the occasion, so he gave me a lump sum, and it gave me the wherewithal to decide what I was going to do.

At that time I was approached by a couple of groups, which surprised me somewhat. I didn't really know what I was going to do so I started asking around, because I think I might have mentioned earlier that my expectation was I was going to work my way up to be President of that corporation. That's all I expected, I mean that's all I wanted to do. Now that was obviously closed to me, so I had to look at other options. And I looked at a lot of things. My father-in-law at the time thought I should be a car dealer, I could probably get franchise and be a car dealer because I was a very persuasive fellow. I found that a little demeaning and insulting, no offense to the car dealers out there in the world, but with a technology background, that didn't seem like the right way to go. My accountant thought I should be in the entertainment business, and I should go out and manage talent, that I was just so persuasive and so smart and had a business head, that I could make a lot of money managing talent. He was probably right, but that wasn't something I wanted to do.

So while this was going along, I talked with Charlie Sporck, who had been a former executive at Fairchild, and at that time was the CEO of National Semiconductor. And Charlie said, rather than be assistant to the President somewhere, which is what I thought I wanted to do so I could learn how to run a company, he told, "You already know more about how to run a company than most of the Presidents I know. So why would you want to be the assistant to some President? You know how to market things, find somebody who knows how to make things and you got a business." Well my father-in-law had said the same thing, that since I knew how to sell things all you I needed is someone to make things.

DSM: So this had never occurred to you.

JS: No, had never really occurred to me. It was just totally bizarre. At that point in time two groups approached me. One was led by a fellow named Jack Gifford, who was subsequently was one of my cofounders. He went on to found a company called Maxim, which is quite a successful linear company. That is Jack's background, linear integrated circuits, or analog integrated circuits, and he had a group with him. Then there was another guy John Kerry who had also been squeezed out at Fairchild by the new management. He suggested that we should go into the business of making complementary transistor logic, or CTL, as it was known, because only Fairchild made that, and therefore there was a great opportunity as an alternate source since most manufacturers of equipment didn't want to be reliant on a single source for a critical component.

I thought you know Jack Gifford's idea is probably a good idea for making a little bit of money, because analog circuitry was more of a black art than digital circuitry. National Semi-Conductor had been formed basically as a spin-out sort of a Fairchild, taking some of Fairchild's technology in linear circuits, but Fairchild was still significant in linear analog circuitry. The digital thing I remember was a much bigger stage. I knew the world was going digital even back in 1968 and '69 when these conversations were starting.

As I said, I left Fairchild in '68, although they paid me through January of '69. So I thought, "How am I going to put these two together?" And of course sides thought this was not a very good idea. The digital guys, John Kerry, he wanted to build CTL. Jack Gifford wanted to build linear circuits. He also wanted to build some hybrid circuits, but in deference to Jack's later successes, I won't go into how stupid that idea was, and as it turned out it never amounted to anything. So I decided maybe I'd put these two together. And they both told me, "No you can't build them both in the same lab area, because the technology that's used for digital is hostile to the technology that's used for linear." And I mean it is literally hostile, because you use something called gold doping to reduce storage time to get fast digital switching. And the gold in the process would kill the amplification characteristics of a linear circuit. So they said it couldn't' be done.

So I'd like to say right here and now that was one of the very first things that I did that couldn't be done, and I think AMD has a history of doing things which couldn't be done. So I put these two groups together, and then I brought in a guy named Ed Turney who was going to be our VP of Sales, ultimately. And Jack Gifford who saw himself as a sales and marketing guy couldn't understand that. He thought I was the sales guy, and I said, "No I'm the President."

DSM Ed was the old man - he was like 39.

JS: Yes, Ed was at least ten years older than the rest of us, but he out drank everybody. He was the sales guy, but there was nothing to sell at that time, so we put Ed in charge of purchasing. So he did the negotiations, and we bought used Bank of America desks on the cheap, and we negotiated leases on space and leases on equipment. Ed did a hell of a job of controlling costs, because we started AMD on a very modest sum. So once I had these eight guys together, the five guys that Jack brought, myself, then John Kerry and Ed Turney, I went out to raise the money. That was what they really both wanted from me. Both John Kerry and the people he attracted, and Jack Gifford and the people he had with him, had been in one way or another trying to find somebody to back them. Jack had been trying for a year and couldn't raise any money.

DSM: Raising capital was a lot different in '68, '69 than...

JS: Oh yes. You didn't have the established venture capital groups that you have now. If you were like Bob Noyce, who you know was the co-inventor of the integrated circuit, and I say that in deference to Jack Kilby, who just received a great award from the Swedish Academy, but the reality is that Bob Noyce invented the monolithic integrated circuit which really is the forerunner for every microchip. So as Bob Noyce likes to say, it took him five minutes to raise five million dollars. I like to say it took me five million minutes to raise five dollars. I really had a tough, tough time raising the money because we didn't have a technology story.

DSM: I heard that Art Rock said no way?

JS: Oh well Art Rock, Art Rock's my favorite nay-sayer. I met with Art Rock, who of course was famous then and is famous now for his Venrock Venture Capital. He'd backed a number of successful companies, not the least of which was Scientific Data Systems, which I'll go into in a minute as an aside. But when I talked to Art Rock he said to me, "What's the deal?" Here I was, an engineer by background, with some marketing and sales experience, but I'm embarrassed to say in those days I barely knew the difference between a balance sheet and a PNL. And a cash flow statement was just totally alienating to me. So when I talked to Art, and he said, "What's the deal," I thought he wanted to talk what we were going to do. What the company was going to be about. But what he meant was, what is the cost per share and how do I make any money on this? I have to laugh when I think back, because of Art's personality, he just let me talk on and on about the business and really never got to that point. At the very end he said, "It's too late to go into the semi-conductor business. We backed Bob and Gordon," meaning Bob Noyce and Gordon Moore at Intel. He said, "We backed them because they're pretty special guys. We've known them a long time, and really it's too late to be in the semi-conductor business." In some ways he wasn't wrong, because there were 25 or 30 semi-conductor businesses that were being founded in the '68, '69 timeframe. And I believe that AMD and Intel are the only two surviving independent companies from that time.

