CHM Computer History Museum

Oral History of Regis McKenna

Interviewed by:
John C. Hollar

The interviews took place between June 13, 2018, and January 15, 2019
Mountain View, CA

CHM Reference number: X8675.2018

Foreword

On June 13, 2018, in the oral history studio of the Computer History Museum in Mountain View, CA, Regis McKenna and I sat down for the first of eight interview sessions. Over the next six months, in nearly 40 hours of conversations, we covered Regis's life, work, achievements and reflections on his five decades as Silicon Valley's leading figure in strategic marketing of new technologies. The transcript of those interviews runs nearly 320 pages and is illustrated with notes, photographs and slide presentations from his vast personal archive. Some may see this project as rather exceptional as oral history projects go, but its depth and breadth are entirely appropriate given McKenna's singular career.

McKenna's professional rise paralleled the rise of Silicon Valley itself. He came to California in 1963 as a young journalist-turned-salesman for a group of engineering-oriented trade magazines based in his hometown of Pittsburgh, PA. His path into marketing began when he realized that many of the young companies he pitched for advertising were unprepared, and therefore struggling and often failing, to create demand for technologies that had never before existed. He leapt into the rapidly rising semiconductor industry, first at General Microelectronics and later at National Semiconductor Corporation. Ultimately, in 1970, he founded his own strategic marketing firm, Regis McKenna, Inc., in Palo Alto, CA.

Over the course of the next 40-plus years, McKenna established himself as one of the most creative, resourceful, hard-driving and visionary experts in the field. He and his teams redefined the term "marketing" to range well beyond conventional notions of the term. Again and again, McKenna designed strategies that helped to define technology companies themselves. In important work with Intel and Apple, his strategies helped to marry personal computing with popular culture. Eventually his approach became synonymous with the title of his landmark 1991 *Harvard Business Review* article that remains one of the most reprinted in HBR's history: "Marketing is Everything."

This oral history delves deeply into McKenna's personal relationships with such titans of Silicon Valley history as Intel's Bob Noyce and Andy Grove and Apple's Steve Jobs. Our discussion of his close personal and professional relationship with Jobs took two entire interview sessions. Their friendship dated from the day in 1976—before Apple was even incorporated—when Jobs placed a cold call to him to ask for marketing advice for a new product called the Apple I. For more than a decade McKenna, an outsider, served on the Apple executive staff that Jobs himself assembled. As an advisor to Intel, McKenna was the only outsider included on the famous "crush" task

force that reinvented Intel's approach to microprocessor marketing and development. Few others were given or earned such access, influence, and ongoing trust at key moments in the lifespans of such iconic companies.

This oral history is rich with personal insights, lessons learned from both success and failure, the importance of friendships and relationships, a significant dose of courage and chutzpah, and plenty of humor. It includes revealing first-person accounts of some of the most notable figures in technology history. It was a pleasure and a privilege to collaborate with Regis and the Museum on this project, and I'm grateful to him and to everyone at CHM who brought it to life.

John C. Hollar
Mountain View, CA
April 2020

Acknowledgements & Additional Comments

This Oral History began in June 2018 and completed in April 2020. First of all, I want to thank and acknowledge John Hollar, former president of Computer History Museum (CHM). John and I would sit down and plan each interview session prior to the taping. John would then provide an outline of the topics to be covered and I would make some notes and do a bit of research. Each interview took about 3 hours. In order to keep my comments extemporaneous, I tried not to refer to my notes during the interviews. John wanted to do this interview to be different from the previous oral histories by including illustrations, photos and other graphic material from my personal archives. I drew upon my business journals which I began keeping in the early 1970's. Digital copies of my journals and my extensive files on Regis McKenna Inc clients will be available at Stanford Silicon Valley Archive sometime in the future.

I want to acknowledge the leadership at the CHM. First Len Shustek, Chairman Emeritus and founder of the Computer History Museum. It was Len has encouraged me to do an oral history. Dan'l Lewin, President and CEO of CHM and long-time friend has stayed close to the progress of this project as well as Marguerite Gong Hancock, Executive Director of the Exponential Center. Marguerite was instrumental in the planning and presentation of the document as well. In addition, I am grateful to several invaluable CHM staff members including Massimo Petrozzi, Senior AV & Digital Archivist, as well as Doug Fairbairn, the Program Director for Oral Histories of the CHM Exponential Center, who is also a "jack of all trades," and to Heidi Hackford, and Emily Parsons for their help in coordinating, tracking and editing the results. I also want to thank Justin Adkinson and Max Plutte, videographers, for their work in recording and producing the video.

Despite the extent of this oral history, I was unable to include many of the Regis McKenna Inc. (RMI) clients who engaged our firm over 30 plus years. The total number of clients over that time exceeds more than 300. Those clients included both startups as well as Fortune 500 companies located thought out the United States, Japan and Europe. While our first clients were primarily from the Silicon Valley semiconductor industry, as we grew the clients reflected the evolution of the high tech industry from chips to personal computers, mini's to mainframe, hardware to software and local-area networks to global networks. In the human sciences, our first major clients was a startup, Genentech.

The nature of RMI's business and the services we offered changed dramatically over those years as well as the backgrounds and experiences of our people. We moved from producing marketing materials to developing marketing strategies. It was though each new decade, we became a new firm. The most consistent comment I heard over the years and even today is the quality of the people at RMI. RMI had hundreds of associates and partners over our 35 years located in seven offices in the United States, in Tokyo and three offices in Europe. There are too many smart and creative people who passed through our firm over the years for me to acknowledge them individually. And, of course, we at RMI expanded and capabilities by the array of new challenges presented to us by our clients. Many of the technologies, products and services we at RMI helped to introduce to market had no precedent. The Microprocessor, Personal computer and Recombinant DNA were revolutionary technologies. The traditional ways of marketing were not adequate to serve the rise of the digital technology.

And, of course, we owe so much to the nature of our early clients in the 1970's and 1980's who accepted our teams as partners working alongside their teams. Our unique clients became exciting places for us to advance our knowledge, be creative, grow personally and explore new marketing ideas and methods.
I often called Silicon Valley "a living laboratory" where the opportunity to learn from burgeoning innovations created new markets and changed the world.

Regis McKenna
Mountain View, CA
April 2020

Table of Contents

Oral History of Regis McKenna, Part 1 of 8

Growing up in Pittsburgh, early career, and the move to
Silicon Valley

Interviewed by:
John C. Hollar

Recorded June 13, 2018
Mountain View, CA

CHM Reference number: X8675.2018

Abstract:

This transcript is the first from an eight-interview series with Regis McKenna, whose pioneering work in technology marketing and business strategy contributed to the success of hundreds of companies for more than five decades. McKenna was a talented, innovative marketing professional from the earliest days of the technology revolution in Silicon Valley. He came to the Valley in 1963 at the age of 24, worked in marketing in the early semiconductor industry, and then established his own company, Regis McKenna Inc. (RMI), in 1970. McKenna became a globally sought-after strategist and marketing expert, and RMI opened numerous offices around the world. His personal and professional relationships at RMI included Steve Jobs, Robert Noyce, and Andy Grove. His more than 700 clients included such legendary companies as Apple, Intel, and Genentech. He is the author of five best-selling business books and one of the most reprinted articles in the history of the *Harvard Business Review*, "Marketing is Everything" (1999). McKenna was recruited to many outside boards and advisory roles, among them his service as a founding advisory board member of the Computer History Museum's Exponential Center.

The interviews took place at the Museum between June 13, 2018, and January 15, 2019. The interviewer was John Hollar, president and CEO of the Museum from 2008 to 2017.

The first interview covers McKenna's childhood and education near Pittsburgh, Pennsylvania, his early career in publishing, his move to California, and his early career with the companies General Microelectronics and National Semiconductor. The time period covered is roughly 1939 to 1970.

* * *

Hollar: It's Wednesday, June 13, 2018. My name is John Hollar and I'm here to take this oral history this morning.

McKenna: I'm Regis McKenna. I've been in Silicon Valley over 50 years and I'm here to be interviewed by John Hollar.

Hollar: It's a pleasure to have you do this, Regis, and I should say for the record that our ultimate hope is that it's going to be a multipart oral history, perhaps seven, eight sessions, maybe more depending on how it all plays out. As I noted in your introduction you really are, I think it's fair to say, the Dean of Silicon Valley in many ways. You've seen and done so much, and you've been instrumental to many top executives and organizations as a strategist and in other ways. It's a chance, in this oral history, to capture some of that background and knowledge and history and to get your insights. Our hope, as it is with every oral history, is that someday 25 or 30 or 50 years from now, a young historian or a group of historians will find this to be valuable as they put the total picture together. Thank you for taking the time to do it.

McKenna: You're welcome.

Hollar: Let's start with your childhood and your upbringing. You were born in Pittsburgh, Pennsylvania. Can you talk a bit about your mother and your father, your family, and your growing up there?

McKenna: Yes. My parents were Irish Catholic. Their parents on both sides came from Ireland, had large families and worked as laborers. My father's family were stonemasons, so they had plenty of employment. My mother's family was less well off. My father dropped out of school at the age of 14 or 15 to get a job and finished his schooling going to night school. He got his high-school degree at Schenley High in Pittsburgh and found work digging ditches for the utility company—getting water for the mules and those sorts of things. He used to talk about it quite a bit. He worked his way up over 50 years to run one of their major divisions, and that was the model of work: You get a job for a public utility, you work your way up, and you achieve success.

My father was a strict disciplinarian. My mother was much more the comforter and the one we went to for everything. She dropped out of school when she was 13 because her mother was dying. She took care of her mother and, afterward, became the mother of the household. In fact, one brother used to send her Mother's Day cards all the time even when they were older because she took care of the house. She worked—they both worked—very, very hard in their lives. The model was work hard, have faith, give to your community.

My father was very active in community service of all kinds. He was also quite, I want to say, obstinate in his views—very determined in his views. He was physically small. He was about five six, but he was a fireplug and he was very tough. If anybody challenged him, he would take them on. He was a fighter all through his life. If he saw a wrong, he would try to correct it, no matter what it was. That helped me through my life.

I think a lot of my brothers. I had six brothers, so there were seven boys in the family. The characteristics and personality traits of my parents worked well taking care of seven boys. There was the soft side and then the hard side, and they worked well together.

Hollar: Where were you in the pecking order?

McKenna: I was sixth. There are pluses and minuses to that. The plus is—and I always saw it as a plus — that by the time you arrive as number six, you're not paid attention to. You're left on your own. I was out of the house as soon as I could walk and exploring the neighborhood, exploring the area where we lived, and doing things that other kids didn't do. By and large I didn't have parents always hovering over me as they did my younger brother, who was the last, and the older brothers. Four of them went into religious life.

Hollar: Did they become priests?

McKenna: Two did, and two of them then left. One brother and one priest left some years later. In the average Catholic family you became known in the parish. The nuns knew my family. They never gave me too much harsh treatment because they would always say, "We don't want to upset your poor mother with

the problems she has now with seven boys." I'd say you're left on your own. I loved the independence and I pursued it.

We grew up in a suburb of Pittsburgh. It was called Brookline. It was a relatively new development. The houses were older; we lived in a house that was built in the late 1890's—a big stone home. The outskirts of Brookline were all farms. There were woods and coal mines. Railroad tracks ran down along the Ohio and the Monongahela [Rivers], down into Maryland and West Virginia. As a kid I explored all that. I would go out and just go on hikes and explore the coal mines and hike the railroad tracks and hop trains and do all that sort of thing. I was doing that by the time I was ten years old.

Hollar: How easy was that to do?

McKenna: I don't know; I mean I did it. I didn't think about how easy or hard it was; you just sort of did it, and it certainly must not have been that difficult.

The farms were interesting. We played ball right next to a farm, so if you hit the ball it went into a pasture where there were bulls. When you're a kid I don't think you think about it much. You just do it and enjoy it.

I had a wonderful childhood. I liked my childhood.

Hollar: With your mother and father not having had an opportunity to finish school, how did they feel about school for you and your brothers?

McKenna: My parents believed in one thing. Behavior. If your deportment was good, you were fine. They never questioned your grades. They might not be happy about them but they never really punished you for not having good grades.

My older brothers were really good at school, and so I'd hear from the nuns, "You're not like your brothers." I'd hear that about once a day.

Hollar: How were you as a student?

McKenna: I was not a good student. I enjoyed the classes that I liked and I didn't enjoy the classes I didn't like—sitting in the classroom—but I got through it. I enjoyed it.

I know we had a town library, a Carnegie library. Many of these little towns had them, and I spent a lot of time there. I don't think I really was looking at schoolbooks. I think I was looking at adventure books and other types of things, anything that I could find. But my older brothers had gone into monastery life and were very academic. They influenced me a lot. When they would come home they would talk about the things they were learning.

My brother Tom was really excellent in French and in literature. That did rub off more so than, say, my parents influencing me. My brother Bob, who was second oldest, was an artist and started doing art very,

very early when he was in high school. He would take me to—aside from taking me to ball games—oh, by the way, he played on the football team with Johnny Unitas in high school.

Hollar: Oh, did he really?

McKenna: Yes, so this goes back quite a while.

Hollar: That wasn't Latrobe, was it?

McKenna: No. It was St. Justin's High School in Pittsburgh; that's where Johnny Unitas started.

He [Bob] would take me to art museums. We went to the symphony all the time, and that sort of thing. It was really my older brothers that influenced me in academics.

Hollar: It seems they were the ones who were opening up the world to you, showing you there were places and ideas beyond the town where you were growing up.

McKenna: Yes, I think that was certainly the case. These small towns and very strict Irish Catholic families are very restricting in many ways. Everybody knows what you're doing. If you misbehave, some adult in the neighborhood would bring you back into line. And with the church having that sort of overriding influence on you they were overseeing you all the time. So that influence, I think, was something that I always rebelled a bit against. I just didn't care to be under it.

Hollar: And with your parents emphasizing deportment so much, how did they react to that?

McKenna: The way you would expect. In school, the nuns certainly had paddles—wooden paddles—and I hid them. I used to take their paddles and hide them.

Hollar: Did you really?

McKenna: Yes.

Hollar: Did they know you were doing it?

McKenna: No. The paddles just disappeared. There was a wood shop, and they would go have others made. I'm sure they had four or five replacements made. I either threw them away or put them outside on the windowsill.

Hollar: You used words like "independent" and "a bit of a rebel." Were you feeling restless? How would you describe your attitude?

McKenna: I don't know that I felt restless, but when I was independent I enjoyed it more.

In high school I was president of the Catholic Youth Organization in Pittsburgh and so I did a lot of civic work. This was largely an influence of my father and family. I helped form a sandlot football team because our high school didn't have football, and I was a football fan. We joined a league sponsored by the Honus Wagner Sport Shop in Pittsburgh, and we played throughout the city. I played football from sixth grade on. Then I went to college and played football. That got me into college actually. It's the reason I went to St. Vincent's.

Hollar: Did you get a football scholarship?

McKenna: I was a walk-on. They said if you make the team, we'll give you financial aid. I actually wanted to pay my own way simply because getting money out of my father wasn't easy, so I worked during the summers. I worked from the time I was 16 until now.

Hollar: I want to back up for just a minute on that point. It wasn't necessarily a natural thing for you to want to go to college, was it? What spurred you on—not to go to work right out of high school but to want to go to a university?

McKenna: It happened as I went through high school. My older brother Joe, who is the next oldest brother, was two years older than me. At that time you could pick your high school, and he didn't go to the same high schools as my other, older brothers. He went to a school further out of town that was run by German nuns in a German parish. It was very strict and a better academic school. The demands were higher, and that, I think, had a lot of influence on me, particularly in the areas of literature and writing.

I was never very good at math, but I think that's because they told me I wasn't. You were tested and told you were good at some things and not good at other things. Yet when I did take subjects like chemistry in high school, or physics in college, I loved it. I think culturally you were moved into areas where the best thing for you to do is go out and get a job.

Hollar: You told me a very poignant story about an eighth-grade teacher who was assigning roles to people, and maybe predicting what you would go on to do, and she designated you as the barber.

McKenna: The town barber, yes. Again, that's more indicative of the aspirations of the nuns, who were very young and coming out of middle-class or lower middle-class families. Most of them were just a year or two out of college, if that. Many of them were still going to college and also teaching because populations had grown significantly after the war and there was a shortage of vocations. The nuns' aspirations were to become a nun, and that was their family's wishes too. Those things recapitulate themselves. There isn't a lot of emotional support or guidance or direction that comes up.

I helped my granddaughters go to different colleges, and I told them, "No one did this for me. I picked my own college and got in by walking on to the football team." I was accepted at several other colleges but the criteria was that it had to be Catholic, so my parents had a veto but no idea about where to apply.

Hollar: You're in college—let me back up before we go to college. You've talked about a couple of things that I think are really interesting. One was organizing your own sandlot football league and another was running for the presidency of the Catholic Youth Organization. Was that always just part of you, this organizing, this building coalitions of people and getting people together? Did you find that a natural part of who you were?

McKenna: Yes, and again I can only say that I think that comes from my father. My oldest brother, Jerome—he's a priest in a parish in Atlanta —if he weren't a priest he'd be a politician. He's a great organizer—social organizer. He has spent his life doing social organizing and helping people. Those sorts of things influence you. I don't think you consciously think about it. It just happens, and when you're aware that there are such organizations you step up and take advantage of them.

One incident in high school was kind of interesting. We used to hold a lot of dances, and the nuns controlled the purse—the money that was taken in and all that. I decided that I didn't want them to have the money. I convinced the principal that they ought to let us run the dances independently. For some reason or other she let me do it. I started organizing the dances and the groups and raising money. Then I would go out and get donations of pop and soda from various people that I knew in the neighborhoods. We made a lot of money. We bought our own turntable and were able to hire disc jockeys. We had our own bank account. We wanted to control what we were doing rather than have the nuns overseeing us all the time. It's just a rebellious kind of thing, but that led to the social organization.

Hollar: Let's talk now about your decision to go to college. You've talked about how you had to be a walk-on football player, and wanted to be, to get into college. What was that like?

McKenna: Most of my friends were going to the local college, Duquesne University, or the University of Pittsburgh. The attraction to me of St. Vincent's was that it was not in Pittsburgh. It was out of town. It was in the country. It was actually a farm—an all men's college, a Benedictine college about 50, 60 miles northeast of Pittsburgh.

Hollar: This was St. Vincent's College.

McKenna: Yes, in Latrobe where Arnold Palmer was from and also Herb Boyer, who is one of the founders of Genentech. He went to St. Vincent's—he was there at the same time I was, though we didn't know it until years later.

Hollar: I was going to ask you if you knew each other.

McKenna: We didn't know it until years later.

I rarely went home. I stayed there on weekends, and even on holidays. It was out in the country. You could go hiking in the woods, you could explore, you could do whatever you wanted to do, and I really enjoyed my first two years there. That first semester I was not great academically. I was actually on probation—academic probation—but then I got some religion and came back and did well the second

semester. Then I decided that I didn't want to play football. I had worked that summer so I had made a fair amount of money. I actually went to work for my father's company digging ditches and cutting rights-of-way. That was a really well-paying job, quite frankly.

Hollar: It was a utility company.

McKenna: It was a utility company, and, again, I was out in the country working. I put everything away—saved everything I earned.

By the way, a college credit back then was something like $25, not at all comparable to what it is today. By my sophomore year I decided I was going to get serious, and did. I had gone to St. Vincent's and I was in pre-law. They called it pre-law but it was really economics and political science and things of that nature. I still wanted to pursue that, but one of the other things I got into was philosophy. I got that from a particular priest at St. Vincent's. We used to sit in his room at night and, quite frankly, we'd drink beer and talk, and he was a real inspiration. You were in a men's college and they [the faculty] were men and so they didn't mind going to bars with you or drinking beer with you. It was a great environment—for me anyway.

Hollar: What was his name?

McKenna: Father Paul Regis Maher. He was a tail-gunner on a B-29 during World War II. He had interesting stories to tell. He was a tail gunner over Germany. He would tell these stories about being a tail gunner and not—

Hollar: Those guys had a very high mortality rate.

McKenna: They weren't able to wear a parachute. You couldn't, because the turret would move.

He told me that if I wanted to pursue both—if I wanted to pursue law and philosophy—that Duquesne University had one of the preeminent philosophy departments in the world at that time. It was in existential philosophy. They had brought in Fulbrights and all of these people from Holland and from Europe who were leading-edge philosophers and psychologists, and they published a lot of original books. A lot of the textbooks were written by people that you may have heard of such as Rollo May, the American psychologist—people like that. When you went to Duquesne you fell into taking courses taught by interesting people rather than pursuing any particular degree. I started piling up credits but not toward graduation. I took a fair number of graduate courses as well.

Hollar: This was at Duquesne while you were still enrolled at St. Vincent's.

McKenna: No, I transferred to Duquesne. I transferred to Duquesne and then from then on I was on the dean's list every semester.

Hollar: What was it about philosophy and the way you found his approach to philosophy to be so compelling? Only a year earlier you had been on academic probation.

McKenna: Well, I think it was just Father Maher himself. It was his personality and his ability to relate to you and to be interested in you. Regardless of the fact that I was going to that school, he was telling me, "There's a better school for you."

Hollar: To promote you, to support you.

McKenna: Yes, to support me. Then when I went to Duquesne there was a professor—his name was Bernard Boelen. He had doctorates in philosophy and psychology. He was Dutch. He and his family fled Holland from the Nazis. He had such a broad range of knowledge, and interests in so many different areas. He felt you gained knowledge holistically and could use it in any area. For example, if you went into law it would teach you how to think differently, but more from a holistic viewpoint than simply a rubric standpoint. He was so popular as a professor that they had to allocate seats by departments for his lectures.

He happened to be a neighbor of mine. He had moved into our neighborhood.

Hollar: Literally.

McKenna: Literally, and I got to know him really, really well. In fact even after Dianne and I got married, while we were in school, we lived near him. I used to go home on the bus, and we'd stop at the bar and he would test me at the bar because all his exams were oral exams. He didn't give written tests because he wanted to question you. He didn't want just your rote answers.

He became an advisor, friend, teacher, guide, probably the most influential person in my life. I've used his ideas throughout my career. The most important of his ideas, for me, is to look at things from a holistic viewpoint and not simply the viewpoint that's in front of you.

Hollar: Do you remember how he communicated that? What in his way of thinking was so powerfully influential to you?

McKenna: What impressed me was his pedagogical way of imparting knowledge and infusing it into students. It was his ability to bring different aspects of thinking together. He wrote a book on maturity.[1] It was philosophy, but it was also psychology. It was about the different stages of life and the discoveries you make at different stages and—

Hollar: Natural ages, meaning the era that you're passing through as a person. Is that what you mean?

---

[1] *Personal Maturity: The Existential Dimension* (Seabury Press, 1978).

McKenna: Yes, and also your physical age. He felt that you really only become mature after 60. Ironically, that's when we tend to retire people. He said, in fact, that's the stage of life when wisdom starts to blossom, and you start reflecting and using history and experience as guideposts. In that course he would bring most of his academic interests together.

He taught a course on phenomenology. He taught a course on Heidegger and *Being and Time*, which is one of the most complex books in the world, but he made it quite simple. He said it was about the external world that we live in, and how it speaks to us. When you think about that, it's about research, and taking in data about the world that is not necessarily in front of you, but all around you. I think that's what a good strategist does. They take in every aspect they can, they sift it, and make sense of it.

What I often did with clients was stand at a whiteboard, and we'd start talking about problems, and I would just start building diagrams and putting up different ideas and then start piecing them together over an hour or two or two or three hours. That approach really came out of that sort of thinking.

Hollar: It seems that Boelen and his approach fit your brain, if you will—it fit the way that you thought, or he sparked something that in you said, "Yes, that's the way I think about the world" or "Now I understand that's the way I think about the world."

McKenna: Yes, and he was just a regular person. I mean he was very unusual in all the degrees he had. He could write Latin and Greek with either hand on the board at the same time. He was a brilliant man, and he broadened the vision and aspiration of his students. Even other teachers took his courses to be exposed to his thinking. Later in life, by the way, while he was a professor at DePaul University, he advised several large companies to help them think through and resolve issues and problems.

Hollar: Do you think he saw that in you, too?

McKenna: Well, I don't know. I know that we had many long, long conversations together on the bus and at the bar about life and other things. He was the kind of person that you could do that with. It was a rare experience. Dianne took some of his courses as well. We both knew him and his family and his wife very well.

Hollar: When did you meet Dianne?

McKenna: I met Dianne when I went to Duquesne. That's also another interesting story. My brother Joe had a good friend named Art Kelly, and Art had a part-time job to pay his way through college. When he was graduating he passed that job to me just as someone had passed it on to him. The job was being janitor of an all girls' high school. So I accepted! It was actually a great job. It doesn't sound as wonderful as you think. I mean you—

Hollar: It's not a bad job for a young man--

McKenna: Not a bad job for a young man, and it was right on the bus route to Duquesne and within five miles of downtown Pittsburgh. After school I could take classes there at night. During the day I could go to work and then go back to school. The cafeteria was always open and it paid a nice wage, actually. It was actually assistant janitor; it wasn't the janitor. An elderly man was the janitor, Mr. O'Toole.

That summer I worked the full summer painting floors, painting the buildings, doing all sorts of things that couldn't be done during the school year, and Dianne was also working there during the summer. She was a student and was working to help pay her tuition and her sister's tuition. We met during our summer work there and started going swimming together, and the rest is history.

Hollar: And that's how it happened.

McKenna: Well, we were kindred spirits. Her mother's idea was that you get out of high school, you get a job and you go to work and help support the family. Dianne—all her teachers were telling her that she was good in math, she was good in literature, she was good at a lot of things, and they wanted her to go to college. Her parents couldn't afford it, so we commiserated over that, and eventually I said, "I'll put you through college."

Hollar: That's fantastic. Did you work every year, summers and during school?

McKenna: I went to work during high school and always worked after that.

Hollar: And you mentioned that you decided you didn't want to play football. Did you lose your scholarship and then have to—

McKenna: Yes.

Hollar: —pay your own way?

McKenna: Yes, after a semester I decided not to play football in college. First of all, college football wasn't at all to me like sandlot football, which was free and fun. You played it with people that you knew, and there was a lot more team cohesion. In college everybody was a prima donna. There was a fellow that got hurt and he was afraid that everybody else, including me, would take his position. There was this competitiveness among players rather than against another team. That's what I found, and so I didn't really enjoy it. In fact, I used to go home and play on the sandlot team on weekends. That had much more of a team spirit. We won the city championship in 1958. We even played some junior colleges. There was no weight limit and so it was a pretty serious team.

Hollar: And you were playing against guys much bigger than you.

McKenna: Oh, yes.

Hollar: They grow them big in western Pennsylvania.

McKenna: Yes. A lot of these guys—our linemen averaged about 250 pounds—

Hollar: Wow, even then.

McKenna: —and I kept them in front of me. I was fast.

Hollar: And a little feisty no doubt.

McKenna: Yes.

Hollar: You're finishing up at Duquesne at the end of the 1950s. What were Pittsburgh and western Pennsylvania like at that time?

McKenna: Well, my vision of that opened up as I started looking for something serious to do. It was either go on and get more education or get a job. If I had pursued, let's say, philosophy, I would have had to get a Ph.D. That would have taken some time and money. Dianne and I had gotten married and I couldn't afford graduate school. My parents couldn't have afforded it, either.

So I started beating the bushes for work and spent a lot of time walking around. I had to hitchhike into Pittsburgh because I didn't have cash to pay the carfare and—

Hollar: Was this 1960?

McKenna: This was in 1960, yes, and the mills were seriously shutting down. Pittsburgh began a renaissance in the late 1950s. Mayor David Lawrence, who eventually became the governor of Pennsylvania, set about a renewal plan, which was to bring clean industry in, clean up the rivers and place very heavy restrictions on heavy industry. As a kid, I remember going in to the city of Pittsburgh with my father and asking him, "Why is it night in the day?" because the city was so overcast with smog and soot from the mills. If you drove out along the river, it looked like you were driving into hell, literally. The open-hearth furnaces lined the riverbank below the road. You'd see these red and yellow and blasts, and it was something you wouldn't forget. As a small child you'd remember them. And of course when they would take the slag out of the open-hearth furnaces and dump it out along the railroad tracks at night, we could see the glow in the sky from where we lived. It was like fireworks every night. And spring cleaning really did have to be done. You had to clean the house from top to bottom, all the walls and everything. It was quite a task to stay clean in that environment, your house, your car—anything.

The mills were vanishing. Another person who went through that was Bill Campbell, who was from Homestead, which was close to my hometown. Unemployment in some areas was 40, 50 percent, and you might say, "Well, those were jobs in the mills" and yes, they were, but the mills supported an infrastructure of all kinds of service industries, and those service industries were dying as well.

There really wasn't much left in Pittsburgh. A lot of the storefronts were boarded up and loss of the mills had impact for years and years later, too.

So to find a job in that environment I'd walk the streets, look in the paper. The particular job I got came through a firm that you signed up with. If they found you a job you had to pay your first three months' salary over some period of time to them.

Hollar: All three months.

McKenna: Yes. It was in increments, but it was three months over, I think, a year.

Hollar: That's quite a fee.

McKenna: Oh, yes. Well, they were in charge.

They introduced me to Rimbach Publishing Company. It was a family-owned company. Its offices were in the Oliver Mansion. [Henry W.] Oliver had been one of the iron and steel barons of the Industrial Age. It was a huge wooden structure on the north side of Pittsburgh that had six floors, and it was a mansion. The publishing company was entirely in there. They were publishing books and magazines. Some of the magazines were *Instruments and Control Systems*, *Medical Electronic News*, *Military Systems*—

Hollar: Very technical—

McKenna: Very technical. They had a technical writing staff. Richard Rimbach, who was the founder, was really quite an accomplished individual in his own right. He had started a magazine called *Automation*. He had helped form the Instrument Society of America. He had helped form the [Ed: International Society of Automation]. He was again one of those multitalented technical people.

He was also a very hard person. He looked like Teddy Roosevelt, and he acted like Teddy Roosevelt.

His daughter was doing the recruiting. She brought me in and sat me down in front of them, and he sat there. He had his pince-nez glasses on and he had a mustache, and he just looked at me and said, "I don't know what in the hell to ask you." He had a mouth like a truck driver.

He said, "What did you major in?" Well, I wasn't about to say "philosophy," and so I said, "liberal arts." He slammed his hand down and he said, "Good." He said, "These goddamn journalism majors come in here and try to tell me how to run my business." He said to his daughter, "How much does he want? Hire him." That was it.

Hollar: That was the whole interview.

McKenna: That was the whole interview. The idea was for me to learn the business and—

Hollar: Were you relieved? It was not an easy job search and suddenly you—

McKenna: Oh, no. It was six months of beating the bushes, walking the streets, hitchhiking here and there, and getting some real rejections.

Other things may have gone on. I'm not a hundred percent sure, but somebody told me later some of the rejections were that I was a diabetic. I became a diabetic when I was 19, type one, and that also was a reason for people turning me down. I mean they just—once they saw you're diabetic, they just automatically said no.

I got rejections that were ridiculous. I got turned down applying to be a typewriter salesman. They said they didn't think I could lift the typewriters. It was that sort of thing—a stigma that a lot of people held against you.

I was told later on that he [Rimbach] was a diabetic, or his mother, one of the two. His mother lived on the top floor, and he would go up every day and have lunch with her. It was a marvelous family environment in which you knew everybody in the company. Every lunch was in the lunchroom with about six or eight engineers who were writers. We had long discussions. They would talk about what they were writing on, what was interesting, what was new. You had political discussions. Again, it was a real education for me.

The magazines covered new products in the field of technology at the time. Hewlett-Packard was an instrumentation company. Varian was an instrumentation company. Systron Donner, which was in the East Bay, was, too. There were a fair number of companies out here that were sending in material for publication. I became copy editor. I helped rewrite press releases, and make up the magazine, and do all sorts of things. It oriented me to the language of the technology of the day.

Hollar: Personally, how did you respond to that?

McKenna: Oh, I loved it. For me it was a combination of lots of things I liked. I fooled around with art. I used to earn a little bit of money in college drawing portraits. So the artistic part was fun.

I liked learning. At St. Vincent's and Duquesne, I learned to learn. It didn't matter what it was—anything of interest. My family can tell you that I am probably the most eclectic collector of things that interest me in the world. Whatever the subject is, I have a book or something on it.

So the job at Rimbach was one where you could learn a great deal. I spent—I don't know—two or three years there and then—

Hollar: It occurs to me—

McKenna: Go ahead.

Hollar: —just at this moment you're in 1960, '61, and a couple of things occur to me. Sputnik launches in 1957 and the whole country now becomes very aware of the implications of technology. You're also graduating from college and your career is beginning right at that pivot point. Your story about what's

happening in Pittsburgh is a national transitional story, isn't it? Heavy industry is going away and a new kind of economy has to emerge. There's an imperative represented by Sputnik and the rise of the Russian threat, if you will, and here you are at this moment in time.

McKenna: Yes. If I recall, I was going into my second year at St. Vincent's when Sputnik went up. There was all this discussion about new academic requirements. When I went to Duquesne, everybody was talking about it. There was this focus on—we've got to step up the criteria for getting through these courses. We've got to improve everybody's knowledge in some way. Everything became much more intense and you were aware of it. You were very aware of it. If you want to digress just for a second—

Hollar: Let's do.

McKenna: —and go back. I remember the end of World War II, and you may say, "Well, I was five years old…" but I remember I was standing in the living room with my mother and she was vacuuming the floor and she stopped and she started crying. When you're a child that's impactful. Why is your mother crying? And she said, "The war is over." I also remember the blackouts—because my younger brother was a baby and needed certain things even though the blackout's in the dark. During the Cold War my father, who had reached a senior management level in the utility, once brought home maps of Pittsburgh. There were concentric circles—the center was red, then it became orange, and then lighter colors out to edge. The shades of color showed where, if the bomb hit, how many people would be killed. He put that on the dining-room table and I was—I don't know—ten years old.

There were civil defense meetings at your house. We used to have these little gatherings at our house, and at other houses in the neighborhood, where they would come in and tell you how to protect yourself. At school there were two things. One was getting under your desk and the other one was going under the church. I wrote two long poems about that, in fact, later on.

Hollar: About those days?

McKenna: Yes, about wouldn't it be strange a million years from now finding me like a fossil in sandstone buried under my desk, because supposedly getting under your desk was to protect you from the bomb. Well, of course it was ridiculous.

Going under the church was different. The church had much thicker walls and floors. It was very scary down there but that's where you hid.

Hollar: And you practiced drills going—

McKenna: —and we practiced constantly, yes, and so you grew up with this in the Cold War. In the beginning of the Cold War my brother Joe, who was in the service, was on transports taking supplies to Berlin. He was actually held behind the lines for a while on one of the convoys. It becomes a very real thing to you as a kid.

I don't think that today there's an appreciation for what this country has come through in the last 50, 60 years to achieve what we have today and to watch it vanish. When that whole academic question arose, people took it seriously. I think even the fact that I personally said "I'm going to get serious" meant "I'm not going to get a job anywhere unless I do get serious."

Hollar: I want to go back just for a minute, Regis, to Rimbach and the engineers that you were meeting and your immersion into the magazines. Were you asked by Rimbach at that point, or did you volunteer, to get heavily involved in the more technical publications, the things that eventually led you to come to California? Can you talk a little bit about that?

McKenna: This was a small company—couldn't have been more than 20 or 25 people in this company. There were certainly printers and so forth beyond that, but by and large in the core group there were maybe 15, 20 key people. And those were the people that you sat with at lunch, those were the people that you asked questions of, and those were the people that would be talking about a particular technical area.

Maybe the fellow that was the editor of *Military Systems Design* would say, "I got this article on such and such and we're trying to decide whether or not the article fits in this context." That opens up an opportunity for you to ask questions. It's your Q&A, it's your master's degree, in terms of finding out what's going on and learning the technical material.

In the meantime, I was asking, "How do you get a magazine ready for publication? What do you do?" That's all done by hand. I went through and literally laid out magazines and measured the type and fit it into various spaces and photographs and so forth. You actually lay out the magazines. You go through that process. In the meantime, you may have to edit a press release down because it has to fit, so you go to an engineer and you'll say, "Help me with this." So it's all part of the learning process, and it's wonderful in those small business environments to learn.

Hollar: How did they take to you as the new liberally educated kid on the block?

McKenna: Oh, they loved it. I mean we got along really, really well. I never had any problems there at all.

Hollar: Did you find you liked working with technically minded people?

McKenna: Oh, yes, because in fact you always felt as though you were learning something. The small talk was always serious talk. It was about politics or it was something going on in the city but it was never trivial.

Hollar: What caused you to come to California?

McKenna: Well, one day Rimbach, the publisher, called me into his office and said, "You know, you're never going to make any money in editorial as a writer." He said, "You can only make money in sales,

because you can get commissions." He said, "So how would you like to try sales?" and I said, "I never thought about it. I'll try it."

They actually gave an examination to the people that they were trying for the new sales position out here in California. His daughter asked me to take the test, which I did, and I guess somehow I came out better than the other salesmen they had. He sent me to Philadelphia for a few months for training under another sales guy, which I did. It was nice because my younger brother was working there in Philadelphia, and we moved there for a short while and got to spend more time with him.

Then one Sunday afternoon—and I didn't know anything about California at that time—I got a call from Rimbach and he said, "We'd like you to move to California" and I was kind of—wow. Somehow as a kid growing up and seeing California in the movies, to me, always was a neat thing, I would never have said no to that, plus the fact that I didn't mind being more independent. Dianne and I were living in a little room about as big as this space. I covered up the phone with my hand, and I said, "How would you like to move to California?" and she said, "How long do I have to make up my mind?" and I said, "Two minutes" and she said, "Why not?" And so I said, "Okay," and the next week I flew to Pittsburgh and then on to California.

So it was a two-minute decision. And if it weren't for Dianne, I mean—and it was the fact that both of us had always liked the idea of being more independent and forging our own way. I don't mean that just in an economic sense or a business sense, but forging our own way culturally, spiritually, and in the other ways in which you form your own opinions. Dianne was always sort of a rebel, too, in school. She was not quite as overt as I was about it, but she was able to challenge people in thought and things of that nature, and so we really were very much in sync along that line. And we've been married 58 years so it's worked.

Hollar: Being in sync counts for a lot.

McKenna: Yes.

Hollar: Was this 1963 when you moved—

McKenna: When we left, yes. We moved here in 1963.

Hollar: You mentioned earlier that because of the nature and the coverage of the [Rimbach] magazines, you were aware of instrumentation companies like Hewlett Packard and Varian, companies that were based on the West Coast. When you came out here what did you have to do in order to make everything work from a business standpoint?

McKenna: I had followed a salesman around in Philadelphia, so I knew at least some of the ideas, but my natural inclination was to go into a company and not just simply try to sell somebody something. Rather, I would lay out a pattern for approaching the companies I wanted to see.

First, I would go in and ask for all their literature, and then I would say, "Thank you." Then I would subscribe to all of the other technical magazines so I could look at their coverage and try to figure out what they did—look at the magazines and try to make sense of it all. I used to lay all this out on the floor and piece it together. Then I would make an appointment, so when I went in I could at least ask some intelligent questions.

That was my modus operandi. I didn't go in and say, "Hey, I'm the new guy on the block. Buy an ad." I would go in and try to ask more about them and about what they were doing and learn their goals and objectives.

Here in Silicon Valley, there were only a few big companies. Most were relatively small companies, and there were quite a few of them. The large companies included Aerojet General in Sacramento and Systron Donner in the East Bay. Most of these made military stuff. Even Fairchild's big business was military.

I also had the Oregon and Seattle territories. Oregon had Tektronix, which was oscilloscopes. Up in Seattle there was a lot of medical instrumentation around the university. And of course I drove to all these places. I drove from here two or three times a year. I would drive up there and drive back. You get to simply know a lot of people that way. You ask a lot of questions and then you try to devise some way in which they should buy ads.

Rimbach was very partial to small companies and small advertisers. He didn't try to sell big budgets to people. I don't know that I can remember all the names of the companies, but there were a lot of small companies along Industrial Way in Redwood City, in San Mateo along Bayshore, and in Palo Alto along the shorefront there. There were small office spaces and small companies doing instrumentation, components, specialized devices, communication devices and so forth.

In fact, it was there that I met Tom Perkins before he even went to Hewlett Packard. I remembered him well. We used to have conversations and—

Hollar: Was this when he was doing his laser company?

McKenna: Yes, but that was in a little storefront thing and so—

Hollar: Did you sell him an ad?

McKenna: I don't know, but I remember having a lot of conversations with him. I remember he was a tall, handsome-looking guy, and I just remember him at that time very well. And by the way, when he first opened up on Sand Hill Road we had lunch soon after and became friends, so I knew him way back.

But in any event I was selling these small companies little quarter-page ads. They weren't that expensive, and it would help them get their word out.

I would help them. There really wasn't PR, there wasn't any calling up the magazines and saying, "Hey, run an article" or this sort of thing. Engineers would submit articles from time to time, but the articles were mainly written by the magazines interviewing people. The companies would send in a spec sheet—a technical spec sheet with a photograph stapled to the top of it—and then the magazine would edit those key specs and run the photograph. I would collect those and send those into our magazines for these companies as a little favor. I know I did really, really well in selling.

Hollar: You mentioned that the sales process was based on engineers reading about products and specs in the magazines.

McKenna: It's hard to imagine today because we have the internet and [more] efficient ways of reaching buyers. There was no internet. There was no efficient way to reach thousands of engineers in the bowels of big companies. Engineers read, they literally read, articles—long articles. They read competitive articles. They read benchmarks about this product versus their product.

Later, at GMe [General Microelectronics] and National [National Semiconductor], we'd have our products benchmarked by an independent lab and then publish an article in the trade press because that's how engineers would measure your product—against someone else's. So there it was.

The journalists, if they believed that your product was going to be better—and they could never really tell, because everybody was pitching them—would give you article space or maybe even a cover on your new product. Later, I took advantage of what I learned at Rimbach. When I went to National and GMe, and even Intel—I started getting engineers to write articles and would give them economic incentives to write. Then I hired engineers who were writers to work with them so they didn't have to spend their lives doing that.

Hollar: These journals and trade publications, newsletters, these were important ways of getting to market.

McKenna: It was the only way. I can't emphasize that enough. It was the only way. The benchmarks were key.

Moving a little further ahead—I would take engineers or management to New York and sit down with the journalists and talk across the table with them. TI didn't do that. Motorola didn't do that. IBM didn't do that. None of those companies did that. They sent them stuff rather than going to see them. As the editor of *Electronics Magazine* once told me, at TI or IBM for example, "We are summoned to their office. Nobody comes to visit us." But we went back and sat down with them, and that overcame a big obstacle, which was the stereotyping of small West Coast companies who they [the journalists] did not believe would amount to anything. We'll talk later about how that came about.

Hollar: Your experience on that side of the table informed your strategy of how to get to these important publications later on.

McKenna: Right, and I knew the editor because I was at Rimbach when the journalists were reviewing articles for publication.

Hollar: I have here as one of my questions, based on our earlier conversations: Did you spot a gap in the marketing and communications strategies of these companies that the publications themselves were missing? Gaps that you felt like you could fill when you went to, say, GMe later on?

McKenna: Yes, I think it was this idea of working directly with the journalists and not through intermediaries. It was going and sitting down and talking with them about your company and products. GMe was of course the first company, the semiconductor company that I joined.

Hollar: And what were they doing at the time?

McKenna: Let's back up. I went to work selling space. I didn't like that, mainly because I found that it didn't solve people's problems. People would start out wanting to run ads and I'd talk them out of it. I'd be saying, "It isn't going to help you."

I even did some research. Like Systron Donner—they were selling accelerometers. They said, "Well, there's only one customer for that," and I said, "Well, maybe there's more," and they would say, "No." So I just cold-called down to White Plains testing facilities in New Mexico and started asking around for the scientists and engineers. I got to talking to several of them and I asked them what else these accelerometers could be used for. I wrote up a little report on new applications that accelerometers could be used for, and I gave that to Systron Donner. That got me some advertising.

Hollar: So you were actually helping to open up markets for them.

McKenna: It was this thing of not just trying to sell. Maybe it was my Irish Catholic background, feeling guilty about taking money from people when you know it isn't going to do them any good.

I left Rimbach and went to work for a small ad agency in Redwood City on a different kind of deal. This was the idea that I gave them: Don't charge a commission for ads, because then you have to sell ads to make money. Charge an annual fee per client. If you're working on a fee basis, you can help them with everything. You do what they need, not what you have to sell.

Hollar: That was a totally new concept to that agency.

McKenna: Yes, nobody out here was working on the fee system. We had a couple of important clients, one of which was Bartlett Snow Pacific. It was a big, giant equipment company, and that worked. I mean they loved that arrangement because we could go in and meet with them and the clock was on us. It was not on them. And [we could] solve all kinds of problems and not have to come up with an ad.

Then one day I was driving down in Santa Clara and spotted a new tilt-up building being constructed. A tilt-up is a building where they pour the walls on the ground and then lift them up, and you've got a

building. They went up overnight. I was watching that happen and one day I saw this tilt-up go up and people were moving in. So I went in and I asked for the marketing director, and it was a fellow by the name of Earl Gregory. He said, "We're just starting our company. It's called General Microelectronics and we're a spinout of Fairchild." I told him what I did and he said, "Oh, you're hired." So I went to work for him—not directly, but as their agency. Then after six months he said, "Why don't you come to work for us?" They had a technical writing group writing proposals on their products for the military. They needed literature. It was a small company, so you kind of did whatever was needed.

Hollar: You were a one-stop shop within the company.

McKenna: Yes, and did a lot of demos, particularly because GMe eventually got into MOS [Metal Oxide Silicon] technology, and MOS was a different breed of animal. It wasn't germanium transistors, which were a version of transistors, or a silicon transistor. It was making a silicon substrate and then putting transistors down on the substrate. MOS transistors did not need isolation because of the way they were constructed. So you could put more of them on a chip, and they didn't heat up as fast. When you put them closer together, they're faster. So you could put more devices on a chip and increase the speed of the chip as well.

A lot of companies were working on that at the time, and they [GMe] were kind of forced into it because their first product had failed. It was a form of logic called RTL, or resistor transistor logic, and those weren't working. People had moved to more digital or diode-transistor logic (DTL) and they were not that successful. So then they went into MOS—which they had learned at Fairchild Labs—and they started working on that. MOS products required a lot of customer education. They required not only technical articles but classes, so we started producing materials for teaching people how to design with MOS technology, because it was more like a designed-in vacuum tube than a transistor.

Hollar: Was that a breakthrough? Teaching your customers how to use your product?

McKenna: Yes, and in fact they made more money teaching than they did on the product. Because the customers were all military, and the military systems designers signed up for it. We built a big, thick binder and hired some solid state professors at local universities. San Jose State was a big provider. The professors would teach the boilerplate, and then our guys would fill in. I was managing that and putting those together around the country. We became much more engaged in trying to move the technology forward into the mainstream. And that became my task.

Hollar: This was an open field, wasn't it? There was no template for how to market to these companies and educate a whole consumer base.

McKenna: No, and there weren't the right vehicles, right? I mean other than trade magazines. That was because the business magazines really hadn't bought into it.

I'll give you some examples. No East Coast magazines had editorial offices here on the West Coast. Maybe *Time Magazine* had one, but they had a science editor and he covered the oil companies and

pharmaceutical companies and things like that, or whatever was here. They didn't cover the technology companies in the Valley. I was told by an analyst at Morgan Stanley in New York, "Those little companies in Silicon Valley will never make it. They're going to be overcome by the bigger companies on the East Coast who have much more resources to take products to market," and in fact they wrote a report to that effect. It said, "It's more likely that new fields are going to be opened up by divisions of big companies because they have the resources and the talent to put behind marketing on a broad scale." They felt these little companies didn't have it.

Hollar: Who did they feel would do that overtaking?

McKenna: Oh IBM, Burroughs, Univac, eventually Digital Equipment, all the big Eastern technology companies at the time.

Hollar: What was the attitude here in Silicon Valley? They certainly must have seen all these big companies, many of whom were their customers, buying their product. How did they think about that competitively?

McKenna: Well, they were growing, but they were growing in large part, particularly in the 1960s, in the military market, so it really didn't matter that much.

They hated the military market. You've got to realize that the military market paid a high average price for the product, but it was paid for in a pound of silicon because you would take your devices and test them by various parameters. Those that fell off the edge were consumer products. Those that got a narrower parameter were industrial products. Then the final ones that got what they used to call "a full shake, rattle, and roll"—those became the military products. You could price those at a premium, but they sold in very limited quantities.

Yields on a semiconductor device—particularly as you got into integrated circuits—were fairly low. All kinds of things would go wrong. I mean if I showed you pictures of the "clean room" at that time, it wasn't a "clean room." You put on a smock. That was it. They just hadn't evolved in all of the aspects of creating an environment for the high quality, pristine kinds of devices that were required. A piece of dust on a chip of silicon that's a quarter inch square looks like a boulder under a microscope. I mean it looks like a boulder, just a big chunk there, and so that destroys the device. So many things had to come into place to really build yields, and that took experimentation.

At GMe they placed finished devices in something like a little petri dish and walked them across the room for shipping to the military. When the devices got to the client, they were all dead devices.

Hollar: All of them?

McKenna: Yes, and they couldn't figure it out at first. What they ultimately found out was that walking the unprotected devices across the carpet put electrical static on the leads and zapped all of the devices.

That taught them that they had to put some kind of protective diodes on the leads. How else would they learn that except by blowing a quarter million dollars' worth of devices?

Hollar: You have a couple of props that this might be an opportune time to show. You mentioned vacuum tubes a minute ago.

McKenna: Well, yes. The vacuum tube—this is an older one I bought somewhere. When you were kids, you could look in the back of a radio or TV and see these. I remember as a kid it was interesting. We had an old RCA stand-up radio, and I always used to peek into the back of it, and they had a diagram showing the leads and the tubes. You couldn't really figure out what was going on because you didn't know enough as a kid. Most of them were bigger than this, but this is a glass tube which has elements in it that light up and then send electrons from one path to another. You can turn them on and off and so it becomes a switch.

That was replaced by a transistor [holds up a single transistor] and this is probably not going to be seen by anybody, but I'll hold it up here. That's an epoxy transistor, one transistor. They were sold by the millions back in the early '60s.

This is from one of my first promotions. I have this because I sent out a bunch of them as samples in little cards. I kept some of those, and I have two left. I don't know what happened to all the others, but I still have two left. I like to compare my beginning and my career in Silicon Valley with this single transistor, and this watch, which has three billion transistors in it.

We talk about how it takes a village to raise a child. To raise technology takes a whole infrastructure of myriads of kinds of businesses and innovations. It's not simply somebody going in and starting a semiconductor business. It's the tools, the instrumentation. At GMe everything was custom-made. They even made the cameras to photograph the circuit layouts on Mylar sheets. I was there while they built all this stuff. They built the burning ovens. They had sheet metal people and all sorts of suppliers come in and do it.

And GMe wasn't a big company. It was all in one building and there weren't that many people there. The company never reached more than $10 million in size, so I knew everybody there and I knew everything that was going on.

The ability to watch all this stuff, to watch them cut the Mylar masks on the light tables, to see those masks put up and photographed and then reduced and reduced, was an education. I have a silicon ingot from 1965— a one-inch ingot that's about 12 inches long. At one end of the plant they grew ingots out of molten silicon. It took a week to grow a crystal and then they sliced them, polished them, and then used a photographic process of masking and exposing and masking and exposing to build the device. Then you had to connect the leads. There was a whole array of workers in the back room that, under microscopes, soldered each little lead onto the device. At the end of that line they had a packaging group.

It reminds me of hearing Bob Noyce talk about going out and seeing what went on under the hood of a car when he was a kid. You could open the hood and see the pistons, the spark plugs. You understood. You put some gas into the piston and light a spark and it pushes the piston down. You got to know how it worked. This was exactly the same thing for me. You knew exactly how semiconductors were made and how they evolved.

In roughly 1965 GMe got a contract to build an electronic calculator for Monroe Calculator. I have a picture of the calculator here.

Hollar: Yes, the picture of it. That's good.

McKenna: It looked almost exactly like the Apple II. It was that size and shape, but it had a little screen on it. It contained 39 MOS LSI chips and it reduced the electromechanical calculator from literally thousands of parts down to 39. They were building those at the other end. So I saw the molten silicon [at one end] and I saw the calculator [at the other] all in my few years of "getting my MBA" at GMe.

Hollar: Is that what it was like for you, getting an MBA?

McKenna: Yes.

Hollar: And a technical degree all at the same time.

McKenna: Well, you know, you knew what everybody was doing. The company was struggling.

Hollar: I was going to ask you how it was doing from a business standpoint.

McKenna: From a business standpoint, the problem was that it couldn't sell everything it made, and it couldn't make everything that would sell. As Phil Ferguson says in his oral history, "They wouldn't buy what we made and we couldn't make what they wanted to buy."

The devices were very complex. They were putting between ten and a hundred transistors on a substrate and that was reaching the capacity of the process. So the yields were very, very, very low. The calculators—they could only produce a few of them. They announced this calculator in a big nationwide campaign, Monroe did, and advertised that they were going to be cheaper and so forth. The average [electronic] calculator was the price of an average family car at that time. These were going to go down to a few thousand dollars, to $2500 or something like that. Well, you couldn't do that unless you could produce these things in volume, and GMe could never produce them in volume. They were pouring more and more money into it. Then they were sold to Philco Ford.

Fortunately, I was always part of the flow of information in that company. Phil Ferguson, who was president, was a good friend and protected me a lot from the Philco people, who really wanted to me to clear everything I did with them. I just told them to go to hell, and Phil backed me up. I wasn't going to do

that on principle to people back in Philadelphia. These were people out of Ford. I got to witness what the bureaucracy of these large corporations can do to small companies.

Hollar: Did that influence you? I'm specifically interested in what you were saying earlier about the belief on Wall Street that the big companies would eventually crush these Silicon Valley companies and you were skeptical of that. Did the Philco Ford experience help you understand why that might not be the case?

McKenna: Oh certainly, certainly, because it became "who's in charge" more than "what has to be done." They had all these classes of people. When they bought GMe, they gave everybody an examination. They brought in this outside management firm to give us all tests. They gave me a test and concluded that I was not fit for the engineering world.

Hollar: They said that to you?

McKenna: Yes. It was the result of my test. My psychological profile was that I was not fit to work with engineers.

Hollar: Did they tell you why?

McKenna: I was too intuitive.

Hollar: And what did that mean?

McKenna: I don't know. I've been here, what, 55 years? I'm sure they were not in their business 55 years.

They categorized you in every way—your grade, your salary, the kind of desk you bought, how many desk drawers you could have, the kind of company car you could have, all sorts of details. It was all in a binder. When you say run by the book, it was run by the book.
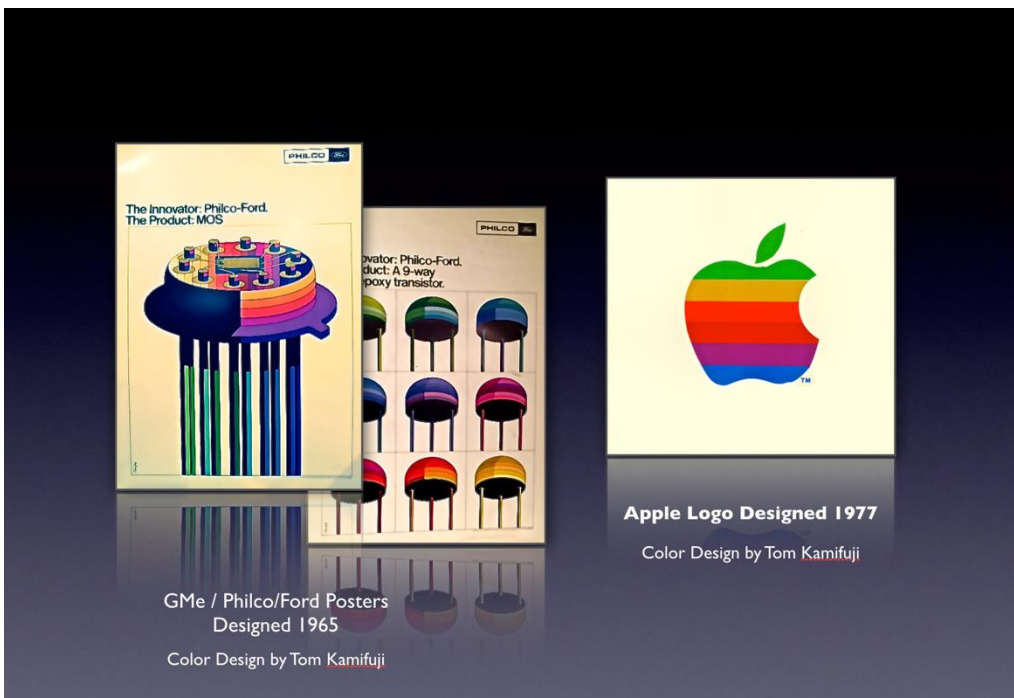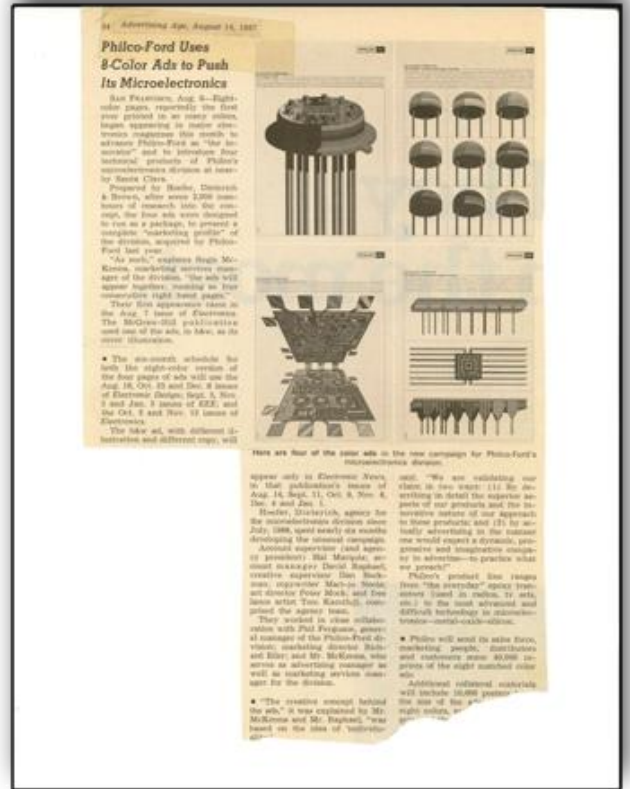
Hollar: Was the upshot that you weren't going to be able to be in marketing, or maybe even be with the company?

McKenna: Yes, they thought I had to move to some other field. They didn't say what, just some other field.

Hollar: And then what happened?

McKenna: One thing I did really got their attention. I had an ad agency in San Francisco called Hoefer, Dietrich, and Brown. They were the largest consumer agency in the area, but they did some industrial stuff as well. I had hired them to do our advertising. They introduced me to a man by the name of Tom Kamifuji. Tom was an illustrator from the psychedelic era of San Francisco. He did beautiful multicolor

designs of Kabuki figures. He was an illustrator, but he also was a fine artist—I have some of his prints, and they're really outstanding designs. They [the agency] made a series of ads taking semiconductor devices and turning them into these multi-color Kamifuji figures. They were really brilliant. So I got the company to agree to do an insert around the MOS launch on those.

GMe / Philco/Ford Posters
Designed 1965
Color Design by Tom Kamifuji

Apple Logo Designed 1977
Color Design by Tom Kamifuji

I think we did a four-page insert in six or seven colors. If you look at them today, you would say they stole the idea from Apple. But, in fact, I later took the multi-color idea <u>to</u> Apple, and that's how the first logo at Apple got made.

So GMe produced those ads, and they got Henry Ford's attention. It got everybody's attention at Ford. They then put pressure on Philco. Philco then put pressure on me. They wanted me to go back and meet with all the bigwigs and to do whatever they told me to do. I won't tell you what I said, but I told them NO in very uncertain terms.

Hollar: Very explicit terms.

McKenna: Explicit terms. Many of the Philco executives lived on the Main Line in the Philadelphia area. I had meetings there with various Philco VPs. Now that I was well established in Silicon Valley, I didn't want go back to those places again.

In any event, fortunately my company backed me and what I wanted to do. Of course it was also the link to the MOS world for me at Intel, but we can talk about that later.

Hollar: Yes, I do want to talk about that later. I'm going to ask you a few more general questions about your observations. First of all, since GMe was struggling, what did you learn in this early phase of your career about why companies in Silicon Valley were succeeding and why some companies weren't?

McKenna: There was a lot of experimentation going on—a lot—and I think what happens is that success is not just know-how. It's certainly having the right backing behind you. If something were precarious and high risk and it faltered, the backing would collapse.

Hollar: And where was the backing coming from in general terms?

McKenna: Well, at Fairchild it was coming from Fairchild, and they did fail on a lot of products and a lot of their research. At Hewlett Packard, Hewlett Packard Labs went through a lot of experimentation, but Hewlett Packard supported them. Varian Labs had a lot of experimentation and failure, but Varian was supporting them because they had other commercial enterprises. Later on it would become venture firms and, more expressly, the venture community, but startups were very precarious and a lot of them went out of business. A lot of them.

I was working with a firm called Syntelligence founded by Sheldon Breiner. It's a story in John Markoff's latest book (*Machines of Loving Grace*). It was backed by Don Valentine in the early days of the 1980s in artificial intelligence and machine learning. It was a client of mine in the early '80s. He really tried to build a business out of it, and at that time it just became too risky and too obscure as to what the market would be. So people backed away. There wasn't a market infrastructure to take AI out. There weren't partnerships that you could build. There wasn't third-party software because Silicon Valley companies weren't building computers. They were making semiconductors. My first nine clients when I started my

business were semiconductor companies. I had nine semiconductor companies as clients, all making different components.

Hollar: And everything a component of something bigger.

McKenna: Something, yes. They were making MOS transistors or some sort of amplifier or using a different form of logic to create something. There were all sorts of people coming up with different ways of designing devices called V chips and all sorts of things, or to create them faster, or more reliably, or something of that nature. So there was a lot of specialization going on.

Hollar: People had to be able to survive experimentation and failures because there was a lot of failure. It was a completely new area. And what about leadership and management? Who were the leaders, the people in the field who were the most important here in Silicon Valley at that time?

McKenna: At that time it would be hard to say who the leaders were because there weren't many. They were not as distinguishable as today. There was a company called Ampex in Redwood City.[2] They made tape drives and were a leader in what people thought would be a major area of America's leadership in consumer electronics. The story is that their patents were copied by Japan and that Japan came in with lower-priced products and undersold them. There were a lot of disputes in the courts, and Ampex didn't survive it, but they were clearly one of the leaders at the time.

In my mind I don't think Varian and HP were very specialized, and they didn't spin people out. In the '60s you didn't see people starting a company out of Hewlett Packard or out of Varian. The spinouts were mostly out of Fairchild, and Fairchild had a long trail of people with expertise. People leaving Fairchild to form companies knew the expertise of other people who had been at Fairchild or in the industry.

When [Charlie] Sporck went to National [Semiconductor] from Fairchild, he knew who the experts were— Don Valentine, for example. When Don went out to recruit a salesforce, he didn't hire salesmen. He went to Philadelphia and Baltimore and Boston, and he went to the top TI salesmen, or the top salesmen at Motorola, and he said, "We will set you up in your own firm, and we will guarantee you an exclusive territory for our devices. We'll give you 90 days, or some great credit terms." So the salesman started a business.

Sporck basically got a salesforce that was independent, on their own, hungry to build businesses, without having to hire salesmen. That was really innovation, and it was marketing innovation, and that really did, I think, establish a precedent in the marketplace. That was rare.

He did it with application engineers as well. He hired application engineers and he put them in the sales offices, but they weren't allowed to take orders. They weren't allowed to price. They weren't allowed to talk about delivery. They were simply to work with customers in helping them design National's products into their systems.

---

[2] [Interviewee's note] Until recently, there was a large Ampex logo display near the US 101 freeway.

I joined National in 1967, only a few months after they started. They went to well over $70 million in sales in three years, which was a lot in those days.

So I'd say that in the 1960s, it [leadership] was mainly in semiconductors. There were other companies, but not too many of those survived because they were all experimentations of one kind or another. There may be some seeds of those companies still left, but I think a lot of them vanished over time. The integrated circuit came in and integrated a lot of the old discrete components. Then there were other types of devices—gate arrays and devices that would package and program things. Then there was the whole revolution of the microprocessor, and after that came waves upon waves of new companies that took advantage of those new technologies. They just washed over those old companies.

Hollar: As the tide rolled forward.

McKenna: Yes. And everybody gained experience.

I always said that for startup companies and entrepreneurs, it wasn't just the reinvestment of money. It was the reinvestment of knowledge. Most of these companies got people on their boards who had been there before. They would get people on their boards who would have run a company or have been part of a company or are part of a company, and they're reinvesting their knowledge back into a startup. It's not just the money. Knowledge is actually more key.

Hollar: What was your experience of the culture of Silicon Valley as it was emerging at that point? It wasn't known as Silicon Valley at the time, but this area was clearly where all this was going on, and you were here. You'd come from the East Coast, where people had different approaches. What were you observing and learning during this period?

McKenna: The semiconductor industry created the camaraderie. You didn't go to the Wagon Wheel [bar and restaurant] and meet people from HP, or Varian or Food Machinery Corp. or Lockheed. For many years—and people criticized me for it—I didn't include HP or Varian or Lockheed or these other companies in Silicon Valley when I talked about Silicon Valley culture. They weren't part of the model—the model being Noyce spinning out of Shockley, assembling the Traitorous Eight, and building an egalitarian environment where everybody had their say. In that model, they find venture money or outside people to help them to finance the enterprise, and everybody participated and shared in the rewards. That's a model that's been recapitulated over and over and over again and gotten more refined and better. But none of those companies I mentioned, while they were here, did that until later, if at all.

Tom Perkins was one of the first to spin out of HP. Tandem Computer spun out of HP, but it was after Tom had left. He knew these people and started pulling them out. Varian really didn't spin out almost anything. They were in the computer business and got out of it.

I'm in a whole different realm than the Terman / Stanford [theory] of how Silicon Valley came about. I think Terman and Stanford tapped into the innovation layer as universities often do. They followed the money, and as the money grew, their interest in ownership grew.

Everybody reinvents history. It's still going on.

Hollar: The semiconductor industry and the unique way that the people in that industry related to each other, that was a major influence.

McKenna: I think the microelectronics base was really essential, because the microelectronics people began calling on these next levels. If you were an instrument maker, if you were a machine tool manufacturer, if you were building a circuit board or any kind of next-level electronics, there was an interface between you and a semiconductor company. The semiconductor guys were learning about that next level.

Hollar: And moving really quickly.

McKenna: Yes. And there was the advent of application engineers who began to learn about how to apply this microcircuitry into other products like machine tools. That was a sort of knowledge transfer, and it formed a very close relationship between the semiconductor industry and the machine tool manufacturers. Cincinnati Milacron, for example.

At that next level up you began seeing ideas emerge in Silicon Valley into different kinds of instrumentation. New medical instrumentation came out early. More sophisticated applications like wave technology. One of our clients, Acuson, designed and developed ultrasound scanners. Sam Maslak was founder and KPCB [Kleiner Perkins Caufield and Byers] was an early investor. But that came about because the circuitry became more sophisticated, the devices—better, faster speeds primarily, and devices that could do the logic faster, do a simulation faster. That just kept bubbling up, and I think if it weren't for the microelectronics industry, I don't think Silicon Valley would be here.

Hollar: In that context, Regis, why was a culture of risk-taking and innovation able to take root here in a way that it really didn't take root anywhere else?

McKenna: To answer that, I would go back to that same industry because these were the people who did the risk-taking. They were spinning out of a company even when they had very secure jobs, and they were starting something within venture money. They were all very unique characters, the people who founded these companies.

You could think of Jerry Sanders as an example. I mean, Jerry was a sales guy but he was a brilliant, brilliant person born on, I think, the south side of Chicago. When he was a salesman for Fairchild—he tells this story—he had one dark suit. They put light cloth underneath in the padding, and it would show through. He used to take his black pen, when he'd go on a sales call, and black it out so he didn't look so shabby. He pulled himself up.

He and Larry Ellison are a lot alike in the sense that they are bombastic, self-promoters. Jerry Sanders loved being around Hollywood. He used to have a white Rolls-Royce that he drove in San Francisco and a black one he drove in L.A. He said he had them in different colors so he would know where he was.

These were unique characters. They demanded attention in many ways, they became more verbal, more out. They spoke up at forums and trade shows. So the characters, as the trade shows grew, became less staid. The computer industry became less centered on IBM and DEC and the BUNCH, you know— Burroughs, Univac, NCR, Honeywell, [and Control Data]. That was called the BUNCH. They were the computer companies that dominated the American scene, world scene. These new guys who went to the computer conferences and the Solid-State Circuits Conferences were not the East Coast guys. These were these renegade West Coasters.

I went to a Solid-State Circuits Conference really, really early with Bob Noyce and I can remember Noyce saying he saw the telecommunications industry and the IT industry splitting apart—that they were going to go their separate ways. This was before the deregulation of AT&T, and he was criticized roundly for that, but he said, "The technology's going to drive it," and he was right.

I remember him talking at Rickey's in Palo Alto once, and he said, "We will soon be able to run a whole business on a few chips," and somebody made the smartass comment that, "Well, I hope they don't drop those chips on the floor. They'll get lost in the cracks and they'll go out of business," and Noyce said, "It won't matter. You'll be able to duplicate them. They'll cost so little you'll be able to duplicate them in a million places." He had that vision, and he was a risk-taker because he was pushing those edges.

When people come out with these new ideas about doing something and then go out and prove them, now you begin to say, "Hey, I'm not going to discredit, I'm not going to discount them as much as I did before."

Hollar: It must've been a great environment for you—thinking about creative ways of marketing a whole new industry—because that was the expertise that you were developing. Did you find that at the time? This is the mid-'60s when you were getting ready to go to National Semiconductor and then eventually starting your own company.

McKenna: Yes. The key thing that I can hang my hat on is marketing products from first-time technologies. They didn't exist before. There was no model. You weren't unplugging something and putting something else in. It was a totally new idea,

> The first volume RAM (Random Access Memory) by Intel
> The first EPROM (Electrically programmable Read only memory) by Intel
> The first Microprocessor but more importantly, the **first high volume 8 bit MPU**, the 8080.
> The first commercial lasers developed by Spectra Physics
> The first commercial Ethernet products by 3COM
> The first Recombinant DND product (Insulin) from Genentech
> The first retail computer Shop (The Byte Shop)
> The first truly "personal computer" the Apple II from and,
> The MAC – a product several key RMI people were part of the Apple team for 3 years developing strategies, planning and marketing programs.
> The first Ultrasound System from Acuson
> The first operation software for PC, Microsoft
> First commercial solid state LED devices – Litronix
> First Digital Systems for Industrial machine productivity (Measurex)
> The first digital PBX (ROLM)
> First online consumer personal communications (AOL) American Online
>
> Non-prodcuct first include:
>
> **IDA Ireland** – we were the first firm to be hired specifically to help Ireland attract high tech companies.
> **SIA** – worked with founders to develop marketing activities and RMI was the only non-manufacturer to be an SIA member after it was first formed.
> **X-Open** – promoted the concept of open software.
> **Ethernet** – Worked with 3COM and then with a consortium to promoted Ethernet as a standard.
> **The Intel CRUSH program** – helped develop a marketing strategy to gain leadership position (versus Motorola) in the MPU market that led to IBM adoption of Intel MPU.

List of products/technologies which RMI brought to market which did not previously exist

and that was even before Intel. Take Spectra Physics and lasers. They [Spectra Physics] developed a low-cost laser for scanning UPC codes, and they were trying to develop an under-hundred-dollar laser to do that. It went into supermarket checkout counters, and that was widely pushed aside as "people won't go near it because it'll cause cancer," or "it'll cause all kinds of ailments in human beings," and so it was actually boycotted when it did go into grocery stores. We had a client, National Advanced Systems, which sold that equipment and it was boycotted by many consumers. So getting those lasers into the marketplace took a vast education.

We took lasers into agriculture and construction. They used to run laser plumb lines, run a laser

absolutely straight, and you could aim it at a target and it measured perfectly, and so lasers became common. That happened in the 1970s, and we were part of helping to launch that. We built whole campaigns around that, and that was very successful. The president was Sam Colella, is a venture capital guy here. He was president of that division and we worked with Sam.

So when these things came along, you looked at them and said, "Do I understand them?" You know that consumers don't understand them, and customers don't understand them. To do that I developed my own methods over time of identifying people that I would become friends with who were users. I got to know, for example, the head of the Microelectronics Lab at GE, and I got to know people like him in other companies in parts across the country, at conferences and so forth. I'd invite them to lunch or go see them. They would become my sounding boards, and they would tell me how complex it is.

There was a fellow, Max Hopper who was sort of the Mr. IT of the United States. He was CIO at American Airlines and Bank of America, and he taught me that the customer is the architect of the computer system. And he <u>was</u> the guy who was the chief designer of the Sabre airline scheduling system used by American and most other airlines. It was that whole idea of outside-in, of learning from the marketplace, bringing it back in, and what they don't know you have to either teach them about it, educate them on it, or bring them into it in some way so that they become part of it. That's a long process.

I think we've gotten spoiled because we think that, "Well, Facebook came along and, 'boom,' it was overnight." But even Facebook has new distribution channels that have their own problems. Stuff moves quickly, and I would say that if you were to weigh the internet successes against the numbers of tries, it's still a very small success rate relative to the amount of tries.

Hollar: We're going to close this session with your move to National Semiconductor and then your eventually opening your own firm in 1970. First let me ask you what was attractive about National at the time, and why did you choose to do that after GMe?

McKenna: Well, it was easy. First of all, I was having those problems with Philco. They had tried to get me fired so many times. For some reason or other, I didn't care about that. I—

Hollar: By the way, what happened to GMe after that?

McKenna: GMe was merged with Philco's Microelectronics and then moved back east.

Hollar: Did it just sink beneath the waves?

McKenna: Yes. It got destroyed. The technology lived on but Philco went out of business. It was another piece in the destruction of old industries that get churned under, and yet out of it comes some little parcels of effort, and those become parts of new industries, and you see it everywhere.

I didn't know much about National [Semiconductor], because they weren't really started yet. They basically had leased the building across the street from GMe, and next to GMe was a little company called Molectro. Molectro had lured Bob Widlar and Dave Talbot out of Fairchild to be the key people there. Bob Widlar was probably, how will I put this, responsible for at least 75 percent of Fairchild's profits? And Talbot was a guy who knew how to make them, so they were Mutt and Jeff. They were two guys that worked together, but they didn't know anything about management and anything else. They were just going to design some stuff. That was next door.

Across the street was an empty building. I got a call from Don Valentine, and Don said he'd like to meet with me. I didn't know Don Valentine. I knew Fairchild and I knew some of the people at Fairchild. I literally walked across the street. When I went in, there was no furniture, there was nothing in the building. It was empty. He and Charlie Sporck were pitching pennies against the wall. You could hear it echoing.

Hollar: Did you know Charlie Sporck at the time?

McKenna: No. I knew of Sporck because he was one of Noyce's, or he was one of Phil Ferguson's. Those two kind of worked side by side. Maybe one worked for the other—but I just knew of him, and, you know, we had an interview and that was it. He hired me.

Hollar: Did they describe to you what they needed for you to do or...

McKenna: Yes. We had a conversation. It was a position called Marketing Services, which was a catch-all for whatever needs to be done, and it included advertising and PR. They really didn't call it PR. They basically just called it Marketing Services. It was largely literature. I did technical articles, all of that sort of thing. It wasn't really well defined, because there wasn't this separate PR activity.

But he needed somebody to do all that stuff and I knew how to do it, and, you know, I was fairly confident in knowing how to do it. Don, he used to write everything in green ink, and he used to write on the back of IBM cards, blank——

Hollar: Blank punch cards.

McKenna: Blank punch cards. After I'd been there maybe, I don't know, a year or six months, he pushed one of these cards at me. It had names on it, and he said, "Those are the people that I interviewed before I talked to you." I said, "Well, why didn't you hire any of those people? Why did you hire me and not one of those?" He said, "Because I couldn't intimidate you."

<laughter>

McKenna: Well, if you work for people in the semiconductor industry, you know, it is a tough bunch.

Hollar: Yes.

McKenna: They were and are the down and dirty people of the business, or they were then. It was highly competitive. Highly. The competition was really what made it so intense. You worked hard and you worked around the clock. He knew that. So I went to work for him and there isn't really much more to the story of how it happened.

The wonderful thing about Don Valentine, as I mentioned earlier with the story of his independent salesforce, was the amount of freedom he gave me. He wanted somebody to just go do things that helped build sales and helped build National's position, and he was up for anything. I got to travel the world, which is not what a person in my position would do. Usually you'd do it from a desk. He didn't want me sitting at a desk. I would go out and work with regional managers, sales managers, customers, distributors. I spent my time traveling. I went to every country in Europe when we opened offices, sales offices, and distributors and reps there. I set up a technical printer in Eindhoven, so that we could ship stuff around the world and pay cheap prices for the literature we mailed, because we, National, did a lot of application notes. We did a lot of that training and teaching.

Hollar: And the sales process was the same as you——

McKenna: Yes.

Hollar: ——had discovered everywhere else.

McKenna: Yes.

Hollar: It was training, teaching, engineers reading?

McKenna: Yes. And we did seminars, workshops and so forth, around Europe.

Widlar was a wonderful spokesman. I mean, he would command audiences of hundreds of people, hundreds of engineers—and would usually keep a glass of gin by his side. I was in charge of keeping him in line.

Hollar: How did that go?

McKenna: Not well.

<laughter>

McKenna: No, I did pretty well. There was one time when we were out to dinner and he had a presentation the next morning, at a conference, and he was lit. He still could be more rational than most people could in that condition, and he went to the john and I told everybody to move their watches forward an hour or two. We all did, and he came back and I said, "Wow, look at that, it's one o'clock in the morning."

McKenna: So...

Hollar: Meeting adjourned.

McKenna: Meeting adjourned. We got him off to bed.

Hollar: Was he okay under those circumstances? Could he get up the next morning and—

McKenna: Yes. He was excellent.

Hollar: —pull it together. Yes.

McKenna: And people really listened to him. I mean, he was very clever. When he published data sheets or application notes, he always put errors in the electrical designs because he didn't want people to copy them. He wouldn't say where the errors were, but it would affect the whole process.

Hollar: Did that become evident because other people followed those specs?

McKenna: Yes. He would tell you, "I've got something in there and we'll know if somebody copies it." Talbot was such a genius at making Widlar's designs work. But he [Widlar] was a genius. I mean, he was a wild man. He would disappear at times and nobody would know where he was. Then when he would

come back and he would have a small box with devices in it, a data sheet and an application, and he'd say, "Here." He'd take it to Floyd Kvamme or Don and say, "Here." He wouldn't tell anybody what he was doing until that point, so you didn't even know what he was designing.

Hollar: Were there other things about working there [at National Semiconductor] that influenced you, lessons you learned?

McKenna: I think the big thing was, again, Don's allowing me to explore the world, to get to see different cultures, to understand that people understood things in different ways and the competition was much, much different in Europe than it was here. There were many semiconductor companies in Europe at the time. The French had competitors. There was a big company in Italy. I saw the cultural clash of having Americans come over with our brash sales attitude. To mellow that you had to build more of the educational approach into what you did. It made them feel better about you, and if they felt better about you they'd move your products.

The knowledgebase of the world of electronics really broadened for me. I'd say they did more for me than I did for them. Once you get involved in introducing those sorts of products, you're doing the same thing over and over again, because they made pretty much the same standard line of products. They got into various types of logic. Later on they tried to get into the microprocessor business and I did help them when I started my business, because one of my early clients, Linear Technology, was a spinout of National. I was on their board, an early investor, and while I was doing my company I tried to settle lawsuits between the two, because I knew everybody on both sides.

Tom Peters[3] really disliked National. He used to bad-mouth them all the time. He talked about how Sporck really wasn't someone who worried about how your building looked or things of that sort. Of course, Sporck always said, "You can have mahogany walls at home or you can have them at work. Where do you want them?" But he was a hard-nosed manufacturing guy, and a good one. An excellent one, actually.

They ignored Peters. Every time he gave a talk he [Peters] would say something negative about National. I got a call from the marketing director at National—this was years after I had worked there—and he said, "I want to meet." I met with him and Charlie, and Charlie says, "It just irks me that he keeps putting us down in quality." They had excellent quality, ranking higher than Intel in many instances. I said, "Well, invite him in to talk," and he said, "I'll never do that." I said, "Well, that's my advice. Invite him in to talk. Ask him to come in and give a talk on how to build quality." He says, "What the hell—" you know Charlie, he just screamed, "What the hell?" I said, "Do it." He did it. And Peters stopped criticizing them. From then on, National became a model of success for Peters.

You know, don't fight them. Join them, don't fight them. I stayed close to the company and a lot of the people there. Obviously, you know, I still know Floyd, and Don is good friend.

---

[3] The business consultant and co-author of *In Search of Excellence*, among other business books.

Hollar: In a larger sense, this ties into the points you were making earlier, which was everybody's learning at this point, right? There's no necessarily right way or wrong way to do it. There's certainly right and wrong ways to go about manufacturing and so forth, but just from the standpoint of learning how to do business in this entirely new business, everybody was learning from everyone, weren't they?

McKenna: Yes, and there were so many people that were alike. I read *Flatland* (by Edwin Abbott Abbott,1884) very, very early in my life. Everything in *Flatland* is a line or a dot or a cube or whatever, and it's all one-dimensional. Nobody tries to be two-dimensional. As a result, no matter how different you think you are, from the outside world you're all the same. I used that many times as an example. You can be in the semiconductor business but you could be different, and you need not be the same as everybody else. Why market the same way? Marketing is where you can distinguish yourself.

That was really the message that I tried to implement in my company—doing something unique and different. Even with the company itself, I very early started thinking, "I'm going to do what my clients are doing. They're all pushing innovation," so I started thinking about, "How can we innovate?" I hated the idea that people thought we did the same thing as everybody else. Because that's anathema in most businesses. I didn't call it public relations. I called it market relations.

Hollar: And very strategic.

McKenna: Yes.

END OF THE INTERVIEW

Oral History of Regis McKenna, Part 2 of 8

From the National Semiconductor Corporation to Regis McKenna, Inc.

Interviewed by:
John C. Hollar

Recorded July 09, 2018
Mountain View, CA

CHM Reference number: X8675.2018

Abstract:

This is the second transcript from an eight-interview series with Regis McKenna, whose pioneering work in technology marketing and business strategy contributed to the success of hundreds of companies for more than five decades. McKenna was a talented, innovative marketing professional from the earliest days of the technology revolution in Silicon Valley. He came to the Valley in 1963 at the age of 24, worked in marketing in the early semiconductor industry, and then established his own company, Regis McKenna Inc. (RMI), in 1970. McKenna became a globally sought-after strategist and marketing expert, and RMI opened numerous offices around the world. His personal and professional relationships at RMI included Steve Jobs, Robert Noyce, and Andy Grove. His more than 700 clients included such legendary companies as Apple, Intel, and Genentech. He is the author of five best-selling business books and one of the most reprinted articles in the history of the *Harvard Business Review*, "Marketing is Everything" (1999). McKenna was recruited to many outside boards and advisory roles, among them his service as a founding advisory board member of the Computer History Museum's Exponential Center.

The interviews took place at the Museum between June 13, 2018, and January 15, 2019. The interviewer was John Hollar, president and CEO of the Museum from 2008 to 2017.

This second interview covers McKenna's career at National Semiconductor Corporation and his relationship with Charles Sporck, Don Valentine, and other NSC executives, as well as the circumstances that led McKenna to depart NSC and found his own company, Regis McKenna Inc. The time period covered is roughly 1967 to 1970.

* * *

Hollar: We're here for the second session of this oral history with Regis McKenna. Thank you very much, Regis, for coming again.

McKenna: You're welcome, John.

Hollar: We've been working very diligently on this so I think it'll go well. This session will cover the period from 1967 to 1970 and the start of your firm, Regis McKenna, Inc. Before we get started on that, let's go back to session one and recap anything that you've reflected on since we talked—that perhaps we didn't get to or that you wanted to elaborate on.

McKenna: One thing would be the network that existed here in Silicon Valley in the period we're talking about in the early and mid- to late-60s. It was 80 percent semiconductors. That was where all the new companies were starting and that's where all the new technology was being formed. All the people knew each other. They all came basically from Fairchild, or had some reference to Fairchild, in some way. They all go back to founders with Shockley, who created the transistor. These were foundations from a common base.

Then it was the "who you know in the network." That's how the stories began of the Wagon Wheel, where they used to go after Fairchild and have drinks or something to eat. There were several of those kind of restaurants around this area, and a lot of them had paper placemats. People would draw their ideas and thoughts and diagrams and so forth on those placemats. Some people saved them. It was a very contained "everybody knew each other" sort of group.

Companies that were here before that like Hewlett Packard or Varian—there was even a tube company up the peninsula called Eitel-McCullough, Friden Calculator across the Bay, companies of that nature, or even Lockheed and Food Machinery Corporation—they weren't much in the vision of these companies. Most of the semiconductors were [being sold] to people who were moving to solid state from vacuum tubes. The early literature was about replacing vacuum tubes. Later we'll talk about Intel and its creation of memory and memory modules. Those memories, semiconductor memories were really based upon the architecture of the core devices. As the volume went up, the price went down and the core memories just reached a point at which they couldn't reduce costs anymore and went out of business.

So it was always this competition with older, ancient ways of doing things. Literally, ancient ways. People thought of them, and displacing them, because of cost and performance functions and features and so forth. The Valley was really not—it's hard to imagine the way it was then because it's so diverse today in people, in companies, in technologies, in types of technologies. People consider companies like Uber part of Silicon Valley. At least from the media standpoint they do. And while they're users of the technology, those kinds of companies were outside the purview of where the real action was taking place. Hewlett Packard was making instruments and of course there were components sold to them. But they were looked at as a customer rather than as a participant in the technology evolution of the Valley.

Hollar: When you consider "entrepreneurial thinking and action" and the way we think of it today, that phrase has a wholly different connotation in 2018. When you think about it 50 years ago in 1967-68, how would you compare the two?

McKenna: The model was still the Traitorous Eight,[1] because most of the people worked for some member of that group in some way or fashion, or they certainly had contacts through Fairchild. They [the Traitorous Eight] found a work situation in which their voices weren't being heard. Bill Shockley didn't want input. He wanted to tell you what you were supposed to do. And that's what I think the original eight thought they were going to try and get out of. They didn't like that sort of thinking because their voices weren't heard. As a result they said, "We're going to go somewhere where we can create our own environment." And as you know the story, eight of them left and found financial resources led by Art Rock. He didn't provide the first capital, but he's the one that helped encourage them. Fairchild Camera and Instrument was an East Coast company that ended up being the financier behind them.

They formed an egalitarian environment. Stock options were given to everybody. How you dressed or who you were, who your parents were or what school you went to didn't matter. It's what you can contribute. They were a very diverse group. I mean they had various backgrounds from physics to

---

[1] [Editor's note] The eight engineers, led by Robert Noyce and Gordon Moore, who left Shockley Semiconductor in 1957 to found Fairchild Semiconductor.

Gordon Moore, a chemist. So their expertise was in different areas, but it was great for the beginning of a new form of productivity creation—the assemblage of things that were made from basic materials, and those basic materials required the addition of different kinds of additives, if you will, to make them work.
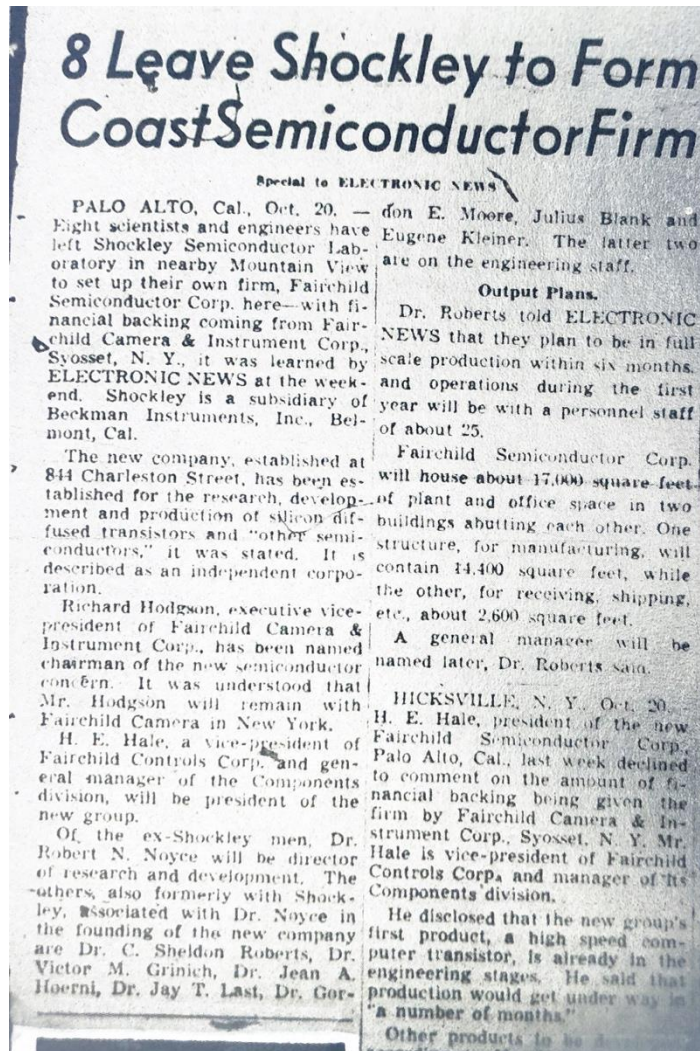
Electronic News, Oct 21, 1957. This article appeared on page 13. A clear indication that the newspaper did not recognize the momentous nature of this development.

That group was a unique kind of group. It was that formation that's been recapitulated ever since. It's usually people splitting out from larger companies, people who then try to create their own culture. They don't just imitate it—they try to create a new culture around it.

I was just talking to a young fellow the other day, and he was talking about a new AI company that he's joined, and what they're doing there, and how they're allowed to be more individual. They let them be more creative with their design and development. There isn't somebody always looking over them saying "this is what you should do." They encourage creativity in their designers and developers of algorithms. You're pretty much left on your own in terms of—if you have to take a day off, that's fine. You just find someone to cover for you, or you fill in somewhere else, or you work on Saturday. It's much more an individual responsibility for the whole rather than rules and regulations and strict discipline. That really was a 19th century mode of thinking where the business was broken up into boxes and you pass everything off from one box to the other. Then quality control was at the end, and they made sure they could back everything up. It led to a bureaucracy of corporate structures that gets so filled up, and everything has to move through so many channels and layers, that it bogs down. Little companies try to form structures that can work through all that. They're creating social organizations inside that encourage entrepreneurship within the company and encourage creativity within the company. So creativity isn't, you know, in the marketing department. Creativity's in everybody's job.

Hollar: Was there a sense of restlessness too? Was there a sense of impatience and a feeling that something big was happening and if you didn't get out there and try to test your own ideas you were going to miss out?

McKenna: Well, companies were spinning out pretty fast from Fairchild. I don't know exactly what the real number is but it's in the hundreds. There was always some new company being formed, and people were very curious over "so and so is starting at this company—wonder what he's going to do?" Or if they even <u>knew</u> what they were going to do because of the type of work they were doing at Fairchild. Fairchild was a very prolific company in terms of development. The real problem as I understand it, because I didn't work there, was that they committed to so many different projects that they were never able to really get any one product or product line into mass production. As it grew and as the company grew, they expanded that idea.

There was a time, when I was at National, that Fairchild announced that they were going to announce a new product every week for the next year. People laughed at it because they knew you can't do that. The cycles of testing and redesigning and so forth were much longer then because you didn't have the automated tools that you have today. That meant asking "how do we organize?" and "how do you select the right products?" And even when you have the right products, how do you find mass markets for it? A lot of experimentation goes on. And the markets they were reaching were very, very small markets— perhaps machine tools, or consumer goods like television sets, and radios for linear type devices. But it was still relatively small.

Hollar: Let's talk about National now. When we left off in the last session you had met Charlie Sporck. You had met Don Valentine. You'd gotten the job. And now you're at National. What was the environment for you and how were your early responsibilities defined? Or maybe you defined them yourself?

McKenna: They were certainly looking for something, Don was. It was Don Valentine who I worked directly for, although there were some elements of fundraising that they needed to do through Wall Street, and I worked with Charlie on that. It was like when you move into a house with no furniture and no carpets and no electricity.

Hollar: Literally.

McKenna: Literally. There was nothing in that building in Santa Clara when I went into see it. There was nothing.

Hollar: You said Sporck and Valentine were pitching pennies up against a wall.

McKenna: And you could hear them echo.

Hollar: A bare wall.

McKenna: Yes. They had acquired this failed company on the East Coast, which was National. It had gone out of business and there was a padlock on the door. When they were able to get Peter Sprague to finance them, get it open again and acquire it, they moved all the transistors from there out to the West Coast. Literally, Sporck and his sons and I and others, not Don Valentine, built an enclosed caged area for security purposes so that the transistors could be safe behind chicken wire fences.

Hollar: Chicken wire.

McKenna: And locks. And that was really the beginning.

There was burn-in testing equipment. I can remember when that first arrived. The head of purchasing was a fellow that I knew at GMe [General Microelectronics, McKenna's prior employer]. I introduced them to him and they hired him, and he's the one that started building and acquiring the equipment for production and assembly. The assembly was done, eventually, right in the back room. You could go out and walk up and down the line and watch—usually women—assembling the devices. Bob Widlar and Dave Talbot had left Fairchild to become vice president and president of Molectro, which was not something that they were attuned to as individuals or by education. That company was essentially acquired and absorbed into National in the very early stages, and so Widlar and Talbot became National employees.

Hollar: Today would they call that acqui-hire? You acquire a company mainly to get the two guys that you really want?

McKenna: That was really it. Those were the two. They had come out of Fairchild. Probably more than 50 percent, maybe as high as 80 percent, of Fairchild's revenues came from linear devices at the time that were designed by Widlar and manufactured by Talbot.

Hollar: Widlar had quite a reputation by the time you knew him.

McKenna: He had an enormous reputation. He was the Steve Jobs, the Bill Gates, the Zuckerberg of that era. When we held conferences—and the Paris one we did, over a thousand engineers attended—he was well-known worldwide. He wrote a lot of papers. And he was a very strange character.

Hollar: How well did you get to know him?

McKenna: I got to know Bob really well. For some reason or other we got along and traveled together a lot of places. He liked astronomy. He had a complete set of Nikon cameras for doing celestial photography, and he often left all his camera equipment with me to keep when he went to Mexico on his various jaunts. He could leave suddenly and disappear for weeks and no one knew where he was. He'd go and get on a plane and go somewhere. He would go to—I think it was Montana for Rodeo Days and they'd find him there. He was a heavy drinker—even when he gave talks. I used to say that my job was to keep his gin glass full.

McKenna: He lived up in the Santa Cruz mountains, somewhere in the woods, and he was a real oddball. He had a big, full, bushy beard, but he also had piercing eyes and could look right through you. But again, everybody knew that he was a genius and they allowed him to do whatever he wanted to do.

Hollar: What was it that National wanted to do immediately? What was the market niche it first wanted to pursue?

McKenna: Maybe I'm putting some thoughts in their heads, but certainly Charlie Sporck, who was the chief instigator, wanted to run his own business and not have to deal with a lot of the Fairchild's parent company influences. A lot of the people at Fairchild at that time were out of the Shockley team. I always equated them with scientists rather than engineers. They always were a cut above and much more cerebral in their approach. Sporck came out of GE's manufacturing school and was much more of a get your hands dirty type—let's make things and make them well and high quality and market the hell of them. In those days there really wasn't marketing. They may have called it that, but marketing was sales.

Hollar: Let's talk about that—how marketing today would mean something completely different from the way you experienced it.

McKenna: Marketing was largely taking the product from the end of the manufacturing chain and putting it through a network of distributors and sales reps and sometimes direct to military or large customers. Generally, the direct people were offices that you'd keep in various regions of the world where there was a large market for your devices, or a relatively large market. In that office might be a regional manager who would look over the distributors and sales reps that they had brought on. They might have an application engineer or two, and they would help the customer. They did nothing with the sales process. They simply worked with key customers to get products designed in. There was certainly financial management because at the end of a quarter all the regions would submit both their forecasts and their best estimates and that was rolled up into a national or international forecast. It was part of the active network of getting the product to the customer.

Hollar: You mentioned to me before that there were a limited number of ways you could actually let customers know what you were doing. Your channels of communication were quite narrow.

McKenna: Yes. There were very, very, very, very few. There certainly was no internet. There was teletype. But engineers relied on the trade magazines and trade shows. But again, the trade shows weren't consistent enough. If you had the Solid State Circuit Conference, for example, it would be an annual meeting or maybe a couple of regional meetings and so forth. They weren't something that would sustain a presence for your product or your company in the marketplace. Trade magazines did that. There were more than 20 that covered the electronics industry. There was Systems Design. There was Electronic News. There was Electronics Design. There were newspapers that were just new products. You had to have a presence in them or you didn't exist. My primary focus was to keep that presence out there in the marketplace.

Hollar: You understood fairly early on, didn't you, that more was required. You had to be a lot more creative and show a lot more hustle and initiative than the average marketing department could show if you were going to get the product out there.

McKenna: Yes. I think a lot of that, from my standpoint, came from Don Valentine, because Don was very creative—not from an artistic standpoint or a design standpoint, but from the standpoint of how to get product to market better. He always believed in working closer to the customer. It was his idea to hire systems engineers and people out of the companies—who would become application engineers—and put

them in the field offices. They weren't back here in Santa Clara. They were in Los Angeles. They were in Boston. They were in Philadelphia. They were in the places where there were large customers or potentially large customers. The rules were—don't carry price sheets. You don't give any price and delivery. You don't do anything that has to do with the salesman's job. You simply help teach the customer how to design these products into your products. You spend so much effort designing a product in, and the cost is more than any individual device—far more. Once you design it in, you don't readily change that unless it's pin for pin, lead compatible, and does pretty much the same function, but there's a performance upgrade.

Hollar: So customer acquisition was really key, because once you had them, you had them.

McKenna: Right. Even up into the Intel days, they called it "getting a design win." Design wins were everything, but the engineers made those decisions pretty much on their own because they were building a circuit card that would probably be a prototype for whatever they were designing—a machine tool or some kind of an instrument or a variety of things. Those circuit cards were configured in a certain way to house these components, and that was the job of the engineer —to put together these prototypes, design it, and put all the specifications in. They usually had some technicians helping them. It was expensive, and you had a really important and vital role to play. A lot of the application engineers would get very close to the customers and in some cases be considered part of the team.

We did a lot of education. Don was instrumental in putting on a lot of training sessions for salesmen. He would have a course taught on how to read an annual report because he said, "We don't want customers who can't pay their bills." Plus you can learn from an annual report about any directions they were taking, and so forth. So that was a course we held pretty regularly with the national and international salesforce.

Hollar: How big was the salesforce at the time?

McKenna: It was pretty small at the time. Don would go to the reps of competitive companies, say a Fairchild representative in L.A. or Boston, and or even salesmen, and say, "How would you like to run your own business?" They would give them the National line to represent. Essentially, it launched them into a business.

Hollar: So they weren't coming in house to be staff, salaried salespeople.

McKenna: No. There were these regional managers, and, depending upon the size of the market, there could be a number of salesmen in that office covering all of the area. So if the area was, let's say Los Angeles, which was a big area, or Chicago, which was also a really big area, for all of the machine tool companies and all of the manufacturing companies in that area, you could have several salesmen in one office. But you put those on very incrementally as your business grew. [Otherwise] you could use reps because reps were largely paid on commission.

Hollar: What other innovations did you and Don Valentine have to come up with to teach your customer base? You mentioned everybody was learning and that meant some people had to be teaching and marketing was teaching. Talk a little about that.

McKenna: I think product marketing built Silicon Valley. I know we say the entrepreneurs have [built it] and everything else, but the product marketers have one foot in the market, in the customers' door, and one foot in the technology.

Hollar: And when you talk about product marketing, you're talking in very broad terms. People today might tend to take marketing and put it into little boxes.

McKenna: Right.

Hollar: But that's not what you're talking about.

McKenna: No. The product marketer was the key. He was essentially the brand manager out of Proctor and Gamble. He was really responsible for everything. Although the engineers were pretty autonomous in what they did, there wasn't much feedback from the outside. One of the notes in my notebooks that I was going through recently said, "Innovation and engineering create, but marketing refines." What happens usually is—you get a product out there and the customers then start giving you feedback. With feedback, when it's in a competitive environment, when it's in a user's environment, you see what you should be building next. It's usually an incremental improvement of some kind because all of the semiconductor business is incremental. You start out with one transistor and you end up with a billion. It's Moore's Law. So when you're doing technology in the semiconductor business you're really looking at adding more functionality at lower cost, adding more features at lower cost. You're building it on the same kind of silicon-base substrate with transistors.

Hollar: Were you taking a brand manager approach at National at that time?

McKenna: It wasn't called that.

Hollar: But functionally, did it look like that?

McKenna: Functionality it was like that, yes.

Hollar: Do you think National was good at accepting customer feedback? Did they hear it? Did that really affect how they took the business forward?

McKenna: Not in terms of what products they designed. Widlar did it himself because he was just going to the next level and the next level and the next level. Inherently he'd been doing this most of his career. He knew, together with Talbot, how to make the stuff. The more complex and difficult the structure or the diagram of what he was doing, the more it had to be done in some kind of solid-state device, and Talbot knew how to do that. So these were all incremental developments from one to the next. There was not a

"why don't you build this?" That really came much, much later. And it came largely in the era of programmable devices. The real growth of that market was the microprocessor because the competitors' products will either do better in a marketplace or less.

One of the people that I talked to was the head of the solid-state design at GE. He had a microelectronics lab. He was well-known in the industry and actually published a newsletter on it. I remember when Intel was competing with their 8088 processor against Motorola's 68000 8-bit versus 16-bit, he said to me, "Many of those small companies out there like on the West Coast who are using the 68000 are capturing our imagination." Meaning, that's something we could do stuff with, and we can do what we want rather than what the designer wants. That really put the push on to get to that level quickly. And that led to the [Intel] "Crush" program. We'll talk about that later. But the competitive pressures were more listened to than the direct feedback from customers.

Hollar: How were your own skills being refined at that time?

McKenna: Practice. As Charlie Sporck once said, "Do a good job and you can keep it." It was a tough place. It was no-nonsense. I heard all of these stories about the wild times at Fairchild and the wild parties at sales meetings. None of that occurred [at National] and it was the same people basically. But none of that occurred at National. It was a very serious productivity kind of environment. You had to constantly be pushing for new ways to get the product attention in the customer's mind and hands, for me, anyway.

For me it was two things. One was doing it economically. We produced a lot of literature, application notes, mailed out a tremendous amount. Had mailing lists that we maintained. On my trips to Europe I went to Holland and there was a company there called Hankee's Holland, and they were global printers. They printed in Holland but they shipped all over the world, and they were very cheap. I had all of our literature done there and then shipped back here to the United States. Setting that all up and the logistics of it and everything—I learned a lot doing that and traveled a number of times over there.

They printed the Heineken labels. I went in there one time when they were printing Heineken labels, big sheets like this, with the labels on it. I asked if I could have one. And, of course, they said no they're all numbered and everything else. I bugged them enough that they gave me one.

Hollar: They finally gave you a sheet of Heineken labels?

McKenna: Yes. I had it framed and I think my son has it.

From the standpoint of creativity it was doing a lot of seminars and small conferences with distributors and reps in the regions. We did that in most of the major regions of the world. I'd exclude Asia because Asia was not—mostly Europeans were the big users of the early semiconductors. In Japan there were obstacles, import obstacles, tariffs and so forth. It made it very hard to get into that country. So they bypassed Japan even though that's where there was a lot of activity. Korea was not online yet. Taiwan was starting. I think one of National's early manufacturing plants was in Taiwan. And then they [National]

were the first company from this area to go into Korea after the war. That was a real challenge because they had to get legislation out of Washington.

There was a fellow who ran their manufacturing worldwide. His name was Fred Bialek. Fred was a steam engine. He was a "no stop him." No one could stop him. He just steamrollered ahead. He told me that he made three or four trips back to Korea and Washington D.C. just to get legislation passed because it was restricted to do American manufacturing in Korea. And he also had to get the Korean government to approve it. But Fred was the guy to do it.

Hollar: He opened Korea for the whole country, essentially, but for National?

McKenna: Yes. And National had a lot of really good manufacturing guys. It spawned a lot in the Valley. That was the origin of it, from Charlie Sporck. So National was this engineering and sales company. Develop the product and get out there and find a way to sell it.

[At that time] it was not a very sophisticated market. I was in Baltimore at a distributor's company. One of the salesmen for the distributor came in and said, "Do you make a 709 linear device?" And 709 was a National standard. It was out there. It was something that everybody—it was almost like the DEC VAX or something. It was a brand. The 709 was a brand. I looked at the guy, who was a component distributor, and I said, "Are you kidding me? Come on. You're putting me on." And he says, "No, I'm not putting you on. Do you make it or don't you? Because if you make it, I've got an order. If you don't, then we'll go somewhere else." This was a salesman. He didn't care what the performance was. He didn't care what the characteristics were. He didn't care anything else about it. What he cared about was—do you have it? As one former Fairchild sales manager told me, there are only three specs you have to know about a product. The pins, the power, and the price. He said, "You don't have to know anything more than that." They were some of the old school salesmen.

Hollar: Were you traveling a lot?

McKenna: Yes, I traveled quite a bit and for long periods of time. When you went to Europe at National, you didn't go over there and fly back. You went over there and you worked. You spent two weeks at minimum every time you went. And you traveled by plane and train. If you couldn't get a plane you did a train. I went to every single country in Europe, I think, from Spain to Denmark.

Hollar: National grew pretty rapidly, didn't it?

McKenna: Yes. They grew in about three years from roughly nothing to about $80[2] million, which was pretty good growth.

Hollar: That's a big number in the late-'60s terms.

---

[2] [Editor's note] the correct number is $40 million.

McKenna: Yes. And everybody felt a part of it. On Fridays, at least in the early years, Sporck would come into a big open area where all the product marketing people sat. He would take out a chair and stand on it. He would say, "Okay, I'm going to update you on what happened this past week. And what are we going to do next week." He would give the orders from what we won, what customers we won, how the new products were doing. And because everybody was a stockholder or potential stockholder everybody was excited about it. It was a real group-think. And then he would lay out some things he wanted to see done in the next week. It could be general things and not specifically related to a chip.

Charlie was a good leader. Every single morning, he would come in, he'd go in his office, get his cup of coffee and go out the back on the manufacturing line. He would walk up and down the line talking to each of the [people]. He knew them all by name. They literally loved him because he encouraged them. You could go to a party at his house and there would be women from the manufacturing line and the vice presidents or somebody from Fairchild that he knew or whatever. He didn't see people in hierarchies at all. You were what your performance was.

Hollar: It's part of that egalitarian culture you were talking about.

McKenna: Yes. That's where you really experienced it firsthand.

Hollar: Did the business, National's business, did it evolve differently internationally from the way it evolved here in the U.S.?

McKenna: No, it was pretty similar. In fact, it was very similar. There were variations by country because it wasn't the Common Market then. You had to have your passport stamped on every border. Getting goods in and out of each country had its own requirements and regulations. Generally, you tried to identify the best possible rep firm and distributors in those areas. When I would go over I would meet with those people. Some of them would take me out to visit customers, and that was really eye-opening because they were 10, 20 years behind us here. But there were some—I'm blanking on the names now, but there were some—there was a big semiconductor manufacturer, Italian semiconductor manufacturer and there was a French manufacturer.

Hollar: Competitors.

McKenna: There were competitors in Europe, but even there the trade magazines reached into all of these countries. When I first went over I subscribed to all of those magazines. I got a stack of French, German, Spanish—you name it—journals every month on my desk. While I can read a bit of French and Spanish I would go through them all because you can pretty much tell from the visuals—it was like a comic book—you could tell what was going on. Or you could get a sense for it. And so that was one of the ways to keep up with what was going on. And there was *Der Spiegel*, which was a business magazine, and they would talk about the companies. So you could pretty much understand what was going on by going through those journals and maybe a dictionary here on the side, a German or French dictionary, helped. But it became clear once you spent some time doing it on a regular basis.

Hollar: How did you feed that back into the process?

McKenna: There were staff meetings and marketing meetings at National. Valentine would come back and feed that back into those meetings, too.

Hollar: Were you the only one doing that from a broad market perspective?

McKenna: Yes. I started this there, and then I did it all through my years at my own company. I'm a ferocious clipper. If I saw things that I thought were important I would clip them and send them out to people in the company. French was easy. Pierre Lamond, who was also one of the founders with Sporck at National, was French, very French. And certainly Pierre could read those magazines very well. I did some translation, a bit of it here and there. I took German, French, Spanish language in school so I could do a little bit of translation.

Hollar: I want to go back to Sporck for a minute. You told me a funny story about the CFO coming to you and needing some furniture in a building that was not furnished at all. Could you tell that story?

McKenna: I think it was largely because of Fairchild, because Fairchild had a huge advertising department and they spent a lot of money on ads. They were probably the biggest advertiser in the electronics industry back in those days, or one of the biggest. So I had a big budget, too. I managed it, and it was my job to spend it wisely. John Hughes was the CFO. John called me into his office and he got up and shut the door and he said, "Look, we're going to be talking to bankers. We're going to try and get a secondary [financing] going here." And he had metal chairs. He had a metal desk. He had stuff stacked on the floor. He said, "Look, I'm going to bring people in here, and you look at our conference room—I mean it looks like we just started business yesterday—like we went to some used furniture store and bought all of this metal furniture. Can you get me some furniture?" He wouldn't put it through his budget, and he wouldn't request it of Charlie. I said, "Okay, let me see what I can do."

So I went to my wife, actually, I told her about it and we went up one weekend to a place in Mountain View that did decoration-type office furniture, and it was wholesale. They'd help you design what you needed from an office standpoint. I bought furniture for the lobby because there was nothing out there. I bought furniture for John. I had painters come in over the weekend when no one was there and paint the whole place—inside all the offices and everything. They had flowerpots that they put in the lobby, nice cylindrical kinds of things about that high. Some people that came in started using them as ashtrays. Anyway [visitors] couldn't tell the difference between what National used to be and what it was now.

Charlie came in that Monday morning. He asked around and, I guess, found out it was me. My office was on the other side of the space from his and I could see him out the little window in my door. I saw him heading towards my office. And I said, oh boy, I'm in trouble. I stood up and stood behind the door, and he opened up the door and felt me there and he pulled the door shut. He literally grabbed me by the tie, pushed me against the wall and said, "Look, goddamn it, are you done decorating this place?" I said, "Charlie, we could use some coat racks."

The thing that I learned very early is that when you're dealing with those semiconductor people you can't be intimidated. And I learned that at GMe. You have to step up and say what you think. But you also had to not be frivolous or foolish in what you were saying. You had to know what you were doing. I think by the time I did that they had enough respect. Later, when I was hiring people to work for me so I could spend more time on the road, I was talking to Valentine about it and he pulled out one of these [an IBM punch card]. He used to do all of his writing on these IBM punch cards, the ones that weren't punched yet. He would write notes on the back of them in green ink. He always wrote in green ink. He showed me a list of 20, 25 names. And he said, "Here, are the people that I interviewed before I hired you." He said, "Maybe one of those could go to work for you." And I said, "Well, why didn't you hire any of these people?" I recognized some of the names. I said, "Why did you hire me?" And he said, "Because I couldn't intimidate you." That was really a technique that Don read, I think, in a book somewhere—that if you're going to work with people, you've got to intimidate them. Charlie and Don could be very intimidating.

Hollar: What was intimidating about them?

McKenna: Their Socratic method of questioning you, of putting you on the spot. Charlie had a little different way. Charlie would ask a question and then not say anything. He could get in a negotiation and say very few words, but the person who he was negotiating with would then keep talking and keep coming out with stuff and keep essentially getting closer to his view. Charlie would sit there and just nod. And he's six-five or whatever. He's a big guy. He's got a deep voice. Smokes cigars. He was not somebody that you were going to mess around with. And so he could be just intimidating in his size alone.

But in terms of his ability to get what he wanted from a deal or from a negotiation he pretty much knew how to do that. And Valentine was very much the same way. Don would exhibit a temper in front of people that I always thought was a little bit of a phony temper. I ignored it. But I literally saw a salesman who actually was a regional manager from Europe who nearly passed out by being questioned by Don. He said, "I have to take break. I need some air. I need some water." And literally they had to take him outside because Don was just relentless in hitting this guy with his issues and his problems. Don is extremely smart and sharp and well educated. He was a tough guy to work for.

Hollar: What would you say that you learned from him in those years?

McKenna: You have to look for ways to accomplish your goal, particularly in marketing, that isn't necessarily buying your way into it. That's where he went out and got reps to start their own firms to handle the National line rather than putting those people on the payroll, that sort of thing—and teaching, and doing a lot of seminars and workshops for both customers and for people internally, so he'd educate the sales force so they could educate the customer. The education process was something I learned very early from him. Though, I will say that GMe, my first company, put on a lot of workshops and seminars on MOS technology and what it was and what it potentially could do from a design standpoint. I ran most of those. But Don did it in a national and international way that was quite effective. You can see the growth from the company. Also Don delegated a lot, which I think was an excellent thing. But then when he

delegated he held you responsible and liable for the results. That's why think a lot of people were intimidated, because he put a lot of responsibility on you and you had to accept it. You didn't have to, but if you did then you knew you were in a position where you had to fulfill that commitment to him. It goes back to Sporck's overriding point, "Do a good job and you can keep it." Although he said that as a joke, I think he down deep really meant it.

Hollar: You mentioned Fairchild had a big advertising budget. I want to take a step back now and have you give your assessment of who was doing well in marketing and advertising in that time. You said that the buyers weren't—it wasn't a terribly sophisticated process. It wasn't a terribly sophisticated customer base. How did that influence the climate for marketing and advertising? And how were you beginning to think about it in that period between '67 and '70?

McKenna: Advertising was important but it was much less image [oriented]. They called it corporate advertising in those days. It was much more product oriented. It was getting a new product out and getting it promoted in the right magazines. Having come out of that world I understood that very well. Something else I started at GMe and National was getting money budgeted to reward engineers for writing articles. Then I found freelance writers to help them. They could sit down and give the spec sheets and notes but then they would talk through the article. I had writers eventually on my own staff, or I had them freelance, who would sit down with them and actually see that it was done, because most engineers were pretty busy and it was very hard for them to write an article. It just took time. And [the engineers are] going to redo a thing and redo it and redo it until it's perfect. Whereas, some [writer] could hand them a draft and say, "Here, edit this." And then, "Here's, a second draft. Edit it." They were much more comfortable doing that. So you ran ads, but the editorial [content] always had much more credibility.

Trying to get ads and articles in the same magazines about the same subjects really helped enormously because one could say, "Here it is. It's real. Here's a few specs. And here's where you can get it." The other one said, "Here's how you can design with it and here's the benefits of it." Those things became part of the whole process.

The technical articles were placed directly through the magazines. At that time there were no editorial offices out here. I think I said *Time* magazine had an office out here, and it had a science editor. If there were any editors or journalists out here they were science-oriented or industry-oriented. They were not at all into the technology. They rarely came down the Peninsula. There was Don Hoefler from *Electronic News*, but that was an electronics newspaper and it talked about products, but it mainly talked about people—a lot of the shifting of positions and who is saying what about whom and that sort of thing. So it was more of a sophisticated gossip sheet. But people read it faithfully. It came out every week. And the people loved that because it said who was moving where. It said who was getting sued by whom, when was the suit over, what are the claims and counterclaims, all those kinds of things. Hoefler was right in the middle. He was—maybe this name is little old—the Louella Parsons for electronics. All of that came together at the same time.

You pretty much had to manage all of it, plus getting those same kinds of articles translated and into European magazines and getting them placed. I collected a lot of the magazines and we'd subscribe to

them. I was going in and meeting the editors and introducing myself and then staying in touch with them, so I would keep lists of them and keep them informed.

Hollar: That must have been a first for them.

McKenna: It was because, as some of my friends in New York told me, "We've never seen anybody from TI. We've never seen anybody from IBM. They don't come to us. We go to them." And so I'd start it, but then the next trip I'd take Don Valentine, or I'd take Charlie Sporck, or I'd take one of the engineers, Bob Widlar or these kind of people. These were real live people from the Valley. They weren't some strange critters that crawled out of the woodwork and were trying to make money or scam the American people.

This wasn't in so much in the business press. It was more into the journals, although I did some with analysts. I got to know an analyst at Morgan Stanley in New York. And I remember him telling me that, "None of those West Coast companies will ever get our attention." He said, "They're unlikely to succeed. They're too small. They don't have the resources. And the only company that we see that has a future in technology is IBM." He told me that directly. That was the hurdle you were up against. There was just a huge credibility gap that—credibility from not having enough proven successes.

Hollar: These were all brand-new companies.

McKenna: These were all brand-new companies. Once there were a few successful ones, it started to change. And the economy started to change, too.

There were several factors going on. The technology was rapidly becoming more friendly in the sense that the user was able to have more control over what the design of the product would look like because it could be manipulated with software. You could alter the program on a microprocessor and an EPROM. You couldn't do that with a transistor in any other shape or form. The customers became more engaged. The real dramatic changes—and I'm jumping a little bit ahead here—but the real dramatic changes in all of this media hype and development came with the microprocessor and the personal computer. Those two things changed the world.

Journalists started using personal computers. They were on their desks. The microprocessor proliferated functions and applications in thousands of industries. Again, there were things like machine tools, but it could be used in airplanes. It could be used in aerospace equipment. You bought it as a component, and you could essentially apply it the way you wanted.

When hobby stores started popping up with kits that you could put the components in, you could sell the kits. People would build their own. Les Solomon, the editor of *Popular Electronics*, showed me the prototype of the magazine cover when the first Altair personal computer was going to be on it. This was before it came out, before it became the model. The Altair was a box. It didn't have a keyboard, didn't have a screen. It was buttons and switches. But it was a small computer at a very cheap price. People didn't call it a personal computer. They called it a home or hobby computer, and *Personal Electronics* was a hobby magazine. Les was really excited about it, and other journalists started getting excited about it

because it was a low-cost computer when something coming out of DEC or IBM was millions of dollars. Here we were talking about a computer that was a few hundred.

Hollar: Did you find, in taking Sporck and Valentine and Widlar to see these editors, it changed their minds about what was happening?

McKenna: Sure, because you either avoid things you don't know, or you have negative feelings about what you don't know. There definitely was an East Coast/West Coast mentality. It still exists today in so many different ways. A lot of it was because it was such a strange industry and seemed far away from what they were used to on the East Coast. You have to go back and look at some of those magazines to see how primitive the products were that they were advertising—primitive from our perspective, but not from theirs. It's quite astonishing.

It's hard to imagine the whole social context and infrastructure that surrounded it at the time. A new voltage regulator could be on the cover of a magazine, and people would say, "Wow, look at the specs on that." It wouldn't even get a mention today. It certainly wouldn't go into a magazine. It would go on the internet probably.

Hollar: How did your background in magazines, and especially having worked for an East Coast based publisher, how did that help you?

McKenna: I knew the structure of the publishing business. That's the job that Richard Rimbach Sr. wanted me to do. I learned how to fit his role. You started at laying out the magazines and pasting type and counting the number of lines and picas between the lines and so forth. You learned everything from the ground up. He was old school. You learned about circulation and reply cards. You would tear out and circle the ads you were interested in, or articles, and send them in. They used that to sell [advertising], saying, "Look at all the inquiries you got from this magazine." But from the standpoint of the user, they were leads. I know some people who took those leads and fed each one of them to the sales force and had them follow up on every single one of them. It could be hundreds or thousands. The whole idea was—there was no other way to get to your customers, and the best way was if they showed an interest and then go back at them.