So Art turned me down, put me in touch with some other people like Max Palevsky who I coincidentally saw at dinner the other night. I think Max is still on the board at Intel, although we never talked business, we just talked about other issues. I met Max and he was in his bed at home, in this lavish estate, and he was too sick to get out of bed. So I made my pitch to him and he turned me down. I had so many people turning me down. It became truly, truly frustrating. But I did have a couple of people who didn't turn me down, notably the Bank of America Small Business Enterprise Company. A guy named Steve Merrill was up there, and it was kind of interesting because the guy who introduced me to Steve, basically met me and asked me what I was going to do. He asked me a lot of questions, and frankly I didn't have the answers to any of those questions because as I say, my financial background was limited, and there was no financial officer in our group. So I went out and I bought a couple of books. I bought Peter Drucker's ~~Management for Results~~ and I bought ~~Principles of Accounting~~. And I read those over a weekend, and I became an expert on financial management. So the next time he came down I engaged Arthur Young and Company, they had done financial statements, and put together some three-year projections and five-year projections. And Bank of America was so impressed with my learning curve, how fast I had come on stream, they said they just had to invest.

Meanwhile, my colleagues at Fairchild who had been sort of spread out, suddenly said they wanted to invest. They just wanted to bet on me. Well I was just overwhelmed. So besides Bob Noyce telling me he was going to invest his own funds, which at the time was a substantial imprimatur to me, and guys like Seymour Schweber, a big electronics distributor, Tony Hamilton, Tim Kronan.

Tim Hamilton ran Hamilton Avnet. Tim Kronan was the CEO of Kramer, and all these guys wanted to invest in the company because I was doing it.

DSM: So they made a personal commitment.

JS: It was a personal thing. I was really blown away. It was very touching. A fellow named Bill Welling who went into the financial end, and a guy named Jim Martin, were particularly instrumental. Jim Martin, rest his soul he just passed away in the last 30 days. That is one of the sad things about being a CEO for thirty-one years, a lot of people change in your life. But in any event, Jim Martin introduced me to his boss, a guy named Mike Shanahan, at the Capital Group, which was a big mutual fund manager and pension fund manager in Los Angeles. Mike was phenomenal. He was one of the smartest guys I'd ever met. Mike started talking to me, and he introduced me to a guy named Jonathan B. Lovelace, Senior. Jonathan B. Lovelace, Senior actually financed Walt Disney. And he loaned us 50,000 bucks to get this thing off the road. I have to tell you, that's where I started coining the name, AMD was a damn Mickey Mouse. Because he founded Mickey Mouse and here was AMD. So rather than trying to be too full of ourselves and what we were going to accomplish, I just made light of it and said, "Hey look, basically our premise is this: the customers for computation and communications equipment want more than one source of supply with a critical components. AMD is going to be an alternate source of those components." There was enough price umbrella, and we wouldn't have to do a lot of extensive research and development and market development because the market was there. And that would enable us to quickly turn a profit. It wasn't the most glamorous thing, but it worked, and we went to market, we had our first products out.

We founded the company on May 1st of 1969. In eleven months we were in the marketplace with products, both digital and linear. We turned a profit shortly thereafter, and went public in 1972. I sort of told a lot at one time, I'm sure you've got some questions in between so maybe I should shut up for a minute and hear some questions.

DSM: Mr. Lovelace was on my list of questions. The legend is that he not only invested 50,000 dollars–

JS: It was his own money.

DSM: But also, maybe more important, entrusted you with a list of names of people that you could go see.

JS: He absolutely did. As a matter of fact as I was brushing my teeth this morning, I was scratching my memory for who was a critical guy in that scenario. I think he passed away, but his name was Dick Hexter. Dick Hexter was a Senior Vice-President at Donaldson, Lufkin and Jenrette. DLJ formed a group called Sprout Capital, which was a fledgling venture capital firm.

Dick Hexter was well known to Mike Shanahan and the Lovelace family, Jonathan Senior and his son, John Junior, who subsequently ran the company and has been a friend for decades. Well they went back to talk to Dick Hexter, and it was very clear that Dick Hexter did not want to talk to me. He didn't' like our business plan. He didn't like the concept of being a second source. He didn't like the fact that it was in technology. I thought, "wow, this is going to be tough. So why is this guy talking to me at all?" Well the reason was that in those days, the securities industry had something they called give-ups. Basically they were fixed commissions. And since the capital group purchased lots of securities, a lot of commissions were paid. But since DLJ at that time was a research firm and didn't actually do the trades, they got what were so-called give-ups. They were given a portion of the commission in return for their research work. So basically, Dick Hexter talked to me because his firm's largest source of income, the capital group, told him to.

Anyway, I finally nailed him into an interview. It was taking place at the San Francisco International Airport at the TWA Ambassador's Lounge, and I had thirty minutes while he was changing planes on his way to Hawaii. Needless to say I persuaded him to invest, and they were a major, major investor. And of course, that was the genesis of a long relationship between AMD and DLJ, which maybe still hasn't ended, except DLJ ended with the acquisition of DLJ by CS, which is of course Credit Swiss Corporation, just in the last few months. So Dick Hexter became a member of my board, Mike Shanahan became a member of my board. And a wonderful human being who is still on my board is Dr. Gene Brown, who was a Stanford professor. Before that he was a Harvard professor, and before that had been Mike Shanahan's professor at Stanford when Mike was one of his leading lights getting his MBA from Stanford. So he joined the board, and suddenly it looked like there might really be a company. Some other people chimed in. A guy from Schroeder, Schroeder-Rockefeller which was a combination of Schroeder's Bank, the guy was named Bob Sandell. He came over with his suspenders and met me in our very austere temporary offices, which was a former rug cutting company.

DSM: I was going to ask about that.

JS: And he said to me, "Jerry anybody who's prepared to live like this is obviously is cost-conscious and we'll make an investment." So somehow between my friends at Fairchild, a limited partnership that was managed by Bill Welling, and was invested in by people like Seymour Schweber and Tony Hamilton and others, and all my former colleagues at Fairchild, we put together the necessary funds to start the company. The closing required one million, five hundred thousand dollars. Some of them were even personal checks, but we got the job done. We got the money and on May 1st of 1969, we were off and running.

DSM: And then in September you hired the first non-Fairchild employee, Dick Pr...