Hollar: Understanding that must have given you something of an advantage when you were thinking about marketing strategy. You understood the publishing channel in a way that maybe other people didn't understand it.

McKenna: Yes, and I got to appreciate the technical editors at these magazines. At Rimbach, it was a small family-owned publishing company, maybe twenty, thirty people in the company. A lot of those were outside sales. Every day at lunchtime, you went up to a big room where you had lunch, and the people who sat around the table were the editors. Every lunch was a discussion about what they were working on. Every discussion was—should we run this, or shouldn't we run this, or what do you think about this, that sort of thing. Now, I wasn't necessarily participating, but I was there and eager to learn.

And there were discussions beyond that. The editors spent maybe half the lunch talking about that and the other half talking about the Korean or the Vietnam war. They went into politics and government. Also, some of them were inventing different types of contraptions—a way of improving the automobile and things like that. They were more mechanical, electro-mechanical engineers, although, we did have electronics, or systems design, and medical electronics. You got a variety of opinions and an understanding of how they're human beings, not automatons that simply take something and turn it into print.

There are certainly people that don't have a mind of their own. A lot of [our] customers think that the media is there to basically restate what they say and do it the way they want it. There were some pretty hard-nosed people out there that were that way. They really would get upset, or cut their advertising, because they didn't like something that was said. They defend freedom of speech, but they would want the journalist—

Hollar: Until something bad was said about them.

McKenna: Right.

Hollar: There are a couple of other things I want to talk about in this session, which sets the stage for you deciding to leave National and start your own company. The first is the rapid growth of everything in Silicon Valley in the late 1960s from the standpoint of technology companies, and semiconductor companies in particular, being on the rise. Can you talk about the environment in '68, '69, '70?

McKenna: Sure. This was the birth of that industry—the semiconductor solid-state technology industry. The early companies were semiconductor [companies], but they built everything. They got people who could do metal fabrication. They would hire all these subcontractors. They basically designed what they wanted and then would order specialized parts, which would arrive in separate boxes. Then they would assemble it and do all the tweaking and testing and other things themselves. And I think I told you that GMe made its own its own ingots, silicon ingots. And by the time National came along, National was buying those ingots probably from Japan or Taiwan. They certainly weren't making them at National. So one of the very first industries that started being independent was the semiconductor equipment manufacturers. Companies started forming to build these things for the semiconductor people.

Applied Materials was a very early company. They started when I was at National. And the strange thing is that they had a devil of a time convincing the semiconductor manufacturers that they knew how to build products for their processes.

Hollar: And they're right here.

McKenna: They wouldn't do it. The semiconductor guys said, "No, we know how to do it better ourselves." It's "not invented here." This was one of the first conversations I had with Jim Morgan when he went to Applied Materials. Major semiconductor companies refused to buy their equipment because they felt that it couldn't meet their standards and do what they wanted to do.

And there were no standards. The industry was trying to create standards. The early ones were the components that went into the semiconductor. Then that expanded to the next layer. We had some of those companies, like Diasonics. Tom Perkins and Gene Kleiner invested in it because it came out of HP. They did an ultrasound scanner—the first ultrasound scanning of the fetus in the womb. You couldn't do that with X-rays. I can remember seeing the first scans that they showed around the office. Another was a company called Litetronics, which made light emitting diodes. At that time, if you bought a computer, it had what is called Nixie tubes. Nixie tubes were glass like a vacuum tube and lit up. You lit up the segment you wanted to represent, and it allowed you to display letters, numbers, or whatever. Nixie tubes were replaced by gallium arsenide. When you applied the current to them, they lit up little pieces of gallium arsenide chips. Litetronix started out manufacturing these, and they could plug it in like a chip on a circuit board, and it read out the numbers or the letters that you wanted. So, [the device] went from glass this big to a little piece of plastic that big. They were over in Cupertino. We did an ad for them—it said, "You can stop whistling Nixie." People don't know what a Nixie is anymore, but it was very common in those days—how do we get rid of this glass that heats up and burns out and get all the benefits of a solid-state device? It was reliable. It lasted a long time. It didn't heat up, not to the same extent.

There was a company here called Spectra-Physics in the '60s. Spectra-Physics was a laser company. They also had a division called—I think it was called Autolab, that automated equipment for the chemistry lab. They were a lot of really science-based people. One of the founders was Herb Dwight out of Varian and Stanford. Another was Sam Coletta, who became president later on, but ran various divisions. One of the things that we handled was the first air-cooled laser. That was significant because most lasers burn very hot, and you needed cooling equipment. The cooling equipment was huge and expensive. To have an air-cooled laser was phenomenal. That then led to more diverse applications such as scanning and the ability to have [a laser] sit under a counter at grocery store to read a scanning code and interpret it into digital. The rise of digital electronics, the rise of things like that, really came together [at that time]. And other companies started benefitting not only from their ability to lower the cost and improve the performance and usability of the product, but also to be in synch with the other industries that were rising at the same time.[3]

Hollar: You had the component layer. You had the finished product layer. Then you had whole industries being created out of those new ideas for the finished products.

McKenna: Right. In the early '60s people were talking about the fact that lasers would be in your supermarket. They'd think you were crazy. Maybe some far-out thinkers were thinking about it, but certainly not anybody in the mainstream.

Hollar: So, that was one environmental factor that was taking place. Then there was a second one, which was just the sheer growth of the semiconductor industry as it was. We were talking about how this was a period when the rise of semiconductors was enabling the rise of everything else.

---

[3] [Editor's note] Until the mid-1970's, lasers were used in science and research. Spectra-Physics set out to develop lasers for broader markets such as scanning data-coded objects.

McKenna: Yes, and so much of the advancement or new products that are in the marketplace today are the result of the rise of not just one company or industry, but of a lot of different industries that came together, and how their technology improved over time. The best illustration of that is the insulin pump. I've been a diabetic for sixty years. I've used [a pump] since they came out in the early '80s. And at that time I was curious about whether or not they used some kind of processor. I read about Dean Kamen, and we started chatting. He had a brother, a doctor, working on chemotherapy at someplace like Stanford or Princeton. He wanted to apply [a pump] in chemotherapy, so he built one, but it wasn't sufficient. I think they found that it just didn't do the job of delivering several different types of chemical-based medicines at the same time. When they published an article on it, someone said, "Hey, that would make a wonderful insulin pump." He then designed a pump for that single job.

I asked Kamen what processor they used. He told me that a lot of technologies had to come together to make this. It wasn't any one element. For one thing, you had to have tubing that didn't crimp. So, that's polymers and plastics that can't crack or break and are subject to all kinds of environmental conditions. There's a low power battery that has to be small enough to go into a portable device and that also will last long enough and be reliable enough to not fade on you when you need it. Then you had to have a processor. He went through all of the various technologies that composed this pump, and there were ten or fifteen. You had to have a display—the material now is LCD. You had to have the ability to measure how much insulin is going in and what the display said. All that technology came up through the '70s and '80s. In the early '80s, when they were designing this, everything came together that enabled them to build a miniature device. But he couldn't have done it ten years earlier.

It's the same with Apple's iPhone. It's the same with a lot of the advancements that Apple's made in watches. You couldn't have done that ten years earlier. So, when Steve said—when was it, the early '80s — it's going to take Apple another three to five years to get in to the consumer business, it really took until he came back in '98. By that time, the state of processors, the state of memory, the state of the internet was there. The internet wasn't around in '81. All of the technologies that came together in the iPhone— graphics devices, communications, miniature antennas—all of those things had to come together at the same time that they could assemble into this. And it wasn't all created by Apple. It was created by suppliers they hand-picked and then orchestrated into a device that everybody's using today.

Back then, here in the Valley, the same thing was happening. There were industries here, but they tended to be more risk-averse as companies. I'd put Varian and HP into that. They're still around, but they're not anywhere near the dominance that they had in the Valley. HP is, as you know, fading fairly fast. Apple replaced it at the top of the hundred and fifty top companies in Silicon Valley a few years ago. And probably this year, other companies will displace it even further down the list. As much as people talk about Lockheed being here, it really never had much of an influence on the Valley. I think it probably used some of the components. But it was never a big customer of anybody that I knew.

I'm sure that's different today. I'm sure that they buy a lot of electronics. But again, back when the Valley was first being formed in the '60s, that wasn't the case. They were still working on World War II equipment.

One other story: I think it was at GMe. The phone rang and nobody was around, so I answered it. The person says, "I want to learn. I'm with Frieden," —this calculator company across the Bay—"and I want to learn something about MOS technology." And I said, "Well, I'm not an engineer, but I'll do what I can," because I put together the training course and I knew enough of the basics. So, I started talking to him. He kept asking questions and finally, after a while, I said, "Look, you're getting a little bit beyond me. I'm going to have to get you—" "No," he says, "You're doing just fine. I'm a mechanical engineer. If I don't learn this stuff, I'm going to be looking for a job in a few years." And indeed, Frieden went out of business. They made electromechanical calculators. The average calculator would be $15,000 to $20,000, maybe $25,000. They were replaced by things that are given away as incentives today. That happened overnight, and the business was all service. They broke down a lot, so you had a service man come once a week, and there was a service contract. That's how they made their money.

Those businesses went away, as did the tube manufacturers, and a lot of other companies. It was a significant change, and such an exponential change. You can't even say that it relied on that industry being here to create the next industry. It was really a stochastic change.

Hollar: Something I did want to touch on before we move on to the birth of Intel, which sets the stage for a later session we're going to do just on Intel, was the ethics of competition in the Valley. What was the code of conduct when it came to competition in the Valley in this period? Or could you say there was one?

McKenna: I don't think you can say there was a generic code [of ethics]. I think it differed by company. But I can say this— it was a small community, and if you were a negative influence within your company everybody knew about it very quickly. To do things that were "out of sight, out of mind" was very hard, particularly in the semiconductor industry.

Now, there were people who were questionable. There were people who were doing things that, in terms of how they got financed and the deals they made and those kinds of things, that were, from time to time, brought up. But those people didn't survive very long. So from my standpoint, it wasn't something that was talked about often or even over dinner or over drinks. I'm sure, like any other industry, it was going on somewhere.

Hollar: There was a lot of poaching of talent, wasn't there?

McKenna: Yes. For example, National never got sued by Fairchild, and there were claims that it was because everybody at Fairchild bought stock in the company when they left. Fairchild was selective in who it sued that spun out [of Fairchild]. Having spun out all these companies, you would think that it had depleted all its resources. Years later, it pretty much had depleted itself of all its really talented people. They brought in Lester Hogan, and Hogan, I think, did a yeoman job, but he was never one of the boys. I think he was a professor before he came in. I don't think he was tough enough in terms of ruthlessly going after people.

Hollar: You told me the story once of a notebook showing up in your office that had a bunch of resumes in it from a competing company. Can you tell that again?

McKenna: Yes, well, at National, we each had a competitor to monitor. And so, I learned everything I could about Motorola. That was mine. This book came in and landed on my desk, and it was resumes of engineers at Motorola who were doing designs. I wouldn't say it was all of them, but a lot of them. It wasn't from a manufacturer. It came from some recruiting firm. I took it over to Sporck, and Sporck said, "Put it in an envelope and send it right back. I don't want to see it. Don't even look at it." Whether or not he was concerned about a lawsuit, I don't know. But Charlie had very high standards and ethics, and he soared in my mind just by that one decision. I probably could have said, "Hey, look at this. This is great." I mean, I don't know. I didn't know the business that well at the time. How do you get the names of all these people? You hire recruiters who go in and talk to them.

Hollar: Now let's go back to the subject of spinouts from Fairchild. In this same period [in 1968], with you at National, Bob Noyce [and Gordon Moore] spin out of Fairchild and decide to strike out on their own [to found Intel]. Can you talk about your recollections of how that happened, when you met them, what news that made in the Valley?

McKenna: Yes, I didn't meet them until I formed my own company. That would have been around '71. But the noise was out there. The information was out there in the public that they had spun out.

I had gone to a lot of these conferences— there was Western Electronics, Wescon they called it, that sort of show. You get the scuttlebutt of everything that's going on. It was usually held up at the Cow Palace in south San Francisco, and that was a big event every year. That's where a lot of the gossip got traded.

Don't forget, the first products out of Intel were bipolar products. They weren't the MOS products that came later. Bipolar were the high-performance products and were generally more expensive just because of both the process and the performance level. They really didn't hit the mainstream until they got into MOS technology, which took a few years. In the meantime, there were bipolar RAMs and various types of bipolar logic devices—made with a different technology, the generation before the 1975 to '80 generations of semiconductors.

Hollar: So, [the spinout] simply wasn't that noteworthy other than the fact of who was involved that—

McKenna: It was who was involved. Those people were really admired as individuals. I didn't know all the others. I knew Gene Kleiner pretty well. I got to know him really well when he was at Kleiner Perkins. Gordon and Bob had reputations that preceded them throughout the industry about being just outstanding individuals, brilliant, but very, very human. People used to worry about both of them in that you could stop them in the halls and tell them you wanted to do something, and they would never really oppose you. But they wouldn't necessarily say, "Yes, go ahead." But [people] felt so good afterwards, they always thought they meant "okay." Both of them were pretty gentle people and, as I said, highly respected. There was a lot of curiosity over what they might do and what were they working on. I remember that, at National, they

talked about it. Charlie Sporck and Noyce were close. There were even some conversations about Noyce talking to Charlie about the two companies merging in those early days.

Noyce was really holistic in the sense that, when he looked at a semiconductor product, he looked in terms of its cost, its technology, could it produce generations that continued up the Moore's Law curve, but also the decline of cost. You could have better margins, but also decrease price to the customer. He knew that you had to get the cost down substantially to overcome previous generations of products. He also knew that you broadened markets by doing that. He talked about this openly.

Going back and looking at the very few things that are written about him, or interviews with him—he really did have a foresight on the world of solid state technology and what was possible. Shortly after they formed Intel, they were at—I think it was an American Electronics Association conference up in Palo Alto, and Noyce was on a panel. He was waxing on the fact that someday you're going to be able to run your whole business on a chip of silicon. And somebody in the audience later said, "Well, if I drop that chip on the floor and it falls in a crack, then I'm out—then I go bankrupt." Noyce said, "No, you won't because they'll be cheap, distributed everywhere and duplicated." That was also that East Coast/West Coast [difference]. The West Coast was small, distributed, share the work. The East Coast was big, monolithic, and hierarchical. Their architectures are that way. Their companies are that way. Out here, the companies were much more egalitarian, much more distributed. That's the way the technology came out, too.

There are a lot of analogies between the structures of the corporations out here and the technology and architectures. That's one of the reasons why there was reticence by a lot of the media, particularly the business media, to look at the West Coast as being serious.

Hollar: Because it was just so unconventional?

McKenna: It wasn't big. It wasn't massive. It wasn't trying to be massive. It was trying to build small things. But Noyce really did foresee the technology changing the way our lives are lived.

Hollar: Now, let's talk about your eventual decision to leave National. There weren't many people in your position that had the kind of scope that you had, were there, in marketing terms—in what you were called upon to do and what you invented when you were at National?

McKenna: Yes. Most of the people were called advertising managers. There really wasn't what we would call PR.

Hollar: So, functionally, the job description would have been advertising manager?

McKenna: Yes. Mine was marketing services, which meant whatever services the marketing people or department needed. I don't think that a lot of them were given the same kind of responsibilities—or, let me say, even the freedom to exercise their responsibilities. That would have been my viewpoint because, back when I was with the publisher, I used to meet a lot of them and hear their complaints.

[By 1970] I had two startups under my belt and one failure. Of course, National was, at the time I left, very successful and going to be more successful. In retrospect, I don't think GMe was such a failure in that the technology went on to become part of the standard technologies of today. The people also went on. In one of my presentations, I [talk about] "the missing link." It's Joel Karp.[4] Joel Karp was at GMe and became the first MOS engineer at Intel. Les Vadasz hired him to get them going down the path of building the MOS silicon transistor because he [Karp] had been working on that at GMe. He brought whole teams of people with him. So, in the sense that it [GMe] played a role of going back and using your experience and your failures to build something better, to go to the next step, it's a good case.

In the two startups, and then the Valley, there was rapid growth all over. I think I mentioned the way buildings were built—they were called tilt-ups. These buildings, literally whole blocks of factories, would go up overnight. You'd drive down one day and it would be empty. A few weeks later, just buildings being formed. They'd pour the walls on the ground, tilt them up, patch them together, and that became a building. They were happening all over.

I had a number of people, search people, call me [at National]. By the late 1969, it wasn't the travel, it was more the repetitiveness of the job. I was pretty much doing the job with my eyes shut because I wasn't learning anything more. The whole idea was— if I were on my own, I could diversify a bit. Then, actually, there was a market recession, and the stock options I had were under water at National. That was a common cycle, whatever the reason. My options—I wouldn't have made any money if I'd left then or cashed them in at that time. Sporck and Valentine both made that argument: "Well, your options will make you some money here if you stay." And I said, "I think I'll be able to make more money myself. And I'll be the only optionee and optioner."

I had a call from a fellow who was working at American Microsystems. His name was Walt Andrews. Walt was a former salesman from Fairchild, and he worked for a guy named Howard Bobb. Howard might have been the head of military sales at Fairchild. He came out of that military segment, and he also had been at GMe. I knew him, and Walt, from that. They wanted me to come over and do what I was doing at National with this new company that had a lot of systems engineers involved. They were talking about building more LSI-type devices that became part of systems, and so it was moving up to the next level of technology. I went back to Walt and said, "I don't want to go to work for another company. This is to keep my diversity open in terms of my own goals. But I will do it for a fee, and if you pay me a fee you won't have any overhead. I'll do the same job—I'll do all the things you need done, but I'll do it outside the company." Walt came back to me a few days later and said, "Howard agrees to it. He'll do it." I said, "Great, I've got a business." I didn't have any money, and I didn't have an office. I didn't have anything else. But I put my resignation in to Valentine. And—

Hollar: What was his reaction?

McKenna: I think that's when I realized Don was going to leave [National] too, because—he didn't tell me that. But he didn't argue with me. He didn't try to convince me to stay.

---

[4] [Editor's note] for more information about Joel Karp see the oral history the Computer History Museum recorded with him: https://www.computerhistory.org/collections/catalog/102658274.

Hollar: And under normal circumstances—

McKenna: I mean maybe I'm being a little egotistic there, but he just said, "You have to hire your replacement." That's all Don said to me. "Before you leave." And so he didn't have anybody in mind.

Charlie didn't want me to leave. He tried to talk me into staying because we were doing a lot more financial communications. I went home and said to my wife, "I think Don's going to leave, too." And he did. I think he left less than a year later.

In any event, I got a call from Walt saying that he wanted me to come over and meet with Howard after work one night. And I did—I went over. It was in Cupertino near a lot of the HP places. It wasn't very far from where I live. It wasn't very far from National, just across El Camino. When I got over there, I went into Walt's office. There was a little conference room next to it, and I heard people shouting and swearing and slamming things. It went on for quite a while. I think once maybe Walt came out and said, "We're hammering some things out," literally.

Hollar: About you?

McKenna: It actually wasn't about me. It turns out that there was a chief operating officer of the company who really ran the company, who had other designs in mind. I'm not going to get into that, but anyway, [he had in mind] a person that he admired closely, and he was adamantly against having me do that job. So they had to agree with him. He was a good employee and a talented guy. So I got up and left. I didn't even wait for their—I went home. Walt called me that night and said, "Where did you go?" I said, "Walt, if you think I'm getting in the middle of your arguments, I'm not going to do that. So thanks but no thanks."

I had already resigned [from National]. I had been interviewing people. I was out of a job, and I hadn't started anything yet. So I went to a company called Electronic Arrays. One of the founders was a guy named Earl Gregory, and Earl had been my boss at GMe, at General Microelectronics. I talked to him about doing his work, and in fact, I think I still have the one-page outline where I put down the things that I would help him do. I was much more familiar with him and how he operated. He said, "Well, we just hired some people to do that, or an outside agency. So, I don't think we need it. But there's a little company that we're an investor in down in Santa Clara called Monolithic Memories." Monolithic Memories was a new company, brand new. The founder was a guy named Ze'ev Drori. I went down to see Ze'ev, and Ze'ev's intentions were to compete with National, so he loved my background. He wanted me there. He was like a bull in a china shop, though. There was no finesse about Ze'ev. I think he had been an Israeli paratrooper. He ran his business like that—a nice person, but a tough guy. And so he said, "Yes, I want you to do it." And I said, "Fine, but I really need two clients. So, you have to call Earl and tell him that you'll do it if he'll do it." And he did. He called Earl Gregory and said, "I'll do this. I'll hire Regis if you do." Earl then had to make up his mind. And he did it.

So I had two clients to start, and they were both on fees. I really started out by going to the bank with two checks—they usually paid you a month in advance. I had at least enough to get by two months. I rented part of an office up on University Avenue. It was in an old Victorian house. A friend of mine was a

graphics designer there, a guy that I had used at National, and he gave me some space—one room. That's where I started out—at that space.

I offered that I would run the [combined] business if he would share the [design] business with me. He turned that down. So, he ended up being a designer for the rest of his life and doing datasheets.

Hollar: Did you have a vision for how you would work with these companies—a vision that was different from the way other advisors or marketing groups they might have hired would have done things?

McKenna: It was different from the standpoint that I had been there. I had been inside the company, which I think was a real advantage for me. The experiences that I had at both companies was pretty extensive. It involved international travel. It involved working with distribution channels, salesmen, putting education programs together, training programs for the sales forces, all of those kind of things, and all of the conferences and trade shows, and doing the technical articles, and hiring freelancers—all that sort of stuff they could find in one package. And it was for a fee. They didn't have to bring it in and put it in-house. Startups liked that idea. They didn't have to add extra cost, and yet they could get what they wanted.

The first thing you do is go in and say, "What do you want me to do?" or "What's the problem?" You spend a few days talking with everybody—what they think they need, and what they want to do, and where they're going. You take that all down and then try to come back with some sort of proposal on how to do the work now, and what it is, and how much it's going to cost—not necessarily in fees, but in costs. I would do that and it worked out pretty well. Easily within two years, maybe three, I had nine semiconductor companies. I went from basically two to nine in about two years.

Hollar: This is a very entrepreneurial story. Did you think of yourself in entrepreneurial terms— starting a business like this and really going at it the way that you did?

McKenna: Only my nerves and my wife's nerves. Honestly, we had five hundred bucks in the bank. And two kids—no, three kids.

Hollar: It was a risk.

McKenna: It was a big risk, yes. But I actually felt I could always get a job. I felt comfortable with that. The one thing that working at both GMe and National, and in the semiconductor industry, gives you is— you're either self-confident or you don't survive, so you learn to be self-confident. You learn to be more aggressive and not introverted in the sense that—well, I don't know, wait until somebody else talks or whatever. You don't. You speak up, or you get out. I think that those two experiences really brought a lot of self-confidence to me. Having not lived in that environment before, knowing very, very little about it when I started—in fact almost nothing about it in terms of real business processes and the competitive environment— you learn it very quickly, because you have to. You learn it very quickly when you spend time with customers, and sales forces, and distributors, and reps, in maybe twenty countries.

Hollar: And they don't have a lot of time to waste—

McKenna: Right.

Hollar: Themselves.

McKenna: I mean you're learning from them as to what's wrong back in the home office. You get a lot of input very quickly by doing that. At National I was on the road within weeks of starting. I did help move the inventories from back East back out here, and then helped set up the European operations. I went there with Sporck and Valentine, and I think Fred Bialek, and Pierre [Lamond]. All of us went to Munich together. I was in the room when they interviewed people and when they were setting up their European operations. I don't think too many people get that kind of an experience that were in the roles that I was in. In fact, I think it was really unique in that I was exposed to so much of the total management of these companies. You're normally not—you're normally looked at like an internal vendor rather than somebody that they can take into their confidence.

Hollar: And you were barely 30 years old.

McKenna: Yes, and I worked hard. My neighbors, they used to mention that. They said they used to see my dining room light on all night because I would sit at the table—

Hollar: Knowing you were up working.

McKenna: Yes.

END OF THE INTERVIEW

Oral History of Regis McKenna, Part 3 of 8

The launch of RMI and the Intel years

Interviewed by:
John C. Hollar

Recorded July 13, 2018
Mountain View, CA

CHM Reference number: X8675.2018

Abstract:

This is the third transcript from an eight-interview series with Regis McKenna, whose pioneering work in technology marketing and business strategy contributed to the success of hundreds of companies for more than five decades. McKenna was a talented, innovative marketing professional from the earliest days of the technology revolution in Silicon Valley. He came to the Valley in 1963 at the age of 24, worked in marketing in the early semiconductor industry, and then established his own company, Regis McKenna Inc. (RMI), in 1970. McKenna became a globally sought-after strategist and marketing expert, and RMI opened numerous offices around the world. His personal and professional relationships at RMI included Steve Jobs, Robert Noyce, and Andy Grove. His more than 700 clients included such legendary companies as Apple, Intel, and Genentech. He is the author of five best-selling business books and one of the most reprinted articles in the history of the *Harvard Business Review*, "Marketing is Everything" (1999). McKenna was recruited to many outside boards and advisory roles, among them his service as a founding advisory board member of the Computer History Museum's Exponential Center.

The interviews took place at the Museum between June 13, 2018, and January 15, 2019. The interviewer was John Hollar, president and CEO of the Museum from 2008 to 2017.

This third interview session took place on July 13, 2018. It covers the early years of RMI after McKenna founded it in 1970. The bulk of the interview covers McKenna's unique, deep relationship with Intel beginning in 1971. The time period covered is roughly 1970 to 1985.

* * *

Hollar: This is our third session with Regis McKenna talking about his distinguished career. We're going to talk today about that period in the early to mid '70s when Regis was starting his company and growing it very rapidly. We'll also focus today on his long and very successful relationship with Intel and its executives. Thank you, Regis.

McKenna: You're welcome, John.

Hollar: We had just started talking at the end of the last session about, and we won't have to go back over that. But I did want to ask you if it felt risky at the time to be striking out on your own and trying to set up the business as you envisioned it.

McKenna: Certainly my wife did think it was risky. We didn't have a lot of money saved, particularly after moving to California. People complained about the cost of housing here, and rents were very high, and when you're starting out, you're not making an enormous amount of money. But it was the idea of taking the risk. I felt quite comfortable in that if I didn't [succeed] I'd be able to get a job somewhere. There was a lot of growth in the area. There were a lot of new companies starting. There were existing companies that I knew, and I knew some of the people in them, and I felt comfortable in taking the step.

Hollar: You talked about how you got the first two companies that helped you launch. What happened after that?

McKenna: Once I got started, we were doing everything that was called marketing services, which was advertising and so forth. There wasn't really a concept of PR. Public relations was—you put a photograph of the product on the front of the data sheet and you mailed it to editors and let them worry about how to write up the product. It really wasn't saying "this a significant product, how does it fit in a context, how does it fit in the competitive environment at the present time." That was really where we started innovating.

One of the very early things I started was called "the backgrounder," and it was getting editors, journalists, freelance journalists to write the background story of the company. Who are they? How did they start? What are their objectives and goals? What are they heading towards? We mailed those out so that the journalists had some background when they would start seeing these companies appear in press releases and so forth. Every company started doing that later on.

I patterned it after an analyst's report. I would tell the writer, "You want to really minimize the adjectives, minimize

the superlatives." The companies want to say, "the best," "the greatest," "the first," all those kinds of things. Having come out of the journalistic world I knew they didn't believe any of that anyway, so it would be far better to go in with a little humility and present the company and the products in a factual manner.

Hollar: How did the companies receive that advice?

McKenna: At least the first companies were willing to do whatever we suggested, or since it was mainly me, what I suggested. I had enough experience, and they knew the success of National [Semiconductor]. National's growth and success were pretty positive, and I had references from Sporck and Valentine and others at the company. They didn't throw me out. They didn't fire me. I left on my own, and they remained good friends.

Hollar: How much of your time in the early days did you have to spend on acquiring new clients, just simply growing the business?

McKenna: It actually just kept going. Don Hoefler wrote a whole newsletter on my company—that within the first year we had nine semiconductor companies as clients, and we were not just getting stuff out but getting it out in a unique way that created some differentiation. Sporck once said that at National I had helped create at least the perception that National was much more successful and bigger than they were. That was because they got an unfair amount of attention [through our strategy of] really personal contacts with the journalists' world. That didn't happen in those days. It was mainly done through wire services or through sending them press releases.

Reprinted with permission from MICROELECTRONICS NEWS. Copyright 1975 Don C. Hoefler.

Manager's Casebook
by Don C. Hoefler

CASE NO: 312

SUBJ: But He Doesn't Know the Territory!

All this represents the press of engineered messages against the senses. And the pressure is rising. In an effort to transmit even richer image-producing messages at an even faster rate, communications people, artists and others consciously work to make each instant of exposure to the mass media carry a heavier informational and emotional freight.

Alvin Toffler
"Future Shock"

IMPROVEMENT NEEDED. Most semiconductor advertising is too timid, too conservative, not emotional enough, and too larded with specmanship. So believes Regis McKenna, pr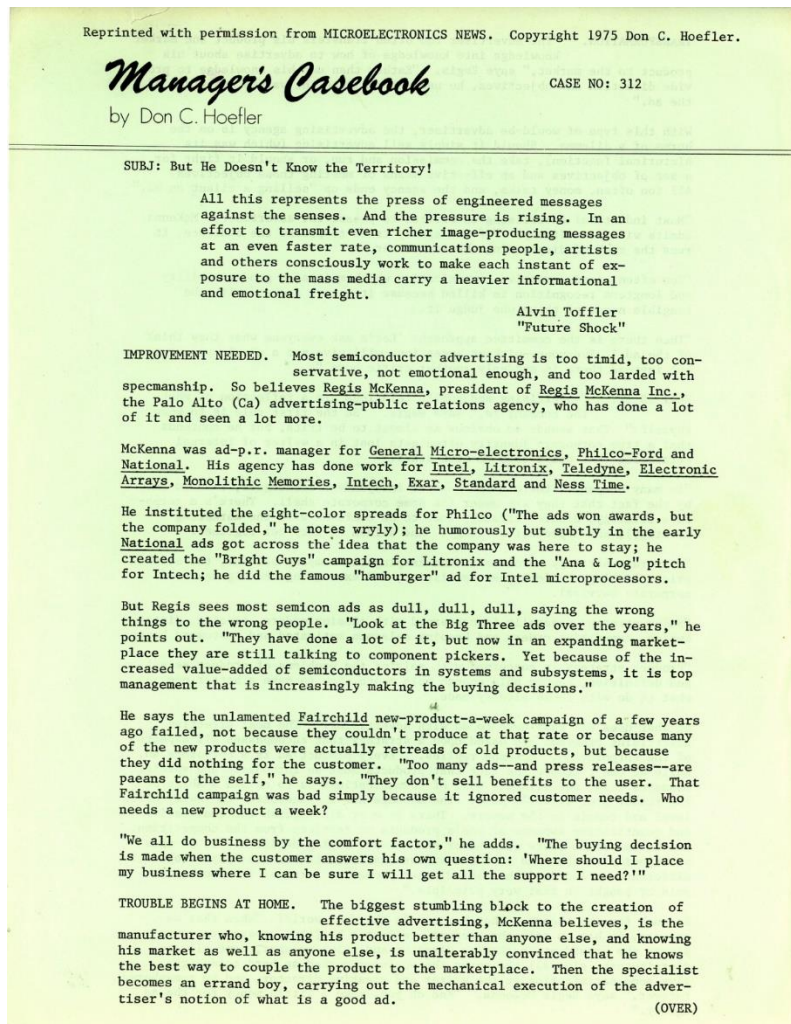esident of Regis McKenna Inc., the Palo Alto (Ca) advertising-public relations agency, who has done a lot of it and seen a lot more.

McKenna was ad-p.r. manager for General Micro-electronics, Philco-Ford and National. His agency has done work for Intel, Litronix, Teledyne, Electronic Arrays, Monolithic Memories, Intech, Exar, Standard and Ness Time.

He instituted the eight-color spreads for Philco ("The ads won awards, but the company folded," he notes wryly); he humorously but subtly in the early National ads got across the idea that the company was here to stay; he created the "Bright Guys" campaign for Litronix and the "Ana & Log" pitch for Intech; he did the famous "hamburger" ad for Intel microprocessors.

But Regis sees most semicon ads as dull, dull, dull, saying the wrong things to the wrong people. "Look at the Big Three ads over the years," he points out. "They have done a lot of it, but now in an expanding marketplace they are still talking to component pickers. Yet because of the increased value-added of semiconductors in systems and subsystems, it is top management that is increasingly making the buying decisions."

He says the unlamented Fairchild new-product-a-week campaign of a few years ago failed, not because they couldn't produce at that rate or because many of the new products were actually retreads of old products, but because they did nothing for the customer. "Too many ads--and press releases--are paeans to the self," he says. "They don't sell benefits to the user. That Fairchild campaign was bad simply because it ignored customer needs. Who needs a new product a week?

"We all do business by the comfort factor," he adds. "The buying decision is made when the customer answers his own question: 'Where should I place my business where I can be sure I will get all the support I need?'"

TROUBLE BEGINS AT HOME. The biggest stumbling block to the creation of effective advertising, McKenna believes, is the manufacturer who, knowing his product better than anyone else, and knowing his market as well as anyone else, is unalterably convinced that he knows the best way to couple the product to the marketplace. Then the specialist becomes an errand boy, carrying out the mechanical execution of the advertiser's notion of what is a good ad.

(OVER)

Hollar: I'd like for you to talk a little bit more about that, Regis, because that was a uniquely Regis thing. There's a phrase—"the Regis touch." One of the aspects of the Regis touch was your commitment to building these personal relationships with journalists and editors and people who were opinion makers. That's not easy to do, because, as you said, they're inherently skeptical, they know that you're representing companies, a point of view, a commercial interest, and yet you were able to do that in a way

that actually helped everyone. It helped them; it helped the companies. Talk about how you first came to that as an approach you knew was important and the process of going about it.

McKenna: They [journalists] were skeptical of West Coast startup companies**,** which was maybe the biggest obstacle. Again, I have to thank Don Valentine. I mentioned all the freedom that he gave me, and I don't think a lot of people in my role or position at the time were given the budget and the freedom to do that sort of thing—to make early forays into New York and London and other centers in Europe, and to just knock on doors and say, "Hi. I'm from National," or, "I'm from my own company now, and here are my clients."

I wouldn't pitch them—I wouldn't give them a sales pitch. I just wanted to introduce myself and have a general talk about what's going on in the Valley. The stories are always greater and much more interesting to the journalists and their world view than, literally, the chips. The chips didn't really give them a lot of excitement, particularly in the '60s and '70s. But [it did] when you started talking about the total amount of business that was created by the semiconductor industry, the percentage growth. I would bring charts, I would bring lots of things to show them what was going on in a particular industry or technology. That raised it above pitching a little picture on a page that nobody could see or understand.

It took a number of years, and it wasn't until some years later that the business press got hold of it. I had been calling on *Business Week* and *Fortune* and *Forbes* and *Time* magazine and Morgan Stanley analysts and that sort of thing for some years and knew them well. Valentine said to me one time that he saw it as a sales kind of thing. He actually used to get upset with salesmen who didn't have enough dinners with customers on their expense accounts, because he said, "If you have a free evening, there's always customers around and you can exchange more information." Peter Drucker said, "More business is conducted, and information transferred over lunch and dinner than any other time of the day." That's absolutely true. Many of the journalists and analysts who worked in New York—and the publishers were all in New York—didn't get home until late anyway because they lived out in the suburbs somewhere, so they would stay in New York until after seven or eight. When I set up my appointments I'd do it at the end of the day, and then we'd go to dinner and you'd talk about everything from family to what's going on in the world—politics, everything—and in the meantime you could talk about the companies that you're working with and what you're doing.

One of the rules that I followed was: Always be honest. Even whenever they said, "We hear that you're not shipping a certain product," I would say, "Sure, that's true." Because they would find out anyway. It's being comfortable in your own shoes because the company's management wants you to always get a good story, and the media always want you to be truthful, and—

Hollar: That's a hard gap to close.

McKenna: Yes, and I think it's the biggest issue. People don't trust public relations because they represent the company almost as a sales arm in too many instances. And at the time that's where I had to make money, and I did it my way.

Hollar: You had another philosophy that you've talked about, which is to aim high—meaning that you only went for the blue-chip publications—*Time*, *The Wall Street Journal*, *Business Week*, the real opinion shapers. How did you find that fit with this honesty philosophy that you're talking about?

McKenna: Even more so, because they were interested in the financial success of the company. They wanted to know the credentials of the people who were the managers. They wanted to know about the processes within the company in terms of how you're organized, how you're managed, how you're expanding internationally. I also felt that part of the change started occurring when you started taking the senior executives back to New York. They [the journalists] began to say, "These people are pretty bright. These people know what they're doing." Quite frankly, all of the people that we were seeing out here at the tops of these companies—even companies that didn't succeed in the long run—were very, very intelligent, sharp people. They were also always very articulate. They could stand up in front of the customer or stand up in front of a conference and be quite confident in what they were saying, and knowledgeable. They could do that to analysts and others as well. They needed the analysts because they started raising money very early. That expanded my world beyond PR and journalism into the analysts' world.

Hollar: Did you find that the New York crowd was surprised about what they were learning was going on out here on the West Coast?

McKenna: It took a while; I mean they certainly didn't do it automatically. There were a few people who had been covering technology and wanted to cover technology. A lot of the gurus that we saw, for example, in the PC industry today were former journalists who got hooked on PCs and started analyzing every PC that came out. Suddenly they became an expert on that subject because they covered them all, but then they left that and started doing conferences and so forth just on PCs.

The most knowledgeable by far was Ben Rosen.[1] Ben was a semiconductor analyst—Coleman & Company, I think, was the first one he was at. He wrote a semiconductor newsletter that he put out, I think, once a month. Ben was a physicist and came from a family of well-educated technical people, and yet he was a financial analyst. People really did hang on his words—customers did. He would be very forthright in analyzing products, and that gave him a platform to do other things.

He would hold semiconductor conferences. The interesting thing about these semiconductor conferences is that when you would go to them, it was only company presidents or senior executives there. It wasn't marketing people, it wasn't PR people. I attended his first PC conference in New York. It was in his conference room, which was a very small room, and it was the presidents of all of the startup companies in the PC business in the country. Ben could command their attention. Then he started doing a PC newsletter, and he also started using a PC. The Mac on his desk was one of the first ones. He had the Apple II on his desk, using it.

I'm jumping ahead, but that really revolutionized the media because the media began using the products that they were writing about, and that changed everything. The microprocessor came close. They

---

[1] [Editor's note] For more information on Benjamin Rosen see the oral history the Computer History Museum recorded with him: https://www.computerhistory.org/collections/catalog/102738545.

[journalists and analysts] could [understand] applications that were real-world applications—blood analyzers, toys, automobiles, things of that nature—so suddenly they had something tangible to point to and use as a reference model. But the PC changed everything.

Hollar: We're going to spend a lot of time on the PC era. I want to cycle back just for a minute, though, on how you went about educating yourself, Regis. Because you really do believe in research and reading and continuous learning, and I wonder if you could talk about that a little bit. You gave me the cover pages out of a number of books that were very influential to you early on. One of the main ones is a book by Robert Bartels in 1962, *The Development of Marketing Thought*. I wonder if you could talk a little bit about that book—its concepts and the influence that it had on you as you were going through this whole process of self-development.

McKenna: I think it had more influence as we got more under our belt in probably the middle, late '70s. The thing that was most impressive when I read that book was that—if you were a marketer in the 1940s or '50s, or you were in the marketing department of a company, more than likely you had an economics background. It was economics, and the understanding of distribution and logistics, that enabled them to look at how to change product pricing, how to move into the marketplace in a unique way by either building real estate or by building sales forces and always looking at the economics of the product. That kind of early training led to the brand managers at Procter & Gamble.

Procter & Gamble was one of the first companies to actually buy a fleet of cars so that salespeople could go into these small towns across America. That was a revolution in terms of getting their products packaged and placed in grocery stores across the country—small ones. [Bartels] was really about understanding the psychology of the marketplace, the nature of the buyer, the economic ability of the consumer. It was through that that came credit—retail credit. My mom would go shopping in downtown Pittsburgh for clothes and that sort of thing. She had a credit card for Gimbels and Kauffman's and Horne's. All of them had their separate credit cards, and that enabled people in America to acquire goods and then pay 50 cents a month for the rest of their lives to fill up their houses with goods. It really started creating demand for product.

Up until that time most of the economists—national and international—were promoting supply-side economics, that the more you built the more you would sell, and it was just the opposite. It's the more people bought, the more you would make. The whole idea of having economists at the base of marketing made an awful lot of sense to me. I thought, "We have to be smarter in marketing than to simply look at the traditional ways of doing things."

Hollar: It also carried the message that marketing required understanding the business from end to end in the context of a larger economy. I was always impressed with your tag line for your company: "The ad is the last thing we do." I didn't really understand it until you and I started talking, and I learned about why that was.

McKenna: Well, the more you advertise a bad product the faster you go out of business. That's the other part of the tag line, and I witnessed that firsthand. I saw this at various companies where they would want to promote right away, and they would start thinking that ads would solve their problem. But they don't.

I saw that when I was in the ad business—selling ads that companies would run, thinking it would build their product, and it didn't. It could have been that the technology was not the right technology. It could have been that the pricing wasn't correct. It could have been longer-term relationships from competitors. It could have been that the service was bad. All sorts of things can go wrong and destroy a product in the marketplace. If you just keep pushing it out there, it won't sell. So, as I said, the more you advertise a bad product, the faster you go out of business.

Hollar: As the agency began to grow in the early days, you had to think about the culture of the company—the way every startup CEO has to think about it. How did you think about that, and what did you want the culture of your company to be?

McKenna: That took time to develop. The first few years you're surviving, so you take on more business than you can handle because you want cash flow. You're hiring people, and we were hiring very rapidly. I wouldn't say that you immediately go into that. Also, I was going to night class in the first five years of my company. I went to San Jose State and I went to De Anza and took courses on all sorts of things.

Hollar: What kinds of classes were you taking at night?

McKenna: At San Jose State I took some philosophy classes. I took a physics course. I took literature and writing, things like that. I wanted to keep the academic mode in my mind. I think that helped a lot in terms of wanting to look for ways to educate my own people as well as my clients.

Aside from that, I subscribed, as I mentioned before, to a lot of different magazines. I have an early article from *The Wall Street Journal* <holds up article>. I would write my clients' names on them, staple a tag to it, and then my assistant would mail them out—to Steve Jobs and Bob Noyce and people like that.

Hollar: And you circulated a lot internally too, didn't you?

McKenna: Yes.

Hollar: Clipping has been an important part of your professional life as a way of educating yourself and others.

McKenna: In my home office, I have a separate room which is just a storage room. It's got metal cabinets on three sides. On one side, all of those metal cabinets are filled with clippings. I have every subject imaginable—U.S. economy, world economy, Japan, microprocessors, artificial intelligence. You name a subject and I probably have a file on it. I would use those for my own knowledge and in my presentations.

We had a lot of training sessions once we got above three or four people. I started bringing in, probably in the late '70s, people from Stanford I got to know to give lectures. We had an office with a big lecture area in it. For example, we brought in a professor at Stanford Business School, who had spent a period of his career at Varian when they were in the computer business—the data machine business.[2] One of his favorite lectures was "Products Need Not Be Commodities." There's always a way to add something to a

---

[2] [Editor's note] The name of the professor is Bob Davis.

product to turn it into a higher value product, whether it's service, whether it's redesigning it, whether it's adding some additional part or system to it. There are ways to not just have that [product] be a commodity. The chip business, and particularly transistors, really looked like commodities at the time. That fascinated me, and he probably was the most frequent visitor and lecturer at our place for some time.

Hollar: I would think that would be just as true for agencies at some level. There weren't a lot of competitors in the early days, but certainly later there were, and you had to differentiate the Regis McKenna group from all the rest of them.

McKenna: We did, and it wasn't easy. I used this comparison with our own people.

Intel was once known as a memory company, and before that they were a bipolar company. They weren't a MOS company as a process. MOSFET is a basis of their technology. They changed, and people just accepted it as the rise of technology. But in our business, I still get people asking me—I have two people right now that just have e-mailed me asking me to meet with them to talk about advertising and PR. I still get that. They just don't want to shake that image of you, even if you change, and I did change the business. Our income in the late '90s was a hundred percent strategy consulting. But it took a long time to get there.

Hollar: In the early days you were just running hard, trying to survive and trying to pick up clients and getting more work than you could actually handle. Is that the way it happened in that period from say 1970 to 1975?

McKenna: Yes—much more work than you could handle. Finding [staff] was really difficult because the traditional people were either used to doing [marketing by] spec sheets, or they were illustrators or graphics people out of San Francisco ad agencies. So what kind of people do you hire? You pepper those people with people with more technical skills. You would have some very creative people and some very technical people.

The technical people came from hiring journalists out of trade magazines. They could write. They understood the products, and they could explain them. One of the people that worked for me a few years later was a guy named Rob Brownstein. He gave a whole series of lectures to our people on basic electronics. We'd try to get those people to also teach others and put them together in teams so that there were creative and technical people working together. That became a mode of advertising and public relations where the technical people could make sure that it's technically correct and that it presents the product in a way that's not over-promotional. Then the creative people might look at the ad and say, "It's not interesting unless we do such and such."

In the early '80s we hired a guy named Jerry Leonhardt as creative director. Jerry came out of a big agency in San Francisco. He was responsible for having designed the original Wells Fargo checks and all the stagecoach stuff. He was very creative. He used to call [micro]chips "bugs." He said, "They're bugs. They're not interesting. They're just bugs." So, in one of Intel's ad, he put a huge chicken in the middle—the chicken or the egg, what comes first to change your business? He started putting really interesting stuff out there that still had a meaning.

First ads on Intel Microprocessors

[We hired] one of the senior technical writers for McGraw-Hill, a guy named George Sedaris. We put George and Jerry together and they wouldn't fight, but they came close to it.

Hollar: How did you find these particular people, these really super-talented people, and convince them to come to work?

McKenna: Through vendors coming in and calling on us and giving references to them, and the journalists we knew, I knew. I knew a lot [of] technical journalists in New York, and approached them to hire them away from some of the magazines that we wanted to place articles in. There was a little bit of a squeeze play. Since we got Intel fairly early, the journalists and the magazines in New York—the technical magazines—wanted to stay close to them because they knew Noyce and Moore were going to do great things. So, when I hired journalists out of there, some of the editors at the magazines complained—but not loudly, and almost all of them became long-term employees for me.

Hollar: Who were some of the other key hires in your early years?

McKenna: I brought people with me from National over the next year. My assistant at National, Myrna Bernard, was a jack of all trades—from accounting to tracking everything, production of materials, and all that sort of things. Then a fellow who was also a manager of logistics for all of our brochures and ads, those kind of things, Dave Takagawa. Those two were really a powerhouse in terms of hard-working, get stuff done, get the products out.
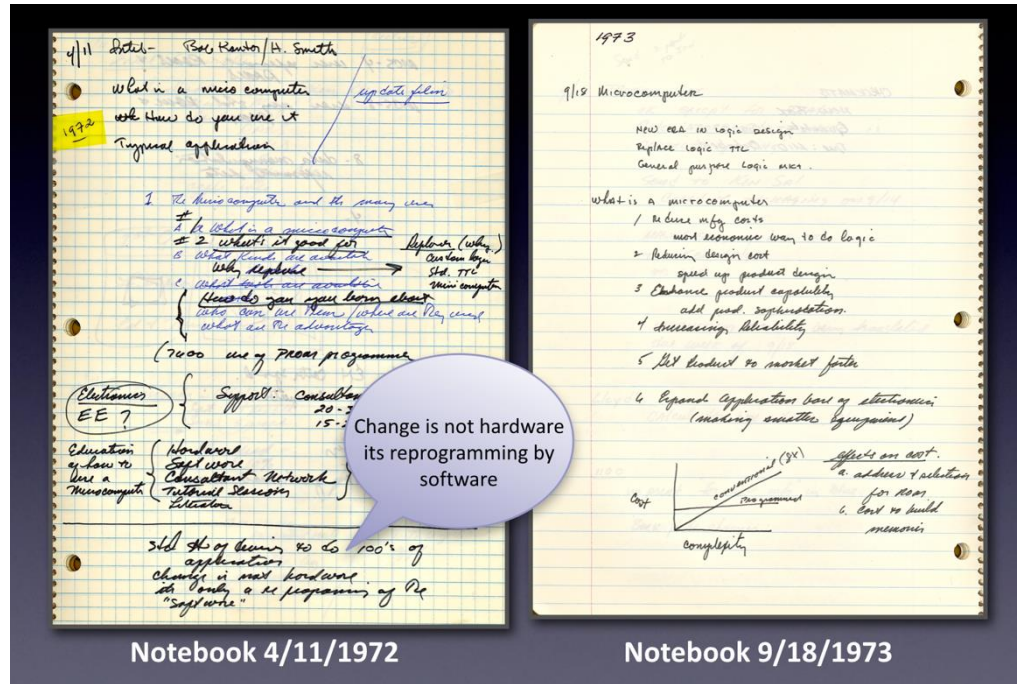
Everything for clients had to be done yesterday. There were time schedules. If you were going to try to make a deadline on a magazine, you had to ship it out a month ahead. Those were really, really tough schedules because in almost all cases—I used to say that if it weren't for the ad or for the PR release, these companies would never put a price on their product. Pricing was always the last thing to decide, and it took "hey, we've got to get this out or we're not going to make a deadline." That's generally what got them to agree on the final availability and specs and pricing.

Hollar: How often were you in on those discussions as well?

McKenna: Oh, all of them.

Hollar: All of them.

McKenna: Yes, if you go through my notes. I don't have notes on my days at National, but I was just going through some on Intel. Ed Gelbach was VP of Marketing. We were going over the microprocessor market and their products, and he gives me all the monthly sales—what it was

Notebook 4/11/1972   Notebook 9/18/1973

Early Intel MPU strategy meeting with Bob Kantor and Hank Smith, product manager, describing key benefits of design with MPU technology

last year, the year before, what their production rate was, what the pricing had been, what the income was, what the margins were on the product. I got very, very detailed information in meetings. There was no "we're not going to tell you."

Hollar: How did the company grow so quickly? What were you doing that put you more in demand than anyone else?

McKenna: We understood their business. That's why the first group were all semiconductors. I had been at two semiconductor startups—companies that grew their own ingots and made their own final products under one roof, and I knew every aspect of production. Not that I could do it, but that I understood it. I could explain the products. I could translate the specs into the real-world value of that product. I have lists in my notebooks of the customers that I would call on for the first microprocessor. I can show you half a dozen or more, maybe 10 different and early users, with the phone numbers of the people I called, and then wrote stories on them.

Hollar: When you say wrote stories, talk more about that aspect.

McKenna: Well, it helps in several ways. There was an application engineer at Intel and working with him we got more examples of how products could use a microprocessor. You have to remember, the microprocessor, the 4004, came out 1971, but it really wasn't until 1982, when IBM designed it into the PC, that they really hit a volume market. Up until that time, sales were growing but were very, very small. It was in machine tools, medical instrumentation, used by all sorts of different, smaller companies or smaller-market companies. My term is industrial products. Still, we wanted a lot of that because that was what we could see ahead of us.

Nick Nichols, Intel application engineer, and I sat down and said, "How can we get more and more of the stories of these applications out there?" I would call and interview the company. Some of them I visited—the ones that were in the area. Atari was one of the early companies, and I went out to Atari and met with [Nolan] Bushnell and people like that back in the '70s. I would write all the information down, and then we would write up a little sheet that would show the product and describe what they're doing and how they applied the microprocessor—even with some circuitry, if they would allow that, and then talk about the value of the product to them. Then we put those in binders that all Intel salesmen carried, and we would keep adding to that binder. Each week, we'd send out something new to them. They could take that out to show their customers what other people were doing with the microprocessor. Those stories also then made their way into application notes and into conversations with the analysts and media.

I could, rattle off a group of these applications, and...

Hollar: And you could probably do that very quickly because you had the background knowledge of the industry, the technology, the customer base.

McKenna: Right.

Hollar: Much deeper than anyone else who was trying to compete with you at the time, I would guess?

McKenna: I probably got a reputation for being a little aloof from the rest. I never joined any advertising or PR clubs or organizations. I didn't attend any of their local or national conferences. I <u>was</u> a member of the Semiconductor Industry Association. I was a member of the American Electronics Association. I decided the thing to do wasn't to join other people who were doing what I was doing, but to join my clients' organizations because that's where I would learn more about how to help them. I went to all the electronics and computer shows and those sorts of things.

Hollar: The business you felt embedded in was your clients' business, not the advertising world.

McKenna: Yes, absolutely. If my client succeeded, I did. So how can I help them do better? By doing that I got to know everybody in the industry. I got to know people at all of the other semiconductor companies and all of the other budding computer companies.

Hollar: Let's start our deep dive into Intel now. Let's start at the very beginning. How did you bring Intel into your group as a client?

McKenna: When I started, I made a list of 10 companies that I wanted to get as clients. Intel was on that list. They had started when I was at National, but they had a reputation that preceded them that was greater than anything they were producing. They were producing some products, but again, they were bipolar. There was no hint of what would eventually become MOS RAM and the microprocessor.

One of the fellows who came to work with me was a guy named Don Kobrin. Don was a special assistant to Bob Noyce at Fairchild and did projects that Noyce wanted done, like location work for plants and things like that. Then he did that same role with Charlie Sporck, and after a while I think Charlie felt he really didn't need that sort of person. Charlie's one person that doesn't keep any extra employees around if he doesn't think he needs them.

So, Don was not doing anything. I asked him to do some research for me—research on a variety of things—but also just figuring out what magazines we should be advertising in as a research thing. Don was working for me on a part-time basis, and he got a call from Bob Noyce. Bob wanted him to do plant location work for Intel. Don said, "No, I'm too busy. I'm working for Regis McKenna right now," and Bob said, "Okay," and he hung up. Don came and told me that, and I said, "Don, you call him back and you tell him that you <u>will</u> do it, and that you're going to ask in return that Noyce and I have a dinner, and I talk about what we're doing." Don called him back, said he would do the plant location work, and we set up the dinner. Don did do the plant location work. It ended up being the plant in Portland that they set up very soon after launching only a few years later, mid-'70s maybe, and I had dinner with Bob and Ed Gelbach, who was Vice President of Marketing.

Hollar: Did you know Gelbach at the time?

McKenna: No. Gelbach came from TI. He was Vice President of Sales, I think. Don Valentine recommended him to Noyce, so Ed and Valentine knew each other. Ed was a little bit of a hippie guy. I mean, he was very bright and very personable. I made a presentation and, although I didn't know at the time, I think my working with people that they knew at both National and GMe added credibility. And the fact that GMe had been promoting MOS technology, and I had done a lot of that, although it wasn't a success, that wasn't something Noyce was necessarily looking for—a successful company. He was just looking for experience. GMe is where they hired Joel Karp, who Les Valdez hired as the first MOS engineer at Intel. I think Bob knew that anybody who worked for Valentine and Sporck was no slacker.

Hollar: And not easily intimidated.

McKenna: And not easily intimidated. We had a very nice dinner and I made that presentation to them, and then the next morning Ed Gelbach called me and said, "We want to do it."

Hollar: It happened just that quickly.

McKenna: Yes, and I was thrilled. Of course, when you do that it goes downhill immediately. I mean, I didn't have people to put on it yet. There were a few guys who were freelancing out of Fairchild, because Fairchild had a large in-house group. They wanted to do the work because they knew Noyce and Moore

and a lot of the people there. But they were horrible. They covered a lot of sins inside, and they were really terrible. They just about lost the business for me within weeks.

Hollar: Intel IPO'ed in October 1971. Was this before the IPO?

McKenna: Yes.

Hollar: What did you pitch them on?

McKenna: Handling all of their advertising. I took a different approach to PR, which was much more personal—building relationships with the media and the analysts, overcoming the obstacles that they knew were there. Bob didn't like to meet with the media. He would just as soon someone else do that. But he was very, very, very good at it.

Hollar: I was going to say—that's ironic because he was so good at it.

McKenna: Yes, but he was very humble guy. I mean, he'd rather give the credit to everybody else. Sincerely, he did. It wasn't a phony aspect of his personality. He would [meet with the media] if it were part of something that we felt had to be done or should be done. Then he would do it. But he was always uncomfortable with it, and it's one of the reasons there's so little actually published on him and very few articles that he wrote, things like that. We had writers that could write articles [for him], and we approached him several times to have a ghostwriter [do it], but he didn't want to use ghostwriters. He wanted to do it. He was fine at writing when he did, but he didn't want someone else to write stuff. He wanted to do it himself.

Hollar: In your estimation, at that point in its early days as a company, what was it that Intel most needed in the way of marketing? What was it lacking that you could really help with?

McKenna: I think the ability to do it all. They were using freelance people, and I don't think they had anybody specific doing it either inside or outside. The product managers were going off on their own and getting things done. But what did they need? If I brought along one of the lists of things I was doing at the beginning of a week in the '70s for Intel, it fills up a whole page. You would walk down the halls and people would just grab you and pull you in and say, "I need this done, I need this done," and so you eventually become part of the team.

Then I started bringing in people. Bill Delaney and Jack Ramsey did a lot of work on Intel. Jack Ramsey, who now lives in Portland, and we stay in touch, he still is so grateful. He said, "To think that I had an opportunity to actually work with people like Bob Noyce and Gordon Moore as a young kid." It just blew his mind that he could get in on these meetings as a very young person. I brought people in very early—I was in the meetings too, but I brought in a lot of my people so they could learn and grow with clients. It's not easy to transfer [the work] because they want you. If your name's on the door, they want you, but we had lots and lots of teams of people working on Intel.

Hollar: Were Noyce and Moore hands-on with what you were doing? Were they close to that part of the business?

McKenna: Not so much Gordon, but certainly Gordon would step in with information. would interview him for technical details. Bob would have an opinion, but he didn't interfere. Gelbach was much more of the final word on stuff.

Hollar: How did that relationship evolve in the early years—your relationship and the agency's relationship with Intel as you began to get more and more integrated into the company? Because what I think we want to get into is—you and your company became really integrated with Intel and its marketing efforts in a way that I think even today would be considered pretty rare, wouldn't you?

McKenna: Yes. It was the same with Apple. I mean, it was--

Hollar: Exactly.

McKenna: We were in on the development of the products very, very early. We sat in on all their long-range product planning, and so forth, and we were almost like a body shop. We were providing people to do things that were different from what they were doing but were additive. It was a very, very unique relationship, no question about it, and they were clients for more than 20 years. So was Apple. Apple also was more than 20 years, and eventually—I'll talk about that later. It was such that you knew that it wasn't going to go that way forever, because as they got bigger and more complex, people in different plants and different organizations wanted much more local control.

Hollar: What was the sequence of events that led it to happen in the beginning? The integration.

McKenna: Things were focused on different groups of products. There were memories, which eventually were the first of all bipolar memories, and then MOS memories. You had the 1103, which was, I think, the largest selling RAM memory. That became a whole team of people working around memory. Shortly thereafter Intel formed a memory systems group that was building cards and small boxes with lots of memory in them. They would sell them as memory storage for computer companies and larger minicomputer companies and so forth. That was also a struggle, because these large arrays of semiconductor solid-state memories—in my notebooks, I have several pages of discussion of what core memories were doing. Core memory was the type of memory that was used in these large computers and even medium-sized computers where memory was used. They were little ferrite cores that looked like little donuts, like a washer that you might use on a bolt or screw, but they were really small, a little bit thicker, and people literally strung them together in a matrix. The structure of the memories that were created by Intel had to follow that matrix, that same information structure, that core memory. It was like wagon wheels becoming the model for the railroad. You had to convince computer companies that semiconductor memory in the long run was going to be much cheaper and much more prolific and larger components than core. Core kept reducing size and cost, but they could not get down to nanometers.