JS: Dick Previte. You know, you're exactly right. It turns out I misspoke slightly, when I said we were off and running on May 1, 1969, that's true, however we didn't complete the financing until the fall of '69. One of the reasons it was so difficult was the stock market was dropping, what at that time seemed like extraordinary amounts of hundreds of points, whereas today those things happen in a day. But in those days, it was a pretty tough market. And basically a number of the people, not the least of whom was Dick Hexter, said they wouldn't invest in us until we had a chief financer on board. So I hired Rich Previte, who had been working for a division of FILCO, who had been in the semi-conductor business, at least peripherally. So we got Rich on board, and the ninth employee was Donna Melleck. Good old Donna Melleck, she was our first mask designer. We used to draw out the masks and then shrink them photo-lithographically as opposed to now where it's all done in computer driven technique, but in those days they were hand-drawn. Gene Connor was another Fairchild guy, he was number ten. I don't remember what Rich's employee number was but it had to be around that. He was the first one that I remember not from Fairchild, that's right.

DSM: Given the level of terror in starting a new business in 1968, 1969, it was a lot different than it is now in the year 2000. Is there a point that you remember, a major sale or a major deal in which you knew the company was going to make it?

JS: I think that the answer to that question is, I knew the company was going to make it about a year and a half ago when we introduced the Athlon Processor. So for 31 years, I have run this company as though our very survival was at stake. I think that's what's kept us agile. I think that's what's kept us successful. But in those days, the first thing was raising the money. It was interesting because Jack Gifford had such a difficult time and was unsuccessful in raising money. The guys were pretty willing to take the crumbs from the table. I wasn't the most sophisticated guy in the world, but the crumbs from the table meant that I only had 6% ownership of the company, even at the founding. The other seven guys each had 4.5%, and frankly at first they even resented that. At first it was going to be eight even guys, but as I started talking to investors, it became pretty clear, and I know this sounds immodest, but I was told more than once, "Jerry you're the only star." And that really hurt. It was maybe nice to know that they thought I was good at what I did, but I thought first of all it was unfair to the other guys, but secondly I thought, "Hey, they couldn't raise the money. I'm being asked to raise the money. I've put these two groups together. I'm the orchestra leader." It seemed only fair that I would get some recognition for my being the first among equals. So we wound up with a deal where everybody was going to get 4.5% of the company, and I was going to get 6% of the company. We had seven founders at four and a half and me with six. That came out to 37.5%. The other ten percent for stock options for additional employees was 47.5%, and the investors were going to own 52.5% and control.

But in order to make that deal, I had to put some performance criteria in there, so otherwise we had only gotten two-thirds of that. So the guys would have gotten 3% and I would have gotten, you know, 4%. And it turns out one of those performance criteria was that we would become profitable without raising any more money. As it turns out, that was a pretty high hurdle, unless of course you have the agreement of all the investors that more money can come in without you losing that right.

Well as we began to develop the company, it became pretty clear that we were going to need to be in the MOS business. In those times we were just in bi-polar. MOS was the technology of the future. MOS now is of course *the* technology, and so I needed to raise a little bit more money. And in order to do that some of the investors said, "Well you're going to have to give up your 50% kicker on your shares." I said, "No I'm not going to do that. I'm not going to do that." So I kept working on investors until I found enough guys around who seemed to be ready to go along. But the company was really running short of cash. We needed to do this. I remember having a meeting with the founders. They said, "We just need the money or we're history. We've got to have the money. We've got to do this." Frankly I was just using MOS as a mechanism for finding a way for the investors to save face and put in more cash, because they were going to get more, but not give up our 50% kicker. And I'll never forget Jack Gifford saying to me, "Well Jerry it looks like we're just going to do it. It's 7 to 1." The seven founders had voted that we should just raise the money even if we lost this 50% kicker. And I said, "No Jack, it's not 7 to 1. The vote is one to nothing because you guys don't get a vote and I'm not going to do it." And that was when we established that yes I was definitely first among equals.

It wasn't a lot longer after that that a few of Jack's colleagues, including Jack, left the company. I think that was good because the company really had to become a digital company. The future was digital. It's all about bits. And Jack was a linear expert. He still is. He's built a great business. He's done a wonderful job. But I didn't want to be in the linear business. My reason for having both linear and digital initially was because it was pretty clear that the margin opportunities in linear were greater, but it would make you a niche supplier. As I like to say, the only people who like niches are cockroaches. I don't want to be a niche player. I want to be a major player. That was kind of a grand remark, but the reality was that I could see the way the technologies were going. The world was going digital. We had to be in digital. We had to be in MOS, and that's the way I've driven the company.

DSM: Whose idea was it to keep the product numbers so that they match up?

JS: Oh, that's a good question. Most people don't understand the significance of that. That was my idea. In those days transistors had 2N numbers, like the 2N950 or the 2N1613. Microchips had different numbers, and they basically just had alphanumeric numbers. Fairchild for example, had an incredibly successful operational amplifier called the New A709, succeeded by the New A741, and then micro amplifier 741. So other people when they saw this incredible market was being created, would replicate these chips.

In those days there were a lot of ways you could replicate the chips. There was no Chip Protection Act, copyrighting the mask layouts in those days. So people would basically knock them off, second source them, or try to, because they were technologically challenging. But they would call them by some other numbers. They would pick a letter, pick a number.

I thought, well that's too tough for the customer. Plus he has no guarantee that it's the same part. So I decided we were going to guarantee all the same specifications. When we introduced our products, instead of calling it some other number with a cross-reference chart, I called it AM for AMD, 741, AM747, AM723. In the case of National, AM, let's see what did they have…AM108, AM101A, so everybody knew exactly what those numbers were because National and Fairchild had been spending fortunes promoting them. They were designed everywhere.

Now I have to tell you, everybody wrote me letters saying that I couldn't do this, that they were going to sue me. But it turns out they couldn't, because they had no legitimacy on claiming a copyright of merely an alphanumeric. Of course subsequently, decades later, Intel sued me when we came out with the AM386. They said, "You can't do that." But we won in court. Of course we could do that. That's why since we had the AMAD88 and AMAD86, and the AM186 and the AM286, the AM386, and the AM486, Intel said, "Enough of this," and came out with Pentium. There was a name which was now a unique name and copyrightable. That's okay because that allowed us to come out with Athlon, and Athlon is a super success. Anyway, in those days, it was a major, major breakthrough. The distributors loved it, and we sold most of our products through distributions, so we sold to many customers.

Remember that in the early 1970s, the military market was aerospace and defense. It was a broad bunch of companies doing sub-contract work. They bought through distribution, and there are prints. They're internal documents called on certain numbers. So this was a much easier way for them to buy. So rather than cut price, we just gave the distributors higher margins. And of course this just gave our competitors fits. Because for us to gain market share by offering a higher margin to the distributor, the distributor loved this because he could make more money, our competitors hated it because if they gave those margins to the distributors that would cut deeply into their business. So sanity prevailed, and we managed to gain a foothold.

Then it became clear that the distributors ultimately just cut our prices, just taking the margins down back to the same margins that they got with the other guys, because that was the way they were selling the product, by giving the guy part of that margin back. We needed to go to the next step, and the next step was military quality for free. It turns out that in those days, the aerospace and defense market bought to a higher quality level.

This was before the Japanese onslaught, which raised quality levels globally. But in those days, there were two levels of quality: consumer quality if you will, then commercial quality and then military quality. So I decided, and basically stated that at AMD we would build everything to military quality only. And all of my guys said that's going to cost us more money. Yes it would, but it also gave us a selling edge. What we need to do was to have something that differentiated us, because I believed from the beginning that how you are different, how you are better is the mantra. So we offered military quality for free. Of course at first people didn't believe us. They came to our place, and we got a great reputation as a high quality provider of basically industry standard parts.

However, that wasn't a differentiator at the military customer, because the military customer was already buying the military quality. It did help us broaden our base. At the military customer level, I needed something else. So in order to further grow there, we came up with another one of my wonderful buzzwords, parametric superiority. Sounds like something that Ringo Starr is now doing on those talk shows - lot of syllables. Parametric superiority meant that while we had an identical part that met all the minimum specifications, we would have variations which you could specify, which would give you higher amplification or faster switching speeds. Or if you didn't want to specify them, you would just know because it was AMD who had them, and you had more margin, more safety in your design. That was our selling edge, and it made us quite a successful company. It was in that timeframe and the strength of these things that we went public in 1972. We became a public company. Our letters were AMDV. Those were really heady days. It was just wonderful. We were a public company. You could see how we were doing in the newspaper everyday. Sometimes you weren't doing so well, but it still was heady times. What I remember most about that time is that's when I bought my first Rolls Royce convertible. I thought I was the king of the world. My license plates were AMDV-1.

DSM: I love it.

JS: That was really, really fun.

DSM: I have to ask you this question: what happened to the yellow Corvette?

JS: Well the yellow Corvette was a 1958 Corvette, and the yellow '58 Corvette got traded in when I moved to the West coast.

DSM: So in 1972 you go public, and in 1973 you're opening in Malaysia, and profit sharing starts.

JS: Profit sharing basically was in place from the time I started the company, even when we were a private company. Obviously there wasn't any profit-sharing when there wasn't any profit, but we became profitable in the 1972 timeframe because I remember I took the company public at 93 times the most recent quarter earnings per share annualized. And in spite of that my co-founders thought I had sold the company too cheap. When we took the company public it was fifteen dollars and fifty cents. Now since that time there have been 27 splits. That fifteen dollars and fifty cents today now is down in the dimes in the fifty-cent range. So I've worked very, very hard to get the company taken public at that price. The stock never traded above sixteen dollars unlike today's IPOs. And in a matter of months, with a slowing market, the stock drifted down below two dollars.

DSM: We're going into 1974.

JS: Now we're going into the big collapse in demand for semi-conductors. By the way, I would say the good thing about that was that I did gain a little more respect from my co-founders for my business acumen as well as my persuasiveness. Because they now saw that we got the public offering off, we had the cash, we could endure, and we could get through this difficult period. By 1973 when business started to soften, then in 1974 the business collapsed, there was a tremendous overhang of inventory in the distribution. And in the 1974 timeframe, AMD was in default on its bank lines. Our largest distributors were not buying from us. One of our largest distributors wanted to return all their inventory, which would have been millions of dollars and would have just been the end of AMD. I was on holiday when that happened. Actually it wasn't much of a holiday, but I was in the south of France. I made a commitment in 1972 that I was going to go to France in the summer for my holiday for the rest of my life. And like so many of my commitments, I continue to honor it. But in 1974, things were pretty tough. I got a phone call that our distributor Kramer Electronics, was going to send back all the inventory. And my Chief Financial Officer at the time, Rich Previte said, "This is just the end. We're done here." I can't let that happen, so I jumped on a plane and flew to New York. By coincidence, on my connection from the plane to New York from San Francisco, who sits next to me but Al [Denakolov], who was the President of Kramer Electronics at the time. He wasn't the chairman or the CEO, but the President. He had been a guy that I had been instrumental in getting a job for, and whom I worked with in Los Angeles previously when I was with Fairchild. He told me it was a done deal, that Kramer was in terrible, terrible straits, that they had problems with their banks, business was awful, they had to cut some lines, had to get some cash, they had to do this because they were no longer profitable, and there was really no way I could reverse this thing. So that's what I was hearing when I was going back to meet with my Vice President in sales. This was pretty grim stuff.

So I got off the plane, and of course he didn't know that what I had learned, how grim it really was. And I said, "We're going to work this out." I changed clothes, got on the plane and flew back to Boston to meet with Mr. Denakoloff's boss, Tim Crone the Chairman and CEO. And I came up with a scheme. That's what they would call it if you were a Democrat, a scheme. I called it a solution, which was I was going to show how we could retroactively rebate Kramer on their sales of AMD products, such that we could put them from a loss position to a profit position. Of course that would hand us a huge loss. But it didn't matter, because by this time I did know the difference between a cash flow statement and an income statement. I didn't care that we were losing money. What I cared about was our cash flow, and I laid this out for Tim. He liked it. He's a very smart guy. And to Al Denakoloff's amazement and to actually the amazement of all my guys, Kramer reversed their position. They did not send the inventory back. They paid their bills, gave us the cash and we survived.