So again, new technology put them out of business. There was a crossover point in the '70s and into the early '80s. It's almost like going back to the 1920s and seeing how things were done. They were pretty primitive, and I don't think most young people today that are in the business would know what I was saying if I said "core memory." That was another product area.

Then there was the microprocessor, which was 10 years of application development and went through 4-bit to 8-bit to 8/16-bit. New competition was arising, particularly in Motorola and Texas Instruments. Both had microprocessors under development. The Crush program, to market Intel microprocessors, became one of the biggest, most pervasive marketing programs in the sense that it fit the pattern of what I later talked about in "Marketing is Everything." This [Crush program] was one in which every department of Intel was engaged, from the chairman of the board down to the operations and sales.[3] It required all product development to be centered on it, to build alliances around peripherals for the new processor family, to the trajectory of future projects. It really set the pattern for [marketing]. That was in late '79, early '80. Crush led to getting the IBM business, and that changed the fortunes of Intel forever. Once IBM put its muscle behind a PC, then we all knew it darn near put Apple out of business.

Hollar: It got to the point where you were brought into the product planning cycle, right, from the—

McKenna: Real early, real early.

Hollar: You would be brought in a year, year and a half in advance of a product being launched. Talk a little bit about that and what that process was like.

McKenna: Intel was a lot like National and GMe. You met with the people who were doing the work at the bench, and I got an early education. We would go in a conference room and they would give you the primer on the product or the technology, and why it's important, and all the various details of it. In some of my notebooks I go into extensive detail on those meetings.

A significant product was the Intel development system, the Intellect. That was a machine to help develop the program for the processor itself. Making a low-cost development system that allowed engineers not to have to write every piece of code, but to use its development system to write the code that they needed to program the processor, sped up design time.

There was a side issue here. Gordon Moore was somewhat upset at the way we were going to talk about [Intellect], because it looked as if we were producing a computer. Gordon didn't want Intel to compete with its customers, and so it was pulled back on, I think, a Saturday morning. I got a call from Hank Smith, who was the product manager, and Hank said, "Can you come over?" and I said, "Yes," so I went over to Intel and he said, "I've never seen Gordon so mad in all my life." Gordon got far down into the product introductions and he didn't want us to look like we were challenging the next level of customer, because those were our customers.

---

[3] [Editor's note] For more information on the Crush program see the oral history the Computer History Museum recorded with some of the protagonists of the program: https://www.computerhistory.org/collections/catalog/102746836.

Hollar: Was this an advertising campaign or—

McKenna: It was everything. It was sales, everything. At Intel, it was coordinated and included everybody. There would be sales training, conferences, seminars. Intel at one time held more workshops and conferences, I used to say, than De Anza Junior College had programs in their catalog. Intel put on a lot of workshops and seminars on their products around the world—because it was a new technology, and these people who they were selling to were designing with discrete logic rather than programmed logic. I have it, again, in my notebooks. Ed Gelbach had us make a phony ad, and it said, "Is Intel ready for software?" and that seemed like, "My God! You mean, Intel? No!" They didn't use software. These things were hard wired. But this [programmed logic] was something which you programmed. It had infinite variety built into it through software, and that was a whole new concept at Intel.

So, think about it. The customers had to stop being component pickers and become programmers. For the engineers at the bench—that was an education. Pushing that education out was an enormous task around the world. There was lots to do. Lots to do. You ran.

Then there were people like Grove who was always at the top pushing. Nothing could be done well enough or fast enough for Andy Grove.
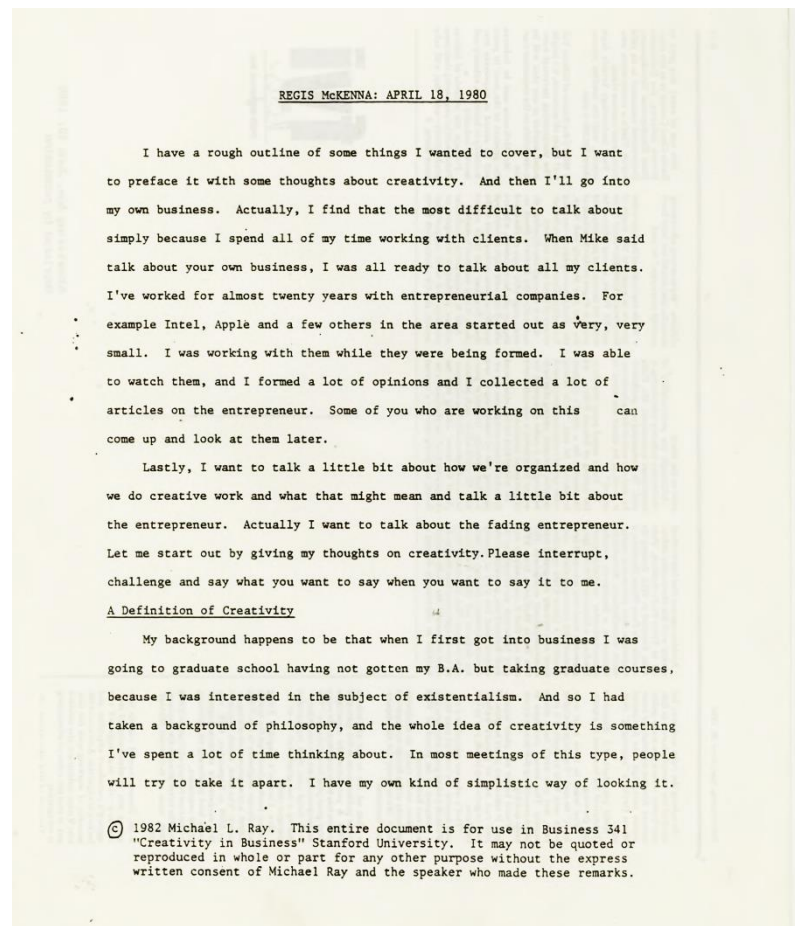
Hollar: How involved was Grove in what you were doing, especially in the early days?

McKenna: Not so much in early days. It was pretty much left up to Gelbach. Then came Jack Carsten, who became Vice President of Marketing. Jack came from TI and ran the MOS division at TI. Jack was a whole different personality. Do you know Jack at all?

Hollar: I know Jack.

McKenna: He has mellowed considerably. But Jack and I got along really well. It's just adapting and learning how to work with people.

Hollar: You gave this fascinating interview in 1982 with Michael Ray, which I really loved. You can see I've put about 40 tabs in it. There's a question I want to ask you here which is a little more philosophical, about the concept of creativity. You've thought and written a lot about that in your career, but I want to talk about the way that you described Intel—as a creative

REGIS McKENNA: APRIL 18, 1980

I have a rough outline of some things I wanted to cover, but I want to preface it with some thoughts about creativity. And then I'll go into my own business. Actually, I find that the most difficult to talk about simply because I spend all of my time working with clients. When Mike said talk about your own business, I was all ready to talk about all my clients. I've worked for almost twenty years with entrepreneurial companies. For example Intel, Apple and a few others in the area started out as very, very small. I was working with them while they were being formed. I was able to watch them, and I formed a lot of opinions and I collected a lot of articles on the entrepreneur. Some of you who are working on this can come up and look at them later.

Lastly, I want to talk a little bit about how we're organized and how we do creative work and what that might mean and talk a little bit about the entrepreneur. Actually I want to talk about the fading entrepreneur. Let me start out by giving my thoughts on creativity. Please interrupt, challenge and say what you want to say when you want to say it to me.

A Definition of Creativity

My background happens to be that when I first got into business I was going to graduate school having not gotten my B.A. but taking graduate courses, because I was interested in the subject of existentialism. And so I had taken a background of philosophy, and the whole idea of creativity is something I've spent a lot of time thinking about. In most meetings of this type, people will try to take it apart. I have my own kind of simplistic way of looking it.

© 1982 Michael L. Ray. This entire document is for use in Business 341 "Creativity in Business" Stanford University. It may not be quoted or reproduced in whole or part for any other purpose without the express written consent of Michael Ray and the speaker who made these remarks.

company. Talk about the personality of Intel as a creative company as you first encountered it, and how well that matched with what you felt you wanted to be building as a creative company in your own right.

McKenna: Yes. Again, when people say creativity, I think they think more of liberal arts, perhaps painting or writing poetry or literature or something of that nature. But I go back to my Professor Boelen that we talked about in the beginning.[4] He used to say that you can have an IQ in a lot of different ways. You can have an IQ for writing. You can have an IQ for painting. You could have an IQ for chemistry. Depending upon your talents and your inclination and your interests, you can develop IQ in different areas. At Intel, I think a lot of this came from the top down—from the founding fathers at Intel. It was the idea of always looking for a way to advance the technology, and not being satisfied with the performance level at any one plateau. Even when they had products that failed, as I mentioned, like bubble memory, they just kept moving on. They certainly corrected their errors and moved their fortunes, such that they kept hitting enough prize-winners along the way that they were able to sustain losses in certain areas like watches— when they went into liquid crystal watches, we did those programs, too. The company just kept looking for better and better ways to do things.

It wasn't just in the products. Product marketing was such that they were always looking for better ways to educate the customer, educate the marketplace, to present the materials around the product. The product marketing department was highly creative, I thought, at Intel. They liked to see new and different ways of presenting what they were doing to the public and to their customers. The product marketing people in my mind had one foot in the market and one foot in engineering. They were the people that can actually see what the customers are asking for and also can get engineering to tweak or to change, or to put certain things into the next version of the product. That was a skill.

Intel had an unusually good share of those [people]. John Doerr was a product manager. Another really wonderful guy was Jim Lally, who was also at Kleiner Perkins, and he was the key driving force behind Crush. Dave House was a product manager. They were people who came in with skills. Dave House, for example, came out of Honeywell at a time when the technology was getting to the level of subsystems and systems. Later we'll hear about VLSI and LSI—those are no longer just components. Those became systems in themselves, and systems thinking had to come with them—things like software and development systems. Bill Davidow and others of their kind out of the systems houses were able to bring [this thinking] into Intel and teach others about it and take that kind of approach. They pushed a stone up a hill for a while, but eventually people saw the necessity, particularly as they got into the '80s and the personal computer world.

Hollar: You were involved in the very beginning in many of the projects. Then there was a point at which the handover came, and you were taking it out to the public. Can you talk about how that process worked and how you refined it in a way that made it so seamless?

McKenna: Well, first of all, it was almost not a transfer because we were part of most of the teams. You sat in these meetings that were doing the planning, and you were there probably every three or four days.

---

[4] [Editor's note] Prof. Bernard J. Boelen, Ph.D., Duquesne University. Cfr. Oral History of Regis McKenna, Part 1.

Hollar: So, when they brought you in in the very beginning, this was the work relationship that you and Ed Gelbach established very quickly.

McKenna: Yes. I was there at least half a day every day, and then doing my work as well as on the rest of our companies. When Apple came along, I used to say I'd spend a morning at Intel and an afternoon at Apple, and then whatever time was leftover I had to show up somewhere.

Hollar: Yes. For all the rest of the business.

McKenna: They were long, long days and nights. But you know what? It was exciting. You were aware these are— particularly with Intel and Apple—these are revolutionary products. There hasn't been anything like this before. There were only a few people saying what was going to be possible. The people who could actually foresee it and had a vision of it were more the technical people than the marketing people. The people like Noyce and Ted Hoff and Federico [Faggin][5] and people like that—those were people who really did see what was possible with this kind of technology.

I'll tell you a story. I met Gary Boone, the guy at TI who actually holds a patent on their microprocessor. I got to know him at one of the conferences. I called him and had lunch with him, and I asked him, "Why didn't TI get their processor into the

Rickey's tackling the SDK-80 microcomputer kit for his next science project.

Rickey likes soccer, lizards, hot fudge sundaes, skateboards and microscopes. He can't decide if he'd rather be Franco Harris, Bobby Fischer or Jonas Salk.

When his Dad brought home the Intel SDK-80 microcomputer systems kit, Rickey helped him put it together. It took only four hours. Everything was there. The 8080 CPU, RAM, PROM, programmable, I/O, a printed circuit board with all those capacitors and resistors and the other things that go with it. The

best part was the instruction manuals. Every step was clearly explained. It was easy. The programming part looked especially interesting. So simple. Just imagine talking to a computer.

The big thrill came on Saturday when they went to his Dad's office to use a terminal. When they connected the SDK-80 to the teletypewriter they got a printout. That was exciting. Within an hour they were talking to the computer, then inventing games. They stayed all day.

Now Rickey is building a micro-

computer of his own. He may be the first kid on his block to have a microcomputer. Thanks to a $350 low interest loan from his Dad.

If you're interested in being the first on your block to have a micro-computer, contact your Intel distri-butor: Almac/Stroum, Component Specialties, Components Plus, Cramer, Elmar, Hamilton/Avnet, Industrial Components, Liberty, Pioneer, Sheridan, or L. A. Varah.

Microcomputers. First from the beginning. **intel**
3065 Bowers Ave, Santa Clara, California 95051.

Intel hobby kit using single board computer. Oct. 1976 Byte Magazine

---

[5] [Editor's note] for more information on Federico Faggin see the oral history the Computer History Museum recorded with him: https://www.computerhistory.org/collections/catalog/102658025.

marketplace?" He said, "When I first developed the concept of the microprocessor, it was called a computer on a chip." And it was called, by the way, a microcomputer. It wasn't called a microprocessor. He said, "I took it to my boss—the idea and the concept and so forth—and my boss said, 'Young man, don't you know computers are getting bigger, not smaller?'" The attitude was, "There's no sense pursuing this because computers are getting bigger," and so you need more memory, you need more whatever. Gary Boone had a whole new way of doing it, but he had an uphill fight just getting the idea of the microprocessor sold in the bureaucracies of TI.

In the bureaucracies of Motorola—I had conversations with the division manager at Motorola as well. He had similar experiences with corporate, trying to get any kind of budget approval to get them into the marketplace. In fact, at one point Mike Spindler[6] wrote him a personal letter—Spindler gave me a copy—saying, "You have to hire Regis McKenna to help you figure out how to get Motorola more into the public's eye," and they never followed up on it.

Hollar: This was unique, wasn't it? You were trying to take a very technical, very arcane thing like a microprocessor and turn it into something a consumer should know about, should be aware of, should understand was coming at them. First of all, why was that important to anyone, and second, how did you go about formulating a strategy for putting it out there in a way that the average person could understand?

McKenna: Well, for one thing, I had very good people, very good writers, and they were putting stuff out there in magazines. That helped tremendously. A lot of our early writers were journalists or ex-journalists, and they were probably the best translators in trying to put it out there for easy consumption. The trade magazines became more news-oriented, and the business press became more technically oriented and, those were two—

Hollar: The two were moving together and meeting in the middle.

McKenna: They were moving together, and you could see it just by calling on them. I well recall meeting —it was probably well into the '80s—a new editor at *Business Week*, and he no longer wanted to know about products. He wanted to know about the people. He quizzed me up and down about the people at Intel, the people at Apple. What were they like? Where did they live? What did they do on vacations? It started becoming *People* magazine. There was this whole changeover. It's becoming more interesting as a phenomenon in our society rather than just the technical aspects of it. Most of the technical companies hated that, but—

Hollar: The cult of personality.

McKenna: Yes.

Hollar: Yes. Because they wanted their people to remain in the background, right?

McKenna: Well, they wanted not only the people but they wanted—

Hollar: They wanted the technology to be—

McKenna: They didn't want to talk about their personal lives. They wanted to talk about the benefits of the product. They were in business to sell products and make money.

Hollar: This is a little ahead of the period we're talking about, but this is the page out of *Business Week* 1980 where it's Moore and Noyce and Andy Grove all posed on top of a what is clearly a rubylith of a microprocessor. It's called "Triumphant Triumvirate: Noyce, Moore and Grove have guided Intel from obscurity to number four." That was even before they were the top company.

McKenna: The 486 was a product that was developed up in Portland, and it was a super new product that they spent a lot of money on to develop. It was really a complete system on a chip. The core to it was object-oriented code, which was a different way of packaging code into its own modules, and plug-and-playing those modules. It was a whole new architecture. They worked for years on it and had to kill the project after spending a lot of money. Grove told me later that what they learned form that, though, was how to build the process equipment for the next generation—because that particular product required a lot more complex testing and testers. Just doing that, he felt, was worth the investment.

Hollar: I wanted to hold up that ad because it's very much on point with what you were talking about. Somehow between the early to mid-'70s and the *Business Week* article in 1980, which is a very short amount of time, business coverage of the industry moved, didn't it? It wasn't just the technology. It was the people.

McKenna: Yes. But it was also the people at the magazine. Lew Young was editor of *Electronics Magazine*. Lew Young became editor of *Business Week*. Bob Henkel, who was a key technology writer and editor—I think he was at *The Wall Street Journal*, and then at various newspapers—was a real newsman, but he covered technology most of his life. He went from *Electronics Magazine*, where he was the managing editor, to *Business Week*. Journals like *Forbes* and others started hiring more technically oriented people, and people on their staffs started becoming interested and started focusing on it part-time.

The Wall Street Journal had a guy named Dick Schaefer. He was out of Boston. He was a general-purpose writer, but he would write columns on the technology business from time to time. He got stuck with it and ran with it, and he built his own career around it. So these are people who had moved into these positions, and then they would cover it not full-time but just part-time. At *Fortune* there was a guy named Gene Bylinski and Gene was very technically astute. He wrote very in-depth articles on technology, technology businesses, science, and he started writing some of the early articles on Intel and on Moore and Noyce. In fact, *Fortune* used to run in-depth multi-page articles, and he did one on Noyce and Moore. Instead of the "Triumvirate" it was the two-headed geniuses that created the new technologies of the future.

A little side story on that. I got a call from Bob Noyce one day, and he wanted to meet with me for lunch. So we met near Intel. He told me that Andy Grove came in and threw that *Fortune* article on his desk and said, "I quit." Bob was flabbergasted. He said, "What do you mean?" Andy said, "Well, you and Gordon get all the attention, and I get nothing." I don't know what the rest of the conversation was about, but I guess Bob calmed him down. Then Bob said to me, "We've got to do something for Andy. We've got to get him more attention," and so I said, "Okay. I'll work on it."

[As it happens] I had received a call from a fellow from *The New York Times* who wanted to do a story on Noyce. I convinced him to do it on Andy. I told him Andy's background—coming [as a refugee] from Hungary, not being able to speak English, going to school in New York, all those sorts of things, and he said, "Yes, that makes a really good story." I said, "And besides, Andy's the production guy behind all of this stuff." A few weeks later he comes out, he meets with Andy and they do a Sunday *New York Times* story on him. They called it "The High-Technology Jelly Bean Ace"[7] It was about how he [Andy] was the guy that really made it happen. From then on, I became Andy's good friend.

McKenna: And Andy got a taste of fame and never left it behind.

Hollar: And all was well.

SPOTLIGHT

High-Technology Jelly Bean Ace

By VICTOR K. McELHENY

SANTA CLARA, Calif.—A picture of Andrew S. Grove hangs on the wall of his office in the Intel Corporation's headquarters in a former pear orchard here. But it's no more a typical executive photograph than it's typical for an executive vice president to receive the additional title of chief operating officer.

Dr. Grove, who received the title in recognition for his role in running the day-to-day operations of what may be the world's most successfully innovative manufacturer of semiconductors, is shown thin and grinning beneath his mustache, clad in sunglasses and bathing trunks, as he pops out of a large cardboard box labeled, "McIntel."

It's a joking reference to one of Dr. Grove's most serious principles in managing the explosively growing company.

In a much-quoted talk to security analysts three years ago, Dr. Grove said that Intel, as a maker of "high technology jelly beans," tiny but powerful chips of silicon able to store and process electronic information, had much to learn from the rigorous standardization of a foremost maker of "medium technology jelly beans," McDonald's hamburgers.

"The first thing that a manufacturer of high technology jelly beans needs is a different breed of people," Dr. Grove, a bronzed, sideburned 40-year-old native of Hungary, told his audience in the St. Francis Hotel in San Francisco.

"The wild-eyed, bushy-haired boy geniuses that dominate the think tanks and the solely technology-oriented companies will never take that technology to the jelly-bean stage," he said.

"Likewise, the other stereotype—the straight-laced, crew-cut, sideburn-and-mustache-free manufacturing operators of conventional industry—will never generate the technology in the first place," he continued. "Our needs dictated that we fill our senior ranks with a group of highly competent, even brilliant technical specialists who were willing to adapt to a very structured, highly disciplined environment."

In the semiconductor industry, which manufactures the tiny devices for the electronic "brains" that are essential to so many industries, successful companies will grow very fast—and fail quickly unless the growth can be managed.

"When McDonald's wants to grow, it doesn't increase the size of its outlets; it just adds new franchises. That is exactly the principle we have adopted," Dr. Grove said. "We add production capacity in modular increments. Each module is meant to be identical to every other module, the same way each McDonald's is the same."

Intel now employs more than 8,000 persons—slightly over half in the United States and most of the rest in Southeast Asia—so Dr. Grove is fighting a tendency to "deal only with inanimate objects and people who report only to me" by attending most of the multilayer monthly management meetings where he has "an opportunity to ask questions as just one of a 30-man group."

Dr. Grove, who fled from Hungary in 1957, was first in his engineering class at the City College of New York in 1960 and received a doctorate from the University of California at Berkeley in 1963. He is the least widely known member of the team of three former scientists who have managed Intel, short for "integrated electronics," since its foundation in 1968.

The other two are Iowa-born Robert N. Noyce, 49, who graduated from Grinnell College in Iowa in 1949 and received his doctorate from the Massachusetts Institute of Technology in 1953, and San Francisco-

has brought in $21.5 million. The company has yet to pay a cash dividend and has no plans to.

With the help of Dr. Grove, who had led Fairchild's research on the now widely used metal-oxide semiconductors, Drs. Noyce and Moore built a company with a deliberately narrow focus on electronic memory units and microcomputers formed within and on top of silicon semiconductor chips.

They hoped to develop important devices that would be a year or more ahead of the competition and that could be manufactured in large quantities at declining costs.

Although the company has encountered setbacks, notably a "two-year miserable period" that Dr. Grove said followed problems with chips able to store 4,000 pieces of information for computers, Intel established huge leads on such devices as a 1,000-bit memory called the 1103, a microcomputer called the 8080, and a reprogrammble memory unit called the 2708.

credit from carrying previous losses forward. Last year, the sales were up almost tenfold to $226 million and earnings were $25 million.

The growth is continuing. In the first three months of 1977, sales reached $65.7 million, a 50 percent increase above the $45.5 million in sales a year earlier. Earnings were $7.3 million against $5 million.

At Intel's annual meeting April 13, the soft-spoken Dr. Moore set a 1980 goal of $500 million in sales, with earnings to be at least 10 percent of sales. This level, which Intel has maintained since 1973, is the highest among the major companies that make semiconductors—Texas Instruments, Motorola, Fairchild and National Semiconductor, and even such smaller, aggressive concerns as Advanced Micro Devices, Intersil and Mostek.

As the day-to-day operating chief of the company, Dr. Grove is in charge of delivering—the company slogan is "Intel delivers" in reference to the industry reputation for difficulty in providing reliable parts in quantity.

The New York Times/Sandy Solmon
Andrew S. Grove, Intel's chief operating officer.

McKenna: Yes, all was well. He [Andy] continued to pursue it—so much so that I know at one point I gave him a list of key journalists and analysts that I would always call on in New York over the years, and

---

[7][Editor's note] "High-Technology Jelly Bean Ace," Victor K. McElheny, *The New York Times* (June 5, 1977), p 7.

I said, "They don't want to talk to me. They want to talk to you. Go call on them." I gave him the contact information, and he did. Every time he went to New York, he'd meet one or two or three of them.

Hollar: How was he in those situations?

McKenna: Oh, he was very good. He liked to teach. He taught courses at Intel for all new employees. He would always give an orientation, and he took it very seriously. He wrote technical books. He loved teaching. So he was pretty good [with reporters]. He could be very smooth and sweet at times and very rough at other times.

Hollar: Did you find that he had a good mind for marketing the way that you thought about it? When you think about your vision for the way that Intel was becoming a very visible company, not just an important technology company but really synonymous with the whole rise of personal technology, and the way that it needed to be marketed, did you find that Andy was on board with all of that?

McKenna: I don't necessarily think that Andy had that sense, but I think he developed it over time. I think he was much more observant than even I thought he was at the time. He was strongly opinionated, but he let things ride, too. If he didn't like something that we were doing, he would tell me about it, definitely tell me about it. For example, there was a series of ads in which we hired Pat Nagel, who was an illustrator for *Playboy*. Nagel did very modernistic illustrations, and the engineers didn't like them. Andy and I met in a parking lot at Intel, and he said, "You know, I sometimes think it would be cheaper to fire you," and I said, "What's that all about?" He said, "The engineers waste so much time arguing over your ads that I could save a lot of time and increase productivity just by firing you." Then he went and got in his car. So he didn't necessarily do those kinds of things, but he would pass on information like that.
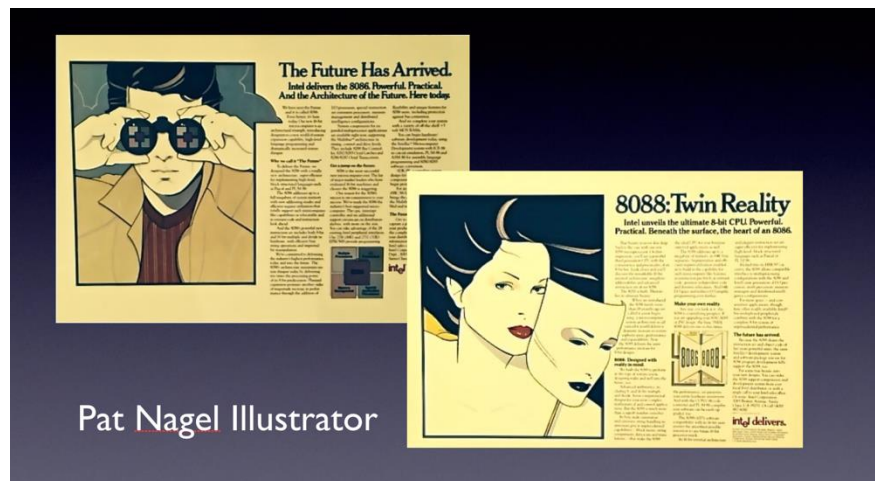
Pat Nagel Illustrator

I went on vacation with him and his wife to the Alps one time—traveling Europe and visiting Intel plants—and Andy was just very, very direct. I think at times he could've been much more mellow, and he lost a lot of good people at Intel because he confronted them so harshly in front of others. He had this theory of confrontation, and then later on he called it "constructive confrontation." He changed the word. So he would try to learn, and I think it was just coming out of that very strict engineering background as well as a rigid way of looking at the world from his childhood and upbringing. But he could be a sweetheart, too.

Hollar: It's frequently said that Noyce and Moore needed Andy to make the whole thing work. Would you share that view?

McKenna: Well, I think they debated that. I should say, and I don't know if this sounds a little self-serving, but at the last Intel reunion, which was here at the Museum, Andy came up to me and he put his arms around me and he said, "My teacher," and I knew what he meant, and it was that he had learned stuff over the years.

Hollar: Talk more about that. Having learned your style and having learned a little bit about Andy's style, I would say you both are life-long learners. You both have these very active minds and you're always trying to learn more. What was it like to work with Andy, and what did you feel he needed to know that you needed to help impart to him?

McKenna: Well, the Crush program was one of the places in which I had a real opportunity. He was in all the meetings, and he picked me to be on the Crush team. There were, I think, eight or nine people on that team, and it was all Intel people. I was the only outside person. With just that selection he said, "I appreciate what you're doing, and I think it's important to what we're doing" and you could contribute in any way—he just wanted you to contribute.

From my philosophy that the ad's the last thing you do, it was the whole idea of "what are all of the parts of the Crush program that were essential to pull together?" There were other creative people. Davidow had a lot of ideas on ads, and I would be quiet, because I didn't think that I had a monopoly on creativity, and so everybody's ideas could be included in whatever we did.

That program was the most extensive and far reaching at Intel. To position a company as a leader, everybody in the company has to take that position. It's not relegated to marketing.

I started fairly early because of the quality movement in the world, particularly in the start of the semiconductor industry. Theory Z—the Japanese Theory Z style of management—the quality circles, all that had started, and I felt that marketing was like that. It shouldn't be looked at as a function. it should be looked at as—we do quality, and quality is something that the whole organization has to take responsibility for. Every aspect of the company—how you greet people, how the salespeople present relevant and vital information, how they learn about the customer before they knock on their door. Every little thing becomes part of people saying, "That's a quality organization." I think you don't call it as such, but a quality program is a marketing program. People would say that takes it down a notch, but I didn't think so. I think that's what moves the product.

The pride of an Apple employee is something that extends well beyond the company in terms of marketing. Their logistics is part of their quality <u>and</u> part of their marketing program, so it all adds up. When you're in a meeting and you're talking about sales and you're talking about distribution and you're talking about building partnerships—and I mean real partnerships.

For example, one of the things they [Intel] needed was some peripheral devices that they didn't have or wouldn't have for some time, and they needed to create a fully populated board for performing certain

kinds of computer applications. I believe I talked to Dave House and Jack Carsten, and I knew Jerry Sanders over at AMD pretty well, and I called him and got them to have lunch together. Andy got really pissed off over that, but I think they did indeed do a relationship. That was well outside of what I'm sure Andy thought I should do. But I knew Jerry well enough to have a conversation with him like that when no one else felt comfortable. Andy wouldn't have done it.

How did that all happen? I had an evening dinner program that was called "An Evening With…" They were programs where I invited guests like [Katherine] Graham from *The Washington Post* and her staff, and people from *The New York Times*, and all of the top papers and magazines. I would invite them to dinner one at a time, one magazine or group at a time. I would invite not only my clients but people like Jerry Sanders who weren't clients, and the presidents of most of the companies that I knew in the Valley that were interested in whatever we were talking about. I had been doing that often with Jerry, and so we got to be good friends. Valentine had introduced me to him when I started at National. So you have these relationships that you build over time, and they do pay off.

Hollar: We were talking earlier about Andy Grove as an executive —about working with him, and his relationship to Moore and Noyce. Can you talk a little bit more about that?

McKenna: Sure. I mean there are different views. I always say that when you talk about people like Andy Grove or Steve Jobs or Bill Gates, it's like the blind man touching the elephant. Everybody has a different description or idea of what they're actually touching. There were certainly people who were closer to Andy, who directly reported to him within Intel, but I had a lot of contact with him for 20 years and we got along really well. We disagreed on a lot of stuff, and that never seemed to bother him in the sense that he didn't hold a grudge, but he could make it really difficult—because Andy once said his objective was to present so many obstacles to ideas that if they got through the obstacles, then it was probably worth doing. He would do that with products. He was always the one that raised his hand and said stuff at the product meetings, at the planning meetings and so forth. I saw him in Germany really berate the head of

the German Intel operations in front of his employees, and I was stunned by that. I felt that was just out of order. It's something you would do personally and privately, but not in front of the employees. That was early on—probably in the late '70s.

I think his relationship to Noyce—and I don't know what happened at Fairchild, I don't know what transpired there—

Bob Noyce (l), California Gov. Jerry Brown, 1974 at a meeting on technology issues at McKenna's home.

but Noyce was very successful in his own right, and he didn't try to be. I think Andy worked very, very hard to achieve what Bob achieved, and certainly he did more, I'm sure, than he ever expected in his life. With Noyce, it all came easily. He was a champion skier, he flew his own jet, he was a great swimmer and diver. He was in demand at high intellectual circles of technology. I went with Bob to Switzerland to one of the institutes of technology there, where he got an award. Noyce was seen around the world as somebody really unique and special. I'm sure it was from his being part of the original Shockley team, and it was also enhanced when he was picked as the leader at Fairchild. From a communication standpoint, I think people saw him as the leader, although it was really a consensus, I think. Then came the formation of Intel. As I said, even before they did anything [at Intel], there was the belief that something great was going to happen because of the people they took with them.

There was a comparison that Andy often made. He felt that a lot of the things Bob did were not adding to the output of product and productivity at Intel. I would say he didn't like Bob very much and would often complain about him. I know he even complained to me about him once. There was a debate going on between memory products and the microprocessor group, and the memory products were under a steep decline because of the competitiveness of Japan. The memory people didn't know where they were headed, and there was so much money being pushed into microprocessors at that time from the company standpoint, so people were a bit confused. I remember talking with Andy and saying, "The noise is getting pretty loud out of the memory group, and people are trying to determine what their future is," and I said, "You ought to get together with Gordon and Bob and decide what to do to keep people

Regis McKenna (l), Andy Grove, 1995

happy." And he said to me, "Ask Gordon and Bob. I don't even know where they are. I can never find them," and he said it really harshly to me. Again, this was supposed to be "the triumvirate" running the company. With Bob it seemed to bother him [Andy] a lot that Bob wasn't on the production line making things.

When Bob stepped down as president, he [Andy] gave him a cubicle in another building and kind of pushed him aside. There were a lot of different things that occurred that made me think Andy didn't think Bob was a real contributor, and I don't know whether this was just elitism on the part of some of the engineers. In the group that originally formed Fairchild, there were a lot of really different personalities, and, as John F. Kennedy said, success has many fathers. I think that from the beginning of Fairchild, and all of the activity that occurred, there's a lot of "go back and rewrite history" or re-perceive what history was, and who contributed what. Some people felt that Noyce didn't deserve to have the patent on the planar process. They felt it was really someone else in the group that was much more involved in pulling

that off, whereas I think—I'm sure— it was really a team approach in the end. Bob wasn't the kind of person that would take credit for something he didn't do, but Bob was really sought-after, and Andy wasn't sought-after for his opinion until much later.

I think he earned what he reaped later on. He did write his books. Intel grew really strong and fast under him. I really don't have any negative thoughts about Andy, although when he became president one of his goals was to replace a lot of the stuff that we did with internal people. I think it was because of control. We were in every operation of Intel, from Europe to Portland, and we had teams working all over the world with them in every part of the company. I was told by someone internally that Andy really wanted to lessen the amount of people from my company that were involved in Intel, that we weren't employees, and I think Andy felt more secure having people that he could control internally. That's the way I read it, anyway. It took three to four years for them to actually do that. That's how entrenched we were. It took at least three different people to do it. We were very close to the teams in there. It got to a point where I said to Andy, "I'm going to resign here because I can get another client that is on the growth path, and you're on the decline path." It didn't seem to bother him at all that we were going to leave the team, which also surprised me, but later on, as I told you, he was very friendly to me and very nice, so I think he mellowed.

Hollar: If you think about it from Noyce's perspective—looking back, looking through Noyce's eyes at those relationships, especially with Andy—how would you describe it?

McKenna: Bob never said a negative thing about anybody. I am absolutely positive of that. I worked with Bob when he moved to Austin because I was very involved with the Semiconductor Industry Association and helping them**.** I even gave testimony before Congress on it for the SIA. I wrote articles on the competitive nature of the technology—U.S. technology versus Japanese, the trade tariffs and their exclusions, and what was happening to U.S. semiconductors. I worked closely with him on a lot of stuff, and he never once said anything negative about Andy, ever. He was a team player and he was just a gentleman. Andy was more volatile. So was Steve Jobs, right? Steve was volatile.

What I like to say is that at one point I had Bill Gates, Steve Jobs, and Andy Grove as clients all at the same time. It wasn't a surprise to me when somebody was volatile.

Hollar: We agreed we'd talk a little more specifically about the Crush project, so you could walk us through it end to end. You participated in it when Intel went through its major crisis as a company and hit the wall financially. It wasn't clear what the future was going to be for Intel at all, and that's a really interesting story. It gets lost in history, I think, because Intel is seen as this machine that just continually rolls forward. Yet it had a major stumble, and you witnessed a lot of that firsthand at the time. Can you talk about that a bit?

McKenna: Well, this was the point I mentioned about the memory group being lost as to what their future role was going to be because—

Hollar: Because memories were winding down and the next product hadn't emerged.

McKenna: And they were winding down largely because they were losing business. That came out of a quality movement at companies like Hewlett Packard. They said Japanese memories were much more reliable, according to their measurements, than the U.S. semiconductor memories, including Intel. So the memory business was on the decline, and that was Intel's bread and butter. That was their staple for a number of years. The processor had yet to find a mass market. I can give you specific numbers on it in terms of revenue, but they were quite small. I think the most that I have in my notebooks in those days was something like $20 million, $25 million, $30 million, something like that. I think one year they went to $78 million, but those are relatively small numbers to sustain the R&D and production activity that Intel was already at.

When the microprocessor was developed, there were two other companies, obviously. Motorola had the 6800 and then it became the 68000—or they had announced that they were going to release the 68000, which was a 16-bit architecture product. TI was in the offing, and there were probably one or two others that were fooling around with microprocessors. There was an Intel salesman, Don Buckhout, in Boston who kept running into customers who were designing the Motorola processor into their future systems. He wrote a memo to Andy saying that he kept noticing this in a variety of places and was pretty concerned about it, and that Intel had not really kept up with the state of the art in processor development. Buckout became almost a legend at Intel. Andy read it, and once the salespeople were saying, "We're having a tough time getting design wins," he sat up and took notice.

First Intel CRUSH Meetings December 1979
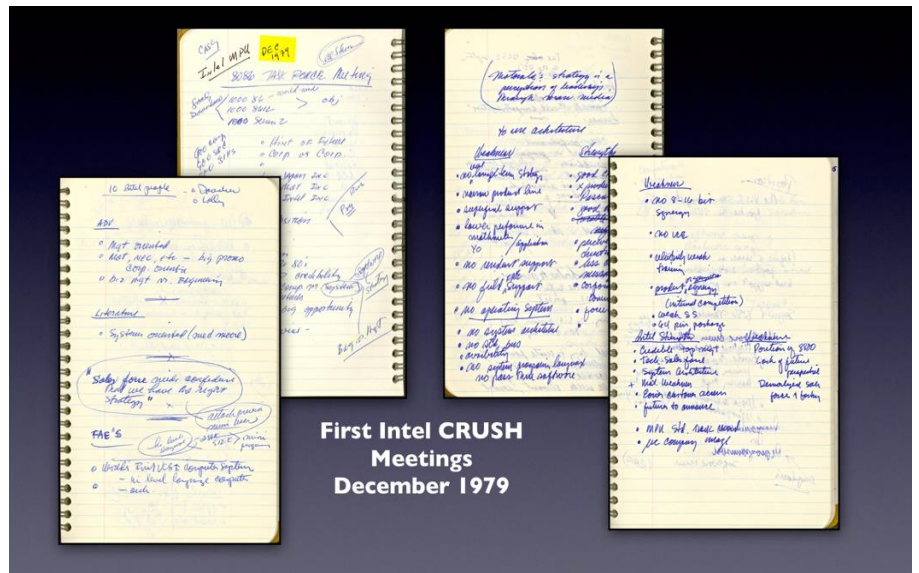
Notes from Intel Crush meeting, 12/79

So Andy called together people from different divisions in the microprocessor group and marketing group. It was a roomful of people in Santa Clara, and he decided to get a task force together to really find out what the issue was and how we would address it. There were about eight or nine, maybe ten people that were on that group, and Andy selected me. I was a little bit surprised. I was always in the meetings, but it was a surprise that he said, "Hey, we want you to be part of that." We went to one of the hotels here in the area and basically met every day for three days and literally figured out what the competition was by looking at the strengths and weaknesses of Intel, looking at the strengths and weaknesses of Motorola, looking at comparisons of sales organizations, what salesmen were saying around the country, Intel design wins—and, because the product marketing people had a pretty good handle on what design wins were pending—what was in the offing and what wasn't happening. There was a really knock-down three days' chalkboard conversation that went on, and it was led by people like Bill Davidow and Dave House and Jim Lally. Some of the

design engineers were in there, too, who had things to say—what technical pieces were missing, what software might have been missing, and so forth.

You ended up with this complete picture that there was a lot more required than simply going out and selling harder or reducing prices or providing incentives for design. We came back and made a report to the executive staff. Andy ran those meetings. He used to keep a clock beside him and say, "You have so much time to do your presentation, and when the alarm goes off, you're done." I gave a presentation on what I thought we could do—quite frankly, the media becomes a reflection of [your position] because I was getting a lot of feedback from the journalists who were talking to Motorola, who were talking to TI, who were talking to other companies, and they talked to users.

Hollar: What were the journalists saying to you?

McKenna: They were saying that Intel's losing its position in the marketplace. They saw Motorola—and they had no reason to favor one or the other—but they saw Motorola dominating, or at least about to take the dominant position in microprocessors. They knew there were other developments coming, so they saw more competition, which didn't seem to have come about [before]. We're talking 1979, and the first microprocessor at Intel was in 1971.

I think there was a lot of hesitancy over those years as to how hard and fast to push that technology. You present your own picture and objectives, and then with Andy you always had to present a series of goals and objectives and what you could do. We would move more and more aggressively to talk about the value of our new products and how to make more of a systems presentation.

One of the conversations that came out of this—a really fundamental and key decision among the Crush group—was to sell not to the engineer but rather to top management. In other words, the engineer is going to be protective of whatever designs he has. I had friends in engineering around the Bay Area, and a lot of them thought the microprocessor was just a phony excuse to sell memory—that it really wasn't a valuable product in itself. They would have to adopt microprogramming in software, learn how to do that, and that was not an easy task for them. They didn't readily want to change to something new when they'd already spent time designing it one way.

But if you talked to top management, you could talk about productivity, about getting your product to market faster, about the economics of getting your product to market faster, with much more flexibility in how you could add more functionality and how you could change it—without having to redesign the whole product again. You could change it with software. There were a lot of benefits to using the microprocessor. And they had it—I have this in my notebooks—right down to the cost of the circuit card, the cost of the devices, the cost of production, down to the cents—and then the cost of microprogramming the microprocessor so one device could replace a bucketful of components and certainly shorten the time to market substantially.

Then we started writing articles. Davidow wrote some, and Dave House, and presenting to the journalists this business argument. We changed who you talked to—more talking to people at *Fortune*, *Business*

Week, *The Economist*, the *Financial Times*, *The Wall Street Journal*, *The New York Times*, where the businesspeople would start reading it. It was a move out of the trade press into the business press. That was a significant change because most people felt that all they had to do [in marketing] was write a technical article and show people how to design with it. That no longer sold. What did sell was the economic argument—the benefits to your corporation, and how it could become more profitable by using processors as the fundamental components of your design, your instrumentation, your computer.

When we came back with that presentation, they bought right into it, approved it on the spot, approved a substantial budget, and the budget included incentives for salesmen—increasing incentives for design wins. It focused the design wins on specific kinds of customers—the top telecommunications companies, the top computer companies. We did it by industry segment. Then we put together a war room at Intel which was <u>literally</u> a war room, with pins and maps and things like that, and made individual presentations for every type of industry. So if you were going to make a call on the telecommunications industry, there was a box that had all of the information and all of the slides and all of the presentation materials that you would need to make that to a telecommunications company. If it was to an instrumentation company, you had all that. If it was to a computer company, you had that. These boxes were large boxes, with all the detailed slides—overheads, primarily—and things like that. It was an extensive program.

You reset your goals and objectives every week on Wednesday. You came in on that Wednesday and you gave a presentation on your successes and failures—and you did tell what your successes and failures were. If you tried to fudge anything you were caught immediately, and nobody did anyway. I think this was looked at as a very serious thing to do. Everybody had a high degree of energy, and people literally were working around the clock to make this happen.

There are other things that some people claim they did that got IBM on board, but I think if it weren't for the Crush program, I don't think it would've happened. It was the output of knowledge. There was a presentation—I think it was Olivetti—that was refined into the presentation to IBM. In one part of the presentation, we showed the 4004, 8008, 8080, 8086 and then a question mark— the next 8080 product. It was linear, and it had time down here, and then complexity. It said that, if you got on the architecture of the 8080, the 8086 architecture, you could upgrade your end product—eventually your personal computer—without having to redesign everything and rewrite software. Apparently, Motorola didn't buy into this. Literally, first time ever, Intel started talking about future products.

Hollar: And a roadmap.

McKenna: And a roadmap of where we're going. We had to do that for certain users so they could feel comfortable committing. That commitment changed the history of Intel, made them profitable. IBM put an investment in Intel at the same time they committed to it. They actually put some people into Intel to help ramp up production. IBM wanted to have a complete fab dedicated to their product. I think Intel talked them out of that. There were debates over how much IBM wanted to buy of Intel, what percentage, and that got tenuous at times because I had a feeling that Noyce was more concerned about giving away control of the company.

Hollar: Did IBM want control at some point? Did it want enough to actually take over Intel?

McKenna: You know, I think that was on their IBM's side. They were debating—at some percentage they'd have to start reporting their financials with Intel's. I don't know what the percentage is, whether it's over 45 or 50 percent. When they ended up with a lot of commitments on production, they did take, I think, about 20 percent of Intel in the end. I'm not sure that was the total number, but it was substantial, and cash. They [Intel] were almost out of cash, so that really filled their coffers.

It was a tenuous period for management. Andy, of course, being in control of the whole company, was driving. The Crush people said what they needed, and Andy was able to see that everybody complied across the company. There was enough power there to say, "We're all in this together." I think it really did save Intel.

It also brought them to a whole new level of systems business. I remember Dave House was very adamant in trying to start looking at microprocessors as systems rather than as discrete chips, and even did a renumbering of the products around classes of systems. Everybody contributed in some way or another. Everybody went on the road, and everybody went on analysts' and media tours—everybody in that group. People like Dave House and Bill Davidow became much more active, actually going on the road and doing more "marketing" of the new approach that Intel was taking.

Hollar: You had been talking to journalists who were quite aware of Intel's problems. How did this affect the journalists' view?

McKenna: The media were always accused of being a little bit biased towards Intel. Again, I think that was because of the founders. I think they [the media] wanted to believe that Intel was going to be all right, and of course they were interested in anything that was new or that was going to change the hierarchy of the market. They accepted it really, really well, but I don't think it was "Hey, wow, this is great." It was, "Okay. Let's see what you're doing," and, "Yes, we're interested in covering it as closely as we can." We sublimated the word Crush, because the lawyers at Intel felt that that might be an obstacle from our competitors. But Intel wasn't that dominant at the time, so it was just a major push—first the 8/16-bit 8086, and then the Pentium that came years later. It was an evolutionary process, from the 4004 to the 8080 and then to the 8086, and then beyond that.

Hollar: Do you remember, apart from the IBM element of this, the moment when it became clear that all this had worked and that this next phase of Intel was on its way?

McKenna: I don't think it was clear right then, because they still had a lot to do in terms of development of the technology. Internally they were running a hundred miles an hour to get all of this done. And, again, it was long hours, a lot of work, and a lot of demands for meeting your goals and objectives. That was true up and down the line. People really were hustling for about five years, because even though you got IBM committed to the processor and to the technology and to the evolution of it going forward, they still had to build something, and you had to plug parts into it when it was ready. That still took some work.

Hollar: We're now at the end of the decade of the '70s. We're going to get into Apple in the next session, but let's talk about the status of your company now at the end of its first decade, from 1970 to 1979. Where are you as a company? Who are your big clients, other than the big two we've talked about, and how do you feel things are going?

McKenna: Well, for me, our biggest challenge was trying to find people, and for me it was being spread really thin.

McKenna: We started having people [competitors] saying, "We do the same thing." I didn't see any great challenges, but as long as there's an ego out there, people are going to hire PR firms. Most entrepreneurs have an ego, and whether you can convince them that it's not the way to go or not, they still want it.

There was a period in which a number of companies in this area, sizable companies, were doing television ads. It always baffled me as to why they were doing television ads. [For example] Sun Microsystems had a dozen users. They were selling into internet developers. They did television ads, I'm sure, simply because somebody else did it and then they thought, "Gee, that's a good idea. We'll do it too." One of the excuses was, "We're trying to reach Wall Street," but Wall Street knew what you were doing because they had analysts covering all these areas and were getting detailed reports. I felt that they still like the media, and they still like to get their picture in the paper.

From the standpoint of the '70s and our clients, we had Spectra-Physics, and they were booming. Spectra-Physics was the laser company I mentioned, and they did a low-power laser that I think was about a hundred-dollar laser. That was going into many of the scanning devices, and they were growing very, very rapidly. They were a long-term client. In the '70s also, we had Hayes Microcomputer, which was the largest supplier of modems in the country. They were the number one supplier out of Georgia. Dennis Hayes had founded this company, and they were a very large client of ours.

We had Magnuson. Magnuson were trying to enhance the performance of mainframe computers or minicomputers through building add-on processing modules. Carlton Amdahl was the founder, and Carlton was the son of Gene Amdahl. I had a chance to have dinner with both Carlton and Gene Amdahl back in the '70s, which was just great. When we met, I asked Gene if he used a personal computer. And I remember Carlton kind of laughing and saying, "Dad, show him what you do." He had just flown in, and he opened up his notebook and there it was—a bigger notebook [than mine] and all across two pages was nothing but equations. He said he just does it out of his head. He just writes these equations, and then you'd see scratch-outs and then all these figures and numbers and brackets and so forth, various algorithms, I guess, of some sort or other. I said, "Man, that looks like a Picasso." I mean, it was so jammed. A couple days later I get a mailing from Gene Amdahl. He took a copy of the page, signed it, and wrote a little note saying, "Here's your Picasso."

Hollar: <laughs>

McKenna: That's in my collection up at Stanford. It was really kind of cool to get to know him back then.

Other clients: Vidar was a telecommunications company, network company. Byte was the first computer retail store. Down in Mountain View—Byte Shops. When they started, we were there. Genentech was also a client. Genentech started about the same time Apple did, about '76, '77. Just like Apple, I started with the two founders, Bob Swanson and Herb Boyer, and helped them pull together the original marketing plan—or business plan, actually.

Hollar: We're going to do a whole session on Genentech.

McKenna: Across the Bay was a company called Cetus. Cetus did similar things. They were a biotech company working with manipulating cellular structures and eventually DNA.

There was Aston Martin. Yes, the 007 car.

Hollar: <laughs>

McKenna: That company was bought by Peter Sprague, the former chairman of National, and he asked me if we would help market that. He didn't have to market it. We went out and talked to the dealers, and they said, "People just call up and say, "Send me the most expensive car you have." They never marketed it.

There was Siliconix. Another really significant company was Measurex. Measurex was founded by a guy named Dave Bossen, and Measurex made some of the first digital processing equipment for process industries like making paper, lumber processing in large mills. Paper processing, to me, was as fascinating as the microprocessor or semiconductors. Paper is made from a slurry of just liquid and pulp—but how much liquid, how much pulp you put in, and keeping that under control during the process, can enhance your profitability. No matter what you're doing, whether you're cutting lumber or you're doing these big, bulk processes, the machines—the digital machines—were able to give you the precise amounts and measurements and thickness that enabled you to actually make money and keep it high quality. Measurex was doing that down in Cupertino, and that was a fun company.

I got to visit all these mills. When you stand beside a paper-rolling mill where they're making these huge rolls of paper going a thousand miles an hour around these things, and you're standing next to it, it's scary. It is an incredible process. And they had to adapt. People who worked these factories weren't digital engineers, but they had digital machines sitting there. I think behind it was Digital Equipment's early VAX products that ran it all, and they mailed the sensors and so forth. But the buttons were big, red buttons that would say "Stop, Go."

With gloves on they could just hit them rather than push tiny buttons like a computer. They did everything they could to design their product for a paper mill or a lumber mill, and they were later bought by some big production company in the country. I think there's an oral history of Dave Bossen here too.

Hollar: So at the end of the '70s, how many people did you have?

McKenna: Well over a hundred. Probably 150 people.

Hollar: And total revenues were what?

McKenna: Well, again, you have to include advertising and the market relations part of it, and that would've been $30 million, half of it being advertising. With advertising you counted the total days of ads and then you took a commission from it.

Hollar: Right.

McKenna: I sold that in '81. In 1979, we were probably doing around $30 million.

Hollar: You sold [the advertising] business to Chiat, right?

McKenna: I sold the advertising business to Chiat/Day. Jay [Chiat] was on my ad agency when I was at National, and I got to know him really well. Highly creative guy, highly creative shop. They broke the rules of advertising. They were somewhat arrogant, but the people at National loved them, and Valentine loved them.

Jay was a really interesting guy. When I'd say, "I'm going down to the agency," Valentine would go with me just to meet the people and spend time there. Because he [Chiat] was in L.A., he had access to many different writing talents and other skills. Of course, he did the 1984 ad for Apple.

I didn't like, quite frankly, either the advertising or the PR side of [the business] and thought I wanted to move out of that to something with a higher value. Advertising's really hard because, in an engineering community, to sell any ad, many times you had to sell it to the wives of the people who were buying it. Somebody's wife was always an English major, so therefore she was equipped to judge what you were doing. It had many critics, constantly, and was not easy to sell into a technical world that was used to specsmanship and didn't create anything of value beyond it—and we did for all of our clients. We did original art for Measurex. I hired Jean Folon—he's in the Museum of Modern Art. In those days, he was an illustrator and you'd recognize his work. It's really out there, and very futuristic. He did the Spectra-Physics ads out of Paris.

That was all influenced by Jay Chiat. I would take ads down and show them to Jay, and he would critique them. We stayed friends. I used to meet him from time to time, and I told him I wanted to get out of the ad business. I don't think he took me seriously, so one day I met him in the L.A. airport. I was heading up here and he was heading back, and we stopped and met and he said to me, "Are you serious about wanting to get rid of the ad business?" and I said, "Yes," and he said, "Well—" He got the Fairchild business, and one of the reasons he gave up the National business was because Fairchild was three times the size of National. He said, "Well, we're going to make a presentation this week to Fairchild, and if they don't buy it, we're going to resign them," and I said, "Okay." I got a call from him that afternoon when I got back to the office, and he said, "I know what I said, but even if they do accept that, we're going to resign them..."

McKenna: They just had a tough time with, again, engineering or whatever. I was going to give them Intel and Apple, and—

Hollar: And you had a client base that was big and prestigious and—

McKenna: Yes, and we had already got—

Hollar: And understood it.

McKenna: And we had already put Apple on TV.

Hollar: Yes.

McKenna: We hired Dick Cavett as a spokesman. He did the commercials—both radio and television. People don't realize that, but we did a fair amount of TV for them and farmed out the production on all that.

So Jay and I met at the Oak Room in New York City [to finalize the sale]. We shook hands on it on Friday the 13th. We said we'd do it and that was it. I had lot of offers from most of the large agencies to buy me out, but I felt Jay would take care of the clients we had. He was capable of doing it. Not too many other agencies I knew would. I had one other criterion: I do not want to save any of your clients. When we sign the final deal—we did it on a Friday, up here—on Monday morning, all of the

Jay Chiat (l) and Regis McKenna, 1981

employees that were doing the advertising will show up at your offices. And that's what happened. I never, never went back, never said, "Gee, here's a—" I never went in and had to explain anything or do anything. We just moved it.

Jay and I then took part of the money and set it aside in a little kitty for investing and startups, which we did here. I had good friends at Sequoia and at Kleiner Perkins and a number of other of the venture firms. I was given an opportunity to buy in as a special partner, special investor, and I would place that kitty

money with Jay and we went on a couple boards together. We remained friends over the years, and he was really outstanding as a creative person.

Hollar: Did he understand the technology business the way you understood it, Regis, or did you help introduce him to an understanding of what made it different and unique?

McKenna: Jay started in Orange County, and at the time he was known as an industrial ad agency, so most of his clients were industry or technology oriented. I wouldn't say that he had deep knowledge of it, but he was really good because he was able to get through some of the outside boundaries of specsmanship—probably a lot more easily, and with more credibility, than I had. They saw Jay as a creative, far-out person.

Hollar: And since he was based on the West Coast, did he have a kind of sensibility that people in the East didn't have?

McKenna: Yes, that's absolutely true. He did eventually open an office in New York. From Orange County he merged with Guy Day, who had an ad agency in downtown Los Angeles, and so it became Chiat/Day. They grew and had consumer accounts and technical accounts. I think they handled the first Honda account, or one of the automobile accounts. They did Eveready batteries, those kind of things, so they were on television a lot with their different ads. They were always very creative.

Before them the one ad agency was Doyle Dane, who did the all-white space ads—two pages, mostly white space, a little Volkswagen down here. Those kind of things. So [Chiat/Day] were looked upon as something special.

Hollar: We've reached the end of the '70s now, and the next session will be all Apple and Steve Jobs. Anything else as we wrap up today?

McKenna: One last thing. The '70s was really the beginning of the proliferation of technology companies here in the Valley, and I mentioned a number of our clients that I'm sure people have never heard of, because they were outside that spectrum of semiconductors, and even PCs. The industries didn't really talk to each other very much, and so when we talk about who was whom, there were certainly the stars within semiconductors. There were the stars within the PC industry. Apple was the first rock star that everybody knew because it was a consumer product. But companies like Measurex, Spectra-Physics, Siliconix—these were all people who added to the font of knowledge and growth of the Valley through various means. While some of them didn't survive or were acquired or whatever, that doesn't mean that the people weren't educated at these companies through their experiences in development and marketing.

One of the people that I really admired was a fellow who did "Inside the Black Box" at Stanford—the economist at Stanford, Nathan Rosenberg. I got to know him pretty well. "Inside the Black Box" is really an interesting conversation because he described technology as that Russian doll—you open one and there's another one and another one and another one. That technology isn't linear. That you don't have a

product and then you linearly just improve it. That if you improve it, there's a whole infrastructure of processes, technologies, and other aspects of it that have to improve. So if you improve the density of a chip, you have to improve the ability of testers to test that density. You have to improve the processes to create room for different kinds of movement of the electrons in different ways, and so that's been improving over time. It's always been an incredible thing, but everything has to move up for you to put that product out. It's not just a simple product, and so a lot of the ancillary kinds of technologies that were evolved came from companies in the Valley, and they had to be there. It's part of the supply chain.

Hollar: And that was the basis of the clients you named in the growth of your company in the '70s—as all those other companies were coming on stream.

McKenna: Right.

Hollar: All right. Thank you.

McKenna: Good. Thank you.

END OF THE INTERVIEW

Oral History of Regis McKenna, Part 4 of 8

The Apple / Steve Jobs Years: 1976 - 2011

Interviewed by:
John C. Hollar

Recorded August 17, 2018
Mountain View, CA

CHM Reference number: X8675.2018

Abstract:

This is the fourth transcript from an eight-interview series with Regis McKenna, whose pioneering work in technology marketing and business strategy contributed to the success of hundreds of companies for more than five decades. McKenna was a talented, innovative marketing professional from the earliest days of the technology revolution in Silicon Valley. He came to the Valley in 1963 at the age of 24, worked in marketing in the early semiconductor industry, and then established his own company, Regis McKenna Inc. (RMI), in 1970. McKenna became a globally sought-after strategist and marketing expert, and RMI opened numerous offices around the world. His personal and professional relationships at RMI included Steve Jobs, Robert Noyce, and Andy Grove. His more than 700 clients included such legendary companies as Apple, Intel, and Genentech. He is the author of five best-selling business books and one of the most reprinted articles in the history of the *Harvard Business Review*, "Marketing is Everything" (1999). McKenna was recruited to many outside boards and advisory roles, among them his service as a founding advisory board member of the Computer History Museum's Exponential Center.

The interviews took place at the Museum between June 13, 2018, and January 15, 2019. The interviewer was John Hollar, president and CEO of the Museum from 2008 to 2017.

This fourth interview session took place on August 17, 2018. It covers Regis's unique relationship with Steve Jobs over 35 years and the important work Regis and RMI performed for Apple Computer, Inc. The time period covered is roughly 1976 to 1986.

* * *

Hollar: This is session four with Regis McKenna. Today we're going to talk exclusively about Apple and your relationship with Steve Jobs, and your work during the birth and growth of the company**.** During that ten-year period, you got to know Steve probably as well as anyone, and worked as closely with him as anyone, so there's a lot for us to talk about.

McKenna: Yes.

Hollar: Talk about your first encounter with Steve Jobs and Steve Wozniak.

McKenna: First, there's been speculation about what I did and what I didn't do. I keep getting emails from editors saying, "Did you throw them out of your office?" Nothing quite that dramatic really happened.

We ourselves were growing very fast as a company. I've shown you lists of the companies that we were working with, and it was getting longer and longer. I did have people who would screen potential clients coming in. They were people that had been around the industry a while. They weren't just willy-nilly looking at personalities or whatever.

Hollar: Just to be clear, you started your firm in 1970. The time period we're talking about right now is 1976.

McKenna: The end of 1976.

Hollar: In that six years, as we discussed last time, you had seen phenomenal growth as a company.

McKenna: Right. And we were still very small. I didn't start like a typical venture in Silicon Valley where somebody gives you $5 million and you go out and build an initial infrastructure. We were making money, and then hiring, and making money, then hiring. We were putting the horse in front of the cart and trying to grow along with our business, not speculating on things that we would partially finance through work and services.

Steve told me later that he had called Intel and asked them who was doing their work, and they referred him to Regis McKenna. He told me he first thought it was two people. So he thought he would call one of us.

Hollar: Either Regis or McKenna.

McKenna: Yes. I think [the call] probably went to Frank Burge. Frank was a longtime Silicon Valley person. He was in the publishing business. He came to work for me. I think he came out of Fairchild originally. He had been in a couple of companies here. He'd been around a long, long time, and he was a really excellent writer. I think he and probably a fellow by the name of Don Kobrin, who had come from both Fairchild and National, and worked as an assistant to Charlie Sporck, were reviewing some of these companies and suggested to me that I meet with them. So we set up an appointment and they came in.

Hollar: At that point, they really weren't a company.

McKenna: No, they weren't incorporated.

Hollar: They were just two guys with an idea.

McKenna: They were not incorporated. But they did have the Apple I, and people had seen it, and it was on the market.

I'll digress a second. People think it was a new phenomenon. What <u>was</u> new was the growth of an industry. What wasn't new is that people were making hobby computers. There were Heath Kits. But there were two products from two companies in the Valley that were doing fairly well selling to hobbyists—the Altair and the IMSAI. Both of them were using Intel processors. That's how I first got introduced to them, because of the Intel processors in them. Intel was always looking for applications, and we helped them write application notes. So there was a knowledge that this industry

was emerging, and technology out there was enabling smaller and smaller computing devices.

They [Jobs and Wozniak] came in and wanted to speak largely about launching the Apple II, which was still in the planning stages. Wozniak had written an article on what the Apple II was all about—how it was designed, what it could do, what features he had planned to put into it, and things of that nature. They felt that was "marketing"—that if they published that article in, say, *Byte Magazine*, they could sit back and orders would roll in.

Hollar: Is that why they came to you? They were primarily looking for your help in getting the article published?

McKenna: Right. I'm assuming that, because that's what they talked about. I don't think their knowledge of, say, a marketing program, or an advertising or public relations program—I don't think they knew exactly what that was. They really hadn't had any contact with that, or any experience dealing with that, in Woz's case—at HP, or at Atari. They were at the technician level. I don't think they would have had exposure to that world.

I looked at the article. I subscribed to *Byte Magazine*, and I read it [the magazine] as best I could. My feeling was that [*Byte*] was engineers talking to engineers. The articles were insider talk. I felt very strongly that they had to broaden their audience, and they needed to have a publication that spoke to the next level up— people that were professionals, people who were disciplined enough in their work habits to spend time at a computer. Because clearly, these computers took time. They were not plug and play.

Byte Magazine, October 1976

You had to know a certain amount of programming, and a lot of things went wrong. To understand that, and then to know the people or the places where you could go to get help, that was all part of the insider

knowledge found in groups like the Homebrew Club and other hobby organizations. There were quite a few of them across the country—quite a few of these hobby organizations around building your own computer.

Hollar: Was it your sense that this was an emerging market that was worth tapping into?

McKenna: No. I don't think you can make those kinds of predictions about future markets. The only way you really know is looking in the rearview mirror. I always say, "The tipping point is seen in a rearview mirror. It's never seen in advance." When people say, "Well, there's going to be a tipping point and you can figure out what it is," I just think that's baloney. The real tipping point is whenever you look in the rearview mirror and you see what's behind you. If it's happening and you can tap into quickly, you have a lot of entrepreneurial companies grow fast. They're tapping into technology that's current at the time, and they're taking advantage of it. Most larger companies don't take advantage of the latest, leading-edge technologies. They usually wait to see whether or not it's secure, or whether it's reliable, whether it's been around a while, whether it's been proven, and whether it's been reproducible and scalable. They'll wait.

An example: When I wrote a book on IBM, a number of people told me that IBM would not go into a market that was less than $100 million. Indeed, they went into the PC business when Apple announced that they had hit $100 million, and that was in 1980. That was when IBM decided to get into the market. But small companies do it because they really don't have anything to lose. They can start a new technology and take the risk, and generally there was venture money here to back that risk up. Risk capital creates most leading-edge innovations.

Apple hadn't gotten to that point yet. They hadn't raised any money. I think Steve sold his electronic calculator to get money for the parts for the Apple I. Somebody said Steve sold his Volkswagen or something else to get money. They were financing it themselves, and they hadn't gotten to the point where they needed investors and so forth to back the company and to put together an organization.

Hollar: What impression did they make on you face to face?

McKenna: Well, they both had cutoffs on, and Birkenstocks, and long hair. Steve had what I called a Ho Chi Minh beard. It was very stringy, and he had long hair. They looked—well, when I referred them to Don Valentine and they went to see him, he called me back and said, "Why did you send me these renegades from the human race?" Don was always a preppy kind of guy. But in the Valley, you cannot judge people by first impression. You learn that very, very early. This is not the first startup I was with. I had been with dozens of startups. I had been in the electronics business since 1965, actually working in startup companies. This was 1976. So I'd been around, I'd seen a lot of companies, and you see a lot of strange people. At National, I met Bob Widlar, who was one of the wildest, strangest persons that ever lived in this Valley. He's reached mythical status now, and certainly he was much more bizarre than Steve or Woz—but a very successful genius. It's not unusual to see people like that. Today it's almost all software engineers.

Hollar: You've written about this encounter, "I realized his ripped jeans and long hair masked an intelligent, articulate and genuinely enthusiastic young man." So he [Jobs] struck you, it seems, as unique.

McKenna: Yes. Steve was certainly the forward person in the room.

Woz was somewhat shy and introspective, but Jobs was out there. He was always talking all the time and trying to convince you of something.

When I looked over the article, I said, "It has to be rewritten." Woz said, "I don't want any—" I think he just said, "—PR guy or ad guy rewriting my material." And even that's not strange. Bob Noyce did not like people rewriting his stuff or authoring it for him and then having him put his name on it. I don't think that's unusual. It's just that there was this reticence to seek help, and since they were coming for nothing else but that, I just told them there was nothing I could do for them. So they left. I don't remember all the details or all we talked about, but they did leave.

I do know that Steve called back, and almost everybody can attest to the fact that once he gets introduced to you, he doesn't let you go. So Steve and I met. I have little early notes here and there about Jobs in my notebooks. I don't have a lot of detailed notes, but throughout that year, I probably met him two or three times. Basically, we talked about his vision of reaching students, reaching teachers, reaching doctors and lawyers and professional people— that he could get a market going. His vision was certainly right on. What he didn't have yet was a product to do it. That was going to be the Apple II.

If it weren't for Steve Jobs—and I've said this before, with all due respect to Wozniak's genius in creating that machine—I don't think the Apple II would have ever succeeded. Steve appeared on the cover of *Time Magazine* in the early '80s, and in that article *Time* said Steve Jobs may well have launched the industry by himself because he was a relentless enthusiast and evangelist for the personal computer.

Steve Jobs and Wozniak using Apple-1 system, ca. 1976
©Apple, Inc. / Joe Melena

Hollar: Did you, based on that follow-up phone call, agree to work for them? What persuaded you?

McKenna: Well, certainly with Steve, we just started. Most of our clients didn't have any kind of formal arrangements.

Hollar: It's not like someone dropped a green flag and said, okay, suddenly you're working together.

McKenna: Yes. You're with us and we're going to go—yes. It happened gradually, I think. After Valentine, Mike Markkula became involved. Mike started putting structure to things because he was in the earlier meeting. Mike started talking about potential budgets, and we put together a budget of what it would take. Mike doubled the budget, which was kind of interesting. It was also foresight, because he felt that it was going to take a lot more money to get it off the ground.

We were trying to be frugal and not spend a lot of their money, because we knew they didn't have a lot. It was interesting that Mike said, "Let's double that budget."

That was really the "let's go." That's where, from there on, we had, as I wrote in my plan, "things to do." We would design and build the logo, develop some advertising, and do what I called a backgrounder.[1] In fact, those notes from my notebook are really the outline of a backgrounder on the company. It was like an analyst's report. I tried not to put a lot of adjectives in—just "here's what we are and here's what we're going to offer the world."

Hollar: There's a very interesting entry from your notebooks dated December 4th. I believe it's an insight into the way you worked with and thought about companies like this. You wrote that they got together on April 1, 1976, incorporated January 3, 1977, or would be incorporated, because [when you were writing the note] it was still 1976 at that point. You talk about where the market would be, and the Altair and the IMSAI. People who are seeing the oral history on video will be seeing copies of these pages. It's a very thorough document. Does this represent your process? Is this the way that you went about it with every company?

McKenna: Yes. With Intel, I have a lot of very similar kinds of documents around the microprocessor, because at Intel, they were in business. They had products coming out. The processor was the one that they were investing in most heavily but not yet seeing a lot of return. The microprocessor—they called it the
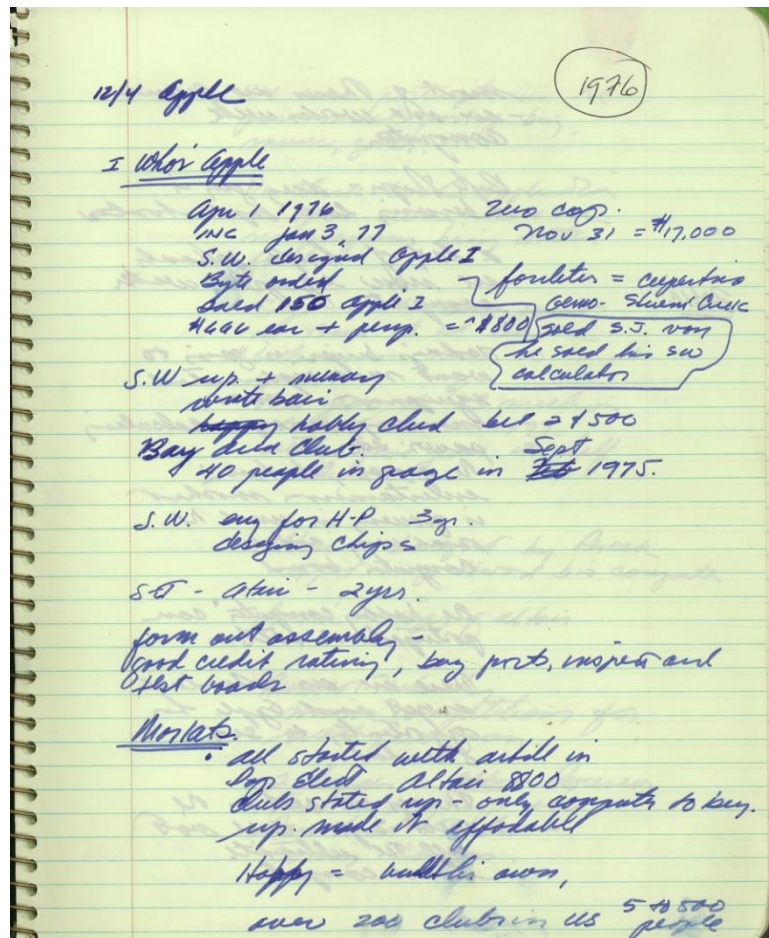

Regis McKenna notes on first marketing plan for Apple Computer, Inc., December 1976

---

[1] [Editor's note] See Oral History of Regis McKenna, Part 3, p. 3.

microcomputer in those days—that was the hope of the future. I have a feeling that's one of the reasons why Noyce was happy to have us come on and handle their business. But that still was just a phone call that said, "Do you want to work for us?" and I said, "Yes," and we did it.

To give you some background, which goes back to 1965, I did bring this. This was the Victor Comptometer's 3900 calculator. In that machine, there are 39 MOS chips. They were able to reduce all the componentry in an electromechanical machine, thousands of parts, to just those 39. Now this was a product fail, because the processes were not mature enough to handle the complexity of the chips, but if you look at this product, it looks like the Apple II. The Apple II doesn't have the monitor on it. You had to put the monitor on top, but in fact, it's the size of an Apple II's body.
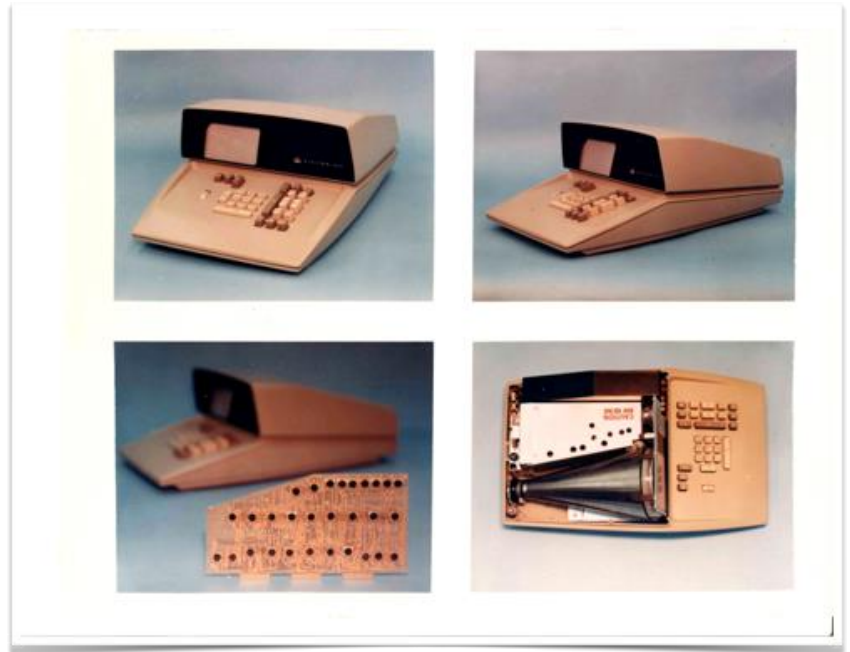
Victor 3900 business calculator. The first commercial application of MOS technology

Hollar: Yes, and especially from the side, you can see that flat top and the sloping—

McKenna: Right.

Hollar: —keyboard. The form factor is exactly the same.

McKenna: And, as I've said, Joel Karp, who was at GMe at that time, and I was at GMe—Joel Karp became the first MOS engineer at Intel. You know how it takes a village to raise a child? It takes Silicon Valley to raise a new company, because there are so many different knowledge points that are coming into play. Your timing as a company, the kinds of people you surround yourself with—all of that makes for a successful company. Indeed, having these other people experience this, even though in failure, they went on. In fact, most of the team that worked for Joel Karp came to work at Intel. So the processor really grew out of an evolution of years of development and knowledge on the part of various engineers.

Steve that knew about the processors at Intel, and I think they probably experimented with that [Intel processors] originally. Apple went its own way for various reasons. I don't think they used Intel for their first processors, or in the Apple II, but the whole idea grew out of Intel.

Hollar: How did you begin to work with them initially to put together a marketing plan for a whole new thing? This had to cross the chasm, to use a phrase, from the hobbyist market to the general purpose market. Was that how you and Jobs thought about it in the very beginning?

McKenna: No. It really wasn't possible at that time. You had to deal with the technology you were given to move it from the hobbyists and the people who were willing to spend time—and there were a lot of people who were willing to spend time. I mean, literally millions of people were willing to sit down and learn basic programming and things of that nature.

The notes that I have in terms of putting together a marketing plan wasn't coming out of sheer imagination. It was coming out of looking around and saying, "Who's out there doing stuff now? What would we have to do?" For example, in my notes, I wrote, "What are the potential distribution channels?" In one of them, I put "Apple stores." That was in 1976. We were talking about Apple stores. I talked about Apple stores in a lot of my presentations to Apple, because there wasn't a good channel out
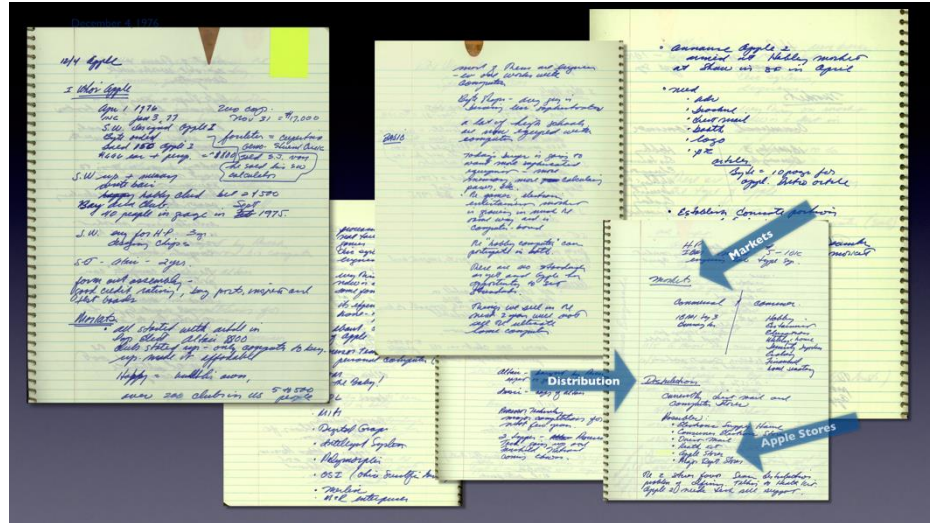
McKenna notebook pages showing that distribution for the Apple II could include "Apple stores," December 4, 1976

there for the personal computer. The channel became general electronics stores. They looked like supermarkets, but they had a lot of electronics in them. Once IBM came in, the retail stores were dominated by Intel-based PCs and Microsoft software. Apple was then pushed into a corner of the store. So for Apple to break out and say, "Here's our own thing," really required a new strategy.

Basically, when we were first doing work for the Apple, I went around to music stores, stereo stores, the Byte Shops, which were a client of ours. I knew what the hobby stores were like and I had worked with them through Intel when they were bubble-wrapping the single-board computer for kits.
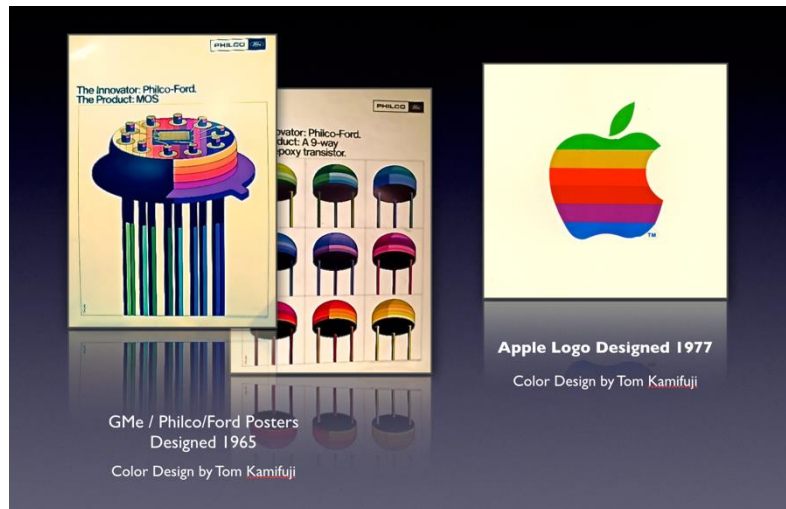
It was community knowledge in the plan, not my imagination. It was my having certain knowledge that other people didn't. It was community information, and generally, it came out of me and Steve and probably Markkula and others sitting around and saying, "Now what are we going to need to do?" and somebody putting out an idea, and then it grew and grew, and so it developed into long lists of things to do.

Hollar: Is that how it worked as a process? You'd sit down together and spend hours together around the table? Talk a little bit about what your work style was like.

McKenna: Well, that was true with all our clients. I always thought technical people had some of the best marketing ideas in the Valley, but they were never able to express them in public. But in fact, behind the scenes, when you're preparing materials and you're looking for new ways to bring a product to market, the technical people have a lot of genius behind what they're doing.They understand a lot about the

customer. They are one with the customer, by and large, because they are technical, and they also use the products that you're bringing to market. So in effect, the people in the community that you're working with become the best sources for developing new ideas for marketing.

Yes, [with Apple] it was conversational. It grew out of that, taking notes, a lot of white board talk and a lot of those kinds of meetings. As companies grew, you generally added product marketing people. They were the workhorses of most companies, including Apple and Intel and everyone else. You spent enormous amounts of time with those people. It wasn't just during the workday. It was lunches, breakfasts, at each other's homes, whenever you could meet. It was ongoing conversation that was never-ending

Development of Apple logo by Regis McKenna, Inc., 1977

and always adaptive, so you were always able to add new material to it.

It's not like it is today. I think it's hard for people to imagine today, where things are very structured. If I were doing business today, I wouldn't have been working with a Noyce or a Steve Jobs and Wozniak and people like that. I would be working somewhere down the line. Maybe I'd meet those people, but I would have to go through two or three levels of people. [Today] you're generally in a cubicle somewhere, trying to figure out this piece of the puzzle, without knowing all the puzzle. There you could see the whole puzzle in front of you.

Hollar: It was a very organic process.

McKenna: Yes. And, again, I'll go back to when I was at GMe. There were maybe 100 people in the company, and you knew them all. They were building the wafers at one end and making calculators at the other, and I knew everybody in between. I watched the process. I could walk down the line and see every one of these steps. I could ask questions. So it was not isolated from a new person coming in and seeing the whole process in front of them.

Bob Noyce used to use the automobile industry as an example. He'd say, "Today, when you open the hood of a car, you can't figure out anything because nothing's visible. It's all encapsulated and covered and epoxied. But back then, you could watch the pistons, and see how they worked. You could see where the sparks were created. You could see everything about it, and you could pretty much figure out how it worked." That was true with old fashioned radios if you looked in the back of them. Our radio at home had a circuit diagram in the back. Even not really understanding how the tubes worked, you could at least see the circuitry and understand that it was a little system at work back there. It wasn't magic.

So when you started these companies, it was a special era. So many people got their college degrees, their MBAs and their doctorates here in the Valley just by watching the technology and being close to it.

Hollar: From your perspective, and from a marketing perspective, why did the Apple II succeed, and succeed so quickly?

McKenna: First, it was the way the IMSAI and the Altair worked. They were black boxes, and they were programmed by lots of little switches and lights on the front. There wasn't a keyboard. There wasn't an understanding of how you'd use it. You'd have to know basic computing and basic machine code to be able to work with one.

The Apple II did away with all that. It was a magical instrument. It had a keyboard. It had basic programs that you could follow. Anybody could buy it and start doing things if they spent a little time educating themselves. Also, it was an open system. You could take the off the top, and it had seven card slots in it. Those seven card slots could be anybody's. They could be adapted, so people were building their own circuit cards and placing them in there to do a specific task, using the computer power of the Apple II. That took it into a wide range of industries and businesses where people could specify their applications.

Apple II launch advertising, Regis McKenna, Inc., April 1977

Being an open system, I think, was one of the things that made it most successful. It's ironic, because that's how Apple started. It's not how they continued, because the Mac was not an open system.

Hollar: Were you surprised at how quickly it took off?

McKenna: I don't think that sort of conversation goes on. I think you're happy. I don't know that you're surprised, in that you're usually so busy. You're doing the next thing that's required, or you're putting out fires. Once you have a product that's successful, it requires lots of peripherals and add-ons and things of that nature, and everybody's working on the next generation, the Apple III. You're happy with what's happening.

Apple did celebrate. I have a little cube on my desk at home that says something like "Apple Achievement Award to the Marketing Team - $100 million" That was in 1980. So by 1980, they were at $100 million, which was a phenomenal success.

Hollar: Talk about that period, Regis, when they went from incorporation in January 1977 to $100 million in revenue in 1980. Pretty phenomenal growth. What did you observe—the company, the people involved, how they handled all of that? As you say, everyone is happy. There's also a fair amount of tumult inside a company like that, isn't there?

Ad campaign celebrating Apple II's historic sales volumes, 1977-78

McKenna: Yes, particularly in this case, where its founding was in this hobby market, which was by itself an eclectic market. You couldn't say who a hobbyist was because it could be people in any profession who just had a knack for technology. They may have been a doctor. They may have been a teacher. A lot of teachers were interested in the Mac.

Apple at that time was almost like a shopping mall. Every day you'd go in and see new people. You wouldn't know whether they worked for Apple or not, because people would find their way there and they'd just come over and start talking to people and start interfacing about their ideas. It was really a crossroads of discussions. A lot of the people that came on were out of the semiconductor industry. They weren't from the computer industry as such. Had they been from the computer industry—let's say from Digital Equipment or NCR or IBM—it probably would have been more structured. Apple probably would have been talking about how to build larger and larger peripherals and how to build it into the enterprise. But it didn't. It stayed down at the grassroots, and so a lot of grassroots people were actually engaged at Apple at that time.

Hollar: What did you think about that?

McKenna: It was fun. It was fun. And Steve—you never knew. I think this may have been during the Mac days, but we went in one day and you could hear classical piano being played. He'd met a woman who was a classical pianist, and he brought a piano into the middle and she would play so many days a week, just during the day. So there was always something that was interesting and a surprise. That's what I loved about my job. I never saw or did the same things two days in a row, whereas when I worked at National, you were doing basically the same thing over and over and over again.

Hollar: Can you talk a little bit about the people involved at that point? Mike Markkula, obviously, was there, as the chairman, and Steve was there as the VP of marketing. Wozniak was there as the VP of technology, essentially the CTO of the company. The board was coming together. Can you talk about that two-year period, let's say, or three, from 1978 to '80, and what you observed?

McKenna: Some of them I knew.They had come from the semiconductor industry, and so you had acquaintances there. You'd huddle with these people about what they were doing. They had things that they wanted to get done. It might have

RMI ad featuring Steve Jobs' quote about the Apple II being "a bicycle for the mind," 1977

only been a little slice of the pie, but it was what they felt was important. One might have been developing certain applications. One would be developing third-party software interfaces. There were peripheral companies out there that were starting as well. There were monitor companies that wanted to either work with Apple or develop specific monitors that adapted to the Apple. So there were all these other kinds of companies that you could interface with.

You were always on the lookout for, as I said, somebody who was building a card that had a specific application, either in the medical field or in the science field or in education or whatever. That became a package that we could put out or promote, around that specific application, to give people the idea that the Apple II can be used in a variety of channels. It's not just a general-purpose computer that anybody can use at this point. It has to be adapted to a specific solution.

 It wasn't tense, but it was an intense environment. Lots of action, lots of people working, lots of new ideas being passed around. A lot of really young people. From my viewpoint, although Steve was, as you

said, head of marketing, he was the focal point. He really did assume the mantle of leadership from the very beginning.

I would meet with Mike [Markkula] from time to time. He and his wife were very active at the trade shows. They both manned the Apple booth—as did everybody. So it was almost like a family affair. Everybody was engaged in every aspect of Apple at that time. It was interesting to see Markkula's wife at the Apple booth, helping to talk to people and hand out literature and do those kinds of things, as well as Mike and others. I can't get into many specifics, because I don't recall all of them, but I do know the general nature was that it was a highly intensive environment in which there was lots to do.

Hollar: You said that in this period your workday was—you'd spend half the day at Intel and half the day at Apple. How quickly did that begin? It must have begun almost right away, didn't it?

McKenna: And then half my day at a dozen other places.

Hollar: Right. It was a 22 hour day.

McKenna: It really was. I mean, there were nights that I actually slept on the floor at the office—which is, I think, a huge mistake. But I had put my name on the door, and that's the person that they wanted to talk to.

Hollar: And if you're not there, then somehow they [your clients] feel like nothing's getting done.

McKenna: They feel they're not getting attention. Obviously, I had that issue. Intel was a client. Apple was a client. But so was Microsoft. I used to say that Microsoft didn't compete technologically but they competed for attention. If one [client] got something out in the media, the others were upset by it. Steve appeared on *Time Magazine's* cover before Bill Gates, and we were supposedly the interface, and so that created problems for us with Bill Gates.

Hollar: How did you manage that?

McKenna: I didn't. They left us. They basically hired my people up in Portland and set them up in business. Bill was an aggressive competitor. Bill then wasn't the same person he is today. Bill went on to bigger and better things. There was a lot of infighting in those days. It was—who's king of the hill? Who's on first? Who gets the most attention? And don't forget—we talked about this in the previous session— print media was king. It was everything. There wasn't an internet. Television pretty much was the news program at night. There weren't any special programs.

Hollar: In fact, the way you defined print media, it actually was a very small universe of opinion-making publications, wasn't it?

McKenna: Yes. It grew into that. In each technology segment there was a key journal that dominated all the others. In the aerospace world, I think it was *Aviation Week*. There were lots and lots of military

magazines like *Military Systems Design*. There were *Electronics Magazine*, and *Electronic News*. It wasn't till the mid 1980s that the general press—*The New York Times*, *The Wall Street Journal* and even local papers like the *San Jose Mercury News*—they were all late in recognizing this as a real industry, or anything in Silicon Valley.

Hollar: Who was the first?

McKenna: *Business Week*. That's largely because the editor of *Electronics Magazine* became the editor of *Business Week*.

And *Fortune*, by the way. *Fortune* did long, in-depth stories. They had some science writers that did long stories on Noyce and Moore and on the growth of technology under them, from Fairchild to Intel. There was a journalist named Gene Bylinsky, a technical guy for *Fortune* for many, many years. *The Wall Street Journal* would give you a researcher and a journalist. They worked as a team. That's when they could afford to do that. The articles would be ten pages or more, so they would do lots of research on creating these major pieces that gave you deep insight into the business and into the technology. The technology went into everything from Polaroid to penicillin. It went into how they came about, and how they evolved, and who were the key drivers of it.

Fortune focused more on the people who did it and the stories behind them. *Business Week* was much more about the business and the probability of its success. Also, there were some key financial analysts. One of the most influential, I think, was a guy named Ben Rosen.[2] Ben was with a small financial firm, but he wrote a newsletter on the semiconductor industry and it became the one "red sheet" or "yellow sheet" that came out every week that you read. Ben was a physicist. He understood what was going on, and he knew how to ask questions. He tried to put out really objective, factual knowledge about the products and their competitiveness in the marketplace.

Ben started holding little conferences, just small ones, about the semiconductor industry. The first one was in his conference room. There were only a half a dozen people in it. I was in it. Gradually, they grew to be fairly substantial conferences with all the industry leaders from around the world. When he went to Morgan Stanley, he was one of the first people who introduced the Apple II into his office. It sat on his desk. One of the early things he did—and I still have a copy of it—is print out a menu of restaurants in New York City with their addresses and their ratings. He had his own ratings. It was a great, long sheet, and it was really nice to take to New York. Mine's all beat up, but—

Hollar: Did you find it was pretty accurate?

McKenna: Oh sure, he took a lot of people. He was a financial analyst.

Later, when he left Morgan Stanley, he was one of the founders of Sevin Rosen. The Sevin was LJ Sevin, former president of Mostek, the memory company. It was a venture firm which became very successful.

---

[2] [Editor's note] For more information on Benjamin Rosen see the oral history the Computer History Museum recorded with him: https://www.computerhistory.org/collections/catalog/102738545.

They were behind Compaq, for example, so they were a very, very successful company—and still are, actually. Ben was always on my agenda for a trip to New York.

There were several of us in a little cabal—the technical guy from *The Wall Street Journal*, Dick Schaeffer. There was Bob Henkel from *Business Week*. There was Ben Rosen, and a few others. We would have dinner together, the group of us. We did that pretty regularly for a number of years. A lot of news, the <u>real</u> news, came out, out of those meetings. They were a very influential group.

Hollar: I'm going to go back for a minute to something you said about this period where we're talking about Apple, pre-IPO. The IPO happened in 1981, and I'm going to talk about the IPO separately in a minute. You said a minute ago that the focal point of the business was really Steve at that point.

McKenna: Well, no, for us.

Hollar: For you.

McKenna: Yes.

Hollar: That's where I wanted to get to, which was—there are several questions. One was, as he was progressing and as the business was progressing, what did you perceive he needed from you, and what did you perceive you needed from Steve?

 McKenna: We'd always put together a plan for the following year, the budget and so forth. Let's say it was an advertising program. That wasn't done in isolation, nor was it done with us sitting back in our offices and saying, "What do you think about this?" I never did believe in that. I believed that part of the team was the people you're working with. So Steve was part of all our creative sessions and planning.

I had a team of people that would work with Apple. We'd all meet with

RMI advertising plan for Apple, 1977

Steve, or he would be in the room. Again, Steve was somewhat unique in that he was very creative. He had a lot of ideas, some of them very wild ideas, and he was very comfortable talking with copywriters and creative directors, and articulating to them what I used to call "engineering baby talk." Without getting into the bits and bytes, he was able to describe the benefits and the features—he didn't necessarily call them that, but he was able to talk in plain language.

He did have a vision. Of course, that always appealed to the more creative people anyway—that somebody would come in and would talk about their vision. It sometimes made for long meetings, because sometimes it led from everybody's vision and on and on and on, then it didn't really end up going anywhere. But it ended up in the working relationship getting stronger. So, Steve spent a fair amount of time at my company.

Hollar: You and he spent a lot of one-on-one time, too.

McKenna: We did a lot of things together, yes. We traveled together. We went to New York numerous times. We always stayed at the St. Regis hotel, which was where I stayed for years, because that's where I said people could find me. We would go down to the Village for dinner and then walk back, which is a fairly long walk.

Hollar: That is a <u>long</u> walk.

McKenna: Yes. I think the St. Regis is at 55th and Fifth, so we had to walk all the way from pretty much Wall Street up to there. We weren't just talking about the business, but talking about a lot of things.

Early Apple II creative team (1977-78)

Regis McKenna and Steve Jobs, 1978

Steve once asked me, did I ever think that Apple would be bigger than Intel? So, he was obviously thinking about building a business. He had various companies in the Valley that he admired very much. Hewlett Packard was one. Intel was certainly one, if not the one that he really most admired, largely because of Noyce and Moore. He got to meet them. Ann Bowers, who eventually became Bob Noyce's wife, was the head of HR at Intel and then became the head of HR at Apple. So there was some cross-conversation there.

Ann says that I was the first one that really introduced her to Steve. That led to them working together, and they all live around each other. We all live within five miles of each other, so it wasn't difficult to have meetings and dinners at each other's homes. It was a real small community of people who knew each other and who were comfortable with each other.

Hollar: There was a moment in 1980—you wrote about this—when Apple had a reorganization. Steve was maintained as vice chairman of the board, but he lost the title of chief R&D officer. You wrote, "Steve never fit into traditional forms. He was truly creative and moved beyond boundaries." It seemed like the company was always struggling to fit Steve within its structure, or the structure forming to fit Steve. How did you view all that? I'm sure you and he had conversations about it.

McKenna: Yes. Well, I'm a student of business and marketing. I have a collection of business and marketing books going back to the 1930s and have read a lot about structure. Of course, [Frederick Winslow] Taylor created the structure for business and manufacturing.[3] He went to Japan and taught Japan how to build their manufacturing entities and then it was followed here in the US. It was based upon each station having their job done, and then passing it on to the next. If you look at that structure, which was established in the early part of the 20th Century, that's also the way the education system was modeled. You put people into rows, you test them, you find out where they're supposed to fit. Everyone passes the same test, and then they move up a level. It's a manufacturing model, and I used to talk about that in my presentations.

It's true with business—everything is passed from one to the other. In fact, that's where many big companies break down, because these individual cubicles or boxes on an organizational chart, these silos of domiciles and people, become the end-all. They don't see the whole process. It's passed off and passed off. Many times, you see a product developed that's not developed for manufacturing. At Intel, they started putting those two groups together, so that the people who were developing and the people who were manufacturing became many of the same people. Then they were able to move that process much more smoothly from development to manufacturing. That's breaking down those lines.

If you think about [your question] in that context, Steve would cross boundaries. He'd pick up the phone and call Dave Packard. He wouldn't go according to protocol. He wouldn't call [Packard's] secretary and try to make an appointment. He wouldn't try to have introductions from one person to another, and eventually get to [Packard]. Steve just broke down the walls.

I think very early on, Steve started developing this idea of certain teams of people doing tasks that were multifunctional—people that could come together and operate. He ran his whole business life around that. These people were from different walks of life, they were different ages, but he had worked with them, had confidence in them. To get into that team, you had to really demonstrate that you could perform. Many of the people that were on Steve's team had been there for years and years and years. When he went back the second time, it was Steve not really seeing the old models work, and trying to break those down.

Still, there has to be some structure to most organizations and companies, but that structure often becomes a cultural way of life, and it becomes binding. I ran into that in many big companies that I worked with. If you work with one group, you find they couldn't work with another. In fact, quite frankly, in the mid-1990s when Steve went back to Apple, there was an article in *Time Magazine* in which Steve was

---

[3] [Editor's note] See *The Principles of Scientific Management*, Frederick Winslow Taylor (1911).

quoted as saying he wanted the company to become the digital Sony. I happened to have dinner with the president of Sony later that year. We started talking about how structures enabled creativity. I said, "You have everything within Sony. You have all the technologies. You have all of the—" but then he went on to tell me that it was all siloed, and that they all worked in their own realms, and that getting them to work together was the biggest task he had at Sony.

Why wouldn't Sony have gone after the personal computer since it was a miniaturized device? It wasn't a big-box console TV. It was a Walkman. Sony always came out with miniaturized, small, nice, smartly designed devices, and that was Apple in the digital world. Apple actually usurped that from Sony. Sony had built so many structures internally that they weren't able to converse with each other, weren't able to cross boundaries and say, "Hey, here's what we're doing. How can we work together?" That takes a long time with established organizations.

I don't want to be too openly critical, but I think that's HP. The "HP Way" became—when they became a big company—became so highly structured and layered that many people within the organization didn't know what the other was doing, and that didn't allow a lot of freedom within the individual operations. They used to say that the people that really exercised freedom at HP were the people who were up in Idaho, or wherever their plants were—up north. They were away from the main plant here. At one time we were helping HP plan for their new computer lines that were coming out. They were RISC-based computers. I had a call from the chairman of HP Europe. He said he was in California and he wanted to come see me. He came to my office and said, "I understand you're doing this work on [this computer]. Don't come to Europe. We don't want any part of that." He was basically telling me, don't bring whatever you're doing with corporate [headquarters] to Europe. They were operating in their own way. So, there's this lack of cross-talk, this lack of freedom, lack of a common culture across organizations.

Apple hits $100 Million Milestone. January 1980

I think Steve built that common culture very early, because he basically had everybody charged up around something innovative and they all wanted to participate. That's true even today. People still want to emulate that fire that Steve created within the company.

Hollar: Let's talk about the IPO now. It's less than five years after the company was formed. Today maybe that wouldn't be seen as such a feat—companies here in the Valley do get formed and become unicorns, as they're called today.

McKenna: Yes.

Hollar: But back then an IPO in that amount of time was pretty incredible. Talk about what it was like to be a part of getting ready to take Apple public.

APPLE CORPORATE OBJECTIVES

1. **GROWTH AND PROFITABILITY**

To grow to a minimum of $.25 billion in revenue by 1981 while maintaining 12% after tax profit margin. Only if we continue to meet our profit objective can we exist to achieve our other corporate objectives.

2. **OUR PEOPLE**

To recognize each person's contributions and achievements and help Apple people share in the company's success, which they make possible.

We feel that the general policies and attitudes of managers toward their people are more important than specific details of the personnel program. Personnel relations will be good only if people have faith in the motives and integrity of their supervisors and of the company. Personnel relations will be poor if they do not. In the final analysis, people at all levels will determine the character and strength of our company.

3. **BUSINESS FOCUS & LEADERSHIP**

To serve individual needs through technology and concentrate on those areas of business where we will make a major contribution and be recognized as an innovator and leader.

Apple wishes to provide something new and needed in its products, and not just something that can be currently purchased. We don't want to be average.

4. **GENERAL ETHICS**

It is in the best long-term interest of Apple to be honest, straight forward, ethical, and dignified in our dealing with ourselves and the outside world. We cannot compromise our ethics or honesty in the name of "profit" or "business." This does not mean that we will be pacifists in the face of aggressiveness.

5. **OUR CUSTOMERS**

To provide products and services of the greatest possible value to our customers, thereby gaining and holding their respect and loyalty.

The success and prosperity of our company will be assured only if we offer our customers superior products that fill real needs and provide lasting value. Our customers must feel that they are dealing with one company with common policies and services, and that our company is genuinely interested in arriving at proper, effective solutions to their problems.

6. **CITIZENSHIP**

To honor our obligations to society by being an economic, intellectual, and social asset in all places we operate.

We also feel that Apple can contribute in certain special ways due to the unique nature of our products; i.e., improving the educational process through

Apple corporate and culture objectives with RMI annotations, 1977

McKenna: There's a lot you can't do or say, so from our standpoint, from a marketing standpoint, it's really subdued, because everything is looked at and measured by the attorneys. In fact, I remember a meeting at our place in which we were having fun, designing some [marketing] programs with Steve there, and we couldn't take

any of that out to the public because they were in their quiet period [before the IPO]. So much of what you would like to do, you have to be quiet about.

Morgan Stanley took them public. It was the first time Morgan Stanley had ever taken a startup, and particularly one in Silicon Valley, public. That was Ben Rosen. Ben was the analyst there, and Ben's the one that introduced Apple to the rest of Morgan Stanley. Ben was responsible for landing Apple, which was one of the biggest IPOs that they've ever experienced. So there was this legacy from back when we were meeting with Ben, and he was part of the early program on the Apple II. He was able to take that into Morgan Stanley. So to get a prestige firm like Morgan Stanley to take them public was, number one, a real coup in itself.

A public offering changes the company in a lot of ways. I tell my clients, "You're going from one boss to thousands of bosses." Those are your stockholders, tens of thousands, maybe millions, as well as all of the analysts recommending you, and the companies that are buying and selling your stock. [Going public] ends up driving your business, and if it's purely quarter to quarter profits and quarter to quarter growth, you may not hit [the targets] and so you may do things that you wouldn't otherwise do if you weren't public. So Elon Musk now is talking about [taking Tesla] private, because I think the pressures that people want to put on him because it's a public company—he no longer feels in control of his company. He would like to get his innovations to the marketplace and not worry about profitability at this point.

So I think when you go public, as Apple did, now you're in the spotlight, and even more than before. The analysts start calling. They start making appointments. They start interviewing everybody, so everybody has to be better prepared. That's where we would come in, helping to prepare those presentations and so forth.

Hollar: How did it change Steve?

McKenna: Steve alluded to this in one of the interviews that he did later on, a video interview. He said it made him more independent. He was always scrabbling, scratching for money. He didn't have a lot of

Apple Computer Inc. prospectus for initial public offering, November 1980

money. His parents didn't have a lot of money. In one day he becomes a millionaire, and that's something that just happened overnight. Now he can buy the things he wants to buy—although Steve was very frugal. He bought a big house up in the hills, but if you went in it and there was nothing in it, except a piano and a mattress on the floor. He lived a fairly frugal life at that time, but he was able to <u>act</u> independently. He could be much more aggressive in dealing with his overseers, because he had independence.

Hollar: Did he talk to you about that?

McKenna: No, I don't recall. I don't think so. He later said, when asked that same question publicly, "I was able to become independent." Once he said that, I could reflect back on <u>how</u> he became more independent: it was to steamroller ahead on the idea of the Mac.

Hollar: In 1983, you join Apple as a non-operating executive.

McKenna: Right.

Hollar: What did that mean, and how did that come about?

McKenna: Well, quite frankly, because of Steve and I having such a personal relationship. We met a lot, we talked a lot.

Hollar: How often were you meeting with him?

McKenna: I'm sure I saw him a couple times every week, if not more. Again, when Steve wanted to do something, it didn't matter what time of the day or night, he was there.

Hollar: He dropped by your house?

McKenna: Yes**,** and my whole family knew Steve and admired him. He was very nice, particularly to my wife, and they actually would spend a long time talking. I think he wanted somebody there that he could feel confident in. That's why he invited me—later on, even when I wasn't with Apple—into meetings, because he felt he'd be comfortable with people that he knew would give him an honest opinion. There weren't that many people. There weren't that many people who would do that.

Hollar: In fact, you did that from the very beginning, right? You were just honest and open with Steve, and that was the basis of your whole relationship.

McKenna: Well, certainly in the beginning, it was easier for me because they were not a big client. You never want a big client to dominate your thinking processes. It's like, when I lost Microsoft, it didn't bother me at all, because I didn't like the pressure of "I'm a big client, therefore you think this way, or do it our way."

The whole idea is to be valuable to them. You have to give them outside-in advice and opinion. You don't have to tell them they're idiots if they don't do it, but you can present it in a nice way.

Hollar: So now in 1983, you're part of the senior staff. You're going to the senior staff meetings.

McKenna: Every Wednesday morning.

Hollar: How did that affect what you just talked about—the ability to be frank and be straight and give independent guidance?

McKenna: Actually, even more. I had more knowledge. I mean, I got the same reports that the rest of the staff got. I knew what the numbers were. I knew what the forecasts were. I knew what the following month was going to be like. I have notes on all this.

Of course, also on that staff were people like Bill Campbell, and Bill and I became very close when he moved here—from my hometown, Pittsburgh. We were both basically around the same age and we got to know each other very early, and we spent a lot of time together.

He joined as VP of marketing. [At first] Bill didn't know how to get to University Avenue on the Peninsula. So I introduced him to a lot of people, and I encouraged him to do what I did, and that is learn from other people. When Bill became vice president of marketing, he spent a lot of his time out in the marketplace. He went out, visited all the dealers and the distributors, went to third-party software people—and Bill was a very bright guy. He just spent an enormous amount of time pulling information in. Bill was probably less tactful than I am in terms of presenting the true picture. He was very direct, to everybody.

Hollar: What was his big concern in that period, 1983-84?

McKenna: His big concern was just learning the business, because at that time, they'd also brought on Floyd Kvamme and I think Bill reported in to Floyd Kvamme, or at least Floyd was there, so Floyd was helping him, too. I think Bill was just trying to get on board as quickly as he could. It's not an easy business to get to learn.

Hollar: This was before the Mac was introduced, right?

McKenna: Yes.

Hollar: So Apple was just growing organically with the Apple II.

McKenna: Yes, and the Apple II was an extremely successful product. There were follow-ons to the Apple II. The product had about a ten-year life cycle, which is enormous for any product at that time. It was loved by people. People didn't want to give them up. For years and years later, they were still in many schools across the world. It was a solid product, particularly as it evolved—with more memory and application cards and things of that nature. There were a lot more peripheral companies out there producing products for it. So it became a little ecosystem in its own right. That ecosystem continued to grow.

Hollar: I think what I was trying to get to with the question about joining the senior staff was this: it just underscores that you were doing much more than marketing strategy, and you always had. For you, marketing strategy and business strategy—you couldn't tease those two apart. They were exactly the same thing.

Steve Jobs and Steve Wozniak with the Apple II

McKenna: Right.

Hollar: That's really what you were doing at Apple at that time, isn't it? That's why Steve wanted you at the table. You were talking about business strategy.

McKenna: Right. The fact of the matter is, in Silicon Valley there wasn't much respect for people who weren't engineers. In fact, it's still a struggle today. There's not a lot of respect for people who are in, let's say, the advertising world. They like their creativity, and they may use it, but back then, anyway, it was just a necessary evil to get stuff out. They were vendors, and most of the people who did that work—until probably I started my business—were called vendors. The whole idea was not to be a vendor, but to be a [partner]. If I could have gotten rid of the advertising bit, which I eventually did, earlier on I would have. But you couldn't make any money just talking to people and giving them advice. Those were the consultants, and consultants were next to, or down at the level of, I think, trust lawyers. You had to offer some way of doing tangible things that they could see, and visibly use, and paid your business for. But in fact I kept trying to bring on people with greater and greater experiences and deeper experiences to work with those clients, and eventually got there. But it took a long while. I was doing it by just simply having personal relationships with these people, spending time with them, talking to them about it, and them telling me their deep secrets.

Hollar: And keeping them secret.

McKenna: And keeping them secret. I never really worried about that.

I had dinner with Bill Gates, and he was concerned about my company working with other software companies. He asked me what made me think I could keep all of this proprietary and not have cross-conversations. I told him, "You taught me that." He looked at me like he thought I was crazy. I said, "You work with Compaq, you work with Apple, you work with IBM, you work with all these companies. They're all competitors. So what makes you think your ethics are better than mine?" That's when he fired us. I'm joking, but well, no, that is what I said. There is that concern, but I always said that marketing and promotion is vital, and you do get information, but it's not anything like having people consulting with you on product development or manufacturing skills and things of that nature, who really are in the guts of your system, and you use the same vendors for all of those. If you're building a fab, you basically will use the same vendors. So it's in people's mind as to whether or not there's this line that can't be crossed.

McKinsey and most of the consulting firms have done it for years. They've worked for competitive companies. They simply build different teams around them. I actually brought in people from McKinsey. Tom Peters came and lectured to us. I invited people that I knew out of McKinsey back in those days to talk about how we would do that and not violate the rules of confidentiality. So yes, it was a concern, but I think we handled it fairly well.

Hollar: You mentioned the lack of respect that non-engineers often experience in Silicon Valley. Steve Jobs was not an engineer either. Do you think that's why the two of you related to each other in a way that was unique to the two of you?

McKenna: You could talk with Steve about literature. You could talk to Steve about art. You could talk to Steve about politics. You could talk to Steve about a wide range of topics that would be interesting to people who were not just focused on developing the next product. And you could talk to Steve about the products. So Steve—

Hollar: At a deep technical level too. It's not that he wasn't technical.

McKenna: Yes. And he learned pretty much the same way that I did, which was through osmosis.

Regis McKenna and Steve Jobs, 1979

But his was intense in one area, in terms of trying to understand how that whole world of the small computer was evolving and what the future of it was. When you're in my position, I was working with 15 or 20 different industries, from biotech to computers to semiconductors. So you're working in different industries, and you know a little bit about everything and not a lot about any one of them. But we could have conversations outside of that, and I would say in the Valley in those days, there were very few people that you could talk about art and design and graphics and things of that nature with, outside of Steve.
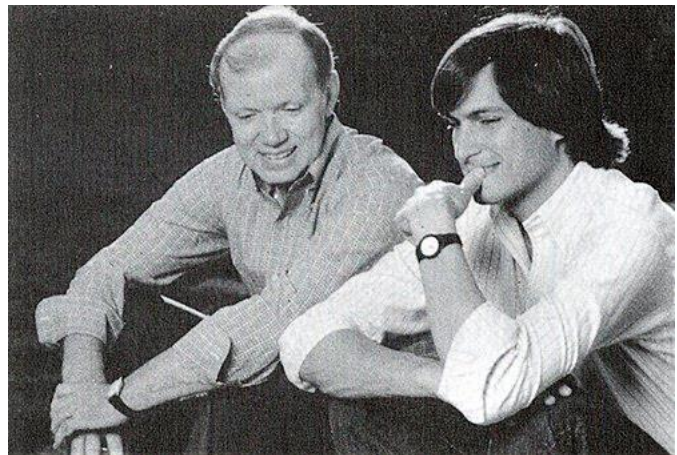
Hollar: When was it clear to you what a compelling public personality he could be, and how great a face of a company like Apple Steve Jobs could actually be?

McKenna: I came across an article, in something like 1976, and it was in *The New Yorker*—the "On the Town column." The author had gone to one of the Homebrew Club's meetings, or some small computer gathering of some sort. He was talking about the people he was meeting, and how young they were, and he was a bit of a skeptic that this was going to be something real—that these people were acting as if it were going to be real. And he said he came across this young man who introduced himself as vice president of manufacturing and marketing, I think, and his name was Steve Jobs, and he said, "And I asked him about these computers, and Steve went on to talk about it as the Polaroid camera of the future, like the Kodak Brownie." He said everybody's going to have it, and they're going to be in every school. He [Steve] said to the guy, "You know, I wish I had had a computer when I was in school—a young man in school," and the guy says to him, "Well, how old are you?" and he says, "I'm 21." So he left that as the punch line. Here's a guy talking about the good old days when he was a kid in school.

Steve obviously had that gift, if you want to call it that, and I think it probably was.

Playboy used to have a yearly electronics issue. It was a catalog, and they put all the new products and things of that nature in, and they had a *Playboy* panel that they interviewed. In 1980 they brought in five people from industry, and the five are Isaac Asimov, the scientist/writer; there's a guy named Carver; there's a guy named Gates, not Bill Gates; and a guy named Kloss. And they were all presidents of large entertainment companies, stereo companies, audio companies, those kinds of things and [*Playboy* was] asking them what the future holds. As they were wrapping it up they all gave their opinions about what the next stereo was going to look like, or the next so and so and so and so, and Steve—I'll just give you the one line—said: "Our goal is to create a computer that a person can use without introducing the new problem of learning how to use it." That's in 1980; I mean that's really pressing it—

Hollar: Yes, it is.

McKenna: —and here he is; I think he's 21, so he's a young man. He's able to stand with these people and essentially come across as probably the one with the most potential vision that would become reality.

Hollar: You wrote this: "The initiative to apply the word 'personal' to computers and persist in using it was undeniably Steve Jobs's."

McKenna: Yes. I think Steve had called a meeting to discuss this whole idea. Up until then, people were debating "is it a hobby computer," or "is it a home computer" and a lot of people adopted the term "home computer" because that meant it was reaching a broader audience. "Hobby" was still a niche—a very small niche—but by the time we had that meeting it was pretty generally referred to as "home computing," and Steve wasn't happy with that name. He kept using this term "one person, one computer."

And this meeting— I remember it was in a little jammed conference room at Apple. There were maybe 10 people jammed in a room, and we had one of our think sessions—writing on the board and putting names

up and talking about what we should do. Steve was driving the meeting, and the "one person, one computer" discussion arrived at "personal computer." That was the word that made a lot of sense.

And I can't honestly say who it was, and maybe that's a good thing because it was really that Steve Jobs team. But he was clearly the one who drove it and made the meeting possible and wanted to discuss the subject and is the one who said, "That's it." So when we walked out of that room, everything was then "personal computer."

As John F. Kennedy said, success has many fathers, but failure is an orphan. When we're talking about Apple or Steve Jobs, there are so many different opinions, and I think it's because so many people want to touch that success in no matter how slight a way. I'm still amazed at some of the people who will turn a walking-by and handshake with Steve into a book.

Hollar: By that time IBM had introduced the IBM PC, and so the war was on—the Apple II versus the IBM PC. What was the environment like?

McKenna: It's an interesting period. Don't forget that my other important client was Intel, and I was on the team that was putting together the program that eventually led to [Intel's] getting the IBM business. So, there was the ability to try to separate two worlds and keep them that way. I didn't necessarily know what IBM was going to do, but I knew what processor was probably going to end up in their machine.

From Apple's standpoint—by that time we weren't doing their advertising. Jay Chiat was. They ran a [print] ad that said, "IBM, welcome to the personal computer business," and it was sincere. Steve felt it was going to broaden the industry, and create a bigger industry, which it absolutely did. But it almost sunk Apple, because the software people followed the standards from Microsoft and Intel. The "Wintel" system became the standard, and that's where all the developers started moving their applications. But when IBM came in there was this feeling that it will broaden the industry.

We knew that somebody was going to come in, in fact, from the early days. I don't know if we put IBM on the list, because at the time other people were developing consumer products. TI was doing a calculator and games. Even National Semiconductor was creating games. Sony was certainly toying with that area. So there were probably a half a dozen companies that they expected would enter that business, and with significant resources.

The IBM thing was, I think, not really well understood at first because you have to remember that none of the

Apple print ad welcoming IBM to the personal computer market (Regis McKenna personal collection)
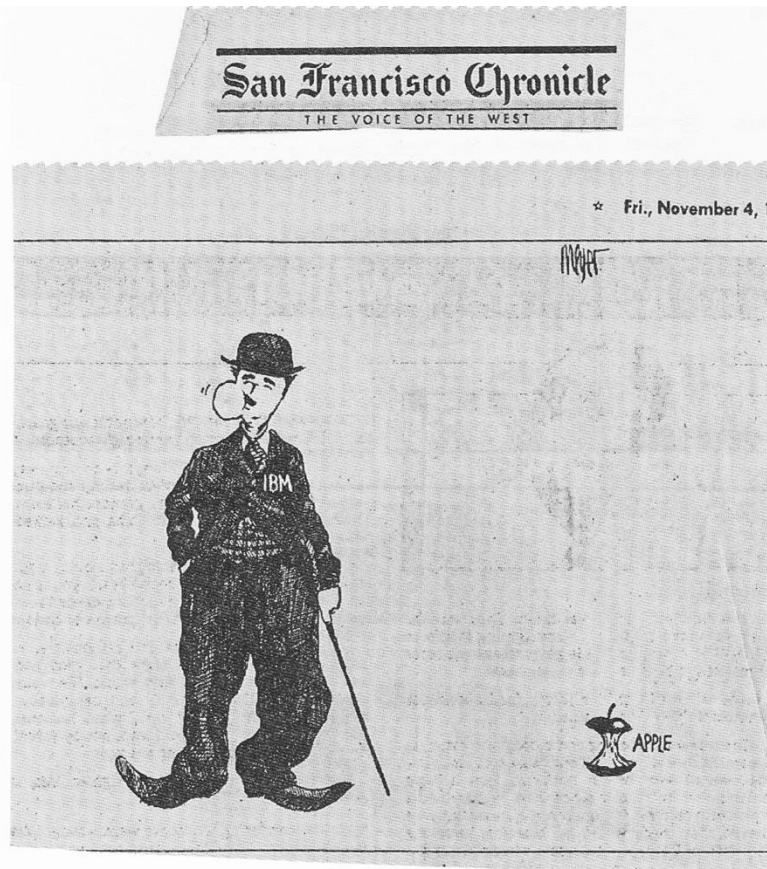
people at Apple were from IBM. None of them lived in that world, and none of them ever had to compete with IBM. They were young hobbyists who had already gone their own way and said, "No. We're different; we're doing it a different way." And in the long run that proved to be the better way—because the IBM way was commoditization and lower prices, and it just simply drove everybody out of the business, including IBM.

The feeling at that time was just more competition coming in, and it would be a more intense business. There wasn't any fear, and maybe that was the downside. There really wasn't fear until probably 1984 or '85, and that was when Steve tried to turn the Mac into the IBM killer. It's why the 1984 commercial was symbolic of IBM. But at that time, with the Apple II selling well, the company was doing very well financially. Apple continued to grow, like the Apple II, so they felt that they had an advantage over IBM.

There was probably a bit of technical arrogance there as well, and hubris. There weren't any special meetings around "well, IBM's in the business; what do we do now?" It was business as usual.

New York Times, "The speed and extent to which IBM has been successful has surprised many people, including IBM itself." [Cartoon courtesy Tom Meyer, 1983]

Hollar: You knew big East Coast companies, and certainly there were other people on the Apple board who understood how these things worked. Were there cautionary voices who were saying, "Well, but this is IBM. I mean, let's not kid ourselves."

McKenna: Well, it wasn't necessarily so. IBM's forecasting with its mainframes was for, I think, something like they were going to sell three of them. Plus, the IBM PC wasn't done in the normal IBM channels. They completely went outside for everything, which was contrary to everything they'd ever done. They made their own CPUs. They made their own memory. They built all the pieces. They developed their own software, and so forth. Initially, it wasn't necessarily known that they were going to go outside.

You learned more about it as you went to these computer conferences, and you began to get the dealers' feedback. It really was a process of getting gradual feedback from the marketplace, which Bill Campbell did, and begin to educate people about the real nature of the marketplace. That's not uncommon in any business where the field has become crowded. There were 50 disk-drive companies at that point in the Valley, I think. What is it now, one or two? So at the beginning of these things there's a proliferation of ideas and technologies.