We were very close to being gone, though. In fact, we were so close to being gone, that some of our sales guys were starting to look around for jobs and were fearful they weren't even going to get paid. So I put together a program, which was called the Up Front Program. And the Up Front Program would pay the sales guys their sales commissions up front for the first quarter of 1975 on the premise that if they made the numbers, they could keep the money. And if they didn't, they would give the money back. Well this is outrageous, but I did it, because that was the way that these guys were sure they were going to get their money if they made their quotas. We had to be profitable, and in order to be profitable we had to make the sales number. Well we did it. We made one cent a share in the first quarter of calendar 1975. All the sales guys got to keep their checks. Only one guy who didn't make his individual quota didn't send the check back. And that was a big disappointment to me because I still believe most people do the right thing. He didn't. Years later he tried to get a job with AMD again, because obviously I fired him on the spot at that point, he tried to get a job back with AMD. Well he knew it was a terrible mistake. I said, "Fool me once it's your fault. Fool me twice it's my fault." So that was the end of that story. That was a really, really dark day, probably one of the darkest days in AMD's history that had nothing to do with Intel.

DSM: There was a big product shift in 1975, bipolar transistors to metal oxide semiconductors. Again, in 1977, Siemens and AMD established AMC. In 1978 you opened a big plant in Manila, and in 1979 your plant in Texas. Your shares were listed on the New York Stock Exchange, that was a big, big year. Tell me about the Age of Asparagus, what is…what is this phrase?

JS: Well I have to tell you, just listening to you tell me about that period, I don't want to say they were the golden days of AMD, because I think the golden days of AMD are here again. But those were the first golden days. That was just an extraordinary, extraordinary period. I called it the Age of Asparagus.

In 1975, you're indeed right, you'd mentioned bipolar transistors. Obviously we've never made transistors, only microchips and integrated circuits, but obviously those are collections of bipolar transistors. And in the 1975 timeframe, we came to be a significant provider of MOS, Metal Oxide Semi-conductor devices, with our first programmable microprocessor, the ADADA, a competitor of Intel's. We made MOS chip registers. We had to make, as time went on, our predecessor of flash memory. So those were very, very exciting days. But the most exciting thing was the Age of Asparagus. What that was about was, and I always used to like to use botanical comparisons, like pruning the bush so that it can flower, you have to do these kinds of things. So what we did in the 1975 timeframe was make the change from being a provider of alternate source products to innovative products of our own design. And I was comparing the products we had been making to lettuce, which was a quick cash crop that you could get out quickly and even get several crops in a year, but asparagus took a couple of years to develop into a cash crop. You had to be prepared to make the investment and wait for the crop to come in. And so since Age of Aquarius was a popular song, I used the opportunity to call it the Age of Asparagus. It got a lot of attention. We sent asparagus out to all of our customers in little crates, announcing that we had now entered the Age of Asparagus, that we were now an innovator.

I would point out that here we are some sixteen years later, and we are now number seventeen of all the companies in the world where U.S. patents were granted in the current year. That was actually was last year, in 1999. This year we expect to have more than 1,000 U.S. Patents granted, which we think will put us further up in the ranks. That's fairly extraordinary. Our company had started as an alternate source with no technology base. So we reinvented ourselves a number of times. This was the first reinvention, the first golden age of AMD, the Age of Asparagus, when the new innovative products and our thrust into MOS allowed us to grow very rapidly, grow faster than the industry. As a matter of fact, you mentioned all those plants opening up, even to this day, I'm terribly proud of what we did in Malaysia, later in Bangkok, also in Manila and China. We always broke new ground literally and figuratively, by going into areas where we were pioneers and won pioneering status. We've been risk takers from the beginning, and it's paid off.

DSM: Being in Malaysia in the 70s, I mean—

JS: When we went to Malaysia, the place where we built our factory was a pig farm. We had to evict pig farmers, and we had to fill the swamp that they were living in. In fact, even to this day when you go to that area, you can still the see the cracks in the foundations where the pilings, which had been put down into the swamps had sunk a little bit. Yes, we were real pioneers. In those days you'd run around in rickshaws and air-conditioning was almost unheard of. Gene Connor went there to build a plant, and he stayed in the ENO Hotel, and I remember him talking about his options, which were to open the windows and let the lizards and the snakes in, or close the windows and be in a sauna. But that's a story for another day.

DSM: Okay so things are cooking, it's the Age of Asparagus, and first there was the oil embargo and then in about '84, '85, the influx of Japanese technology.

JS: That was the early eighties, yes. You know it was kind of interesting. In those days our sales guys always had crazy, exciting titles, and one of them was AMD Magic, because we really felt we were magic. We really thought we were just an extraordinary company. As I think I told you, I formed AMD because I felt I was unfairly fired at Fairchild. I wanted to have a company that was interested in people. So I've said for thirty years, people first, products and profits will follow. I wanted people to have a chance to realize their dreams. Now of course a lot of people were skeptical. They felt that you had to have an authoritarian management, that people left to their own devices would do the right thing. I didn't believe that. So look at the 1974 to the 1984 timeframe. That was a ten year period there, where AMD a Fortune 500 company, put out a total return to shareholders, and another magic number, we returned almost 100% per annum per year for that ten year period. We were number one in the Fortune 1000 companies in the total return to shareholders. So, that was magic. Those were the magic days. And that was even while we were going through some struggles, because in '81 and '82, with the Japanese invasion and the Japanese dumping of D-RAMs, they drove us out of the D-RAM business. D-RAM is the Dynamic Random Access Memory business, which is why I built that factory in Texas in 1979. I remember the unveiling and the grand opening. I asked, what was the future of D-RAM, was it Tokyo or was it Texas? And I was betting on Texas. Well I was wrong. It was Tokyo. They drove us out of that business. But we changed, and we turned that into a plant to make static RAM, and a plant to make programmable logic.

So once again we reinvented ourselves, and by 1984 we were rolling. Our stock was at an all-time high. Business was terrific. We were making microprocessors. The PC market was booming. Then of course, in the summer of 1984 there was a complete collapse. AMD's revenues dropped from 256 million dollars in the September quarter of '84, to 128 million dollars in the September quarter of '85. It was a fifty percent collapse, and AMD was on the ropes. It was no longer the Golden Age. We were in serious, serious trouble.

DSM: So this was the age of staunch and the liberty –

JS: This is the age of staunch, which was stop the red ink. We had to stop the flow of blood. Staunch stood for, as I recall, something about those actions unnecessary to control hemorrhaging, Stress Those Actions Urgently Needed to Control Hemorrhaging. Stress Those Actions Urgently Needed to Control Hemorrhaging. And as we came out of that we had another program named after my daughter, Lara, which was L-A-R-A, which was Let's Achieve Record Activities. All these things were to drive productivity. Those were really tough times. What was really toughest, was I had baked into the company's culture, a no layoff program. To have to cut people back was just unacceptable, I didn't want to have to do that.

DSM: So this was 1986. That must have hurt.

JS: 1986 was terrible. 1986 was the worst year of my life. I've had some bad years, but that was probably the worst year of my life. In 1986 it became clear that at the rate of cash burn, we had less than two quarters to go. I had to cut costs and the only way to do it in a people intensive business, in a brain intensive business, was to have layoffs. It was tough. A lot of tears fell. There were a lot of broken hearts. Boy, it was really an awful, awful time.

Eventually we got the company back to a situation where it was stable. We weren't going to go out of business. I went out and raised capital and sold some bonds in that early 1987 timeframe, to get enough cash into the company to keep us going. But it still wasn't going to be enough. It was pretty clear our outlook was pretty grim; because it was during that same timeframe that Intel had stabbed me in the back and not transferred the technology that we were entitled to under our technology cross-licensing agreement and product exchange. I was in arbitration. It was supposed to last six weeks, it lasted eight years. So in 1986 my largest business opportunity had been effectively stymied. Business was very, very tough, and people basically were predicting the end of the world.

DSM: That Intel business couldn't have come at a worse time.

JS: It couldn't have come at a worse time.

DSM: Either both business-wise and personally.

JS: It was a very, very tough time. It was very, very bad, and especially because it was one of those few times in my life when my basic belief in the goodness in human nature was proven to be naïve, or at least naïve on a fairly narrow number of people. Nevertheless, I really felt that we would get through this. I'd never felt that AMD was not going to be successful. But it sure wasn't clear how we were going to be successful, and we were really in need of cash. We had excess capacity. We managed to stem the flow of red ink, but - you know, it reminds me of my Valedictory address in high school when I talked about placing a frog in a pail of tepid water. You raise the temperature, and the frog being cold-blooded, won't noticed a change, and it'll boil to death. But when you throw a frog in the hot water, he jumps out immediately. You know that implies that the only way you ever survive is crisis or catastrophe. And I came up with the idea that you place the frog in a bucket of cream, if he kicked his legs long enough he could turn it into butter and he could walk out. So I believe you just got to kick your legs a lot. You have to keep fighting, never surrender. Of course this is now where we go to Bruce Springsteen, no retreat, no surrender. So I said, "We just got to keep fighting and fighting and fighting."

Along those times there was another guy that I was fighting. His name was Irwin Federman. He was the CEO of a company called Monolithic Memories, which was having a hard time also. They had a pretty good cash position. They had over 100 million in cash, but he had no factory capacity. His products were in high demand but he couldn't expand capacity. He didn't know what to do, and he was tired. Well I wasn't tired. So we got together, and we acquired Monolithic Memories. Irwin got a chance to salvage the careers of all his employees, which was very important to him because he had the same culture as I have. And Monolithic Memories generated the cash we needed and created a new revenue stream for programmable logic, and AMD lived to fight another day.

DSM: That was an extraordinary time. In 1986, you laid people off. In 1987 you entered this Intel loss, but by 1988, you're back in the black.

JS: Back in the black.

DSM: Back in the black. Tell me about the restructuring in 1990 and making Rich President, and COO.

JS: It turns out that during these periods in the mid-eighties, when Tony Holbrook was Executive Vice-President, Chief Operating Officer, and then President for a period of time, we were definitely struggling, because our entire strategy of building blocks of ever increasing complexity, to reduce the cost, to improve the performance and shorten the time to market for manufacturers of computation and communications equipment, was suddenly in trouble, because the ultimate building block was the microprocessor. And with the microprocessor now being dominated by an extremely aggressive and now hostile, monopolist Intel, we were in deep sauce. Our whole strategy was basically foreclosed if we didn't change. You know the story about the scorpion who bites the frog whose supposed to swim across the river? Well the scorpion bites the frog and the frog says, "Why'd you do that now we're both gonna die." And the scorpion says, "I don't know, it's just my nature." Well it's my nature to never quit, and there's no way I was going to let Intel's duplicity force us out of the microprocessor business that I had fought so hard for us to be in. But in so doing, I basically wore poor Tony Holbrook out. He was pretty tired. He just didn't want to fight that fight anymore. He wanted to step aside, to be Chief Technical Officer, do something else. He just didn't to be in that pressure cooker day in and day out. And Rich Previte, my longtime friend and the first Chief Financial Officer of the company stepped up and said, "Jerry, I know your strategy. I can help you execute it day in and day out. Give me the chance." So I did that, and I think that that freed me to focus on being the architect of change, while not getting bogged down with the day-to-day activities of running the business. I think it was a very, very wise move. And I think that Rich, without a technical background, did a hell of a job. He distinguished himself to keep AMD going through a very, very bad period.

As you may recall, 1990 was another one of the big downturns for the semi-conductor industry. Our shares got pounded down to below two bucks. It was a pretty ugly time. My friend, I use that term advisably, Tom Kurlak was at the time the leading semi-conductor analyst and a Merrill Lynch spokesman, and he said, "AMD is a dead company." That was my favorite quote. "AMD is a dead company." Well, I stand before you as Lazarus. Our best years have been since 1990. We came back with a vengeance in the early 1991 timeframe when we introduced the AM386. And that is by the way, when Intel started suing us. Up until that time, there was an arbitration, but they were just running out the clock. They had the ball and they were running out the clock. They knew the arbitrator was going to take a long time. They dragged that thing on for eight years.

DSM: We're talking about this decision to bring out the AM386 in March of '91.