Lots of people were still trying to build small computers. There were dozens of laptops and smaller-format computers being developed. Even at my company we saw lots of them. They were coming, and we knew it was going to be a crowded field. It would just change the nature of your competitive posture. It meant you had to grow faster. You had to have better products than the competition, and you had to build an organization that was capable of doing the marketing and distribution and sustaining the environment. So I think it was business as usual, but business as usual here [in the Valley] is having fast-rising competitors.

I was told later by the president of Motorola—when Intel turned its whole business around in the matter of a month to compete with a microprocessor in the personal-computer field—he said, "It would have taken me that long to get a plane ticket to go back and talk to my management with all the bureaucracy I had to go through." Things don't move fast in those companies, and they [Apple] didn't think IBM would move as fast as it did. But the way they set up their PC business [outside the normal structure] allowed them to move faster.

They still had problems with Bill Gates. There was a lot of fighting going on between Bill and IBM over the software. While I don't have notes on that, I had direct conversations with the IBM people who were in that meetings. One of them was the president of IBM at the time, who was a friend of mine. They were long, drawn-out, fighting, screaming matches, and I'm surprised they've even kept their relationship.

Hollar: Was the issue about whether to license it or own it? Was that the main issue?

McKenna: Yes.

Hollar: One final question: You mentioned earlier about being deeply embedded in Intel working on processors that were eventually going to go into the PC world, and at the same time deeply embedded in Apple. Did you just reconcile in your own mind, "Look, I'm going to have a foot in each one of these camps and I'm not going to worry about it"?

McKenna: I didn't make those kinds of judgments about what would succeed and what wouldn't succeed. We evaluated each one on its own merits.

Also, I didn't make judgments about the future of those companies. I mean in the 1970s I was doing work for an AI company.[4] It didn't succeed but I didn't say, "Do I think AI will succeed?" We all thought that it was going to become a success years from then. It was somebody who was trying to make it happen in a wrong time and place. So, I do think that time and place are significant.

---

[4] [Editor's note] The name of the company was Syntelligence, founded by Sheldon Breiner and financed by Don Valentine.

You have to play your hand in that time and place, or you'll lose it. It's very easy, because you could be out of this business for five years and you're gone. I think that's the way it was then. If we saw an opportunity with an Intel [we would take it]. We [were] working with them in every area of the world. We had put an [RMI] office in Europe for them, and in Portland. We had a big staff of people working for them, and we worked almost as employees because we were there every day. We had people embedded in the company, and we felt the same way with Apple. We didn't necessarily put [Apple] in other parts of the world, but our office in Europe for Intel was also there for Apple. Indeed, the fellow we were working with at Intel who was the head of European marketing for Intel became the head of Apple's marketing in Europe. Also, Mike Spindler, who worked at Intel Europe and then became an Apple employee in Europe, eventually came back here and became Apple's president.

So there was a lot of cross talk in terms of people transferring from the semiconductor industry to the computer industry and there were people from Intel that went to work at Apple, particularly in product marketing. Hank Smith was on the Apple board, and he ran microprocessor marketing at Intel. Hank knew that I was working on both.

Hollar: And Mark Markkula had come out of Intel.

McKenna: Yes, and Mike was the manager of product marketing for memories at Intel. He's the one that introduced Art Rock to Apple, and Art put money in. So those connections were fairly close.

There were years and years of effort on everybody's behalf, including Mike's and mine and others, to get Apple to use Intel's processors, or at least look at them. But there was a reticence. They did finally do it, about ten years ago.

Hollar: It's amazing, as you point out—the amount of shared DNA between early Intel and early Apple, as you described it.

McKenna: Art Rock was on both boards. Many of the board members were people that were friends or had become friends, and I would meet with them privately. That's how we got to know each other—simply because of talking both about Intel and Apple, and he was just curious to know what my opinions were. When Steve was at NeXT I knew several of his board members. I used to have breakfast with them before their meetings over at NeXT, including Ross Perot; I had breakfast with Ross Perot talking about Apple. So yes, I got around.

Hollar: As further evidence of how early and deeply embedded you were in Apple, you brought in an org chart; we want to just have you show and talk about that before we finish this segment.

Regis McKenna and Arthur Rock, 1982

McKenna: Yes. As I was going through the computer files of my notebook scans I came across this. The date is 11/08 and it says 1978 but I think that might have been misread. I used to just put the month and the day on my notebooks but then I have to guess what the year is. I think it may have been 1977 rather than '78.

But in any event it says "Apple status meeting" with Mike Markkula; Don Valentine, who was on the board of Apple; Hank Smith of Venrock; Steve Jobs; Henry Singleton, who was the chairman of Teledyne, which was a very large, successful telecommunications company; Art Rock, because Art had been an investor in that company; and Mike Scott, who was from National Semiconductor. He was the general manager there, and they brought him on as Apple president.

Hollar: Yes. Mike [Markkula] personally recruited Scott to come over and be president.

McKenna: Yes, and Mike, I think, really always wanted to work himself out of a job. I mean, he had other investments, he had other things he was doing, and I think he wanted to do his stint at Apple short-term, and he did. As I said, he was right there at the early stages, and I think he felt that it would be full-time management. There was always a reluctance to let Steve do that. They felt he was too young, too impetuous, too mercurial, and so they were always looking for somebody who could be the disciplinarian, I guess, or the adult in the room.

Hollar: And how did you feel about that?

McKenna: I'd seen entrepreneurs who overcame that and grew. It just was a matter of time. But once you get venture people involved, and the whole idea of going public, then the priorities of the board [change]. They have to have a solid hold on the company, from financials to development and so forth. I think that kind of pressure creates the need for more structure. It makes them feel secure to have it more structured and I think they felt unstructured by Steve—his creative, innovative flow of things—

Hollar: Crossing boundaries—

McKenna: —crossing boundaries. They never felt comfortable with that. If you know some of those people, they're very strict and disciplined people in their own businesses. I think they liked what Steve had to contribute in marketing the company and being a spokesman and understanding it. I think Steve wanted to be more than that. I think he felt, and he even said— I have that in my notes—that "No one really taught me how to be a CEO or to be a manager. I had to learn this all on my own, and since it was my own company nobody ever countered me, and so as a result I was able to do what I wanted." In fact, he said, "If I were at a Kodak or a big company, they would have tossed me out a long time ago." He understood that. He knew what he didn't know.

One of the problems with Steve was that he never really let on what he didn't know, not overtly, and so people made assumptions about him and—

Hollar: And it sounds like, in particular, they assumed he knew more than he really did.

McKenna: No, I don't think that was it. I think they saw him as he acted and as he was. I don't think Steve was about to tell everybody everything he did know. He kept a lot to himself—in reserve. I think his vision for Apple was to go further when he had an opportunity.

He saw the potential technology coming out, particularly out of Xerox PARC—the mouse and the pull-down menus and such. That vision from the 1980s of developing a computer that you don't have to learn how to use—that was his ultimate goal, and he wanted to stick by it. He didn't know how to get there, and he probably couldn't have articulated very well how to get there, or what he needed to do it. I think that's what they would say—that, if that's your goal, you've got to spell it all out and check all the boxes and have budgets and so forth. I don't think Steve had that yet. It really did take some fermenting for Steve to mature in those ways.

Anyway, they had an organizational chart that put Mike Scott as the top as the president and CEO. The finance guy was to be announced. Tom Whitney was director of engineering—not Woz, but Tom Whitney. New product development was under Steve Jobs—that was on the chart— and then down below was product engineering, Rod Holt, and off of that same line was Steve Wozniak as R&D.

There were some other boxes down below, but this was the organizational chart. As I said I think this was probably—and I've got to do some checking on this— probably 1977. But the company was a going concern when Scott came on. Whatever the sense of urgency was for people, it wasn't necessarily felt within the company—though it was necessary.

Scott was clearly the wrong guy because this was a team collective, and "collective" is a good term, I think, for that—

Hollar: In the Berkeley sense of a "collective."

McKenna: Yes. I used to say that Apple wasn't so much a company as it was a happening, like Woodstock. Everybody came together, and it was good music.

Scott came on, he's a tough manager, he comes out of the National [Semiconductor] mode of management, which is "do a good job and you can keep it." As I mentioned, that's an actual saying. It's a tough environment. It's very structured, and it's a hard environment. Scott tried to lay that on Apple. He got a lot of pushback, and certainly not good feedback. He treated vendors pretty miserably too.

Here's one story. Apple had ordered a VAX from Digital Equipment for manufacturing, and it was something like three months late. So Mike Scott sent a black funeral wreath to [DEC CEO] Ken Olsen and said, "This is where your business is headed."

Hollar: Was he at Apple at that point?

McKenna: Yes. That's why he did it. He had pretty strong opinions and ways. Those probably worked in the semiconductor business but didn't work in the new kind of culture that was being built at Apple.

It [Apple] went through rough waters for a while. Someone up there must have been looking down kindly on it because it survived about ten years of disaster—eight years anyway. Michael Dell, when asked what he thought Steve should do with the company when he came back, said, "I'd tell him to sell all the assets and give the money back to the stockholders." I think he's swallowing those words now, but quite a few people counted Apple out. It was a lot of Steve's magic that made it happen. There's no other explanation for it. His ability to change things there, without stock and without a lot of financial influence, was quite amazing.

Hollar: Let's talk about the birth of the Mac. When we were preparing earlier, you talked about Steve envisioning the Mac in the middle of all this turmoil within Apple. The story of the Mac team's pirate ship and pirate flag and all of that is well told. We don't have to cover that here. Rather, I want to start with some things you've written.

Steve Jobs picks you up at home on a Saturday morning and drives you to a secret workspace on the Apple campus, and he says, "I've got this project I want to show you." Can you talk about that and how the Mac came about from your perspective?

McKenna: We know that some of the technology had been around. People were talking about the future of computing technology, and the ability to create a better interface, and that work was done not only at Xerox PARC but also at SRI and Stanford and other places. There was this whole effort to try to reduce complexity and make the technology more accessible to a broader audience. Again, that seemed to ferment here. Steve certainly was in that ferment, so he understood it. That's why, when he went to Xerox PARC, he knew they were working on unique ways of doing things there.

I said earlier that I really think, in a way, Steve Jobs saved Xerox—they didn't save him. He paid for that technology with stock in Apple, and they [Xerox] no doubt did well on it. Steve was able to take that [technology] into the marketplace and make a reality of it. I know the people at Xerox like to claim it as original, and I'm sure that I understand that. It's this touch of success they always want to have and not have it just recirculate itself in a lab. But as they say, if a tree falls in the forest and nobody's around, does anybody hear it? The sound comes when you have an audience, and Steve created the audience.

With the Apple II he certainly learned a lot about the computer business, because that became a worldwide business. It became a world of developers. It became a world where IBM was the chief competitor. So he understood what had to be done.

And I think another thing was driving him—and this is my own opinion. Just to go back a second—my org chart that I was showing earlier had Steve as head of new product development. I think he took that seriously. He was going to do the product that went beyond the Apple II. Wozniak had moved out of the company, actually, despite what people think. I mean he left the company very, very early—left Apple. The new product would be Steve's. He was the one that conceptualized much of it, he would drive it, and he would develop the R&D process. Just as the Apple II was created by Woz and that particular team at the time, and Steve was sort of a support function, now Steve became the main driving force. That's what I think he <u>wanted</u> to do, because I think he thought he would learn a great deal by becoming that driving force for the whole product.

Now, to your question. When he first came over and took me to that lab, there wasn't really much to see. It was a bench full of cards and [oscilloscope] tubes with electrical signals showing across them and so forth, but he was thrilled with it all. He showed me this card that was a beautiful circuit card—well designed and so forth—and he was proud of every little bit of it. Even though it was early and there wasn't really much to see, he was into it in a big way, even from that point. So at every little step along the way, he was both learning as well as contributing.

I'm sure, in terms of driving the engineers, he was saying—okay, can you make the performance better than that, or can you add the functionality of that, or can you do this. His way of learning was the Socratic method of asking a question, and taking it back, and then giving it back to them one step higher. That's the way he operated, and he drove it.

The first meetings around the Mac were probably in 1982. It wasn't called the Mac yet, but it was in the early planning stages. So literally almost three years of planning went into the launch. It was the one product in which we were able to really look at all of the ways you might bring a product to market with the development of an infrastructure. Once it was developed, and we were getting ready, there were individual meetings with software developers. We were given insight into what the product was going to be and what it looked like—some preliminary views into it, although, again, Apple and Steve were keeping it fairly under wraps. They wouldn't do anything without a nondisclosure agreement.

I think there were 50 or more developers getting individual presentations on what the Mac was going to be, and commitments came out of it. Bill Gates, when he first saw the presentation, said at least 50 percent of Microsoft's future products would revolve around it. He later said that publicly. That commitment gave a lot of impetus to others to develop third-party software around it.

The early meetings were miniature seminars. Apple launched the first one at its annual meeting here, and then there were similar ones around the country. I have some photos of the one in Dallas. They had planned on 100 people attending and got 400. In New York, people lined up on the street. There was enough leaked about various aspects of what was coming that made it very, very successful.

From our standpoint, the planning focused on how you launch a product with a reference base. Journalists quote references, and the people they quote are users, third-party developers, partners, and those sorts of people. I always felt you educate those references first before you go to the media. You educate your infrastructure. So we did hundreds of presentations to those people before we actually went to the public. We put the initial Macs into the hands of well over 100 opinion makers very early. Those people then became reference points and could say, "I've used it. Here's what it does." Then when you go to the media, the references reflect that.

Then there were probably 20 stories we came up with about the development of the Mac and its uses and its applications. The press always liked to have an exclusive. If you went to them and said, "We've got this great product," they'd say, "Great, we'll do a cover on it, or we'll do a major article on it, but we need an exclusive." We gave exclusives on a piece of the story. We had about 20 covers I think, or maybe more, maybe 30. All with just a piece of the story.

Hollar: So, one magazine would cover the interface.

McKenna: The team. One did a whole story on the team. One wrote about Steve's views on the future of the Mac. Another would be the applications. I don't remember all of them, but we split the entire story into various pieces.

Macintosh launch montage (from Regis McKenna presentation)

It was probably the first time that sort of thing was ever done, and it was largely successful. The media coverage was worldwide. The goal was to have everybody talking about the Mac within two weeks, worldwide, and that's what happened. Everybody was talking about it. And it became a reference model.

There's a good part and a bad part to that. It became so successful, then it [the Mac] <u>had</u> to be successful. The Mac factory in Freemont spit these things out like they were Sony Walkmen. And that was the model. But if you know the early Mac, it was encapsulated. You couldn't adapt it like the Apple II. You couldn't improve the memory, and you couldn't change things very easily within it. It wasn't easy to upgrade the system, or increase the speed, or solve other kinds of bugs. It was still a hobby-type product. It had a lot of room for improvement. It wasn't easy to do, and it took six months.

They sold a ton of them in the first 90 days. But that factory was expensive to maintain. It's spitting out inventory that you have to pay for, and it was being paid for by the Apple II group, because they were the ones making money, doing well and still having a strong customer base. The Mac was just building its base.

In the meantime, there was a slowdown. Between 1985 and early 1986, people stopped buying home personal computers. The market just flattened. Dealers had a lot of inventory. They weren't able to move them. This was largely due to the fact that people needed to be educated in order to buy the product. They still couldn't just take it home, plug it in, and go. I know enough people who tried that. You just couldn't do it. It's, "Okay so, what does it do?" There were very limited applications to begin with. Mike Markkula, I think, wrote a program for his wife for her recipes. I used to joke, "Yes, you can put those recipes in there. You can print them out on little four by four cards, and then buy a little metal box and put them in it and then put the box on your stove."

The fact is there just wasn't a lot of know-how in terms of [the personal computer's] application in the marketplace at that point. That was a stumbling block. Steve's premonition of the need for a computer that people don't have to educate themselves on became part of the slowdown in the personal computer business. Plus, as I said, there was excess inventory—from IBM and others in the marketplace.

Apple Computer, Inc., financial results, 1982-86 (courtesy Regis McKenna personal collection)

All this created conflict within Apple, because the majority of people were working on the Apple II, and a follow-on to the Apple II, and even the Lisa. They were all seeing a lot of money going into the marketing of the Mac and into that factory, and it became a conflict. There were two different ways of computing [within Apple], and you can't really have two operating systems competing with each other under the same roof. If you were a salesman, and you wanted to sell the local high school the Apple II, which already had a track record in education, and now you want to sell the Mac into education—from a corporate standpoint, which one focuses on the education market? What do you tell the dealers—to sell this way or sell that way?

It became competition within Apple between those products. Of course, the Apple II people felt they were winning. They were on the leading edge. [The Mac] had yet to really prove itself, except that in the first maybe three months to five months it really was booming.

Hollar: I think it's so interesting that you were on the senior staff at Apple, serving as someone who was helping to think through all these issues. Can you give me a flavor of what the discussions were like and how those problems were playing out in the executive staff room?

McKenna: The first developing conflict really was between Del Yocum, who was the GM of the Apple II at that time, and Steve. Del obviously wanted to make his product line the dominant one in Apple because it was the one producing the most revenue and income and profits. Steve really was talking about tomorrow and financing that separately. So, Apple was headed toward two divisions under two different people to see how those two could evolve by themselves. There really wasn't an easy solution. Steve was running the Mac department, and it was supposed to be the product that could supplement the Apple II. But it didn't look like it was going to supplement it because it was struggling to get its own footprint in the marketplace.

There's an old saying in the advertising business: "The ad won all the awards, but the company went bankrupt." So, yes, [the Mac] got a lot of kudos and a lot of credit for getting new ideas out there—the concept of the mouse, the concept of pulldown menus, the concept of graphics in a computer, the concept of different fonts, much more of a creative product for artists and architects and people of that nature, but it had to be a successful product. And its success was being called into question because it just wasn't selling at the same volumes. You need volume production to cut costs. It's just the way it is, and that wasn't happening fast enough. So every meeting tempers flared. Every meeting was back and forth. It just intensified over time.

Hollar: John Sculley had arrived on the scene by this time, hadn't he?

McKenna: Yes.

Hollar: How did that change things from your perspective?

McKenna: From my perspective, this gets a little bit into the personalities of people. John really didn't have a contribution to make. He came out of the consumer soft drink world. It's a totally different world than the computer world. He didn't want to let on, I think, that he didn't know that world—because if he did, it would be a witness. He put all of his faith for two years or so in Steve. Steve was his idol and his model. He pretty much tried to listen only to Steve. And that was said in the room. You only listen to Steve. You just tolerate everybody else. And—

Hollar: That was said to Sculley in—

McKenna: Yes.

Hollar: These staff meetings?

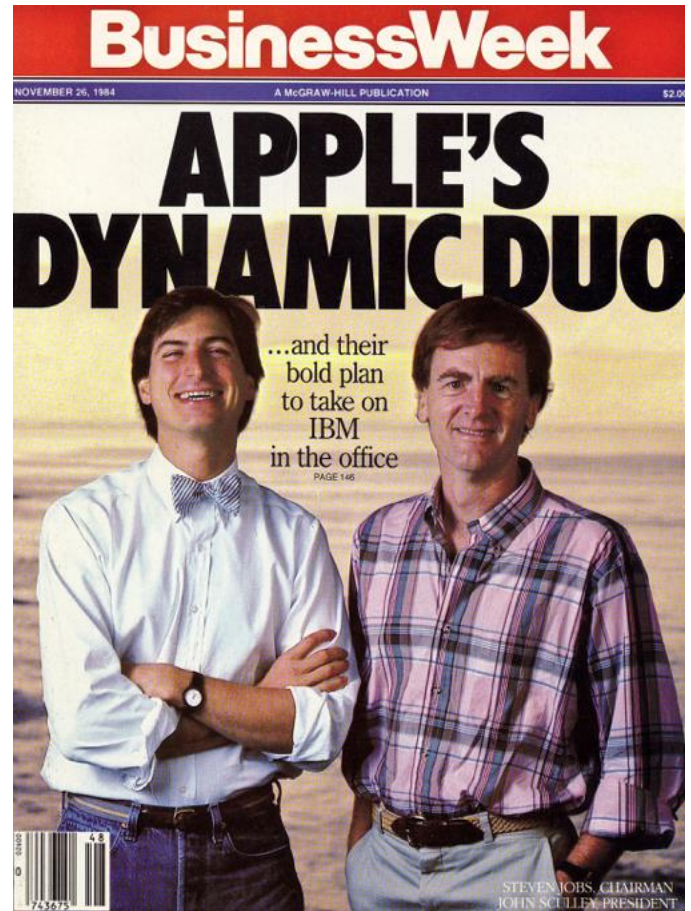**McKenna:** Yes. Bill Campbell said it. Bill had no problem speaking up and speaking his mind.

There was a *BusinessWeek* story at the time that showed a picture of Steve and Sculley, together as friends. So [their relationship] got into the news. This is what I was telling you before about the Apple story being played out in the public. It was like an afternoon sitcom, or a soap opera—from the day it started, with Steve out talking to *Playboy Magazine* and *The New Yorker*.

And his life started playing out in public. Everything that happened, even the revealing of Lisa being his daughter out of wedlock—that was played out in public, everything. And he wasn't happy about it. I have notes on that in my notebooks. But in fact, it did happen, and so this was part of that. It also kept getting leaked that people were unhappy, that there was a lot of conflict between these two sides.

The relationship between Steve Jobs and John Sculley was being played out in public

I don't think, at that point, they knew how to solve it. It was a little bit like at Intel, where there was the memory division, and the microprocessor. The memory division was supporting the development of the microprocessor for ten years, from the 4004 to basically the 8080. The 4004 was 1971, and the 8080 was 1980 or so. For almost a decade, Intel was looking for a market for the microprocessor, whereas memory had a solid market, solid growth, but was also being encroached on increasingly by cheaper, higher-reliability memory from Asia. So what do you do? And when do you make the decision? How do you transfer over? What's the risk of doing that? You don't get a simple "pick one." It's the fact that one is supporting you, and the other one is possibly supporting you in the future. Which one do you sacrifice, which one do you invest in? It becomes a long, intense discussion—and lots of them.

Hollar: What was Steve saying to you at the time? He looked to you for advice. He confided in you and was seeking your counsel. What was that period like between the two of you?

McKenna: Yes, certainly. Particularly when I was on the executive staff, I took off my hat as a vendor and supplier. I was a member of Apple's team. I had to take a completely non-partisan view toward the sides, which I think I did pretty handily. I didn't favor Steve's view or anybody else's. Privately, I felt that Steve

needed to make some changes to the Macintosh and make them more quickly than he was willing to do. He didn't want to make the changes quickly because they were expensive and would take some retooling of the factory. And again, I don't think his knowledge of the whole intricate process of retooling and of improving the performance of the Mac, and changing a lot of the things that were necessary, was there. I think that took a little bit of time for him to learn. But he was confident that he would. Steve never lacked confidence in his future and is totally focused and dedicated to his product and what's in front of him. He never gives up on it.

The other one was much more traditional. Even the people there were more traditional. I think Del Yocum came out of the traditional manufacturing mode, and these people were just producing more of the same. The next Apple II was smaller and more friendly and things like that. The Apple III was a failure. That's a whole other story. But the follow-on products after that were successful in the marketplace—were a little bit smaller and had better performance in them. And so, they were well-accepted into the marketplace. That balance just created a long discussion about how you solve that problem. People were asking Sculley to solve it. And I think John was reluctant to get in the middle of it.

Hollar: Why didn't John want to take that on? Was it because of his respect for and relationship to Steve?

McKenna: I think that was part of it. I think he didn't want to challenge Steve. I think he also knew that—it's almost one of these "which half of the child do you accept" things. One is keeping the numbers going, and you're a public company. So, he's ultimately seeing he has to be responsible for that. On the other hand, he believes Steve's vision, and Steve is a great salesman for his vision. I think that's where Sculley was caught. He wouldn't make a decision one way or another.

When it came to a head, it went to the board. Sculley took his concerns to the board, and they told him, "Look, you're the CEO. You've got to make the decision, and you've got to tell Steve he's not going to run the Mac division anymore."

John came into the executive staff meeting and announced it. I think he told Steve first. He said that he told Steve that he's not going to run the Mac division anymore, and if there were any more conflicts or fights he's going to be forced to fire Steve. He said Steve agreed to listen 75 percent of the time. Those were his words. That's Steve Jobs, right? I mean, that is just a beautiful answer—"Okay, I'll pay attention 75 percent of the time. But that other 25 is mine." And so, he didn't—he wouldn't—give up his little bit of turf.

The people in his group were totally loyal to him. I think he felt he could run them as a shadow GM, which I think he tried to do. And he tried to actually get people on the overall staff of Apple to dedicate their attention and work only to the Mac division.

Hollar: In your notes you describe a staff meeting where there's a kind of "him or me" discussion—where Sculley calls the question and asks each one of you sitting around the table your opinion about either Sculley or Jobs. Was it that same staff meeting?

McKenna: It wasn't "Sculley or Jobs." It was whether Steve should head the Mac division.

Hollar: Steve was in the room.

McKenna: Yes.

Hollar: And Sculley's polling every member of the staff.

McKenna: Yes. So, it was directly to Steve. And—

Hollar: And what did you say? I mean it's all in the record.

McKenna: Yes. I felt that Steve should not be the general manager—that I was for him being head of R&D, head of product development.

Hollar: And you had to say that?

McKenna: Yes. But I had told Steve that privately. I had told him privately that he could still be the driving force. It's the difference between management and leadership. You don't have to be a manager to be a leader. And I didn't want him to go because, first of all, Woz was gone. The other leader had gone, the other founder. At all the companies I had worked with, the founders were a great influence on the direction of the company.

I felt strongly that you had to keep the founders there in some way. Bill Campbell felt exactly the same way.

Hollar: And said so in the meeting?

McKenna: Yes.

Hollar: Had he said so privately to Steve?

McKenna: Yes. Yes, and neither of us coordinated what we were going to say because we didn't know the question was going to be asked. Both of us defended Steve in the sense that he really did have a vision for products and for innovation. But he needed someone to manage the overall process and make it more predictable—forecasts, for example, To be able to forecast how many Macs you're going to build next month became a real critical thing. At the time, it wasn't that way. It wasn't a systematic process. They kind of polled the field and said, "How many Macs do you think we can sell?" Then that was sent into the national sales manager. Then he sent it to a manufacturing manager, and everybody looked at it and then made their guess or corrected what was there. And then it ended up as a number. Whether it was high or low, nobody knew.

Hollar: So it had to be run as a product line. That's really what you're saying, right?

McKenna: Right.

Hollar: Which you had seen in Intel and any number of other clients.

McKenna: Dozens of companies, yes. Yes. And I mean going back to GMe, I was around the manufacturing line in that company. I worked in the building with the manufacturing line. At National, the manufacturing line was in the back room, and I visited their manufacturing plants around the world. So it wasn't as if this were new to me, but I wasn't in a position of trying to make a judgment for the company as to which way it could go.

Hollar: So, in fact, Steve didn't leave Apple at that point. I have a note here that, two months after that meeting, the two of you talked. He was starting to think about other things he might do, either within the company or outside the company. What was your sense at that point of what was going to happen?

McKenna: Yes, I think he took a trip I think to Russia. And—

Hollar: Ironic.

McKenna: Yes, of all things. Believe it or not, I think he was giving a talk there. They had given him warnings about what to talk about—don't mention the Bolsheviks. And I think Steve immediately starts out talking about the Bolsheviks. He did just the opposite of all the rules and regulations that they gave him. I was told that later.

They [Apple] were trying to get him away for a while. But when he came back, he was thinking about what he would do with his life. He did ask me if I thought he could become president of the United States without belonging to a political party. My reply to him was, "First, you ought to register to vote," which he had not. I think Steve was vitally concerned about politics, but I don't think he wanted to live with the down and dirty nature of the politics itself.

Hollar: Corporate politics weren't brutal enough?

McKenna: Yes, but he stayed engaged. I was president of the California Innovation Association started by Jerry Brown. Actually, Jerry Brown and I started it. Steve was on it along with Dave Packard. I think Noyce was on it, and a few other people. Its objective was to see how we can help make California a better environment for innovation. Steve was on it and attended political meetings. He was quite active in terms of support for candidates and even meeting with them and so forth. It wasn't necessarily around Apple or Apple products. It was around trying to create an environment where innovation can thrive.

Hollar: Did it still feel like to you—having been there from late 1976 to now 1985—like Apple was his company? Or did it feel like something else?

McKenna: No. Because of the two different product lines, Apple was beginning to split apart, and there were different teams of people. And actually, the different teams of people had different backgrounds in

the sense of the management. It really had become bifurcated as a company. You can't allow a company with a different fundamental core operating system to exist alongside another one in your company. I learned this later watching Oracle buy companies. If you buy a company that has one, you either have to figure a way to make them compatible, or you have to do away with one and let the rest of the company be absorbed into it. At some point, that was how I felt [about Apple].

But at that point, you couldn't tell which one [should prevail]. You didn't know about the future of the Mac and how quickly people would adopt the Macintosh technology because, again, you only had a window of success that was about that wide. As Gordon Moore used to say, "You never know when the window is half open or half closed." That was how most of us felt. Is the window open? Or is it closed? And how long will the Mac have to right itself and become a dominant standard in the industry? As we know, that took a lot of years. I don't think it would have occurred within the next year. So, that was the conundrum.

Both products stayed alongside each other for a while. Gradually, the Apple II faded just by product line and by Apple not giving it the attention that the Mac got. After Steve left, Sculley and the team of people that were there just improved the Mac enough to make the improvements that the marketplace was looking for. That allowed it to have that little blip. It did well for a while, but then, again, their vision beyond that was foggy. And so it never went anywhere.

Hollar: How much longer did you stay in that role on the executive staff after Steve left?

McKenna: I was on it through most of Sculley's presence there— probably about five years. The conflict then was really the struggle to get people on the board to get John to somehow or other have a vision for where the company should go.

He was, early on, focused mainly on stock price and revenue and the IPO. And from the perspective of a person who was responsible for promotion—and I don't know how soon this [oral history] will be [public], and I know John will react to it— but I always felt that John's feeling about Apple and himself was how much the media coverage reflected on him. They define themselves by their reflection. I know a number of people in the industry that define themselves by the media's reflection of them. They aren't able to actually stand up on their own. People like Steve and Bob Noyce didn't care what the media said. They knew what they wanted to do, and they kept pursuing it. Oddly enough, I was doing all that—but I really respected the people who basically didn't need it. You had to, because they had a mind of their own.

Hollar: What was the media's reaction to John in those years?

McKenna: At first, it was very, very good. John was very scripted. And—

Hollar: And was good at being scripted?

McKenna: He was good at being scripted, but not necessarily having any innate knowledge of the computer business. That always was there, and it was always his fear, I think, although, he wouldn't express it overtly.

Hollar: That must have presented a lot of issues for you as the one who had to get him through this period as the CEO of Apple.

McKenna: Yes, because a lot of the issues that arrived were problems of the press—it sounds familiar, doesn't it? That then I get called in to try to fix that. And you don't fix it. It is what it is. So that creates some conflicts, although, on the surface we got along.

My friend Bill Campbell was also very honest and direct with me about what he heard offline. Bill made me realize that I really ought to probably step aside and not get into those meetings. John would ask me the same questions as the rest of the staff. Also, as you know, I took a lot of notes. I was asked to stop taking notes. John said to me once, "You know, Regis, all this is confidential." I'd been working for Apple for ten or fifteen years at that point. Bill Campbell really chastised him when he said that. And so I think Sculley was uncomfortable with me there, and I felt it was time to go.

Hollar: Meanwhile, your business was growing just as quickly. And you had just as many big customers, more than ever. Right?

McKenna: Yes.

Hollar: Was it a relief for you when you finally were able to relinquish Apple and get back to the core of RMI?

McKenna: No, Apple remained a client, and a good client. I had sold the advertising to Jay Chiat, and I did that intentionally. I picked Jay. I was doing a substantial amount in the advertising business. I think it was over $20 million, maybe $25 million, just in advertising. That's multiplied by the actual value of the ads. But more and more people were clients and in diverse areas.

As I mentioned, almost exactly the same time that I took on Apple, in 1976, Genentech came onto the scene. I knew the two founders, or I became friends with them. One, Bob Swanson, was out of Kleiner Perkins. He was a partner there. The other, Herb Boyer, was a scientist at UCSF. We didn't know each other at first, but it turned out we went to the same college together. We were only, I think, a year apart. Once we found that out, we got along very well.

I had Spectra-Physics, the laser company developing a low-cost laser that ended up being part of the scanning system for retail stores. They also stayed in scientific instruments. It was a fascinating company. It was a really interesting company. Sam Collela was the president of one of the divisions and is now a really prominent venture capitalist here in the Valley. And he and I worked together on trying to bring lasers into new markets. We brought it into agriculture and into construction and places like that. We worked with the company Acuson, which created the first sonograms for use with non-invasive or non-harmful medical scanning. That was also out of the Valley—Kleiner Perkins. Tandem Computer—I could go on and on, but we had a lot of customers or clients. And it kept growing. And we got clients then to start developing in other areas of the country and also in Europe.

Hollar: We're going to talk about Genentech next time. I think that's worth going into some detail on because they were every bit as important and successful as your relationships with Intel and Apple.

McKenna: Yes, I mean a lot of the companies we worked with were trying to bring new technologies to market. And that's why they came to us. They needed somebody that could understand the business of they were in.

I had hired a lot of technical people, mostly out of the trade magazines, the technical editors and journalists who were engineers—good writers who had gone to journals. While the journals were mad at me, we doubled their salaries. They made pretty good money under us. We got people who really you could bring into a meeting and who could ask questions at the engineering level. And I learned a lot from them.

We had one fellow, Rob Brownstein, who used to actually give courses at my company on basic electronics and engineering. He developed it into a video series. That paid off because the people began to learn, and educating themselves was an important thing—getting to know the technology business, because if you can't speak the language of your client, then they weren't going to be much interested in you. You then turned yourself into a vendor, and it became a commodity and a price war.

A senior guy at Intel once said to me, "We did some surveys out there, and we found out you're the most expensive marketing company that's out there." And I said, "So? Go find one of the other ones." I said "go do it" because they wouldn't have been able to find anybody that could have spoken their language and had as much history in the company. They eventually just took it in house—but the downside of that is that you don't get much objectivity. The people inside are not going to challenge things because their job is on the line.

Hollar: It took them a long time to do that, too, didn't it?

McKenna: Oh, yes. It took a very long time. They had three different people at Intel [doing it].

Andy Grove liked control. Andy and I were really—I thought we got along really, really well. We met a lot. We became, I think, fairly good friends. We could have our differences. I would argue with him, more so than I ever did with Steve Jobs. Andy tolerated me, and I had to tolerate him, because they produced a lot of money. Not just for that, but because Intel was such a significant force in the industry. But it took him, I think, something like seven years to get even the first semblance of taking on functions that we had been doing. That was starting somewhere about 1988 or '89. They brought us back in later on to help with the Pentium. They also hired some of the people that had left me. So, we had, I think, a long-term influence on Intel.[5]

END OF THE INTERVIEW

---

[5] [Editor's note] The balance of Regis McKenna's oral history with respect to Steve Jobs and Apple continues in part 5.

Oral History of Regis McKenna, Part 5 of 8

Apple After Steve Jobs,
And Running a "Learning" Company at RMI, Inc.

Interviewed by:
John C. Hollar

Recorded October 5, 2018
Mountain View, CA

CHM Reference number: X8675.2018

Abstract:

This is the fifth transcript from an eight-interview series with Regis McKenna, whose pioneering work in technology marketing and business strategy contributed to the success of hundreds of companies for more than five decades. McKenna was a talented, innovative marketing professional from the earliest days of the technology revolution in Silicon Valley. He came to the Valley in 1963 at the age of 24, worked in marketing in the early semiconductor industry, and then established his own company, Regis McKenna Inc. (RMI), in 1970. McKenna became a globally sought-after strategist and marketing expert, and RMI opened numerous offices around the world. His personal and professional relationships at RMI included Steve Jobs, Robert Noyce and Andy Grove. His more than 700 clients included such legendary companies as Apple, Intel, and Genentech. He is the author of five best-selling business books and one of the most reprinted articles in the history of the *Harvard Business Review*, "Marketing is Everything" (1999). McKenna was recruited to many outside boards and advisory roles, among them his service as a founding advisory board member of the Computer History Museum's Exponential Center.

The interviews took place at the Museum between June 13, 2018, and January 15, 2019. The interviewer was John Hollar, President and CEO of the Museum from 2008 to 2017.

This fifth interview session took place on October 5, 2018. It covers Regis's experience with Apple under CEO John Sculley and the RMI client base in the 1980s and 1990s. The time period covered is roughly 1985 to 1999.

* * *

Hollar: We're in session five of the Regis McKenna oral history today. We're going to begin with the period at Apple, Regis, after Steve Jobs left and John Sculley was now CEO. You're still on the executive staff. What did you observe then, and how were you working amid all of this change?

McKenna: Well, the executive staff actually became more prominent at that time because people, it seemed to me, had to be more willing to speak up—to have their own voices heard and to actually take some leadership. I think most of the people on the executive staff, felt that they could be the one to run Apple. And I think probably all of the others would have disagreed with that.

Hollar: Is that a natural thing, by the way? You've seen a lot of executive changes over your career. Is it the case when a CEO departs, a lot of people step up and say, "Well, finally my ideas are going to come to the forefront because I really know how to run this thing?"

McKenna: I'm not an engineer, but I have a strong belief that the people who run a technical company have to have some technical bones and some deep experience in that area. That had been the problem at Apple all along—having two different operating systems in the company, two different products that actually competed with one another, and the need somehow to bring those together even if you saw it as

a long-term goal. I'm meaning the Apple II platform and the Mac platform. You just can't have those under one roof. Each of those groups was fighting for their autonomy.

The one person that wasn't doing that was [Marketing VP] Bill Campbell, because Bill was trying to bring some rationality and sanity to the organization. He didn't see himself, at that time, as capable of running it, though he probably could have. Even though he had non-technical bones, he educated himself, and he was a very bright guy. Some of the people who later on became more influential in the company were the financial people, the HR people, and people like that. And they were influential. In particular, [Sculley's successor, Mike] Spindler listened to those people more, I think, than he did the technical people. That became an issue later on.

I wasn't on the executive staff when Spindler was president. I had resigned before that, largely because we [RMI] had a business. And I was on the Apple executive board at a level above the people who my people worked for. It always creates a problem, I think—and I did create that problem for myself in a number of instances—by going on the boards of companies who were our clients. Although I never favored our company, and I've even been on the board of a company where they fired us—and I agreed with them. So, I didn't see myself as facing a conflict, but it's certainly perceived inside, and the people underneath will work against me and against our company as a result of it. So, I saw a conflict.

John, I think, also felt he didn't know where my loyalties lay. Like some people, I think John felt you had to be loyal to him. So, there were always questions. In one meeting, as I was taking notes, Sculley reminded me that the meetings were confidential. Bill Campbell spoke up and said, "He's been here for five years— he's been doing this since the beginning of Apple. So, why are you asking that question?" I think it was [Sculley's] way of saying he wasn't comfortable with me in the room. That's why I resigned.

Hollar: When you started talking about a technical company needing to be run by somebody with technical bones, John Sculley was not that person. What did you observe at that point?

McKenna: There's one story that I can probably tell. I felt that Apple had an opportunity to build alliances with a number of other companies. IBM had dominated the marketplace. It became the standard. But there were a lot of computer companies out there that didn't make a desktop, didn't make a laptop computer, didn't make a personal computer, but they were building minis or mainframes.

I actually made a list of them and presented them at the staff meeting at one point. I have that list. It's in my archives at Stanford. It was people like Tandem, Digital Equipment, UNISYS, Sun, other types of companies who were not necessarily going to compete with Apple, but would certainly like an alliance where you could even OEM their products or skid it into the corporate world. I felt John ought to meet with some of these people.

I got a call one day from Gene White, who was the president of Amdahl, and that was one of the companies that I had on my list. He said he had been trying to reach John Sculley for months, and he never returned his calls. He said, "You know, I compete with IBM. And I can call the president of IBM, and he returns my calls." He was fairly upset over it. He had been around the computer industry for a long,

long time. So, I went into John and I asked him why he was doing that. And he said, "Well, do they know that I'm not technical?" So immediately I knew he had some sort of feeling that he had to have a technical background or some knowledge of the technology.

The second person this happened to was Jimmy Treybig at Tandem. Jimmy had been trying to get in to see John, and the same thing happened. I encouraged Jimmy to try again, and I went in and saw John, and John again said to me, "Does he know I'm not technical?" And I said, "He doesn't care. He's not here to talk about operating systems and the physical nature of the technology. He's here to make some sort of an agreement—to get to know you and let the engineering people and the marketing people and the other people worry about how to create the alliance."

Sculley asked me to be in the meeting with Jimmy Treybig, and so I was. The first thing he said to Jimmy Treybig was, "I'm not technical." I don't know if you've ever done an oral history with Jimmy, but he's a good old boy from the South. He says, "Oh shit, neither am I." He has like a PhD in engineering. I mean he was a very technical guy. But he had more of an idea how to build relationships, and to do it on a CEO-to-CEO basis, rather than on the basis of "I'm an engineer, you're an engineer." But [not being technical] was something that haunted John, I think.

Now, I don't want to detract from John. I think he was doing the best he could. But I think the board brought him in because they saw John was president of Pepsi, and they were looking for that sort of marketing aura. He could bring that into the company. But what Apple really needed was somebody who could think about how to bring people together through the technology that allowed them to have one dominant architecture in the company. Bill Campbell and I talked about this and felt that Steve would make a good head of R&D because he had that vision. It was the Mac architecture, but he saw it as eventually taking over the company. And so that was really the nature of it.

It just seemed to me [Apple] was getting into more and more conflict. They already had enough people on the board who felt they should be the ones to call the shots. I don't think I ought to get into mentioning all their names.

Hollar: No, I think that's right since so many of them are still around. But I would like for you to talk a bit about the board dynamic vis-à-vis Sculley during this period after Steve left, and this search for leadership and strategy and a path forward. You described one important collision within the company— these two very different platforms—that wasn't reconciled. There were others, too. And you said in the last session—I think the quote was, "The board struggled to get John to somehow have a vision for where the company should go." What did you observe in that period around that issue?

McKenna: I think there was ambivalence about what to do because I don't think they really had a technology strategy. Where are these operating systems going? How do we implement that? It wasn't so much that they couldn't say it. They didn't know how to implement it without creating a lot of personal conflicts in the company.

Certainly, some of the divisiveness in the company was created by Steve because he would put his own group first—particularly the Mac group. He fiercely fought for keeping that group apart from the rest, and I think that just sustained itself. Now, there were things that could be done, which were done, to improve the Mac, to improve the process, to come out with new products that had the next generations of memory and processors, to improve the operating system, which was certainly there in patchwork form for many years. And it did bring new products to the marketplace. Certainly in at least the first couple of years when Sculley was there, it brought new revenues back into the company.

John was able to go on the road, but I think people found that it was very difficult to ask him questions from a technology standpoint. He also felt ambivalent about doing that. I think he felt uncomfortable in that technology world. I'm sure he will say he didn't. But I think other observers also would make that observation. And there are a lot of people in the company—high up—that I certainly knew well who would say that.

Hollar: What was it like when John Sculley's capacity to lead the company was eroding and eventually there had to be a decision that someone else needed to come in?

McKenna: I think John himself pretty much became overwhelmed with the job and was trying to look for some kind of a succession plan. They had brought Spindler back from Europe, and he was running international. Spindler talked a really good game. He had a good technical sense of where things were going. He could stand at a board and draw out a future strategy, and it would overwhelm you. He fell short in how you implement it, and not making headway.

I think John had this, again, ambivalence about the job, whether or not he was in the right role, and should he leave. I think at times he was in and out. He would talk to other people about succession and then pull back. It became really unbalanced for a time.

Eventually, the idea was for him to become chairman and for Spindler to take over as president. That never worked well either, because Spindler complained about John. And I'm sure John complained about Spindler. So, it became, again, one of these internal battles.

It's a miracle that Apple survived, because it had gone through so many of these contentious issues within the company, and you can understand how it was a startup. They could be that way. They called themselves the pirates, and they were sort of a rag tag group of people and put together things from their own know-how—but not in the sense of what I think had to be a long-term architecture.

I can say these things because I worked with other companies. At the same time, I was working very closely with Intel, and Intel was always moving these things very methodically forward. They thought about—do they stay in the memory business? Do they go with the microprocessor? If they're in the microprocessor business, what are the next three, four, five generations going to look like? How do we get to those five generations? How do we manage ourselves out of the memory business and really focus? That was contentious in Intel as well, but you never heard about people really being upset and the whole management being in turmoil as a result. I used to say I spend my mornings at Intel and my

afternoons at Apple, and so, you could see this just constant difference in management styles and management process.

Intel had failures, lots of them. But they never let those failures overwhelm them. They basically were always pushing to create that next generation of product. They never let them [failures] crush them as a company or create unresolved conflicts internally. And yet there were conflicts. There were lots of fights. I remember well the memory people were really confused as to "why are we putting all this development money into microprocessors when we're the mainstay business." And yet, by then, lots of companies, particularly the Japanese, were into the memory business and were making higher-quality memory and higher-quality devices.

Actually, I used that as a teaching tool. I would say, "Don't forget—people like analysts and journalists go into your company, and they go into your competitor. And they're making these mental comparisons about who you are and where your technology is going. They're not just taking down what you say and repeating it by rote." Somebody like Ben Rosen, who was a physicist, and an analyst as well, could analyze not only the company but where they're going. He would put it into some perspective. So you begin to get more and more people on the outside who could compare and set a value upon various management styles and processes. And of course it was a teaching tool for myself by going to these places and seeing this happen.

I mentioned that Genentech started at roughly the same time as Apple. I never saw that kind of thing there. We were dealing with PhDs in science and biochemistry and so forth coming out of UCSF. And [co-founder] Bob Swanson, who was, I think, a chemistry major, spent most of his time in venture capital. It was a company that knew its direction, had moved gradually forward. The board helped them figure out they needed someone from a financial standpoint. They methodically thought about how to create a management staff that could sustain the process and the vision of the company.

I don't think Apple did that. It was much more ad hoc. It took many years to come back. And I think that did, by the way, come back in the late '90s when Steve came back because I think he had more experience then.

Hollar: And understood it.

McKenna: And understood it. And I do think that Pixar's management and style and professionalism rubbed off a lot on him.

Hollar: There's one intermediate point in there that I want to get to with respect to Apple. And that's the arrival of Gil Amelio, whom you had known in another setting.

McKenna: Gil followed Mike Spindler. Mike had personal issues. His wife was very ill, for example. They used to call him "Diesel"—somebody that had no emotion. But Mike worried a lot. He was obsessed with the overwhelming power of Microsoft, really obsessed with it. You could sit down at lunch, and he'd never stop talking about Microsoft. He came to my office quite a few times to vent. And the conflicts with Sculley

were overwhelming to him. So he didn't have a clear view of how to manage the company. And, as I said, at the time the head of HR and the head of finance sort of directed him and made decisions about what the company should do.

That's where, in my notebooks, I show the split [in direction] that I had shown them. One was towards IBM. The other was to be a Sony. I said they had to make that kind of decision because it would mean how they staff, how they hire, how they market, everything.

Hollar: You posed that as the strategic alternative—either be more like IBM [i.e., the enterprise] or more like Sony [i.e., consumer].

McKenna: Right, and that's early on in my notebooks from the Apple staff meetings. I even drew a little triangle, and I put down, "What are the requirements to get into either one?" And of course, this was before the internet and before a lot of those kinds of changes. It was sort of a visionary thing. Sure enough, when Steve came back, he was quoted in *Time Magazine* as saying, "We want to be the digital Sony." Fortunately, the internet and modern networks solved a lot of the issues of getting into the enterprise, which they struggled with.

Gil Amelio came on. He had been the president of National Semiconductor. I didn't know him in terms of working with him as management. I knew him because of my Semiconductor Industry Association days. He was at, I believe, Rockwell in L.A., and he ran their semiconductor operations. Noyce and he and I were the marketing committee for SIA at the time. Bob would fly down in his jet, which he liked to do, and I would go with Bob. We'd have our meetings down there, and so, I got to know Bob better.

When Gil came on the board of Apple, I thought it was probably a good move because he'd been around. He'd been at Rockwell. He'd been at National. I didn't spend any time doing anything for National while he was president. I did meet with him a few times, had lunch with him a few times. But that was usually over some SIA issue, not about the company. When he came in, though, it was clear that Apple was declining, and not only in revenue.

He brought some people with him that had no sense of—I had known those people for years. He brought in some people from IBM Systems and so forth, and also people out of the semiconductor industry, that just didn't have an idea of what the personal computer business was about. Some were from out of the computer industry. They all wanted to be miniature Steve Jobs, I mean getting up at their conferences with black turtlenecks on, and jeans. These were middle aged—this is like having the Hell's Angels dress up in a tuxedo. I mean it was that contrasting to see them there trying to imitate Steve. These were not issues that could be solved with superficial kinds of presentations. I think they really fumbled on what to do and how to meet the marketplace.

Now, again, on the other side, the Wintel platform was just running rampant. It was controlling the personal computer industry at that time, and the clones. So they were up against that, and there was no long-term strategy as to how to solve it.

We were pretty well into consulting at that time. I made an appointment with Gil, and went in and made a presentation to him on how to fix Apple and what they should go about doing. And—

Hollar: And he requested that?

McKenna: No, he didn't request it. I went in because a lot of people from Apple and from other places were having lunch with me, or talking to me, and saying, "Something ought to happen at Apple because it's dying." There was just no pizzazz in the company any more in terms of products. The products like their pen-based and voice-based systems—all these were failing. Newton and things like that had failed.

Once Steve left, I even had people calling wanting to have lunch with me who said that they felt that they could come in and run Apple. I had lots of emails from people wanting an introduction. It seemed that two things were happening here. One was the board was not close enough to management to know what was going on, or were willing to let it ride and see if somebody could solve it, because the board wasn't acting either. But I put together a presentation that—

Hollar: Let me just—before you talk about the presentation— I just think it's very interesting that this is an important dimension of your career in Silicon Valley. You were kind of the father confessor to people who would come to you and seek advice and give advice. You were the glue that held a lot of these relationships together. How did you handle that when people would come to you on very important issues like the future of Apple, and they were making these suggestions and possibly even believing you might take this to the board and give them some advice?

McKenna: Well, it depended upon who it was. I continued my lunches and dinners with Bill Campbell over the years. And certainly, he and I would always talk about what was going on there because he, too, was getting that same feedback. Spindler remained in the area, and he would call, and we'd have lunch and so forth.

Hollar: Would he be seeking that same kind of insight?

McKenna: No. He was basically just venting. In fact, I think there was a point at which Bill and I had lunch with him, I think, and it was all about Microsoft. And so, we left kind of saying, "I think we're not going to have any more lunches." I don't mean that in a bad sense about Mike. I actually sort of felt sorry for him because he had a lot of issues pulling on him from his family side. But at least he had some strategic insight as to where Apple should go.

I don't know what Amelio was trying to do, but I don't think he had the vision of Apple being a digital Sony or those kinds of things, nor do I think that a guy who had spent his whole life and career building semiconductors had the capability of doing that. So, different people were calling me or feeding me emails or whatever—

Hollar: Some whose opinion you clearly respected and—

McKenna: And it would be a topic of conversation with almost anybody you'd meet in the Valley at that time. What's happening at Apple? And because I had a career at Apple, people would ask me.

I formed an alliance with my firm and Gemini, the consulting group. Some people from Gemini came to me and said, "Something ought to be done at Apple." And so we sat down together and came up with what could they do. We spent an afternoon on a whiteboard doing a session on it, just for our own mental health, I guess. And out of that I wrote a plan as to what they could do in 10 or 15 different steps.

One of the first was profitability. I strongly feel that the best positioning tool that any company in the technology business has is being profitable. If you're profitable then the world will look at you and say, "Okay, you're doing something well and right." If you're not profitable they want to know what's wrong, and the CEO gets put on the spot. The company also becomes very vulnerable when you're losing money. It's when your competitors start hiring your people because they figure you're vulnerable. It's when your competitors start going after your customers because they know you're probably not going to be a long-term presence in the market, so services begin to fade. So profitability was one of the top things I wanted to go to. You have to turn Apple profitable, however you can make that happen. That would be, probably, to cut people, maybe even cut product lines. But the idea was to do a complete evaluation of your assets and liabilities first.

Number 15 I remember well. I said, "Bring Steve Jobs back into the company and give him a strategic position of helping to straighten out the company and set his vision." I don't think he thought about that, but that was number 15.

Hollar: Did you remember how he reacted to that?

McKenna: He didn't react much at all to the whole thing.

Hollar: You took him through point by point, all 15 points.

McKenna: I gave him a presentation, probably about two hours in his office, point by point. It involved building alliances with other companies out there and learning from them, that sort of thing.

I think he also relied heavily on his staff. And there was a real arrogance, I think, among his management. I learned later he had developed that at National—we know how to do this thing and nobody else does. And they sort of were, "Go away. Go away. Go away."
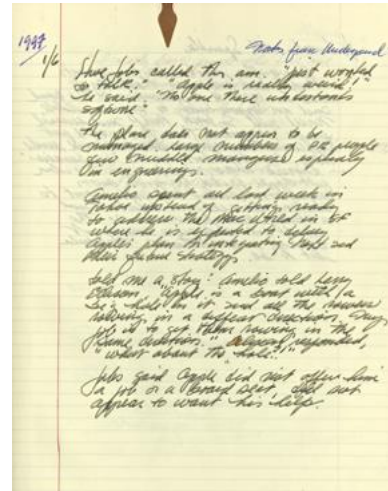
Hollar: So the arrogance was, "Thank you very much for your opinion but we know how to do this?"

McKenna: Yes, if not in those exact words. It seemed rather hopeless.

Now it turns out that, just following that downstream, Amelio did instigate buying NeXT, because he had talked to several others, including [Jean-Louis] Gassée's company. He had a company [Be, Inc.] that was developing an operating system, BeOS, and I know Gassée was hoping to sell that operating system to

Apple. It turns out that Steve—people would encourage him [at NeXT] to get out of the hardware business and to get into the software business. This was an opportunity to do that.

So that deal [the NeXT acquisition] was cut. Steve then went over there and spent, I think, a morning with them, and I have a full page of notes on my meeting with Steve on that. If I look my conversations with Steve about the meeting, they said, "Thank you for the software but we don't need your help." And those were the exact words.

Hollar: I remember you talking about this, and maybe even quoting your notes, where Steve contacted you after he first encountered Apple [again] and said, "It's a pretty weird place."

McKenna: Yes. He said that there were more PR people than engineers, and I believe that. This is, again, where the reflection is more important than the reality: As long as the media thinks we are doing well, we are doing well. That's just hubris. The media doesn't create who you are. It reflects who you are. That was certainly a living lesson right there.

McKenna notebook entry dated Jan. 6, 1997: "a weird place"

Hollar: What were you able to tell him about what you had observed and what you felt needed to happen?

McKenna: I had talked to him about what we had presented to Gil.

Hollar: You took him through the 15 points?

McKenna: No, I didn't. That was a phone call. He called me and told me about the meeting, and how he said they don't appear to want help. They didn't offer him a job. They didn't ask him to be a consultant. They didn't offer any position to him at all.

I think he left very sad, because I think Steve always felt that if he got in, he could take control. I think he was just so far better equipped to do that in 1997 or '98 than he was in 1985. He had gone through NeXT and putting that system together with the importance of software, and then Pixar—the professionalism of the staff and the management and how they did things. I think all these were lessons that he learned—great observer. He would absorb everything from the outside world, and I think he synthesized that into a new vision for Apple. I think that was in the back of his mind.

In the meantime the question was—how does he do it? There were conversations, I think. Larry Ellison of Oracle said that he had talked to him about how to do a buyout of some kind, or buy the company, raise enough private capital to do that. I don't think Steve wanted to do that. I'm not sure why, but I don't think he wanted to do that. I think that would've left, again, a board that he didn't control, and I think he wasn't going to let a board control the company any more, if that happened.

So he had that meeting, and things continued to deteriorate at Apple. Then about three or four months later I got a call from him, and his first words were, "What do you think about my new board?" Bill Campbell was on the board, his long-term friend and, actually, neighbor. Bill would be blunt and honest but he would never do anything to hurt Steve or Apple. Everything Bill did was in good spirits and in pursuit of truth for Apple. I think that was an absolutely super addition.

Steve asked the other people on the board to resign. He didn't say anything negative. He didn't say, "Gee, I just don't want you around anymore." He basically told them he wanted to start fresh— he wanted to start Apple again. I think that would make a really interesting conversation. How did someone who had no equity interest in the company, didn't buy it for cash, sold something to them and, essentially, between that first conversation that I recorded and the second one, come in and create a new board and a new vision for the products? Whatever he did, and however he did it, though, I wasn't surprised. It's just that I think it was a miracle to lack the control over what was happening but to make it happen.
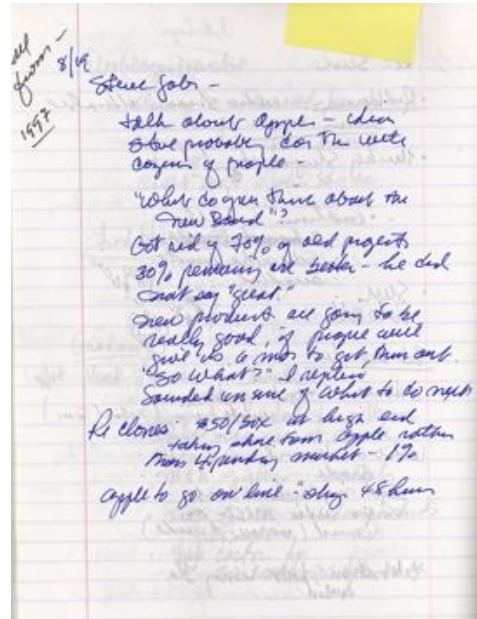
McKenna notebook entry dated Aug. 9, 1997: "What do you think about my new board?"

Wired Magazine, June 1997. Image courtesy of John Plunkett, founding designer.

Hollar: You weren't surprised?

McKenna: No, no. I wasn't certain at all that it would be successful, but not surprised that he was able to take it over. Steve could talk the arm off a chair. He was quite persuasive, and he did always have a vision for where the company was going. But I don't think anybody understood what he had absorbed over the last eight years and was actually ready to begin applying.

In fact, I had another long phone conversation with him in which he told me about cutting the product lines back, of focusing on just a few areas within the company—especially the laptop and the iPod, which would become the iPhone later on, and cutting out all of the rest.

Apparently under Amelio they had something typical of IBM where they had a lot of teams doing the same thing and competing with one another with projects. Steve said I don't want my teams competing, like the Apple II and the Mac. He wanted everybody working on the same page, working together and having a vision for

where they're going. That settled a lot of problems within the company. That's why they had such retention of people, because now they had a vision in front of them and could follow that.

He said there were a lot of good people at Apple, and he was surprised that they stayed—and it was heartwarming, to say the least, when he asked them why they stayed, and they said, "Because we bleed in six colors." That was the original Apple logo. He had instilled that within them early on, and I think they wanted to continue along that path.

When asked what he would do with Apple, Michael Dell said, "Close it down and give the money back to the shareholders." 1997

Hollar: Even though you didn't have the same kind of relationship at Apple after that, you and he stayed in close touch, didn't you?

McKenna: Yes. We had lunch from time to time at NeXT. I went to his product launch in San Francisco with him. I wanted to stay friends with him, and I think he wanted to stay friends with me. He would call me, and we'd have conversations. We had conversations about his launch of the NeXT product. He knew it was going to be delayed, and we had a conversation about how long do we have that delay, and what would happen if we delayed it beyond certain points, and those kind of things. But it was just to keep the conversation going, and we did over long periods of time. When he went back to Apple, I had lunch with him over there a few times.

Hollar: In the cafeteria?

McKenna: Yes, in the cafeteria, and learned all about how he trained the sushi people in Japan before he opened the sushi bar at Apple. Like Steve, everything he did, he tried to get it perfect. So he sent the whole team of chefs over to Japan for training in how to do sushi before he opened the bar.

Hollar: Very typical Steve Jobs story.

McKenna: Very typical Steve Jobs. He applied that to everything in the company, and he gave it a vision.