JS: Well I think you really have to go back to 1986 just for a minute. The arbitration started in 1986 because Intel wouldn't transfer to us the necessary materials so we could introduce a version of the 386, which we were entitled to under the Technology Agreement we signed in the early 80s. At first I think I was just in shock. I just could not believe that Andy Grove would deny what was clearly spelled out in the agreement. We were entitled to this. I just could not believe it. I don't want to get into any personal issues because I've never been one to hold grudges, because negativity just brings you down. But I was shocked. I knew the man. He's a brilliant man, and I just didn't understand this character flaw. It was a very interesting time for me because I'd been blessed, I'm a very lucky guy. I had a wonderful first marriage. I have three great kids from the first marriage, and my wife was very supportive of all my struggles. Somewhere along the line the marriage degenerated, and we got divorced. So I was a single man between 1982 and '90. And in '86, I was very lucky. While all of this was going on, my faith in human nature was somewhat damaged by Mr. Grove's duplicity, I met a young woman who is now my wife, Tawny Sanders. And as I started telling her what was going on in m life, she came with a whole fresh expression on this thing. I mean, the whole thing was unbelievable that I was going to challenge. I think she admired the fact that I wasn't going to let these people walk over me, that I was going to do the right thing. So I thought wow, this is a good woman. So while it took me four years to finally marry her between 1986 and '90, she went through some of the most awful periods of my life. The reality is that I was defined at that period of my life as to who I was. I was not going to give up. I wasn't going to surrender to injustice. I was going to fight for what was right.

At the same time, I'm a pragmatic guy. I was not going to be one of these guys standing in front of a court house with a boom-box holding an American flag, and saying, you know, "Count every vote." This is ridiculous. I think you have to be a pragmatist. I think you have to play by the rules. I felt that Intel hadn't played by the rules. I felt that we had played by the rules. I believed in the system. I was going to fight to make this thing work.

So 1986 to '90 was a really, really tough time, because there were a lot of people saying we should just give up. We should get out of this business. It's really tough. But I kept saying it's the biggest part of the semi-conductor industry, it's got growth, it's fundamental, it's absolutely the ultimate building block, we have to be in this business.

So our engineers in Texas were developing a floating point processor which was called the 387, which was the floating point processor that went on to the 287, which went on to the 286, which they developed and brought to market but didn't have a very long life, because the 386 came out and so it obsoleted it. But meanwhile, they were working on the 386, and they were doing this in a way that Intel could not say that we had in any way infringed their intellectual property. We had the rights. We did this thing completely independent. It was a reengineered version, and we came out with it. It was lower power, high speed and was a smaller chip than Intel's. It was an absolute engineering tour de force. And since they couldn't beat me in the marketplace, they promptly sued me for intellectual property infringement. Then we went to court in earnest, which didn't get resolved until 1994. That's when the courts found that we in fact had the rights to the microcode that was embodied in our circuitry as part of our patent, and technology cross license which had gone back all the way to 1975. So we had demonstrated that. It was a very interesting time. Pat Lynch was going to try the case for us. We lost the first time until the court case was thrown out because the judge found that Intel had doctored documents, had whited out dates and withheld information. So the judge threw out the verdict and censured Intel. We had a second trial, and this time I said, okay we're going to get the biggest guns we can get. So we went to Pat Lynch. And Pat Lynch says, "Gee, Jerry, I'd love to represent you, but I have to do the Exxon-Valdez deal. But here's this guy Tom McCoy, and he's really good." So I met Tom McCoy, and boy he was really good. We put together a great team, Terry McMann from another law firm was really was our man in the courtroom in front of the jury. We had George O'Reilly and Tom McCoy behind the scenes, masterminding it, and basically we kicked their ass.

DSM: When did you personally find out about the February 1994 decision, which I guess is the end of this seven or eight year litigation.

JS: I was in court.

DSM: You were there?

JS: Oh absolutely. I was in court every single day of that trial, every single day, and then I worked through the night to get my job done. I was there everyday.

DSM: What did you do after the decision?

JS: I think I wound up being at home that night eating some ice cream alone because I'd forgotten the key to my apartment. I couldn't leave the apartment and my driver had my keys. So I figured if I leave the apartment I couldn't get back in. So I recall just eating some ice cream and feeling damn good about it. I just felt vindicated. It wasn't like I had won the lottery, it's like I was accused of a crime that I didn't commit, and I was vindicated.

DSM: After eight years.

JS: So vindication is the only thing I felt. I did however, feel though that it was proof that justice will triumph, and the truth won out. I'm a great believer in the truth. My board members tell me I'm a truth teller, and a truth seeker, and I am. I don't lie to myself and I don't lie to anybody else. I have to tell you that the lies in that case were so outrageous that-- I don't even want to go there. But today, that's all behind us –

DSM: Huge cloud.

JS: Huge cloud because if they would have won, the damages that they would have claimed would have put AMD out of business. So the sordid case was hanging over my head for years. I have to say that when that thing lifted, it was a wonderful, wonderful time. And it enabled me to really set AMD up for our new golden age. That's what I'm the proudest of, and that's why I'm really going to stick around here for another couple of years, to make sure that that comes to fruition. Because what I decided at that time was that we needed to have a completely independent approach to Intel. Intel was a monopoly with over a 93% market share. If we didn't have an independent solution, we'd always be subject to them. So I felt we needed to develop an alternative.

Now since the world was dominated by Microsoft operating systems, we were fortunate that we won the case. And we had now come to an agreement with Intel that we could in fact, build devices which would run the Microsoft operating system, which would enable us to compete in the marketplace, albeit against this giant, but we would able to compete. However they forced me, as their final act of terrorism, to not build a processor that was bus compatible with their processor. What that meant was it would be the same thing as saying everybody could build an engine that would run with the automatic transmissions made by Bosch and others, except you can't, Jerry. You not only have to build your own engine, you have to build your own transmission. So that put a tremendous burden on us. Nevertheless I felt we could do it, and we did it. We did it with the Athlon.

Along the way we had a couple of interesting side trips. First we came out with the K5, which was our first independent engine, and it absolutely executed the Microsoft operating system flawlessly. It also established that we were in fact the technology company. We began our quest to take a leadership position of innovation by filing patents, spending heavily in R&D. Of course this resulted in our having large losses. So while we were successful in the courts to defend our position, we had the right to go to market with an alternative solution.

DSM: You were starting all over.