People think that after he went back Apple immediately jumped into the spotlight, but it didn't. It took about two to four years. Again, one of our conversations was—we have a lot of great products ready to launch if people will give us time. He told me how they were going to go online, and that they were going to ship products within 48 hours. That sort of thing. So, the plans were evolving, and we would talk about that. I wasn't in a position where I had any consulting advice to give him. I'd ask questions, he'd answer, we'd go back and forth. So, it was more like two friends, and I wanted it on that basis. I even said that to him at one point.

He did ask me to come back, and I said no. I basically said I'd rather be friends, and that's how we kept it. In fact, he asked me to do that twice when I helped him on the iPhone and, again, I said no.

Hollar: Talk a little bit about your involvement there, too, Regis, with talking to Steve directly about the iPhone 4.

McKenna: I had one, and I didn't have a problem with my phone, but if you did cover up that one part of the phone when you held it, it would shut off.

Hollar: This was the issue with the antenna around the outside of the phone.

McKenna: Yes, and they called it "Antennagate."

I got a call from Steve, and he was actually in Hawaii with his family. He said he was going to fly back and could I meet him on, I think it was Monday or something like that, and I said sure. He basically called together a meeting of some of the people from Chiat who were still working on his account. He had his marketing people there, and some of the engineering people. And we had a meeting in his conference room, and his son, Reed, was there. He wanted him to observe it.

I asked for the data. I wanted to see what the data had to say, because I knew Apple—they had collected a huge amount of data from all the users and all the people that had complained, all those who wanted returns on the phone, and so forth. The iPhone before [the 4] was actually worse than that phone. So it was really a relatively minor issue to the consumers that were buying it, from my standpoint. I first advised him to just let it go. I said, "It'll fade away, fix it." He didn't want to do that. He said, "No, we've got to address it." I said, "But there are only, really, a relatively few people that are making noise about it. You may be making a bigger issue." We talked about that in the meeting.

Most of the other people were telling him to come out and apologize. They really wanted him to put his tail between his legs and go out there and be very humble and so forth. I said, "Don't do that. I don't think that's you. I don't think that's what you should do. And I don't think the data calls for that, quite frankly. I think you do tell people that technology products are never born perfect, that they will improve, and they're constantly being improved." And he used that line, actually, when he talked. Basically, he said, "We will address the problem." They gave you a little protective band that you put around the iPhone. And, he said, on the next generation, as soon as we can, we'll change it. They had all their antenna people working on it. It solved the problem and it passed.

But what happened was, of course, once he went out and said these things, they [consumers] didn't lose confidence in the company by saying, "Oh, here's a big failure." The president of Microsoft at the time said this was going to be a failure, this product. And it wasn't. It still continued to sell. The next generation sold even more. It had an opportunity to be a hiccup, but it wasn't. I didn't think it would be a long-term disaster.

Hollar: I think we've finished with the Apple session now. Are there any final thoughts that you want to add?

McKenna: Just that I had an opportunity to meet with Tim Cook after Tim invited me over to lunch. I met with him and his executive staff, and we talked. Tim had just come on board. He told me that Steve said, "Don't ever ask yourself what Steve Jobs would do." That was Steve, and I think that was really wonderful. It instilled a great deal of confidence in Tim.

Tim's background was superb. I always felt that he really made Apple, because his logistics knowledge and implementation of the logistics systems in Apple made everything. They used to even want to make their own power supplies and things like that. Tim basically got rid of manufacturing and sourced everything, all the components. But they retained quality control on everything. They controlled the design. They controlled the architecture. They controlled the quality on all the parts. And that was Tim, plus then being able to supply the stores and customers with the product from birth to death. I'll say from birth to shipment. They managed every little aspect of it.

Tim's, again, very much like Steve in his precision and his knowledge and his real refinement of quality. I think people overlook that entirely because he doesn't make the presentations the way Steve did, and he doesn't try to. But he brings more people in to do it. And sitting in a couple of his staff meetings since then, I've seen he looks to his team and he delegates, and he questions and he takes all kinds of inputs. But he's as precise as Steve was, I think, in execution. So I think he's just been super.

At the time, I told him, I just said, "You're gonna do great." And he said, "I hope so." It sounded a little bit like, "I don't know yet." And he didn't, because the world was really beating him up quite a bit. All he could do is put his head down and move forward and keep showing them, and he did. I think he's added more value in the company than any single leader that they've had, including Steve. So I think that particular succession was Steve's choice, and a good one.

Hollar: You've seen the birth and the growth of such a large number of iconic companies in Silicon Valley who've been able to sustain that excellence over 40 years or more. Do you see, in the culture and the DNA of Apple, a company that you think will be able to do that in the same way Intel and others have? Are they singular as a company?

McKenna: I think they are. I think they've built a deep research operation within their organization, and that, unlike other research organizations that I had experience with, like Xerox and Xerox PARC and even Varian and HP, they have a sustaining R&D flow that goes up into productization in a wide range of areas. I know that not because I know something inside Apple, but I know a number of the vendors. I know companies that want to be vendors who have gone through the process. It's in multiple areas and it's across everything.

Look at their processor development. Their new watch has six billion transistors on the processor. That was their design. They've got expertise that goes well beyond a phone. It's not a phone anymore. It's a medical device. It's a communication device. It's your history. It's all sorts of things. To be able to build the electronics in it and to design those electronics from within Apple and control that intellectual property, they're making processors that compete with Intel.

Hollar: So, you believe the prognosis is good?

McKenna: Yes. Steve once asked me, "Will we ever be bigger than Intel?" And I thought they would be, because they were building an end product where Intel was building a component. And I said, "Usually the component companies are not as big as the systems companies, just because of the nature of the products."

Company	2000/2001 Rev ($ Millions)	Company	2007/08 REV($ Millions)	Company	2015/2016 Rev ($ Millions)	Company	2017/2018 REV($ Millions)	Founded
HP	$48,253	HP	$118,697	Apple	$234,988	Apple	$239,176	1976
Intel	$29,389	Cisco	$39,575	Alphabet	$74,989	Alphabet	$119,855	2015
Cisco	$12,154	Intel	$37,586	Intel	$55,355	Intel	$62,761	1968
SUN Micro	$11,726	Apple	$33,038	Hewlett Pac	$51,778	HP	$53,889	1939
Oracle	$8,827	Oracle	$23,630	HP	$49,708	Cisco	$48,096	1984
Apple	$8,134	Google	$21,796	Cisco System	$49,589	Facebook	$40,653	2004
Seagate	$6,802	Sun Micro	$13,256	Oracle	$37,159	Oracle	$38,906	1977
3COM	$5,772	eBay	$8,541	Gilead Scien	$32,639	HP Enterprise	$28,352	1987
Quantum	$4,902	Synnex	$7,749	Facebook	$17,927	Gilead Sciences	$26,107	1987
Applied Mate	$4,859	Applied Materials	$7,375	Synnex	$13,262	Synnex	$17,046	1980
Solectron	$8,391	Yahoo	$7,208	Applied Mat	$9,557	Applied Materia	$15,373	1967
		Symentec	$6,222	PayPal	$9,248	PayPal	$13,094	1998
		Sanmina-SCI	$6,088	eBay	$8,592	Tesla Motors	$11,759	2003
		AMD	$5,792	Netflix	$6,780	Netflix	$11,693	1997
		Agilent	$5,547	Salesforce.c	$6,667	Salesforce.com	$10,480	1999
		Gilead Sciences	$5,336	VMware	$6,572	Nvidia	$9,714	1993
				Sanmina-SCI	$6,238	eBay	$9,567	1995
				Lam Research	$5,900	Lam Research	$9,558	1980
				NetApp	$5,706	VMware	$7,922	1998
				SanDisk	$5,565	Adobe Systems	$7,302	1982
				Symantec	$5,424	Sanmina-SCI	$6,893	1980
				Adobe Syste	$5,070	Intuit	$5,818	1983
				Nvidia	$5,010	NetApp	$5,751	1992
						Advanced Micro	$5,329	1969
						Electronic Arts	$5,095	1982
						Juniper Network	$5,027	1996
Total REV	**$149,209**		**$347,436**		**$703,723**		**$815,216.00**	

Source: San Jose Mercury News SV 150

/San Jose Mercury Annual Survey)

Hollar: Now we're going move into a session on the growth and change of Regis McKenna Incorporated as a business. This section will roughly talk about the time period from 1980 to 1995. During this period, in addition to all the work we've talked about with specific companies, Regis, you were growing a major strategy consultancy. Marketing was at the center of it. But you were really, as we've already discussed, as much about business strategy and macro views as you were about specific marketing strategies for specific clients.

I want to ask you, first of all, what was your approach to building a creative organization like this—one that could take your overarching vision of big trends and put it it into an organization that could actually make real work happen on the ground?

McKenna: Well, again, I started my company in 1970. I had left National. And, you remember, I had worked for two semi-conductor startups, including General Microelectronics (GMe), that were the source of MOS technology, which was the basic process technology and design technology that later on allowed Intel and other companies to develop their processors and memories. They were bipolar companies.

Intel, for example, was a bipolar company before that technology. And they got a lot of that from people who had left GMe, the GMe/Philco combination and went to Intel. So I lived through that follow-on activity.

GMe failed for a number of reasons. One was that it was actually almost too early into the market. The technology wasn't yet mature enough to be able to produce LSI technology—LSI or VLSI technology, Very Large-Scale Integrated technology, because the processes couldn't handle multiple transistors at once and do it in a uniform manner with a highly-reliable outcome. So yields were terrible. The company failed largely based on that. But still, in all, they initiated something that became a model, I think, later on for other companies.

National was a very buttoned-up company, very disciplined. Again, thanks to Don Valentine, who was my boss, and Charlie Sporck, who gave me a lot of latitude. And so I was able to learn things like distribution,

the importance of field organizations, how Europe was developed. I worked quite a bit on European development, meeting with new representatives in Europe and so forth, and helping them set up their programs and doing things locally. So that really helped with thinking "outside in" versus "inside out."

So I was armed with something. When I started, my first nine or ten clients were all semiconductor-based clients. I offered them experience. And, indeed, that was what we talked a lot about. A lot of them at the time wanted to emulate National in some way because it had grown very fast and was a global company. So I participated in that. National was still a small management group. I knew all the key managers. I knew all the key engineers and was able to spend personal time with all of them. So I was able to observe, and I could offer, if not "here's how they did it," then at least some reflection.

So the first part [of RMI] was really to just be independent and not find myself doing the same thing over and over and over again, but build some value in it. I just went with survival.

You took on business that was there, although it turned out that my experience led to having companies that were in the same vein as the semiconductor. There wasn't much going on in the world of new companies, new technologies that weren't semiconductor in some way, or referenced in the semiconductor business. As the 1980s began, we began getting into more systems-type products. The microprocessor was wonderful to work on because it was different. It was programmable. It was infinitely adaptable. It solved key problems for companies getting products to market. It increased functionality, lowered the cost of getting development done and so forth. But it wasn't the standard way of getting end products designed.

So you had to change the way people thought in the marketplace to get that done. That took about ten years of work—constant meetings, discussions, developing presentations to the end market, culminating in the Crush group that pulled the whole company organization together into one small team that had to look at all of those things. We had to bring all of those resources to bear—and change them, if necessary—against a major competitor who had a better product at the time. At least it was perceived to be a better product. How do you overcome that? That experience alone, I think, helped in major ways in terms of my understanding where the future lay.

Within my company, we started out doing things that companies needed because Silicon Valley had an anti-consultant attitude. They were engineers. They could solve the problems themselves that needed solving. Marketing was sales—distribution and sales. It wasn't sitting back and saying, "How do we plan the next products? How do we look at competitive nature, the competitive business?"

On the other hand, Don Valentine had each of the people in his team follow a competitor. I had Motorola. When you went into the meetings with him, you had to be able to report on what they were doing, what products they were coming out with, what's new at Motorola, what's going on, those kinds of things. Competitive analysis became part of the knowledge base I learned, and that was valuable, again, in any business that you went into. What's going on in the companies out there who were competitors or seemed like they might be competitors.

Let's take Apple. There were a lot of potential competitors. IBM wasn't in the business yet. Texas Instruments wasn't in the business yet. HP wasn't in the business. The Japanese weren't in the business when Apple came out. So there were all these potential competitors that we had to look at in terms of how that market would evolve.

Even Genentech was the kind of company where you looked at the marketplace and analyzed it. Their first product was called somatostatin, a hormone that was a precursor to the insulin molecule. [Eli] Lilly owned ninety percent of the insulin market. It was derived from extraction of the insulin from pigs' and cows' pancreas. It was a long, expensive process. Understanding that and what to do with that was Genentech's first target. It wasn't the marketplace. It wasn't the consumer. It was a few big pharmaceutical companies. So I got two articles written—and I can show you the articles—one in *The Wall Street Journal* and one in *BusinessWeek*. They were explaining the launch of somatostatin and how that would lead to insulin. It actually went into their strategy, which is interesting. I was just reading it again before this meeting. Both Herb Boyer and Bob Swanson [the co-founders] talk about taking it into not only the pharmaceutical market but also the industrial marketplace.

I remember sitting down with Bob and going through their plans, asking, "What do you mean by industrial and where will it go?" Well, a lot of fermentation goes on in the industry, and that's basically a recombinant process. Any of the fermentation industries could also maybe use the technology. They [Genentech] weren't going to give that up at the time because they felt that might be a possibility.

As a company it followed a chart that I made very early on. The chart said marketing is like going to the moon. You don't aim at the moon. You aim at where the moon is going to be. If you aim at the moon, you'll go out into Never Never Land. I have a chart that was actually sent to me by the vice president of marketing at Kodak, because I made a talk there, and we got to be friends. He sent it to me and said, "Here's how I interpreted our conversation." He used it at Kodak.

You can't target markets one to one. The rocket ship is constantly adjusting to the environment as it moves. As things happen, it has to keep on a trajectory that is a parabola rather than a straight line. And then it lands on the moon. That came out of those sorts of conversations. These companies start. They put together these plans. They have some core ideas. As they go, part of my job—and I felt our job long-term—would be to help shape that curve to where they should be heading. That doesn't mean we know what you're doing. It means that we can look at what you're doing and keep adjusting to a competitive environment, to the technology environment, to the shape of the way people are looking at you through this prism of their current world. That just evolved over time, so that by the early 1980s, it was much more a formula for me.

I started creating these circular charts for Apple, and each segment would have what's going on in that part of the personal computer marketplace. And every quarter, it was changed. There were different competitors. There were different influences from the software world. There were just different economic, political, social, and technological changes that were going on. And I would put them into these circle charts. So, I have a series of like three years of those charts that I had made for Apple on a regular basis.

Keep looking at the environment. See what's changing and how you respond to it. That's that arc that you keep trying to adjust to get where you're going.

Hollar: And this process helped you stay ahead of a very fast changing landscape at that point?

McKenna: You had to have that because you can't really predict the future. I wrote the book *Real Time* later on[1] to say the marketplace is in real time and you can't really predict that. You have to actually live it and then adjust with a lot of feedback. You gain that feedback in the near term, not in the long term. Today, the feedback loop on knowledge that goes into computer systems has become both a plus and a minus to many people. It's literally instantaneous. It's less than a few seconds.

"Real time" was a military term. It meant that you can't make a decision faster than a bullet or a rocket. But you have built-in systems that are constantly adjusting or that can do the analysis for you. It adjusts the plane, or the rocket, or the ship in real time. That's all programmed ahead of time. That's not done in that instant—or it's done in that instant, and not long-term.

That's something that I learned from a Nathan Rosenberg, an economics and professor at Stanford. He wrote a book called *Inside the Black Box*.[2] He said, "Technology is a hands-on business. You learn by doing." That became a really critical point in my career and in my companies—you learn by doing. Get people's hands on. When young people come in, get them out and start having them work on things. I just talked to a fellow I hired when he was in his early twenties right out of school. And said, "You know, you've thrown me in with people like Bob Noyce and Gordon Moore. The first week I was there, I was terrified. But today, I'm so grateful you did." He said, "Because that was a great learning experience for me."

Hollar: What kind of person did you look for that you knew could thrive in this kind of environment?

McKenna: We tried to create a team. I learned early on that because we were in a technical environment, we had to have people that understood the technology. We hired people who were engineers who were largely technical journalists. I hired their top technical writer from *Electronics Magazine*, George Sedaris. George ghostwrote a lot of technical articles for Intel and most of the technical companies out there. There were other people like that who were very knowledgeable.

Then we'd have creative people who actually had creative backgrounds. They were either writers or creative directors from ad agencies. Those were the hardest people to hire. Then product marketing people, who had one foot in each, so they could balance it out. And that became small groups and teams who worked on clients. A little bit of everything.

You couldn't have creative people going off and doing things that didn't fit the goal or the nature of the technology itself. One of the biggest things, when I was an ad manager inside National, was getting an ad

---

[1] [Editor's note] *Real Time: Preparing for the Age of the Never Satisfied Customer*, Harvard Business Press, 1997.
[2] [Editor's note] *Inside the Black Box: Technology and Economics*, Cambridge University Press, 1982.

agency that could write an ad that made sense, because they mostly were coming out of the consumer world. They would write nice fluffy words that didn't say anything to the engineers.

This is the kind of ad, for example, we did at Intel, which was very early in the microprocessor era. It was how to buy one. That's the chip. That's the microprocessor. The "microcomputer"—that's what they were called then. We would write these examples. I went out and got salesman to give me names of people that I could use. This ad allowed you to write in for a booklet that would give you the detailed information. I did a very similar one at Apple which was, "How do you buy a personal computer?" It was the early stages of trying to educate the marketplace.

So, you could say RMI is an ad agency, but most ad agencies wouldn't think in terms of educating the marketplace. They'd think about trying to sell the ad or through an ad.

Hollar: Yes. And another thing I like about that is the whimsy. You've got a rooster in the middle of a page about a—

McKenna: Chicken or egg.

Hollar: Chip. And you've got a cheeseburger in the middle of the page about applications.

McKenna: Right. The art director was Jerry Lenhart, who came from one of the big agencies in San Francisco. He was a very creative guy, and he called the chips "bugs." And he

Intel advertising, 1974

didn't know anything about the chips, but the ability to give him the content and then him to use his imagination to how to illustrate it. And he was very good at that. He was super.

Hollar: You talked about a minute ago this formula that you came up with. It was a combination of competitive analysis and understanding the technology and then looking at all the other social, political, market forces that were shaping demand. Was there an "a-ha" moment for you where you said to yourself, "Now, I have it? Now, I really understand. This is a kind of generalizable approach that I can begin to work with many clients on?"

McKenna: No. You just work. You learn by doing. You're hands-on, and you basically learn in the process of working with the product marketing managers and the entrepreneurs. Again, I was fortunate in that I was here so early doing this sort of thing that I was working largely with entrepreneurs and the first layers of management that came in. I always found them very receptive—and got good feedback. They

did know what they wanted, and they knew their businesses well, most of them. And so, as a result, we became part of their team. That was the way we liked to work. I don't know of too many ongoing clients where we didn't have between five and ten people working every day within the client itself as part of the marketing team.

Hollar: You mentioned that one of the virtues of that ad campaign, or ad campaigns like that, was educating a market on these new products. Did you find that you had to educate clients at the same time about that approach? The reason I ask is that I've always been very struck by how you've gently pushed back against the notion that it was just an ad, or it was just PR, or it was just an article, and that you were able to flip the mindset of a client up to a higher level—

McKenna: Right.

Hollar: And say, "No, there's really more to it than that."

McKenna: Yes, I think it's because of the understanding that businesses had being here in the Valley. Being very technically oriented as a community, they were in love with the big ad agencies and the big ad campaigns on television.

All the companies that I know of in the Valley, at least at one time or another, experimented with television commercials even though their marketplace may have been a dozen companies. I know of semiconductor equipment companies that did television ads. I remember asking the CEO why—I mean, you sell to the semiconductor companies, and there's a hundred of them in the world, something like that. You can go and call on them. Why do advertising on national television? Well, they're never quite sure, but somebody sold them on it. And it made their ego. It certainly hit their budget big. So, there's this love affair with glamorous Hollywood. It's still here in many instances.

That was always also a fear I had—and they would eventually do it—that they would go hire a big ad agency because it just has that glamour to it. It's why people hire McKinsey—because McKinsey has a reputation, not because they necessarily have any specific knowledge in your area. That still goes on.

I met a year or two ago with the top management at Mazda, who came over here to listen to my pitch. And they basically were telling me they couldn't do what I was telling them to do because some consultant out of Harvard, who was now with McKinsey, had told them to go this other way. It was clearly not leading them to be the Toyota of the future.

There's this sort of belief out there that there's some magic answer, there's some white knight that's going to come in. It's why they brought in Sculley. It's why people go on television. It's why they spend—when in effect, it's just hard work. It's putting your nose to the grindstone. It's knowing your market. It's spending time in your market. It's listening to people. It's all sort of the practical kinds of things that make companies successful. And, as they get bigger, I think they get more abstract from it. When they're really small, they believe it.

I saw that, for us, your biggest competitors are these intangible things, not the tangible items. I wasn't worried about money, because we certainly outgrew anybody in the area. We were making more money than anybody in the area. So, I never really worried about that. I mean I had a full library staff, research staff. We hired a librarian to run that, and you could come in and just give her a project. She ended up working for AT&T's information systems. So these people were good people, and you had to put those kinds of organizations in place if you wanted to move into a more value-added kind of position in this business.

So it's not only the vision, not only understanding the marketplace. Andy Grove said you have to be paranoid all the time. But the paranoia, for me, wasn't some kind of [competing] company. It was the ideas people had about what they think marketing is.

Hollar: Now [I] want to get into something we were talking about offline, which is the unique perspective you had to make comparisons—comparisons between market segments, companies, products, or ideas for developing products. Can we go through some that illustrate your unique perspective?

McKenna: Yes. One early comparison would be Genentech and a competitor called Cetus. Cetus was a biotech company in Emeryville. I think they're actually still there. They saw themselves as a competitor to Genentech, and they couldn't quite understand why Genentech got into the public's eye much faster. Genentech actually grew faster and did everything better than they did. I also was working for Cetus, who always claimed to have a different market perspective—not doing the same things at Genentech. But they were in the biotech business. I got involved and was very involved, particularly with their CEO and their management team. Their product plans were 10 and 20 years out, and I told them they had to actually show timelines to productization—that the marketplace just wouldn't pay much attention to them unless they could set up a timeline and say, "This is where we're headed. These are the kinds of specific things we're going to develop." They were talking about biomass and converting biomass into tangible products. But that was a 10-, 20-year project, those kinds of long-term things.

Genentech had goals. The first product was somatostatin. The second was insulin. They had very specific targets that people could identify with. And analysts could say, "Okay, here's the market for that product. You're going after that market. I understand it." The analysts would look at biomass and say, "What's the market for it? How big is it?" No one could measure that.

I worked with them [Cetus] basically side-by-side. I remember putting together presentations for the CEO going back to an analysts' meeting in New York. I focused it on productization and so forth. I kind of forced them into these categories. When I got back there, he got off on a tangent and started talking about 20-year projects. He spent the whole meeting talking about that. And of course, he came out and there was no response. So I then walked away from them because I couldn't get any further with them unless I could get them to do productization. It wasn't the marketing that failed. It was the development line and the management's ability to put this stuff into tangible market productization language. That just never happened, or it didn't happen there for a long, long time.

Another comparison would be Motorola and Intel—and, actually, there were two other companies that I worked with after that, or at least got to know well after that. At Intel, Andy Grove had formed a team that we called the Crush Project, which was people that represented different areas of the company to figure out how to take Intel's product line and turn it into a viable competitor for the Motorola 68000. The 68000 was a 32-bit processor, and Intel's processor was sort of in-between. It was called the 8088. That's where they were. They were slow, or they were not out with a competitive product. So, the idea was—how do we then get that? We identified lots of companies all by market segment. We looked at telecommunications, industrial computers, and so forth. We looked at all those segments. Who were the top companies? Who were the ones that we can make these presentations to? And the key part of the presentation that this team developed, of which I was the only outside member, was to look at long-term product evolution of the processor. We actually created a trajectory and put products out here that most companies don't want to do. They don't want to say what their future's going be because then they're somehow committed to that in the marketplace, and if they don't execute on that, then they're a failure. They will really get dinged big, particularly in the financial markets. But you had to go tell people that if they standardized on the Intel processor, their products would basically see a path of constantly evolving with the same basic operating system and that you didn't have to redo your product every three to four years.

Motorola had a leadership role. I had a couple of experiences with Motorola. One was over the StarTAC phone. They invited me to give a presentation to their management on what I thought would help "brand that phone." That was the way they put it. And they pitted me against a team from Proctor and Gamble, who were the Tide team, Tide soap. Each of us made these presentations in front of Chris Galvin, who was the president, and his staff. I basically told him that StarTAC was going to become a cheap product copied by people in Southeast Asia, and it was going to end up selling for a dollar. I told them that they had to add value to the product through software enhancements, and move downstream with it, and create more and more functionality in it. It was an analog phone, but it cost twenty-five hundred dollars. They weren't happy with that answer. They liked the Proctor and Gamble answer. Proctor and Gamble was, at the time, spending $2 billion a year on advertising for Tide. The Tide team presented an advertising story. They [Motorola] liked that answer better than mine.

Shortly thereafter, I was in Akihabara, the electronics center in Tokyo. I was walking down the street and there was literally a wicker basket piled high with phones. They were a dollar a piece, a hundred yen at the time. This phone was very popular in Japan. You could make phone calls, but you would also send text messages. You could do certain things with it that you couldn't do with your normal phone. They were sold for a dollar but with a subscription. You bought one, and you paid something like thirty dollars a month to use it. So, the value of the hardware was nothing. It was the services that you sold through the phone that had value, which is eventually what the iPhone and all the others had. And I bought seven of those, one for each of my grandkids.

Hollar: For seven dollars.

McKenna: Yes, for seven dollars, and I brought them back, gave them to my grandkids. They were all little. They could play with it. It lit up. You couldn't do any [phone] things with it. But it was a dollar, and it was much cheaper than a plastic one you could get at Toys R Us.

Also, continuing with Motorola—[Apple CEO Mike] Spindler had written a letter to the president of Motorola Semiconductor telling them that they should hire my company to help them broaden the scope of usage of the 68000 into more popular platforms and follow-on devices. But Motorola saw the 68000 as another chip. They really didn't see it as, I think, as important as it was—as a system. Where Intel began hiring people from—Dave House, for example, came out of a systems house. Bill Davidow came out of a systems house. These people started thinking not in terms of selling chips but of selling systems on that chip that had the same characteristics as if you were putting in a long-term system. But at Motorola— I had a meeting with them. I spent all day there. I remember that one of the key product guys said to me, "Tell me again why we should be thinking about software." And of course, the whole business of the microprocessor is understanding software. I failed that whole day in having a conversation with them. I told the CEO of that group about how the Crush program was put together. This was after we had done work with Intel. I told him that it took us one week, offsite, working on the strategy. The following week, we presented it to the executive staff. They approved it on, I think, Monday. The end of that week, we brought Intel teams from all over the world to Ricky's Hyatt House, and we started assigning responsibilities—from product, to distribution, to sales, to training, to developing presentations—technical presentations—to everything. I mean it was a really far-reaching scoped plan and project. And I told the CEO it was executed within one month. He said, "It would take me that long to get a plane ticket approved to fly back to Chicago to meet with the top management to get an okay."

So you began to hear about the hierarchy of the company [Motorola], whereas at Intel the person who was driving this was the CEO, Andy Grove. It was this difference, again, between these sorts of East Coast companies that are highly structured with organizational flows and so forth that never really made decisions quickly. Whereas at Intel, they were pretty much a model company back in those days. And most people that came out of there will absolutely agree with that and say it was the greatest learning experience of their life.

Another comparison would be IBM and DEC. We did very good business with IBM—helping them with their minicomputers, moving them into business segments—and I knew Jack Keeler, who, at the time, president of IBM. Jack was the only engineer to ever be president of IBM. He went to Santa Clara University and he sat on the Santa Clara board with me, and I got to know Jack very well. I had written a book called *Who's Afraid of Big Blue*, and he had read it. He brought me back to headquarters in New York and introduced me to people, and said, "My goal is to change your mind on IBM." We became very close friends and I got to know a little bit about trying to change IBM and how to really implement it. We worked with him on the application server business. We did a number of projects at IBM around helping them get into businesses. And they worked well.

The key thing about IBM is that they knew who their customers were. They knew who their market was. It was the back-room engineering computer in engineering departments that worked in manufacturing. That's where DEC computers were also really strong in the marketplace. We had done some research at

IBM, and we did some research at DEC, and found that DEC wanted to move into accounting and the front office and compete with IBM, and, in fact, they were on the cover of *Forbes* as overtaking IBM at one point. This was probably in the early 1990s. That was more the media making that decision, and DEC wanting to do it, but certainly not from the customers' standpoint, because they [DEC] just didn't have the knowledge or the tools to do that. When they took on IBM, they really began to lose market share and momentum. IBM certainly won that. DEC also didn't adopt the PC, whereas IBM went off and created a PC, so IBM began understanding the power of Moore's Law—that it was coming upstream, whereas they were trying to push downstream.

I was invited to a strategy session back at DEC by [President & CEO] Ken Olsen and spent a couple days back there with him and his team. They thought the microcomputer was a toy—would have no impact whatsoever because it just didn't have the capability of creating the input and output and the bandwidth necessary for high-speed connection. They were not anticipating the internet.

Hollar: When you're at a strategy session like that, was your role to say to them, "Actually, I'm working with a lot of companies in this area who are taking the opposite view," and to present that to them and help open their minds a little bit? That their view might actually not be the case?

McKenna: I never went into these meetings not prepared by research or by tangible evidence, because a lot of it was, "What do you know? You're a marketing guy." I learned that from Intel and Andy Grove, too. I always went in with customer viewpoints.

I had built my own network of people out there in the marketplace—at GE, at various systems houses that I got to know, various analysts and so forth, and, like everything else, I took a lot of notes. I would put that into slides, and I would present them at meetings. Rather than say, "Here's my viewpoint," I would say, "Here's feedback," from either some analysts or from customers.

There was one key guy who ran the microelectronics lab at GE that I got to know really well—Max Hopper, who was sort of the CIO's CIO. He built the whole computer system for Bank of America, their systems. He did American Airlines' reservation system. So he became known as sort of the CIO's CIO and was a really revered person in the industry, a wonderful person. I got to know him well and he became a client. I would keep in touch with those kinds of people, and they always gave me a lot of good feedback.

So when I went to DEC, Olsen asked me to give a presentation to his executive staff and to his board. It wasn't the whole board, but it was a number of people from the board that were in the meeting. I was doing this at the time of foils and overheads. I was talking about pretty simple stuff. It was staying close to your customers, so you can gain feedback on what's going on out there, and where they're moving, and how they're thinking, and then adapting your business to it. There was a fellow who—I think he was head of sales—his body language was sort of sitting there scowling and sitting back. He didn't like the fact that I was even there. About halfway through he interrupted me—I was talking about keeping in touch with your customers—and he said to me, "We do all that." And I said, "You do?" He said, "Yes." I said, "How do you know what your customers—" He says, "We do a survey." And I said, "How often do you do it?"

He says, "Once a year." And I said, "Okay. Do you think that's often enough?" He said, "Yes. We talk to our customers."

So I had a slide, and the slide was from the CIO of Citibank in New York. Back then it was the largest bank in the United States. I put it up, and the quote was, "If you're doing this survey for DEC, would you please have someone from DEC call on me? I haven't seen anybody in a year." Now this was the sort of prototype company where DEC had a lot of computers installed. And so Ken Olsen just got furious in the meeting. He went over and grabbed the guy and was just upset. But I also knew I had just slit my own throat, because things at DEC worked from the bottom up, not from the top down, particularly in marketing. So Ken said he wanted to work with us long-term, but no one in the company after that would work with us.

I slit my own throat, but it made a point. But they didn't learn from that, because, quite frankly, I think if they'd gone into these businesses later on they would have seen the rise of small computers on everybody's desktop and not rejected them.

Tandem did [reject them], too. The CEO at Tandem told me that those things were nothing but toys and games. I remember sitting in his office. It was six o'clock in the evening. I went over to have a meeting with him and he drew it on the board. They just don't have the power and the memory and the networking capability and the bandwidth—all that sort of stuff. But yet they had no knowledge of Moore's Law. So there was a lot of resistance to getting this into companies because the major computer companies just didn't see it happening.

One other comparison, and then we'll go on, was Silicon Graphics and Apple. People don't realize Silicon Graphics was like an $8 billion to $10 billion company when Apple was probably $1 billion or $2 billion. They really had a chance, because they had this graphics engine that was really powerful technology. It was what they were founded on and what they built most of their businesses on, these graphic workstations. Again, I'm not going to get into names, but their CEO and I had a meeting, and he told me that IBM had offered to put their graphics engine card into every PC. What did I think? And I said it'll make you a worldwide standard overnight to do that, and it would really set your business going. They turned it down, and they turned it down because they felt they could do it themselves—build their own computer and their own systems. So, they passed up being the graphics standard in the PC business, which ended up being billions of computers out there.

When Apple was—during the Spindler and Gil Amelio days—when everybody was talking about Apple declining, I felt that the only one in the Valley that had an opportunity to replace Apple would have been Silicon Graphics. After all, the Mac was a graphics engine. It made its debut on the basis that it could do graphics and other things besides just text and so forth. The Silicon Graphics workstation could have been reduced in cost to compete, or they could have developed their own personal computer along those lines.

I was meeting with the president, whom I knew—they had been our client early on, but not during this period—and suggested that to him, and he said, "Well, we're already doing it. We have 100 people

working on it." I said, "Wow." He said, "I'll show you when we get back." We went back after lunch and he introduced me to people and, again, he thought my background in personal computers could help them. But it didn't. And of course, they did come out with a box. I think it was $10,000. It was huge. It was not a personal computer. It was a computer, but it wasn't anything that would replace the Apple Mac or the Apple II. So there was again this hubris. "We know our way. We know what we're doing."

I made a presentation to them at one time in which I was pushing the idea of beta sites and learning from beta sites about how you adapt your product to the market. And they said that the customer can't tell them anything that they don't already know. I was absolutely given that feedback from the engineers. "We know what the technology can do. They don't." There was no willingness, I think, to listen to what was going on in the world around them, nor to heed advice.

That was a very common kind of thing. I could actually go on and on. I have a long list of these kinds of [comparisons] because I've worked personally with hundreds of companies over 30 years. There's probably no two competitors that I haven't worked with.

Hollar: This is a very useful part of this whole oral history process, especially because the Museum's Exponential Center wants to record some of these insights. These are exactly the kinds of lessons they want to try to distill.

McKenna: Exactly. Well, there are a lot of those kind of lessons if you were to combine different oral histories. I've started doing that as well. I found out a lot of things just by searching the oral histories and then getting the details. I can give you my examples, and I'm not saying mine are right. It's just that, at the time, these were the conversations that I had, and maybe they thought I was arrogant and so forth. But I was simply making comparisons with what I knew and what I didn't know. I wasn't trying to take over the company, and I wasn't trying to be an engineer.

Hollar: If you were to distill—and you've done this throughout your career—if you were to distill those comparisons into a set of principles about why some companies succeed in that environment and why some don't, what would you say?

McKenna: Let me first answer by saying that failure doesn't necessarily mean you're not going to succeed. I learned that from Noyce. I was on a plane once with Bob Noyce, and I was mentioning that two-thirds of the companies in Silicon Valley fail. I had just read that in a study out of one of the universities. This was back in, I think, the '70s, maybe the early '80s. And Bob said, "Maybe not enough fail." I was kind of taken aback by that. I said, "So what do you mean?" He said, "Well, when you fail it often means you're trying new things."

So that's the nature of it. You learn by doing, and you fail at times, but you don't let that overwhelm you or overcome you. You move forward beyond that. Of the lessons that I learned, that was number one.

Number two is that so much is based on the financial resources of a company. You can only move forward if you have money in the bank, or you have the resources to apply to the next solution, or you can

give the marketplace time to move to that next solution. NeXT had to sell because they had built hardware around a really beautiful operating system, but they didn't have the commitment of their backers to move to the next financing. I know that because I knew the people at Canon, who were part of the finance deal at Apple, and I had conversations with the president, who kept asking me what I thought was happening with NeXT and how they were going to get their money back. I had an office in Tokyo, and so I got to know him.

It's those kind of perspectives that you have to learn. So financial resources become very important.

I'm on the board of a company called Nanosys, which is a nanotechnology company. It's now going on 15 years I've been on the board. It's a basic materials company. It's hard to develop. At first, nano was going to be everything— from biotech to aerospace to communications to whatever. And it was only within the last seven, eight years that they've focused on a particular product, which was displays, and how to enhance the color output of a display. Samsung has built all their new color televisions around it. They could survive that long because they raised, initially, something like $80 million at a time when nanotech was the hot subject. They were able to use that $80 million on their technologies, trying things that didn't work, and then eventually getting the management team that was able to pull it off. It was the initial funding that allowed them to sustain themselves. So, I think that's a real key principle.

The third lesson is competitive analysis. It's not just competitive. It's understanding where your core technology is evolving and how it's evolving. We've lived here in the Valley understanding Moore's Law, or innately understanding Moore's Law. I think Steve understood it really well. He knew things were going to get smaller, better, faster, cheaper. How you implement that depends upon an awful lot of technologies moving simultaneously. It's not just what you do. It's what all of the ancillary technologies do, because Apple buys a lot of its electronics and its software from other people. It even acquires those companies. You have to have a broad perspective about where you're moving and who has the surrounding resources that you need to follow to bring that to the next generation.

I don't expect technology's going to slow down for anybody, so it's about the way you work in real time. I put this in my book [*Real Time*]. The way you work in a real-time world is you're constantly gathering data so you can make rapid decisions. So, you have to constantly be out there with a lot of sensors in the ground, getting feedback all time. Technology allows you to do that, but the information is not really personalized in the sense of, "Okay, is that something that we should or shouldn't do?" There's ultimately human judgment, so you need seasoned management.

I think that's one of the problems that we've seen recently in companies here in Silicon Valley. The management just aren't seasoned. They haven't gone through a lot of both either technological or even social change themselves. I think probably the best example of that is Facebook. These are very young people with not a lot of personal experience in the marketplace, not seasoned and experienced, to have dealt with the broad social issues that their product has raised. That's the challenge there. The technology is a given to them. How they use it takes some careful thought about how society adapts, how society adapts to technologies, how we learn to use technologies, and the addictive nature of it. We've been addicted to technology for a long time. The handheld remote control was there long before

Facebook, and people were addicted to it. Switching the channel became sort of a family joke. When technology is in the hands of people, they start using it.

There are enough things out there showing how people hold onto these things and use them. Read Marshall McLuhan. Marshall McLuhan said this 50 years ago—that these technologies are extensions of ourselves and we personalize them to the extent that we don't identify them outside of ourselves.

There are more philosophical issues that they're faced with at Facebook, issues that unseasoned management just doesn't have the experience of dealing with, or young management today. Understanding that environment, I think, becomes really, really critical,

Then there's government involvement. The government is cutting back on science. It's quite true that Silicon Valley was started with government investment—military investment—and historically there has been a large investment by various government agencies in technology. I was a member of a group at Harvard for a long time called The Use of Dual Technologies. Technologies are developed for the military, but they have a dual purpose into the consumer world—say, the microprocessor, or memory, or graphics engines, or lasers, or whatever. All of these technologies have been adapted for both. You can use a laser to shoot down a plane, but you can also use a laser to scan for eye disease, or to get your supermarket checkouts done swiftly. New technology can have wide application in many areas, and understanding that is important.

I read that Tim Cook is spending more time in Washington now on trade and trade restrictions. All technology businesses are global, and because they are global, they're competitively global. That's where we're going to see huge challenges.

I'll give an example of this that I personally experienced. I was on the board of a company called Hanna. Hanna was a biotech company that was cloning the islets of Langerhans, which grow insulin. They were growing insulin in a petri dish. There were a lot of different processes they had to do. They had to encapsulate the cells to protect them from antibodies, and so forth. For probably five years, they developed this technology and were working on it. This was during the Reagan Administration, which felt that once you could clone life and clone other kinds of things—the government frowned on that, and so they stopped funding these kinds of developments in the United States. All that technology went overseas. So the government had a direct influence in shutting down a start-up and driving it offshore.

Hollar: I want to get back for a minute to the points you were making about wisdom and seasoning and leadership of a company. You've given some examples of instances where you offered a well-researched, well-rounded opinion about strategic choices a company could make based on your experience, and also the research and data you brought in that weren't accepted. Who do you think was able, as a client, to take the best advantage of the kind of 360-degree thinking you brought in?

McKenna: I think there are a lot of those companies, a lot of smaller companies, because I get feedback from people who either worked for us or who would tell me that I gave a talk at their company and so forth. I still get lots of that kind of fan mail, if you will.

I think probably the main one—and I can only vouch for them until probably the late '90s—was Intel. That was driven through their product marketing department. If a product marketing team is solid within a company, they really do an outstanding job, because their job is to have a handle on what's going on outside, and what's going on inside, and bring those two together. If you have a really mature product marketing group, they do that.

I can't tell you the number of companies that I've advised on that. I just did that recently. Somebody just asked me at lunch, "Do we need a marketing manager?" And I said, "No, you need more product marketing managers—people who can engage you with the outside world but also understand your product well enough to be able to connect the two." I think Apple certainly had that from the beginning, but that wasn't just me. I think that was a combination of the teams that we put together to work on Apple.

Again, a lot of the stuff that I'm talking about was part of training sessions at our company. We had a lot of training sessions. We had a building on Embarcadero Road in Palo Alto, that had a huge hall—an open room with cameras all around it so we could record all kinds of training sessions and then replay them to our offices around the world. From the earliest days, we had our clients come in and give presentations. When there were quality problems, I had two or three different quality control managers come in and talk to our people about Intel or another company and what they're doing in that area. I would ask our clients, key people, to come in and talk about what they're doing. We had an international marketing committee that invited people from Europe. We had the Head of R&D at Sony. Dave House was on that committee. And we had regular meetings to discuss marketing in the technology realm around the world. We recorded those sessions. I have some of those recordings. So, it was all of these kinds of things that count.

The teams that went to work at Apple, the teams that went to work at Intel—I wasn't doing the work as much as trying to figure out ways to get it out through multiple sources, and writing the books and giving lectures on that and so forth. The books were a succession of ideas that grew and changed over time.

Hollar: You were running a learning organization.

McKenna: Right. And, in fact, I gave that talk at SRI, and one of the recent presidents of SRI said to me, "That's the first time I ever heard of marketing as an education process." He said, "You ought to do something on that."

I said, "I've been doing something on that for 50 years."

END OF THE INTERVIEW

Oral History of Regis McKenna, Part 6 of 8

Real Time, *Total Access*, and
"Marketing is Everything"

Interviewed by:
John C. Hollar

Recorded October 9, 2018
Mountain View, CA

Abstract:

This is the sixth transcript from an eight-interview series with Regis McKenna, whose pioneering work in technology marketing and business strategy contributed to the success of hundreds of companies for more than five decades. McKenna was a talented, innovative marketing professional from the earliest days of the technology revolution in Silicon Valley. He came to the Valley in 1963 at the age of 24, worked in marketing in the early semiconductor industry, and then established his own company, Regis McKenna Inc. (RMI), in 1970. McKenna became a globally sought-after strategist and marketing expert, and RMI opened numerous offices around the world. His personal and professional relationships at RMI included Steve Jobs, Robert Noyce, and Andy Grove. His more than 700 clients included such legendary companies as Apple, Intel, and Genentech. He is the author of five best-selling business books and one of the most reprinted articles in the history of the *Harvard Business Review*, "Marketing is Everything" (1999). McKenna was recruited to many outside boards and advisory roles, among them his service as a founding advisory board member of the Computer History Museum's Exponential Center.

The interviews took place at the Museum between June 13, 2018, and January 15, 2019. The interviewer was John Hollar, president and CEO of the Museum from 2008 to 2017.

This sixth interview session took place on October 9, 2018. It covers Regis's development and execution of marketing and business strategy for new companies like Genentech, his landmark articles for the Harvard Business Review, his books *Real Time* and *Total Access*, and the evolution of Regis McKenna Inc. as an employee-owned company. The events take place in the time period spanning the late 1970s to 2000.

<p style="text-align:center">* * *</p>

Hollar: This is session number six with Regis McKenna. I want to begin this morning, Regis, talking about the financial markets and the financial analysts. We've talked about your approach to market-making and generating awareness, first of all, for entirely new products and entirely new companies. Can you talk a little bit about your approach to financial analysts, financial markets, and how you used your particular approach in helping them understand what was going on in technology?

McKenna: It's a long learning process. I've always seen everything that I've done here in the Valley as one long education. Each experience adds to the font of knowledge and the ability to reach back and grab experience. But having worked with both private and public companies, you begin to realize that the financial stability of the company becomes its strongest marketing tool.

I went through this with Tandem Computer. I was looking at my notes last night from that period. I made some notations that started in the 1970s. In the late '80s and early '90s, they began having financial problems, largely due to problems with their systems and a sale that they made to the California DMV. The DMV had acquired software and systems to manage that whole network of offices and data, and they

had problems. The state put that out publicly—that the DMV had bought this system, that it wasn't performing up to snuff, and it wasn't them [the DMV]—it was the other guy [Tandem].

Those are vulnerabilities. Particularly when businesses are relying on certain systems and software for the execution of a strategy in an ongoing business, and when that looks vulnerable, then competitors and customers begin to worry. Will this company survive? Will it be able to upgrade its software? Will it be able to move to the next generation? Will we get the kind of support that we want, or will they be cutting back in all kind[s] of areas—because the first thing that happens is a layoff? That frightens everybody.

If it's a public company, people begin to worry and then the questions start. We're seeing this now with Tesla. There are real questions about its financial viability. Those hurt because then they lose a lot of orders from customers who are concerned about whether the support will be there if I buy this car.

The strongest marketing a company has is to be profitable. Now, how does that marketing come about? It's through financial analysts. Today, there are certainly bloggers and so forth who do a very good job of coming in and analyzing a company, or pointing out the strengths and weaknesses of a business in the marketplace. They're in the marketplace, and they have no restrictions on who they can talk to. When I started thinking about this, though, it was largely people like *The Wall Street Journal* or *The New York Times*, or *Forbes* and *Fortune* magazines. They're the ones that you could describe as being more financially oriented in their editorial work. They would always quote analysts. They would quote third parties. They would quote customers. That became a "he said, you said" kind of journalism that we still see today. But when business journalists first started looking at technology, they didn't know the ins and outs of the technology businesses, so they relied on third parties, particularly financial analysts who were putting out financial reports on the industry and on businesses, to give them guidance and insight. And that became highlighted.

The idea that I had was—let's go to those people, and let's educate them before you go out and do any kind of press, so that when they do that, there's already an understanding out there of what you're trying to accomplish. The only way to do that is to do it personally, because there aren't a lot of key analysts that cover any industry— maybe a handful at most. There are certainly those in Europe and in Asia. But by and large, there are probably no more than 15 or 20 people that you have to really get to know, bring into your business, and educate on what you're doing.

Now, you have to have something real. You're not selling them because they have the wherewithal and the means to do the research to find out what's real. They will be talking to your competitors. They will be talking to your customers. You can't get away with things—or if you can, it's very short-lived. That whole process—understanding it, and how it works, and who looks to whom for credibility and knowledge—you have to figure that out ahead of time. I used to say that 10 percent of the press and the analysts, influence the other 90 percent. It's a pyramid that might be tall up here, but there's stuff below the surface also at work. It used to be said that most newspapers pick up *The New York Times* in the morning, read what's going on and then report on it that night on the local TV news or in the local newspaper. We see that as syndicated journalism now. Most local newspapers are filled with syndicated news.

So information is disseminated through certain channels, and you have to understand who that is. Today the survivors continue to put out the news, and they do it based upon, quite frankly, their profitability and wherewithal. If they don't have the profitability, they don't have the reporters, they don't have the ability to do in-depth research and to get people out into the field. So there are keystones that could come tumbling down. That's the great fear we have today with the press—the printed press. A few of these keystones are falling because of online advertising. Nobody online is replacing that [financial analysis] except a lot of bloggers who could be anybody, anywhere, anytime who declare that they want to analyze something. So it's becoming more and more obscure to do that [reporting] today, whereas in the 1970s, '80s, and '90s, you could do it with a much cleaner approach.

Hollar: Were there editors, publishers or analysts who really helped you—who made an impression on you just by the way they handled the ideas that you were bringing to them, especially in the early days of these technology companies?

McKenna: Yes. I got to know most of the journalists before having any clients— back particularly at National [Semiconductor]. I mentioned that Don Valentine gave me a lot of freedom to explore and do the things that I felt they had to do. [National CEO] Charlie Sporck once said that I got them to look much bigger and successful than they were. Largely I spent time on the road visiting these people—spending time with them and getting to know them without any clients there, without having to influence them or sell anything, and feeling more peer-to-peer. I would bring materials, as you know, and show them things like wafers and chips.

On the press release that we did for the [Intel] 8080, the first 8-bit microprocessor, I had a chip pasted to every press release. We sent out thousands of those—the chips were rejects, but they didn't know they were rejects. It was pasted on the front so people could actually see what a microprocessor looked like. People are still asking me for them today. I think I still have an envelope filled with a bunch of them.

Another example: the first electronically programmable EPROM. You can actually demonstrate what happens. You can see the chip. There's a window in the top of the device. It was probably about an inch long, but in the top of the chip, the package, was a little window. When you put an ultraviolet light over it, it would erase the program. Then you could reprogram it. At that time, they were pretty primitive. But you could show that sort of stuff, give illustrations of it, and then quite frankly, in a lot of instances, devise stories with these people.

One of the key analysts was Ben Rosen, who was in New York at the time, at Morgan Stanley. Before that, he was at a smaller financial company. He was a physicist. He knew how to figure out what was going on in these companies, particularly in the semiconductor industry. Bob Henkel was at *Electronics*. He became managing editor and then moved to *Business Week*. He and I became lifelong friends, and he had no problem telling me I was full of bull or that I was trying to sell my clients. We would argue over that, but we got to be pretty close. We would talk about who are the good guys and the bad guys in the industry and who can they trust and who can't they trust.

There was a fellow at *The Wall Street Journal* named Dick Shaffer who was part of that group. There were about five of us who would have dinner in New York together and talk about who's who, what's going on, and how things were going. Largely because I didn't feel that I was the one to tell the story, I wanted them to talk to the people in the companies. I told Andy Grove, "They don't want to talk to me. They want to talk to you. So, when you go to New York, here's a list of people that you should go have lunch with and get to know." And in fact, he told me here in the hallway at the Computer History Museum that that was the best advice he'd ever had, because Andy liked the media. He enjoyed going out and educating people about what the business was about, and that became part of his modus operandi.

Hollar: He was very good at it, too.

McKenna: He was excellent at it. It was still very much a personal business at that time.

Most of those people remained friends with me for long, long periods of time. And there was *Electronic News*, which people thought was sort of a gossip sheet. But it had Don Hoefler, who was the person who covered the Valley era and who is credited with naming it Silicon Valley. I knew Don pretty well. I knew his boss Jimmy Lydon very well in New York, because I had started calling on him years ago. Lydon would even call me to check up on stories that Don was filing.

At *The Wall Street Journal* I was invited into their daily editorial session, at which they selected the stories that they were doing. I got to know these people really, really well, and they trusted me. I wasn't trying to BS them in any way whatsoever. Certainly I was trying to present my client in a good light. But I felt the best way to do that was to not try to manipulate them in any way.

Here's the problem with the PR business, in my mind, and why I always hated it. I used to say "PR needs a new image." If you are a really good person with high integrity, and you know your own self well, you're caught between the client who wants a particular outcome and the media who realize that they have a free hand at looking and saying what they want to say. Those two worlds often conflict. So you run into the situation quite a bit where, at the client level, they don't understand why the media picks a certain subject, or why they picked a competitor to put on the cover of their magazine, or to write a story about. When the client believes they're better, they can justify why <u>they</u> should be there in that position. Often you're dealing with people who never quite understood the First Amendment, let alone why the media picks certain stories. The PR person is in the middle. If you work in the company, and you're the PR person, you have little choice but to try to carry the message to the outside world. It's very hard to fight back internally.

I put together a book on PR. I used to teach it to companies. The first place I taught it was at Tektronix in Portland. The first chapter is "Know Yourself," from Socrates. The first principle of living a real life is to know yourself. You have to know yourself whenever you're in that business and be willing to challenge people and be willing to get fired, be willing to not be accepted. So you have to educate people rather than make it a confrontational kind of thing.

That led to our "Evening With…" programs, which I hosted with all of the major newspapers and magazines—*Time*, *Fortune*, *Business Week*, the *Washington Post*, their top people, their top editors. In many cases, they would bring their senior editors from around the world, and we would have a dinner that we would arrange here. It would be on my company's tab. Nobody paid for it other than us. We'd have a dinner and bring Steve Jobs, Charlie Sporck, Jerry Sanders, Bob Noyce, people like that, Don Valentine, people from the analyst world. They would sit with the journalists. We had Mrs. Graham from *The Washington Post*—she came with her whole staff. The deal was that the journalists can ask you questions, and you can ask them questions, but nothing can be printed. And that was an agreement up front. You could never get that today. People were surprised that we got it then. But the industry out here was rising, and they were curious about it. If that's what they had to do to attend, they would go back later and find out more detail and publish stories. But I wanted the dinners to be really open and for both people to get to understand—we're doing our job, and you're doing your job, and here's how we ought to meet in the middle.

I didn't just invite clients. Usually I invited the president or the senior person at companies that I knew and that were in the area. I have a couple of the guest lists that you can go down. You'll say, "Are these all clients?" And they weren't. I would say half of them were clients. Half of them weren't.

Hollar: Would you talk to them? Would it be a Q and A format?

McKenna: It was Q and A. It was asking questions and then getting into conversations. I remember when Mrs. Graham brought her editorial staff, the Japanese were the issue. Basically, consumer electronics had vanished from our shores and had gone to the Far East. And it was assumed a lot of the technologies and companies that were here, including Apple and others, would all end up being made somewhere in Asia. This is what happened to so many companies during that era, from steel to video recording. Mrs. Graham had just come back from Japan. They, in fact, stopped at this dinner on their way back from Japan, and they were really interested in hearing the voices of what people thought here. So it was an active discussion, back and forth, and people were participating.

Most of the dinners ended up being very open. They were really outstanding sessions. The purpose was simply to get everyone to realize that journalists are curious about your business and about your industry, and they're not trying to help you by marketing your company. They're trying to understand what's going on so they can communicate that to a broader public.

Hollar: Did they leave that evening with a deeper understanding of what the concerns were?

McKenna: You know, I didn't do any follow up specifically. But over time, these sessions lasted maybe-- I think we went three to five years doing different kinds of sessions. I think it made a lot of headway. People still talk about them today.

One of the issues that we ran into was—so many of the companies that were spinoffs here were suing each other. So we would sit down and say, "Oh no, we can't put him next to him."

Hollar: Seating became an issue.

McKenna: I had an assistant, Gayle Holste, who worked for me for about 25 years. She was very good at putting these together. She would see that everybody was happy, and that they were not necessarily sitting next to somebody that they were battling in court.

Hollar: The understanding on the part of the people you were trying to influence must have changed substantially when the devices started actually sitting on their desks. Was that a moment when suddenly a lot of people said, "Okay, this is a thing. This is not just a minor business."

McKenna: Yes. I think there were two seminal events. I think the microprocessor was a significant event because it changed the way companies designed their products. It changed the time to market, so more innovations could come out. That was fairly understandable because it was a computer on a chip, and it went into everything—we did an ad on chips being in everything from blood analyzers to video games. Now they began to have a lot more to look at in the way of applications where is this going on. And so a lot of the stories that appeared were about putting this kind of device inside of various types of medical instruments or things that anyone could relate to—video games and so forth.

Certainly, the personal computer was a revolution to media because they were not only using it themselves, many of them, but it was also an experiment to use it. That gave them a certain feeling of—I can evaluate this because I'm using it for my work daily, which is what you told me I could do. If it didn't work well, they could report on that, too. In fact, a number of journalists became industry gurus and wrote on technology exclusively. I knew one who began his life as a sports editor and ended up writing exclusively on electronics. They were there at the beginning, and they expanded their knowledge using these first machines. They were able to look critically upon them as a user as well as an outside observer. Remember, this was a day when people read more than a sound bite. There was no internet yet. Printed media had a big impact, and the personal computer had a big impact on them.

Hollar: Did you find the periods around the IPOs of your major clients like Intel and Apple, were those periods that called upon you and your company to do particular things that you found innovative or that were a different way to think about a public offering?

McKenna: It was what I didn't do. Because even in the first work that we were doing with Steve Jobs, our conversations with him were—we can't say certain things publicly because Apple was preparing for their public offering. Lawyers started coming into our meetings. I remember the first time lawyers came into the meetings at Intel, when we were working on Intel's quarterly reports and on their first annual report. All of a sudden, lawyers showed up. There were things you couldn't say. It was more not what you could say, but what you couldn't say, and that always became restrictive.

I didn't like that very much. Neither did most of the people in the creative side of the business because that really put a stop sign in the way of their creativity. Some of the lawyers wanted to put all the exceptions and denials at the bottom of press releases. That's like sending something out and saying everything you want to say, and then you get a paragraph at the end that says, "But don't believe this

entirely." I mean it just put the opposite kind of stamp on it. We started getting into a lot of that as things went on.

Then there were firms that started specializing in financial PR. That was not something that I felt was always, from my standpoint, helping the credibility of the product in the market. If that credibility were strong and the company were profitable, then the financial markets would take care of themselves. There were also classes of clients—for example, biotech clients and companies that were going into the pharmaceutical business like Genentech—which didn't have any need for us after the launch of the technology and launch of the product, because it was then five to ten years before you get FDA approval. That long process really meant that you couldn't promote anything. You really couldn't go out and speak a lot about these kinds of products to the public because there were lots of restrictions on that until you had something really viable. I even got beat up for the initial announcements of the first products at Genentech. I got calls from people, science magazines and the like, telling me that I should not have done that. They beat me up on the phone because they felt you only do this kind of thing once you have peer reviews and once it's been reviewed by the FDA.

Hollar: What had you said that upset them so much?

McKenna: There were two articles. One was in *Business Week*, and one was in *The Wall Street Journal* that I think I gave you copies of those.

Hollar: Yes, I was just sitting here thumbing through the papers. There's an article here from *Business Week*, December 12, 1977, "A Commercial Debut for DNA Technology."

McKenna: Right.

Hollar: It talked about Genentech synthesizing the brain hormone somatostatin. And it was cast as a business story because obviously it was *Business Week*. It's actually labeled as being in the research section of the magazine that week.

Genentech: First genetically engineered protein, BusinessWeek, December 12, 1977

The reason I asked the question, reading it now, almost forty years later, it seems like a perfectly straightforward business article.

McKenna: Right, but at the time they were comparing it to a pharmaceutical company who announces a drug before it's really out there and in the marketplace or before it's been approved by the FDA. I think that offended a lot of people and sent up warning signs. It also led to a lot of speculation about this creating new kinds of life— designer animals, designer people, all of that stuff. There were the fringe people out there who began writing all kinds of things on the other side.

At Genentech, it had a really positive effect in that Lilly [Eli Lilly & Co.] saw the article. I think they saw the article in *The New York Times*, which appeared before the *Business Week* one, or roughly around the same time. That actually caused them to come visit Genentech. They licensed the molecule that Genentech was developing for insulin, and that led directly to the creation of a partnership that helped sustain Genentech as a small company. Here's a small company developing what would eventually become drugs for diabetics, and for certain other kinds of diseases—I think the next one was growth hormone—and that kind of

Genentech: First genetically engineered protein, The New York Times, December 2, 1977

work was usually done by big companies. Their credibility when Lilly made a deal with them—suddenly they had the backing of a major pharmaceutical company who, quite frankly, had something like 80 or 90 percent of the insulin market worldwide. It gave them a lot of stability.