JS: We were starting all over again. We had to spend tremendous amounts of money in R&D, and then we had to spend money on factories to build products. I spent the money that we made in the flash business. We never talked about flash, but our relationship with Fujitsu has been nothing but wonderful. So for being accused of being a Japanese basher in the early 80s I've now become a great champion of globalization, and our relationship with Fujitsu has been a tremendous success. AMD and Fujitsu together with our joined venture are number one in the world in flash memories. Who is number two? Who else, Intel. So we know that on a level playing field, we can beat these guys.

So we're trying to get a level playing field. We came out with the K5. It was not quite as good as we needed. Intel came out with the Pentium, they had the Pentium NMX. Once again, Intel wanted to deny me NMX, we had to get the NMX. We finally got that. We incorporated those instructions in the K6, and the K6 was the result of the acquisition of NexGen to give us an arithmetic processing unit that I could marry to our bus structure, so that we could have a Pentium compatible solution. But after that we had to have our own bus. We were working on that, and it's called K7. And of course, in June of last year, we introduced it as the Athlon Processor, and the rest is history.

Last quarter, the September quarter of 2000, AMD's net earnings, more than exceeded the net losses of 1996, '97, '98 and '99. We made more money last quarter than all four years' losses put together. Again it was vindication, validation, maybe some more ice cream, but it's a tremendous thing that we've been able to do. This year, we're going to earn close to a billion dollars. That is from a company that was declared "dead" ten years ago. I just publicized a report on company reputations, and the Wall Street Journal just sent me a report that AMD and the semi-conductor and the semi-conductor equipment group, has been recognized as having the third best management behind, who else, Intel, in applied materials. I have to tell you I have to admit that Intel in applied materials has very, very good management. So to be in that league, and just be a bronze medal winner, we're very, very proud.

So today while the semi-conductor industry is once again in some turmoil, as there's some softening in the PC market, and a weak consumer market with the uncertainty in the election, people are again predicting the demise of the PC. Well, they're just wrong. The PC will continue to be the hub of the digital universe in both wired, and wireless forms, and AMD is going to be the leader. We are about to within a year, our eighth generation, which is a 64-bit implementation is entirely different than Intel's Itanium. Not only does it have a different architecture, not only does it have a different bus structure, it even has a different instruction set. Our device will offer the customers for the first time since 1981, the chance to deliver solutions to their customers, which are completely independent of Intel's server architecture. We have the right solution.

I'm going to stay here as CEO. I've got a contract as CEO through April 26th or thereabouts of 2002, and by that time, we will have demonstrated our server architecture that outperforms Intel. It is completely independent, with a better solution. And I can feel that okay, I'm both the frog and the scorpion. I'm going to be on the other side of that river, and then I'm looking forward to having you know my heir apparent Hector Ruiz take us to that next level of ten billion, because I think that he's the man to do it.

DSM: Wow. No lack of enthusiasm for this next two years, it's extraordinary.

JS: No lack of enthusiasm for that aspect of two years. This is a hard job. This is a very hard job.

DSM: Fair enough. A couple questions that I'd like to ask you that I've asked the other leaders in this revolution that I've interviewed that are less historical and more speculative. Talking about innovation, and success, and then how you'd like to be remembered. One of the questions I'd like to ask is this whole idea of innovation, people have a thousand different explanations for where real creativity and innovation comes from. Where do you think it comes from?

JS: To me it's very clear. It comes from competition. Competition to always be better - to do something new. I've said for decades, winning means gaining market share. A success is profitable growth. Well, profitable growth is success, but I want to win. And to gain market share you have to be different, you have to be better. You have to make a clear reason for buying from you. That only happens in a competitive environment. So you take that, a competitive environment that is in the absence of a monopoly, and you also take you know, Joseph Schumpeter's observation, that growth will occur when the innovator is given the opportunity to innovate, which means an environment where he can innovate, and the opportunity to participate, and the rewards is innovation, and you'll get growth. So that's AMD. AMD is what Joseph Schumpeter envisioned. We believe in the creative destruction. We've reinvented ourselves.

DSM: When did you started reading Schumpeter?

JS: I'm not sure whether I read Schumpeter for the very first time. Whether it was when I started the company or whether when John came here sixteen years ago. But Schumpeter's been a part of my life for a long, long time. As a matter of fact, I have Schumpeter's original book with his autograph in it.

DSM: What a treasure.

JS: Recently I added to my book collection the Rudyard Kipling's first editions, because Rudyard Kipling is also an important guy, because of his poem "If." 'If you can keep your wits about you and all others about you are losing theirs then you are a man my son.' That's how I'd like to be remembered. I kept my wits about me during some pretty, pretty tough times.

But innovation is really what it's all about, and that comes from people. It comes from brains. We have an expression around here at AMD, "A good idea doesn't care who had it." I like that. I think that Reagan said that there's no limit to what you can accomplish, if you don't care who takes the credit for it. I think you put those two thoughts together, and put Schumpeter in there and mix it all, and get Jerry Sanders enthusiasm, and you have AMD.

DSM: Last question.

JS: Okay.

DSM: These interviews are going to be preserved for as a long, long time. We'll be distributing them to archives and libraries in Germany and China and Brazil, and Italy, in Forty-three countries. So in three hundred years when graduate students look back on this time and this crude technology and this extraordinary group of people that were a part of it, how would you like them to think of Jerry Sanders?

JS: Well all I can say to that is that it's truly humbling to be honored by participating in this thing. What I'm proudest of is that AMD is a great place to work. I think that whatever society evolves to, hopefully it evolves, and not devolves to in the next 100, 200, 300 years, that they're going to be societal entities; and corporation is the societal entity today. So I just want to be remembered as the guy who tried to make that societal entity human, that I provided people with the opportunity to realize their dreams.

I was talking just as recently as yesterday to a guy who heads up a group of people in a small company, whose dreams are set back because the world has changed with the IPOs and dot coms and the like. And I said, "I would love to have you as part of our team, but not if it's going to mean dashing any of your dreams." I can tell from the expression on this guy's face that the reaction he had was, AMD's the kind of company he wants to be with.

So I'd like to be remembered as a guy who started a company not on the basis of a technology breakthrough, or the desire to make a fortune, I just wanted to have a societal entity, where people were treated fairly and people got to realize their dreams. And if I've made a small contribution in that way, then I'm proud and my kid would be proud of me.

DSM: As well they should. Thank you very much. Extraordinary interview.

JS: Thank you.