On the other hand, there was a company that I was on the board of, and which was also a client, called Hana. They were in the East Bay. They were developing and cloning the islets of Langerhans, which grow insulin cells inside the pancreas. And they were trying to grow these and clone them largely in what would be called Petri dishes. They had various degrees of success with that. But then the Reagan administration put a stop to any kind of research on anything that smelled of new forms of life in the lab and the cloning of human cells, because they were using fetal cells. Fetal cells were acquired not in any illegal way, but usually through people that had miscarriages and those kinds of things. They were using those kinds of cells. In fact, I even wrote a code of ethics for them on how they handled that, and we published it.

Hollar: Was that the first time you'd done something like that?

McKenna: I knew a little bit about ethics. I took a lot of courses in it in college and things like that. It was something which they needed, and it became something that they could show to analysts. But in fact people just stopped investing in them, and so they were not able to get the funding that they needed to sustain their work.

Hollar: Was it an ethical question for the investors?

McKenna: No, but that issue was raised by people, particularly in the media, because it was cloning human life. I think it was largely around the idea of using fetal cells. Today they do the same thing, but they actually use human cells that you can extract from the body. At that time, the fetal cell was thought to be a pure cell that you could use to clone. It probably would have evolved over time to something better. The problem with type 1 diabetes is that the mechanism making the cells is attacked by antibodies of your own body's creation. You had to have some encapsulated way of growing these cells and then keeping them protected. That's a long process of trial and experiment, and they were well into that. They had scientists, they were moving along, and they were being funded. But then the funding dried up once the government said, "We're not going to fund any of those kinds of projects."

Hollar: Since we're into this subject matter now, and it's early in the session, I thought it might be interesting to talk about Genentech and your relationship with the founders. Can you talk about how that all got started? And then let's talk about your experience with Genentech.

McKenna: Yes, and it was really a brief period of time. It was around the same time as Apple. We're talking 1978.

It was largely because of Bob Swanson, who had been a junior partner at Kleiner Perkins. A lot of my clients were from Kleiner Perkins. We worked together very closely. I knew Tom [Perkins] from pretty much the time he set up Kleiner Perkins and did a lot of work for Gene Kleiner. Things that I wouldn't have normally done, I did for Gene Kleiner. He had some strange investments—I mean he had good investments, but he also had some strange ones, like tennis shoes and tennis rackets and things like that.

Anyway—Bob Swanson called me. He had left Kleiner. It's always been a question as to why he left. I think there was some issue with Tom. Perkins was a man of quick judgment. Bob was, I believe, a chemistry major in college. He had some background in this. I think that, somehow or other, Bob wasn't finding the deals that he needed to find or something of that nature. The junior partner's role at Kleiner was—you come, you do a good job, and you can keep it. Or you can grow within the partnership. But if you don't produce enough, and there's some consensus among the people there that you're not doing enough—or Tom Perkins had an opinion, who outweighed everybody else's—then you'd just move on to something else, and they'd bring in a new batch of graduates. Bob was one of those people.

Still, he was very persistent. He was working out of the Wells Fargo offices in San Francisco at the time, and he was working on a plan. That was the first place I met with him. He talked about research in recombinant DNA area and said that he had found a person who had been really working on this over long periods of time. I guess there were two people. One was Herb Boyer at UCSF. The other was at Stanford. Bob went to UCSF to visit Herb, who was in the research area working on this project and had a lab there. They got along, and they talked about the potential for it. So now Bob had to put it into a business plan.

I had several meetings with him in which we went over how you write the business plan for this, and what markets. We wanted to identify growth markets. I remember Bob mentioned industrial uses that had never before come about. Beer, for example, would be an industrial market. It's made in a process of fermentation, and it's cloned, if you will, through yeast. Their technology was like yeast. You put it into a bacteria. The bacteria would multiply. Then they'd kill off the bacteria, and you'd have the molecule that you wanted left there. That's how'd you grow it. But to do that, first you had to manipulate the gene and the basic component. That's where their recombinant DNA could be applied.

With insulin, you would take the DNA apart and recombine it into a molecule that looked like an insulin molecule, and then put it into e-coli, I think, and that would multiply and grow the insulin. Then they would basically kill off the e-coli. You had the insulin left, and could purify it.

He went through this whole process and worked on the business plan. He then asked me to see if I could help patch things up with Tom Perkins. I remember calling Tom and suggesting that things looked promising with Genentech—that they've got some ideas and some products and so forth. That's how Tom then got involved.

Hollar: Bob Swanson was only 30 years old at the time. He was still a very young guy.

McKenna: He was a very young guy. He was also very smart. He knew what he wanted, but he was also very shy. He wasn't a Steve Jobs kind of character. He wasn't able to market things in that way. Privately, he was very good. But Bob was a methodical structured kind of person.

Hollar: We'll put this picture in the oral history. But you can just look at Bob Swanson in this photograph and see the very guy that you're describing.

McKenna: Yes. He was a really wonderful person.

He told me about Herb in some of our early meetings, and he gave me a copy of Herb's resume. I looked down it, and I saw that he had attended St. Vincent's college in Latrobe, Pennsylvania. And I kind of sat up, and I said, "I went there." Herb was there a couple years ahead of me, I think. We overlapped by one or two years. I only went for two years and transferred to Duquesne University. I certainly didn't know him. I went home and found my one yearbook from those days, and it happened to have his picture in it as a senior.

Hollar: And there he was.

McKenna: And there he was. And I mean he looked like a cherub. I told him. He had a very skinny black tie, as it was in the late '50s.

I blew that yearbook picture up into a poster, and I had the art department put *Time Magazine* on the top. It was his yearbook picture on the cover of *Time Magazine*. I blew it up very big and rolled it up. We were going to meet at a lunch in San Francisco, and I brought that along. I think probably for the first part of the

lunch we were just getting to know each other, talking back and forth about what he was doing in his lab and so forth. I think he probably thought, "Why do we need this guy?" because he was a scientist, and this was his exposure to somebody who was talking about how to market the product. It was far afield from what he had seen before. As we got into lunch, I said, "You know, Herb, if this pans out, you're going to become very famous. So, I took the liberty of showing you what that's going to look like." I spread out this poster showing him on the cover of *Time*. And he literally fell out of his chair. He said, "Where the hell did you get that?" And so I went through the story, and we became pretty good friends after that.

Hollar: Was that the first time he knew you and he were both alums of St. Vincent's?

McKenna: Yes. He didn't know me from the man in the moon.

Herb was a really, really, outstanding person. He told me later that he put the poster up in the lab, and his people who worked around him used it to throw darts at it. Eventually he joined the board of St. Vincent's. He's from Derry, Pennsylvania. It's a small farm town about fifty, sixty miles northeast of Pittsburgh. He continues to go back there and support places and things from back in those old days.

Hollar: I didn't know either of them personally, but watching video and seeing pictures and interviews of the two of them, it was interesting. It was almost a role reversal in a way. Bob, even though he had come out of venture capital and was helping to really shape this business, was the more shy, quiet, retiring guy, as you said. Boyer, the scientist, who you might have expected to be more retiring and shy, was a talker. He was a big thinker. He seemed to really like the limelight—or at least he didn't run from it once he was thrust into it. Is that the way it was?

McKenna: Yes, but I find that's true of a lot of the scientists and engineers and people who work in management. The engineers, particularly those who drive certain new technologies or products in some way, are very articulate about them. They're also very articulate about potential uses and where they see the next, and the next, and the next generation going. I never shied from taking input from people on the technical or science side because they really had a lot of vision about where the business could go and had their own ideas. I think that became more true the more time I spent with them. Where it was science-driven, particularly in the biotech world, many times they were able to articulate their science in a way that people in management or even marketing couldn't. So I actually loved that part of the business. And that was true with both of them.

Aside from somatostatin, the big one was insulin. Lilly put in a prototype manufacturing facility within Genentech. It was a mini-processing lab. I remember going in and watching them put it together. It looked like one of these things out of the movies with all the tubes and lines for the distillation process. In fact, it looked like a huge complex still. And it really taught Genentech how to get into the business. Again, that goes to a lesson that I learned about alliances. When you're a small company, these alliances that you have with larger companies really teach you things. They teach you how to get into a larger environment, how to scale, how to develop distribution, how to think about the next levels of change and growth. Sometimes it's a negative thing. You make an alliance, you see inside a company, and you see how

they're doing it wrong. But even so, you're able to emulate that but do away with the bad stuff and do it in a good way. You still learn from having that partnership.

I think that partnership did enable Genentech to see what they would look like two, three, five, ten years from then. And Lilly was a pretty buttoned up company.

Hollar: When you first encountered them, did they know? Did they fully understand what they had in being able to make the recombinant DNA process work with these hormones and synthetic drugs?

McKenna: Well, Boyer was able to do it in a lab. Sometimes that can be seen as an artifact. You have to actually put it into production to see if the same process can be done over and over and over again. That's true with a lot of materials and chemical-based businesses. One scientist told me that too many of the innovations we read about are done by Hollywood scientists. What he meant by that was that they get a breakthrough in a lab setting in a small experiment, and then they announce to the world what they can do. They do that to get more funding, not to necessarily reproduce it. But it's really not a viable product yet, so, you're basically in research, and trying to move into development. To move into development means you have to repeat that in a process that takes you to volume.

At Genentech, I think they probably knew intellectually that's what they had to do, but neither Herb nor Bob had worked in a large pharmaceutical company or a large chemical company. But they certainly intellectually knew the process and could forecast it. I think most of these companies learn by doing, as we've talked about before. And part of the doing was working alongside, say, the Lilly people, who were helping to build that first prototype production operation.

Hollar: When they got exposure to the Lilly process, what was their reaction?

McKenna: Insulin was going to demand a lot of volume of business, and they felt they couldn't grow that fast. So they licensed that to Lilly. But the next drug, which they developed after we were no longer doing business with them, a few years later, was human growth hormone. That was produced in relatively small volumes. The Orphan Drug Act helped companies that produced a molecule or a drug for an illness that had a limited market, or was intended for a small number of people. You were exempt from certain taxes, or you were patent-protected for a longer period of time. There were benefits to that, and with growth hormone they could have exclusivity on the patents they developed in that area for a certain period of time. It gave them protection from competition that would come in and drive the prices lower.

Incidentally, I should say that the promise of creating insulin through recombinant DNA was that it would reduce the cost of insulin. As you know, I've been a type 1 diabetic for most of my life—60 years. When I first started using insulin, I think it was something like $10 a bottle, maybe $5. It's $300 today. It didn't reduce the cost. The extra money that's been added on to it is really profit. It's actually cheaper because you're making it in high volumes, to make, but it's more expensive to buy.

Hollar: It's so interesting you should say that because I was just about to read you this, the two sentences out of this 1977 [*New York Times*] piece, which was kind of Genentech's coming out party, that

struck me. One was the lead. "A tiny San Francisco company just two years old has scored a biomedical research coup that may have left its competitors in the dust." That must have just been a dream article to read when you saw it. Do you remember how you reacted?

McKenna: Yes, from my standpoint, biotech companies had a much greater ability to get favorable treatment from the media because they just seemed to be more directed toward saving mankind or—

Hollar: Human good.

McKenna: Human good, yes. Electronics companies—and you even see it more today—seemed to have something sinister about them. They're after profits. They're after control of the market. So, that kind of story was not unusual except for the fact that it wasn't in a science journal. It was in a [newspaper]. And that was something Genentech changed. I was able to do that for them only because I would never have gone to the *Journal of Medicine* to publish that because I didn't know who they were. But the business press would help develop a start-up, and get it to that next level, and get it the kind of financing that it needed as well as the kind of partnerships that it needed. That's why the business press became a significant vehicle for them and probably why they got more favorable treatment.

Hollar: Apropos of that and what you were saying earlier about the cost of insulin, the second sentence, which is way down the article, says, "Today, somatostatin costs around $30,000 per gram to synthesize chemically. But Genentech believes it can bring the cost down to $300 or less." That makes it a business article, a social article.

McKenna: Right.

Hollar: A human good article, as you were saying.

McKenna: Right, yes.

Hollar: Which would get your attention.

McKenna: Yes. Now, this wasn't always true. I'll give you a comparison. There was a company across the bay called Cetus, C-E-T-U-S.

Hollar: They're mentioned too in the article here.

McKenna: Yes. We drifted away from Genentech because we really had nothing more to do there. We were trying to do a newsletter for them, but we didn't have the kind of people that could actually support that. We did a couple newsletters for them, but I think they probably did most of the writing because at most pharmaceutical companies, the person who runs marketing is a scientist.

Hollar: A subject-matter expert.

McKenna: Yes, they're really, really steeped in it. And I met those people at Lilly and other pharmaceutical companies later on. They generally picked somebody from the science world within their own management structure. First of all, because of the regulatory issues, they can be literally stomped on very quickly by the FDA if they go out of bounds. And the SEC, all kinds of people, will jump on them if they're promising the public some solution that isn't viable. We saw this through Theranos, and their lack of getting a viable product to market. What they were saying versus the evidence quickly got into *The Wall Street Journal*, and really that began the downward trend for them. So these are very sensitive areas that do require, I think, a high degree of specialization.

But Cetus, again, was at an early stage. At the time, they stated that they were in a different area—what they called trying to evolve products out of biomass. Pete Farley was the president. And, unfortunately, they kept talking about product time to market as being 10 years or 20 years. I tried to convince them that that just wasn't viable—that you couldn't go before the financial community, either the venture community or the financial community, and expect to raise money with that kind of lifecycle. You had to have a shorter time to market. They were basically a research operation, and were trying to fund research, but they had to have specifics. They just never had, to my mind, enough specifics.

I did put a lot of presentations together for them for financial analysts meetings in New York, and went with them. The subject would always come back to biomass, and it would wander off into theoretical stuff. They just didn't seem to be able to focus like Genentech. Genentech said, "Here is somatostatin. We're doing that now. And that is a precursor of us doing other molecules like insulin." That was very specific in people's minds. They could identify it with a disease. They could identify it with specific issues. At Cetus, you never could identify anything. I think they're still around, but I don't know and I haven't followed them.

For the longest time, you couldn't identify a specific market category in which they had made inroads. And so again, there really wasn't anything for us to do. I had no problem with that because we had plenty of business elsewhere.

Hollar: I want to go back to one other aspect of Genentech, which you touched on: Bob Swanson's relationship with Kleiner Perkins and with Tom Perkins. You said earlier that Bob asked you for help in patching that relationship up. What did you do, and how did you do it?

McKenna: I simply called Tom. You know, the simplest thing. I said that I'd been working with Bob, and that they want to raise money, and that Tom ought to have a conversation with Bob. I think there were feelings on both sides that tension was there, when there really probably wasn't much.

Tom was a very practical person. He could be pretty volatile and even angry on things, but it passed quickly. I think Tom knew this could be not only an interesting business, but a very viable business, once he got the presentation. I don't remember the specifics of what I said or did or whether I showed him the original plan or something of that nature. But I do know they got back in touch and that Perkins pretty much picked up most of the tab for the initial deal. I don't think they spread it around much. On that deal, I think Tom did everything. I think they did a secondary. And Tom called me and said, "Hey, I'd like to get you, you know, on the secondary." So, I was involved in the secondary.

Hollar: And then it went public not long after that.

McKenna: It went public [not] long after that.

Hollar: I want to close that section now and move on to talk about your notebooks, your note-taking, and your style of both recording events as they happen, and then recording your own ideas.

Today in Silicon Valley, everybody's got a notebook. They carry it everywhere. But you started that for yourself a long, long time ago, and it's an important part of who you are, how you worked, and the history that you recorded. Let's talk about the Regis McKenna note phenomenon. What actually got you started carrying a notebook and using it the way that you came to use them?

McKenna: I actually started when I first started college. I kept a notebook, and I wrote all sorts of things in there. I wrote a lot of poems. I wrote essays on what was going on, commenting on things around me, and my thoughts. I think I threw a few of those notebooks away, as any of us would when you say, "Boy, was I dumb, and naïve, and stupid in those days."

I wouldn't do it every day, but I'd do it periodically when I'd get some ideas or something. I would just scratch it down in a notebook.

Then as I got out into the world, I started making comments on businesses, on people, on businesses and the characters that were running them. I've got a lot of personal comments among notes on the specifics of a business. My notebooks, which cover my business career from 1972 to into the 2000s—and I still use notebooks— were not intended as a daily record of what's going on. Some pages were just a few words here or there, which largely would give me something that night or that week to look at and say "this is something I have to do," or "this is something to fill in." A lot of people can't make sense out of it because it was at that moment and referred to something specific I was doing. But in other times, I literally would sit down and write long prose stories.

Because I was on Apple's executive staff, I always believed Apple was a story. When they began, shortly thereafter, Tom Peters and his partner Robert Waterman wrote the book *In Search of Excellence*. And it was really about how America—particularly old industries and new technology businesses—had their tails between their legs. They weren't wagging and boasting about how great they were. Most of the old industries had vanished. I was born and raised in Pittsburgh. That was the steel capital of the world. It had supplied most of the steel for World War II and for all the armaments and machines and manufacturing in that whole Ohio Valley. In California there were new businesses and new industries, and certainly the key one was the semiconductor business. But no one really knew where those products were going. They were initially going into military uses. But it wasn't clear yet whether other American businesses could be built on that. The people who had really seemed to take advantage were Sony, who did the transistor radio. But at that point there weren't too many other things with transistors. We didn't have a transistor television. We didn't put transistors in our car. There were no people really taking advantage of it. Peters said it seemed as though those old industries vanished because they weren't able to fully take those new products and technologies and leverage them into new industries.

Then Apple came along. It was a time when the whole business community needed companies and examples. Here were basically two kids who were very young. At least one was a dropout. The name Apple itself was all-American. When we did the original multi-color logo, it was basically an affront to tradition. I remember looking, at the time, at all the other logos. IBM looked like something that was built by Rome. You know, the type was very solid. It was like going to some old European castle towns or Roman ruins and seeing the stability that had endured there for years, and years, and years. With Apple, the idea of creating, and going outside the norm, and doing something really different—that's what they appeared to be. They had that attitude: "We are different." The people who were head of the company were probably more the age of the grandchildren of the people that were running most of the large companies in America.

I went around and asked people if they knew who the president of IBM was. Who was the president of Texas Instruments? No one knew. But even early on, they knew who the president of Apple was. That became a story to me, and it was a story that evolved. In my notebooks, I paid a more attention to that and maybe to Intel than others, though I do have prose notes.

And I would comment. Here's one—the title of this one was "Power, Politics, and Ego."

Hollar: What's that dated?

McKenna: See that's the other thing. I didn't always date them. But this one came probably from the '80s.

Hollar: So, that's somewhere in that incredibly tumultuous period in between when you met Jobs and Wozniak in '76 and Steve's departure in—

McKenna: Yes, I have really extensive notes because I was on Apple's executive staff. And I have really extensive notes on that period of time. For example—

Hollar: And what's that essay about?

McKenna: About Apple. And the rest of the pages after that go into getting a call at home that there was an emergency meeting, a staff meeting, being called. I think it might have even been on a Saturday morning, and they asked me to attend. I think that started with—John had gone to the board.

Hollar: John Sculley.

McKenna: John Sculley had gone to the board, yes. And there were some outcomes of that, and long discussions. This went on for a couple weeks, that whole discussion. So, this was really an article about John Sculley and his role. All of these notes are during that period.

I felt like a journalist. I had met with Mike Markkula. I met with Al Eisenstat, the attorney, several times, and with Ed Stead, who was also in the attorney's office. I met with Steve. I met with other members of the board. I talked to the secretaries. So, I have some really long, extensive notes about that period. In all

honesty, I don't think anybody has told that story. And I'm not going to make it public because I think it would be too embarrassing to some people who are still around. I don't think I want to do that.

Hollar: You were doing this because it was just your way of working out in your own mind what you were seeing and thinking. These weren't for publication—maybe someday, because your notebooks are at Stanford now and accessible to researchers.

McKenna: Not yet.

Hollar: There will be a moratorium or an embargo. But this was just your way, getting back to why you were doing all this, Apple and otherwise, it was a way of you working out in your own mind what you were thinking.

McKenna: I had the habit of writing stories. Even when my wife and I moved to Philadelphia briefly before we moved to California, we went down to Washington D.C. to spend the weekend with people who used to be her neighbors back in Pittsburgh. They were a couple who had bought a place in Florida. They were interesting people, and he worked for the government, and his opinions—I came back home, and then I wrote a short story on it. I went to Beirut in 1973, and then I wrote a short story on that, not fiction but just what happened and what I observed and what I saw and so forth.

So, after having those kinds of experiences, I would tend to just write something about it, and, as I said, I started doing that a long time ago. I was just interested. I always thought maybe I would put those things into books, though I have files and files of unfinished stories on all kinds of subjects.

Apple became that. Intel became that. They became stories that I thought were really interesting.

I have two book ideas. One I keep folders on. It's called "Notes from Underground," and that one I would publish anonymously. The other is "If People Only Knew," and that's what goes on inside companies and boardrooms. People don't know. They never really see what goes on. There's a lot of anguish, a lot of gnashing of teeth, a lot of arguing, and fighting, and all kinds of things going on—and certainly good things, too. American corporations evolve through internal conflicts—one management versus another, the people down at this level versus the people at that level.

Fortunately, I think we've evolved, particularly in recent years, to something completely different. The more I hear about a lot of the younger companies that have evolved here in Silicon Valley, there's much more recognition of voices coming up and participating in the overall management and policies. It's much, much different in terms of bringing more people into the discussion and bringing more of the employees in. That, I think, is one of the really good things that I've seen happen here in Silicon Valley in the last 10 years or so.

A lot of the semiconductor companies initiated it—the, "We're in this together," but I think there was still a lot of top-down. Certainly having worked for Philco for a brief period of time, I saw that in spades there. It was all top-down. I was literally told by the marketing director at Philco, "You will do what I tell you. When

I tell you to do such-and-such, you do it, and you do it in this color and that shape and that high." I mean, literally he said that to me.

My response was such that my boss thought he was going to jump out the window. I used to say, "I'm not economically independent; I'm just independent."

Hollar: As you reflect back on your notebooks now—because you've spent a lot of time going back through and looking for things and——

McKenna: I do. Yes.

Hollar: What's your impression of your thoughts over the decades? Are you happy? When you were trying to faithfully record events, do you feel like you got it right? When you were just being creative and letting your mind run free, do you still feel that sense of freedom when you look through it? What's your overall take?

McKenna: First of all, no, I don't think I got everything right. But I think being able to write it down at the moment allows you to reflect on it and hopefully learn something from it—from even the observations that you were making.

With regard to Apple, I think that both Bill Campbell and I felt that Steve Jobs should've remained at Apple and been chief technology officer. I think that was a good decision at the time, though Steve had another outcome in mind than we did. I tried to convince him of that, but it didn't work.

I don't know too many people that have worked with as many different technologies or as many different companies—a lot that I didn't even record, because they were just one-off sessions or speaking events at companies, where I then got to meet the managements of top companies. That included Xerox and Kodak and IBM and Digital Equipment and companies throughout Europe and Asia—Mitsubishi, Toyota, all of those companies. I've been with their top managements and learned a little bit about each one. Not all those experiences are in there, but the accumulation of the experiences gave me the ability to make comparisons and make judgments and then see outcomes through my life.

When you ask, "How do we try to evolve as a business to be more of a consulting firm than, let's say, an advertising or a PR firm?" what you realize is those are functions that really don't have major impacts on the outcome of a business. They may in the consumer world, where you're marketing a consumer product. You do need to do that, but it's still not the key factor to your success. The key factors become so much more what you derive from seeing other instances and other companies not follow the technology, not pursue, not push the edges, not move to the next generation early enough, being late to market, not adapting, not having enough knowledge of their customers, particularly at the higher levels, being more top-down than bottom-up. All of those kind of things come together from just having been there and having watched it and observed it, and you reflect on that and those kinds of experiences.

I feel that's one of the shortcomings of today's people going into marketing or maybe even into any kind of technology business generally— the young engineers and the young people going into these businesses. I've met a lot of them. They contact me and want to have lunch, and I'll bet I still have five or six of those requests a week. We just have lunch and talk about things—young people out of school, or parents who want me to talk to their kids about going into an industry here or somewhere. They're put in a cubicle, and they're focused in a very narrow segment, where I had the experience of participating in management meetings at a very young age and seeing everything that's going on in the company and seeing the impact—when you come into a new place and you check in at the front desk, and then you actually meet the chairman of the board and the board itself or the president. You see these two extremes.

My son-in-law keeps saying, "Regis, here's my checklist for the next time you see Tim Cook." He's an engineer, so he tells me all these things, and we joke about it, but at some level you get that this kind of input doesn't always get into the structure, or placed within the purview of senior management at companies. As they get bigger, it's just harder to keep in touch with everything. There's just too much going on.

When you look at Amazon and Apple now, billion-dollar—trillion-dollar—companies, it's an enormous amount to keep track of. That's even hard for smaller companies to really get. I know there are a lot of demands on senior people like Jeff Bezos and Zuckerberg and certainly on Tim Cook—expectations of them, when in fact their responsibilities are so broad and in so many different areas that putting priorities on things is difficult. A lot gets pushed to the side, because they just run out of time. I do know that Tim Cook is up at four in the morning and at Apple by six or seven, after he does his workout and so forth. So his days are long, and if you're running a billion-dollar, trillion-dollar company, that's probably expected.

Hollar: The other morning, I finished a run with Carol at the Dish really early, one of those summer mornings when the sun's up at five thirty, and we ran down Stanford Ave. to that little Starbucks at the corner of Stanford and El Camino, walked in. There were three people in that Starbucks: me, Carol and Tim Cook. Tim's sitting there with his iPad doing his e-mail and drinking a coffee at six forty-five, probably the only quiet time he gets in an entire day.

McKenna: Yes. I get a lot of requests to ask him to do things. I do go to almost all of the announcements, and then I send him back something about what I thought or whatever, and he's always responsive. But if I say, "Somebody wants you to go here or give a talk," he never responds to that. That's delegated to somebody, and he says, "Should I do that, or shouldn't I?" He's the modest CEO of this large corporation—and we haven't seen those kinds of large corporations in the tech business, ever. Remember?

Hollar: That's right. It's only just starting to happen.

McKenna: I keep track of that. I keep track of the top 50 companies in Silicon Valley. There are more companies than ever with over $5 billion in revenue in Silicon Valley. There are about 20. But 15 years ago there were half of that many, and 20 years ago there were about 6 or 7. The number of companies

between $1 billion and $5 billion has almost tripled. So there are management issues here that I think have to be addressed. There are lessons that they don't have time to learn. They don't have time to sit down and go visit other companies and see how things are done.

I've been, as far as I'm concerned, blessed, because I've seen every technology. I've seen every kind of business, and on a global scale.

Hollar: And you've seen every type of leader. You've seen every type of board member. You've seen every type of entrepreneur. Along those lines, getting back to your notebooks for a minute, what work have you done to distill some of the big lessons that are tucked away in all those many thousands of pages?

McKenna: That's in my next life. But there are lessons, I think, from my notebooks.

I showed you this morning the environmental charts that I did on the personal computer business. It

Examples of "Environmental Charts" for the personal computer business over a period of time
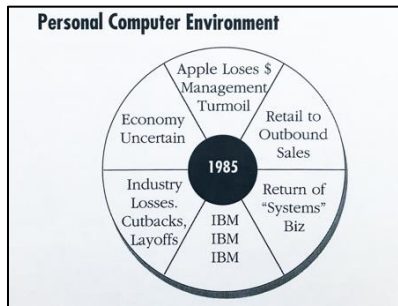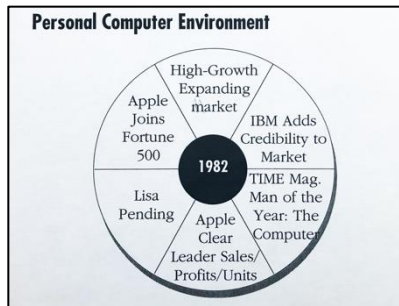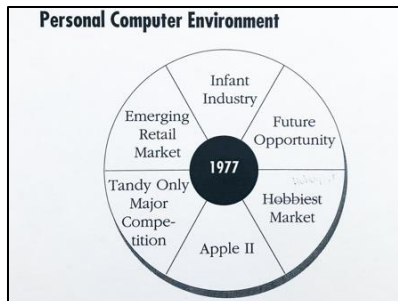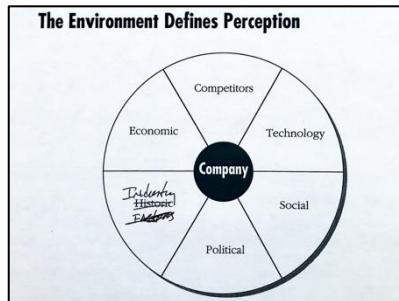
would've been whenever the Apple first came out, so it would've been late '70s, and it was one of the models that I always used. The world sees you and your product through prisms, and those prisms are economic, political, social, technological, and competitive. There are a variety of factors. Your company is viewed through one of these prisms. You're in the middle. Financial analysts will look at you one way. A customer would look at you through another, so they will look at you and define you in different ways and understanding what's going on in that prism is important.

When you get into growth industries, new industries, each of those prism segments changes almost monthly. I did that prism analysis for the personal computer industry over a period of 10 to 12 years, and I have each of those. I put in different influencing factors, such as IBM entering the marketplace, or things like Java coming into the marketplace, technological changes that came in and had an influence on the business, people going out of business, recessions. All of those kinds of things happened over the period of a decade, and you could distill that down into a 10-year-long case study of the personal computer's rise.

Hollar: Yes. The analysis, and we'll include it along with this oral history, could be done for any kind of technology, couldn't it, because I'm looking at the first slide, and it says "the environment defines perception." That's a principal that works across everything.

What do you hope researchers will be able to find and use from your notebooks and from your personal archive, Regis?

McKenna: It's a little like putting a new platform out there so that people can decide what they want to do with it. I think that some of the stories that could be created out of the work that I've done will be new insight into a lot of things from the inside.

One of the examples that I wrote—this was my own commentary back in the '70s—was at an Intel meeting. I had just seen a report that Intel had said that something like 60 percent of their products were going into industrial products, another 20 percent into military. But no one defined what I called the emerging market for information and data in the computer business. I said that maybe they needed to do some research, because the whole world of data processing and information processing may be their biggest customer in the future. That was just a commentary in the late '70s, and it was rooted in the fact that the markets they were serving then were the old industries. When Intel began, don't forget, they were a bipolar company selling the same things other people were selling—maybe a little better or newer technologies—but still going into machine tools and industrial products, whereas new products would be going into more commercial, consumer types of products. That didn't happen until later on.

I think the successful companies started to do a little bit of projection and imagination. I think imagination is really important, because a lot of what has come about we think of as science-fiction, such as talking on your wrist phone, and those sorts of things. So I do think that there are those kinds of things that you can track when you begin, whether you're an executive or, really anybody—you can be keeping track of your career through notebooks and reflecting on where you've been so you can see where you're going.

Hollar: Do you think that's an important quality in a good CEO as well? You've mentioned a couple that were especially good. Someone you respected a lot—Bob Noyce—was credited with a couple of quotes that would seem to be contradictory. One was, "Don't worry about history. Go off and do something wonderful," but another was to the effect that you have to understand what's happened before you can understand where you're going. He seemed to be someone who could have a foot in both camps, and that was the way his mind worked.

McKenna: Yes. I was in a meeting at San Jose State's engineering school, and there was a presentation by a venture capitalist who told them that, if they really want to get themselves engrained in the industry and get funding from people in the industry, they should just focus on apps—because that's where the money is. My response was—understand where apps come from and how they're built, and the types of processors that are being developed today, and how they require new kinds of software, new kinds of devices. We've gone from processors that had 1,000 transistors on a device to something like this [shows an Apple watch], and, in fact, the processor in the next watch is going to have 6 billion transistors in it. That requires you to look at everything around it, because the kinds of interfaces that you're designing,

the speeds with which things change, the ability to put different kinds of applications and software on top of it—all those interactions come from looking at where it's evolving to.

Moore's Law built this Valley, and that was always looking at the future. It wasn't looking at the past, but it was built on a past thing, and that proved that it was going to happen. There are people denying that it's still happening, and yet just in the last five years we've gone to 6 billion transistors on a device, and that's in the face of people saying Moore's Law is dead. Now, I don't know when it will die, and there is a certain limit, probably, but they're down to the atom level now in terms of spacing transistors for both development of memory technologies, as well as information technologies. If Moore's Law doesn't sustain itself through the device level, it'll go through the systems

Moore's Law c. 2011 (Regis McKenna collection)

level. So I think it'll just move up to where the system is performing, with a multiplicity of devices, and it will probably be pulling together networks of these devices together. That's what they're essentially doing with neural networks. It's not just a device, but it's connecting a lot of different devices together to act like synapses of the brain.

But that's less important than saying you have to understand you're building a business that depends upon constant progress. There's almost an enigma built in. People want to not change. Particularly, I think, in business they want to stabilize on things. They don't want to change, and yet it is change that makes their businesses successful. It is change that brings new competitors in against them. It's change, so they've got to be constantly looking at what's changing in the environment, not what's staying stable.

Hollar: And, therefore it's important if you're going to be a successful CEO.

McKenna: You got to be out there, and the successful ones are. The successful ones are.

Hollar: Just one final question about your notebooks and your note-taking: That's part of a much larger archive that you've accumulated during the course of your career. Just talk a little bit about the things that you felt it's important to keep. I was stunned the other day. We were talking about something in relation to one of the oral-history sessions, and the next time we saw each other, you handed me an op-ed by Arthur Schlesinger from the *Wall Street Journal* from 30 years ago, which says "The Future Outwits Us Again." You seem to have this incredibly diverse set of things that have meant a lot to you. You've kept these things because they're meaningful, and they tie into something else. Talk a little bit about your archive beyond your notebooks.

McKenna: And, strangely enough, I can't often remember the name of somebody I met yesterday, but I can remember where I have something filed from 40 years ago.

Hollar: I think it's common for us all.

McKenna: Yes, and if something's missing, you know that, right?

This whole idea is to be constantly learning about not only the business you're in and the businesses that you're serving, the technology industries, but about the environment. By "the environment," I mean that sphere of economic, political, social and technological change—to keep tabs on those, because they have so much influence.

Peter Drucker said your business will change more from outside influences than it will from anything you do internally, and we certainly have seen that in Silicon Valley. We probably testify to that in terms of all of the top companies in Silicon Valley being displaced by a whole new wave of network-based companies and software companies, whereas 20 years ago it was all hardware. That changed the way we all live in this Valley.

I keep files on almost everything. I have things that go back to literally the '20s and '30s and '40s, because the past really teaches you about the future. In other industries—in radio, for example, there was a proliferation of radio stations all over the world. There was a proliferation of radio companies. There was a proliferation of TV companies. And it happens here in Silicon Valley, right? At one point there were 50 disk-drive companies. There were hundreds of PC manufacturers around the world at the beginning. So this was the same pattern that you would've seen over the last 100 years.

I have file drawers in which I have stuff on economics, on the financial marketplace, on society, on the internet, on Amazon, on processor technology, on Moore's Law— and then there's a whole, big "yet to be filed." I went into my own research files for writing my books and for looking at data and putting together presentations and things of that nature, so I could bring in information from the outside world. I was a ferocious clipper on economic influences and trade influences. I've kept files, particularly diagrams, on competitive trade issues, the movement of capital, the movement of goods and services around the world, particularly related to technologies. I would publish those, probably 30 to 40 or 50 at a time. I would have my people copy them and make packets, and I would send them to the key CEOs on my list so that they could go through these and just see charts. They didn't necessarily have to read a lot, but they

"I keep files on almost everthing,"-- Regis McKenna

could just see 50 charts and graphs from *The Wall Street Journal* and *Business Week* and *Time* and *Fortune* and the *Times of London* and the *Economist*, those kinds of things.

I was sending these packets regularly to a small, personal group of people. That was a way of keeping the people up to date on those environmental factors that are influencing change in their businesses.

Hollar: Your mind just naturally works to assimilate and synthesize a lot of information coming in from a lot of places and making it useful, taking all that information and applying it in a way that has impact, whether it's informing a CEO or developing a marketing strategy or a business strategy. So I can see how drawing that together and sending it out to your best clients would be helpful to them. I think you probably understood as well as any Fortune 500 CEO that there's so much information coming at you at any one time. Unless somebody, somewhere helps to assimilate at least a little bit of it and put it in a form you can use, you're not getting ahead of the game.

McKenna: Yes. There was one president and CEO of a company who I was talking with. I don't remember what the book was, but I had read it, and I said, "It's a book you ought to read." I was telling him this, and he said, "Did you read it?" and I said, "Yes, I did," and he said, "Did you highlight it?" and I said, "Yes." He said, "Could I borrow it?"

Hollar: "Send me the highlighted version."

McKenna: It's just the overwhelming nature of being a leader of a company. We now understand all of that, in this age of the products and technologies that are so impacting our social lives today.

I had this discussion today about Facebook, where they didn't come to the realization that they weren't just making a product. They were making something that had huge impact on society—as if they were a public utility or a public service or a government. It had a more far-reaching impact than I think they themselves realized. And so it requires insight.

My mentor in college was a professor named Bernard Boelen, and he had degrees in philosophy and physics. I mean, he had a multiplicity of degrees. He emigrated from Holland. He and his wife escaped the German invasion [of World War II] and came to the United States. He was just a marvelous teacher and had all of this knowledge of a wide range of subjects, and I stayed in touch with him. He was at DePaul University in Chicago when we last talked, and he was being called on by many companies, large companies, to come in and talk about the philosophical issues within organizations and companies. You need a CEO who has the ability not necessarily to know those subjects but to at least be able to bring in people who could help have those insights.

I know that Intel hired anthropologists and psychologists, and those kinds of people come into a technical company with a liberal arts perspective. I'm a big believer that the liberal arts is an asset, because I was one of the lone liberal-arts people in Silicon Valley and in technology businesses. When I was at Philco, they did a personality test on me to see if I fit the company, and I was told that I really ought to find a job in another business, another industry. That was in 1965, and this was the standard test that they gave all

of their employees to see where you fit. They said, "You're orthogonal to the engineering mind, and this is what this company's all about. So you have to find a job somewhere else where you can teach or do something else." As it turns out, in fact, I did find a lifelong job in teaching—but it was not what they expected. So I think we need that kind of different thinking as an influence.

Steve Jobs, again, said he felt that the arts and sciences and engineering really intersected to make Apple, and I think Apple has proven that they can intersect—at the right time, in the right place, and with the right people. They can create this. Marketing is then everything, because it puts it all together, and it appeals to the world.

I think we need more of that kind of thinking today in our executives because, more and more, the corporations are shaping our society more than our governments are. We can see that right now. The influence of success within companies over the last 10 years—10, 15 years—through even recessionary times continues to be strong. The market continues to be strong, because, in a way, it's ignoring the government. This is where I tend to become more conservative and say it's the government that's getting in the way—because we're missing the benefits of the government continuing to invest in science and continuing to support the science world. Instead, the roadblocks are coming from government now. They're inhibiting the growth of science through their negative views on—well, just the environment itself could be a huge opportunity for the development of science.

So could security. One of my last big jobs was with some people out of Lockheed working on airport security. I felt that you could go into an airport and never have to go through a screening mechanism because there is so much data out there on any one person. You could pull all that data together in less than a second. I put together a list of all of the public databases that we all are exposed to, from birth records to divorces to marriages to taxes, and so forth. All those records are there, a lot of data on all of us, and it's all sitting in databases that can now be synthesized and protected. I'm not saying it's not protected now, but there are ways to implement security systems that require huge investment in software and maybe neural networks and artificial intelligence and scanning and those kinds of things. But it could all be synthesized, and I felt that kind of system could be like the space project. That's what I compared it to—the space project, focused on the security of the nation, largely driven by secure software, if the investment were made. I think we could do that, and we could be driving it, but the government's not doing that. It's being done on the private side. It has to be done.

Hollar: We're going to begin the afternoon session now. We've talked both chronologically and thematically, and I think for anyone who's reading through or watching the interview, Regis, it'll be very clear that we're skipping back and forth between theme and chronology. And that's good, because whoever is reviewing this over time will have the benefit of being able to skip back and forth and tie it all together. But I think it makes sense to us.

We're going to go back to chronology now. In our earlier sessions, in various ways, we've covered the period up to about the mid-1980s from the standpoint of your business, when things were incredibly strong. Now I'm going to talk about the period from 1986 to about 1990. By that time, you'd had more than 250 clients up to that point at various stages—major, small, some long-term, some more--

McKenna: Project-oriented.

Hollar: Project-oriented. Yes. And then in 1986, you decided to make an alliance with Peat Marwick—align your business with their business. I'd like to take a few minutes and ask you to explain the context, first of all, in which that was happening, why. I'm sure you evaluated many potential partners and why they would seem like the best partner, and what you hoped to achieve. Let's begin at the beginning. Where was your company as a business and why did an alliance seem to make sense?

McKenna: We were doing multiple things in what we called marketing services, including advertising and the PR, which we always tried to take to a different level or depth than other companies. With some we'd succeeded, and with some we didn't, but we did it with the value-added of having really bright people in our company. We had a lot of really, really bright people and kept moving upstream that way—trying to bring in better and better, more talented, more experienced people. It got to a point where there were enough people with MBAs in our company, and enough people who were thinking about doing more than simple implementation of strategies, that I thought we ought to continue to move in the consulting direction.

The one problem was, of course, survival—because, as I mentioned, this was an anti-consultant world. Advertising and PR were really the things that you earned money from, and those allowed us to have a platform to also explore, learn, give our ideas and participate in the client companies' strategy, businesses and processes.

In 1981 I had sold the advertising business and we basically had to start over. I think we had a couple million dollars' worth of business that was not advertising, but that had been a fairly lucrative business and so we had to really rebuild. By 1985-86 we were back up over $10 million and that enabled us to spread our wings a little and I was impatient to go further. I had discussions with some consulting firms about our processes and some of what we called products—internal and external audits, developing a strategy for taking new technologies to market, really formalized programs in which we used a process that we had developed. I had talked to partners at McKinsey in New York, and they wanted us—but they wanted to work alongside us for a year before deciding whether or not they would want to either merge or acquire us. To which I said, "No way."

Hollar: No way.

McKenna: We talked to Hill+Knowlton. I had meetings with their top-level people. At the time, there was not a lot of strategic, in-depth thinking in those companies. They're implementers—fellows that most of our people, you know, thought placed brochures on chairs and in halls where the company's going to have some kind of an event. I'm sure these companies have changed since that time. I had discussions with a number of companies, including Gemini, which was a fairly well-known global consulting firm.

Peat Marwick was a large accounting firm. It was trying to get into other businesses, and they had spent some money acquiring a consulting firm back in Boston, an IT consulting firm. They were really very, very much in sync with the way we did things, and we made a good partnership. More and more of our clients

were in the computing field, and the firm Peat Marwick acquired were people out of MIT and Harvard and had some really top-notch consultants. We got to be close to those people. Peat Marwick also had an interest in a smaller company out here that was doing consulting in processing and manufacturing, particularly in semiconductors and other processes here in the area. I don't think they had acquired the whole company, but they had the distribution and the ability to have their partners learn about the business and then sell it to their clients across the world, so we could've hopefully grown through that mechanism.

Hollar: And just to put this in context, the big accounting firms at the time still had accounting as their core business.

McKenna: Absolutely.

Hollar: KPMG, or Peat Marwick at the time, weren't the only ones trying to diversify. Arthur Andersen was trying to do this.

McKenna: Right. And Andersen was successful, and then they split their business. Yes, that became the model.

Hollar: They were trying to become full-service business partners for their core accounting clients.

McKenna: Exactly. Peat Marwick wanted to do that, and we got to know, in particular, the technology partner, who was in Minneapolis. He came out, spent a lot of time, kept coming back and forth. His name was Tom Moser, and I remember the name because I knew three Tom Mosers.

McKenna: Tom was a very strong technology partner at Peat and was trying to get them into technology companies and businesses. So, we did. They didn't acquire a major interest in us. They acquired something like 49 percent, and that gave us money to expand.

Simultaneously— perhaps one of my biggest downfalls—John Doerr asked me if I would become a partner at Kleiner Perkins. Not full-time, but half-time, which meant that I would still attend all the partner meetings. I used to say I worked one hundred percent of my time at Kleiner and one hundred percent of my time at my company.

It was like *The Producers*. I sold 150 percent of myself.

Hollar: Before we talk about that offer from John Doerr, talk a little bit about your involvement with Kleiner and its companies overall. This morning we talked about Genentech and—

McKenna: Tandem.

Hollar: There were others, and a lot of them were Tom Perkins-led investments too, weren't they?

McKenna: Yes. Tom Perkins was one of the first people I met in the Valley when I was in the publishing business. I called on his little [laser] company. When he formed Kleiner Perkins, I had lunch with him up on Sand Hill Road. We talked about what I was doing, and I knew what he was doing, because friends of mine like Don Valentine had gone into that business.

I knew most of the venture capital people in the area simply because many small companies were backed by venture companies, and I would either come across the company and then refer it to somebody, or suggest they go to somebody through a venture firm. Genentech got to know me because of other companies that I had had as clients at Kleiner. So, it really was the Silicon Valley network at work. Once you got into that network it became a referral system, and that's how I benefited from it.

John Doerr and I had worked at Intel on the single-board computer, trying to get Intel into the personal computer business back in the hobby era, and we did. We put together packaged components and sold them through Byte Shop and through other kinds of hobby stores, and we promoted and marketed that a year before Apple was even founded. So, John and I stayed in touch, close touch.

Brook Byers was also a partner there. Brook started out of college working for Sullivan Reading Centers, which was founded by a Stanford professor who had started a remedial reading program for children after school. He had these remedial centers all over California and other places, and Brook hired us to help him. Brook went into marketing right out of Stanford Business School, and so I was working with Brook before he joined Kleiner. Jim Lally was also another person at Kleiner. Jim had been at Intel.

So, we had worked together with a lot of these people on product marketing issues and on bringing products to market. What more do you need than somebody that knows how to go about bringing companies and products to market? I mean, basically a startup is bringing a product of some kind to market, and that was the origin.

It was John's interest in having me join Kleiner, and it was a good experience. It just became overwhelming in terms of time consumption after about five or six years. Plus, the Peat Marwick thing was not working. Those things went hand in hand. I think I was paying more attention to startups and going on boards. I was on six, or seven, maybe eight boards, and continued to go to the partner meetings and then also trying to run my company. And it turns out that Peat had added a lot of expense to the company. They added people on our side of the business. They really didn't understand the technology business or technology marketing, and every project turned into an effort to get our clients to be their audit clients.

Hollar: So, it was a business development strategy for them.

McKenna: Yes, from the people who were on the ground working it was. I remember one or two projects they brought us at the eleventh hour, for us to do, and they would present it and say, "Hey, we get 90 percent of that billing," so we were not getting the billing. They would push all the billing towards them. It was all these little issues.

It just continued to deteriorate. We did the deal in 1985-86, and I joined Kleiner in '86, and Kleiner was just overwhelming. I really wasn't paying attention, or much attention, to what was going on at RMI. By the time I ended the partnership with Peat, we looked like we were on the brink of going out of business. They had built a huge backlog of receivables. They had hired over 20 people who were making over a hundred thousand dollars a year but producing no income. This, again, is big-accounting-firm thinking—get a lot of people to do things, and they make a lot of money, but they don't necessarily do anything.

Hollar: And that was so contrary to way that you had always run RMI.

McKenna: Right.

Hollar: As you said in an earlier session, you built your staff after you got the contract, after you had the income—

McKenna: Right. We were always "pay as you go." We didn't hire people until we had the money.

To digress: At work I often used the example of how I dated a young woman in high school whose mother owned a candy store. It was right near the school. It was a little penny candy type of thing. Her husband had died when she was very young, and the mother kept the family together by running that candy store. I remember talking to her about how she managed it, and she said, "I have two drawers. I have input and output."

She said, "When I sell enough candy, then I can buy some more. I put it over here, and I buy with this money." She managed the business that way. When I told the story at RMI, I said, "That's us." You fill up the one drawer and then you can go out and buy more candy. That candy store was the business model.

Now the candy store was not able to buy more candy, and so I made a decision. I went back in about 1989, and they had two people running the business—one guy from Peat Marwick and one person from our side. They were co-managing the place. I fired 21 people within the first week, and I got a good CFO who came in on a temp basis. We turned the receivables around and really grew the business. We got the business back to profitability within a year, and then just basically grew from there again.

I had to think differently about alliances and all those sorts of things. I had lot of offers from companies to be acquired both when we were an ad agency and whenever we were the marketing firm. But all of those were earnouts. They would give you an initial payment and then you would stay with the company for five years and you would buy yourself over that time. I said, "No. I won't do that."

I discussed something like that with Jay Chiat when I sold him the advertising business. The way I put it was, "I'm not going to buy myself." I told him, "You're going to pay me cash on a potential earnings type of thing, and when I transfer the business to you I don't want to ever hear from you again."

I did tell him that. No, I did. We stayed friends and we even co-invested in some tech companies after that.

Hollar: But as far as consulting or advising…

McKenna: I said, "I don't want to save the business. I don't want to come in and be your account person again at Intel and Apple." Chiat continued to be clients for us and actually good clients, because the work that we were doing went well beyond the advertising area.

The other issue was trying to recruit really top-notch creative people to this area—art directors who have done film, and people who know how to buy national media, international media. Those kinds of people are not in this area. I used to say that this [Silicon Valley] is not the Mecca of advertising. It's Los Angeles, New York, Chicago, maybe, and London. That's why Chiat started out in Orange County, moved to L.A., and became Chiat/Day. It was Chiat, and then it became Chiat/Day, and then he opened an office in New York. That's how he grew—by recognizing that—and I certainly didn't want to do that. I wanted to stay here, and so the writing was on the wall. I knew that we had to get out of the advertising business simply because we couldn't bring in the necessary kinds of talent. We tried, but they would not stay more than six months or a year, largely because there were no other companies around here that were doing the volume of advertising that Intel and Apple were doing. So sooner or later we needed more professional help, and that's the reason I got out of that business.

From then on it was really a question of either growing our own or selling the company, and I felt selling the company, at least from my standpoint, was, again, buying myself. It turns out that a boutique consulting firm with your name on the door is a formula for problems, and certainly it was. Because you're personally doing a lot of things. My wife was always saying that every time we'd take a week off, the phone would be ringing all the time I was gone. It seemed all the disasters happened whenever you tried to take a few days off.

So, I bought the company back from Peat Marwick. There was a fellow there named Jon Madonna. Jon became the youngest CEO at Peat Marwick. There was a coup within Peat Marwick around 1988-89, and it was the young crowd versus a lot of old-time management saying, "We're going to manage this and we're going to select who our successors are," and they had to select someone with so much tenure and those sorts of things. I think they may even have called them the Young Turks—the young partners who were called partners but weren't receiving the compensation that the other partners were receiving. But they had votes, and they basically voted in Jon as one of the youngest guys ever to be the top guy at Peat Marwick.

Jon came down and we met. I remember that he sat in my office and I said to him, "Jon, this is not working," and he said, "Yes," and he said, "and you were the most successful of the deals we did."

I guess they completely wiped out the one in Boston. I mean, it just destroyed the company. With the one out here, that didn't happen. They had done a number of other deals and they just didn't succeed at them. So, we made an agreement. Obviously, they were willing to almost give it to me, so I bought it back for next to nothing.

[Don] Valentine suggested that I had the perfect business—you grow a business, you sell it, and then you buy it back for nothing.

Hollar: But that's painful. That's not an easy process to go through.

McKenna: No, it isn't. My wife said I aged 10 years during that period of time. You are literally working 24 hours a day.

Hollar: And your business wasn't slowing down. The partnership may not have been working, but it was in the context of a business that in many ways was going strong. RMI at the time was receiving a tremendous amount of public attention.

McKenna: Yes**,** and I have to credit a lot of the people that worked for me with that as well—long-term people that were there 20, 25 years, although people outside didn't know them very well. As I said earlier, Gayle Holste, who was a jack of all trades, and a number of people along that line that were there a long, long time. Our CFO that we had, Dan Scanni, has his own CFO firm now. He does financial management for startups, and he's been very successful. Elizabeth Chaney was also one of the people and was there about 25 years. I think she developed much of the conceptual thinking that was very powerful. She hired a lot of really key people, and there were others.

We had a core of really strong people there. Into the '90s and up to 2000, we brought in a lot of young MBAs out of the Wharton and Berkeley business schools. We tried a few Harvard people, but they generally just wanted a ticket to the West Coast. Stanford people had other opportunities, although we would go out and make presentations. Those young people from the business schools really were excellent at doing work. I mean, they just were superb. Three or four of them have created companies here in the Valley. They had strong technology backgrounds.

My FitnessPal is an example. One of the founders was a partner or a consultant with us, and there's a fellow, Vijay Babba, who was an Indian consultant and then partner. Vijay went back to India and created a very, very successful business. I think he sold that for a lot of money and is starting other businesses. There are quite a few partners who have gone off and been very successful in business.

I learned this from Tom Peters, actually. I brought him in to talk to us about how McKinsey, with a lot of bright people, ran the company. He ended up saying, "It's like herding cats." They had lots of very bright people, and the compensation was good enough to have everybody stay. Then they had ex-Mckinsey people who were really loyal and would come back. That took 30, 40, 50 years to do. That model is still sustaining and putting out people that go out into industry and then come back into McKinsey.

My criticism is that they're a little more formulaic than our industries should be. Most technology companies need to be very, very flexible, and constantly changing. The algorithms have to change every six months. Most consulting firms are not capable of doing that.

So I had to get us out of that and get back into the mainstream. All in all, I shut down a number of offices that Peat Marwick had started. We had something like 8 or 10 offices around the world. They were putting them where their key partners were, not necessarily where the technology businesses were. Their objectives and our objectives ended up being completely different, and I wasn't smart enough to see that in advance. I ended up traveling something like 250,000 miles a year. I got a lot of writing done on planes.

Hollar: Because there's a lot of plane time involved.

McKenna: Yes, and you're having new experiences and then writing. I would pull out my notebooks and write long pieces on planes. I did almost all of my books that way. I did five books on planes. So you get time to do that and meet other people and do other things.

I felt that I could be more successful on my own working with startups, and helping them, and investing in them. By the year 2000 I saw that I would be able to do that, and so I talked to the RMI partners about that. Ultimately, I literally divided up the stock among all of them and said, "It's yours." They all went their separate ways and created their own companies. I thought that was a perfect ending, quite frankly, because I didn't have to lay off a lot of people or do that sort of thing.

Hollar: You've just ended the company, and I'm not ready to end the company yet.

We'll call that a preview of what happens down the road.

McKenna: Yes, Yes, Yes.

Hollar: I want to go back for a minute. We've talked about the RMI side of it and the KPMG alliance side from 1985 to 1990. Let's talk about the Kleiner side of it.

It makes perfect sense that you would be asked to come into Kleiner, but did it also strike you as a somewhat unconventional invitation? You knew everyone or all the key people within the partnership. You'd already become friends with them. You'd seen them invest, you'd helped their companies, Genentech being among the many notable ones. Tandem's another one. There were many, many that had benefitted from working with you.

McKenna: Yes, Yes. John even had me come in and talk to the Segway people.

Hollar: <laughs>

McKenna: When they were in trouble. Yes.

Hollar: I don't know how to put this other than—was it fun? Was it enjoyable? Did you see some things that you really enjoyed doing during that period with Kleiner?

McKenna: I think it was quite difficult at first. It was pretty much done on a consensus basis. Tom Perkins was still there. Kleiner, Perkins, Caufield and Byers were all there, so it was pretty much the full partners. They went through a process for how you bring in new deals. You didn't present a deal at that table. You generally talked to people around the office before that. I think it was more difficult for me because I was doing it half time. I wasn't there every day.

Hollar: And that made a difference?

McKenna: It made a big difference. I think when you're there, you just spend more time with your partners, and you work jointly on various deals. I was doing that, but certainly not on a day-to-day basis. There were a number of companies in which Jim Lally and John Doerr and I were involved. Silicon Compilers was one that John had started, but the founder was from Intel. I knew him. John knew him. John asked me to come in and be on the board. That was a very early venture in automating the chip design process by compiling the code for design, and it struggled in those days as semiconductor companies were wanting to do everything themselves. It was hard to sell to the technology to them.

Tandem was a little bit easier, because it was already a hardware company, and I was still helping them. With Genentech, it was really just getting them off the ground and helping to establish them. The major deal there was getting them together with Eli Lilly.

That partnership was a 10-year deal, and after that 10 years, I still invested in Kleiner deals. I was a special limited partner until a few years ago, and so I was able to take companies to Kleiner and have them look at them.

I did the same with Sequoia, and in fact, after I decided no longer to be with Kleiner, Don Valentine approached me. He wanted to do a reunion board for two companies. One was down in Texas and one was called Microchip in Arizona. Microchip was building microcontrollers, which I knew something about because Intel had a microcontroller that was a microprocessor for fixed applications, although it was still programmable. The Texas company, Convex, was building a super minicomputer. Pierre Lamond, Don and I were all on the boards, and also early investors. That happened even though I wasn't a partner [at Sequoia].

It taught me a lesson—one that I once told Bill Campbell about. When he was deciding to leave Apple, they all wanted him. I said, "Don't go to work for any one venture firm." There were a lot of venture firms that would have liked to have him. Kleiner wanted him to be a partner, and he turned it down. Instead, he worked with half a dozen venture firms as an advisor to many of their companies.

It not only made him very successful financially. It also gave him a network of people who continue to say he was a model of somebody who was an outsider, and who was talented and could help. John Doerr brought him in to Amazon, to advise Bezos when he was struggling. Bill was really a sort of coach-like figure to a lot of companies out here, and that process, that consulting model, was a good model for me too, and that's what I continued to do.

Hollar: By that time, you'd been around a lot of young companies that you'd seen succeed, going all the way back to National [Semiconductor] and then to Intel and then to Apple and then Genentech and, I mean, the list goes on. When you observed the process of entrepreneurship from the venture side, what additional learning did you get about what makes an entrepreneur successful? Not just the company, but the quality of the person that you saw who makes it go, or perhaps struggles to make it go.

McKenna: I think in both cases, whether or not the person has the foresight to say, "Here's where this business is going to take me and us," the one real lesson that I learned was that it's more important who invests in you than how much. The early investors, the early venture people, become your board and your advisors, and they're the people who link you to the talent out there that could really help you when you need something.

By and large, at that time, a lot of the people in the venture business were ex-operating people. And there are still an awful lot of those people out there. A lot of young people in the venture business who are just fresh out of school don't know who to pick up the phone and call and say, "Hey, I want you to see this person." If you're in a very successful company, or at least a growth company, generally when you go to board meetings in one of those companies, a lot of the conversation is, "I know so-and-so at this company and I can introduce you to so-and-so," or "Let me get a meeting between you and so-and-so and you can move your business in that direction," or, "You can partner with this company."

They're always advising on what their network should be like, and the network builds the company. You need a network of people to create a company.

We love to idolize the one-man entrepreneur who comes in and does everything. Steve Jobs is credited with certainly far more than he himself probably would tell you that he did. He had other great people around him, and people outside, who gave him advice. I think when he came back to Apple and formed the second board, he got people who were networked and could help bring in other types of talent, and who had his interests at heart. It wasn't like they were exclusively going to listen to Steve, because most of them argued with him, but by that time he was willing to listen and to be convinced. I think the people on the initial Apple board just didn't have that kind of reach into other businesses, and Steve had no control over it himself anyway. The second time, he was able to select the kinds of people that he thought he needed to build a network. I think that's rule number one.

Remember when John F. Kennedy went to see Eleanor Roosevelt to be interviewed to become president? This was when he was running, and she was telling him all the things that he didn't know yet because he was too young. Kennedy said, "It's too bad there isn't a college course in how to be a president." That's pretty much the way it is here. The startup CEO, the founder or founders, often don't have enough scope of knowledge—not only about the business, but about the things that are necessary longer term.

One of the questions I like to ask entrepreneurs is, "What's your second product?" and a lot of times that stumps them. They really don't know. They've got one idea—and where does that idea go? What's that idea look like 5 or 10 years from now? You don't really know where it's going to be, but you have to have

some vision as to where you think it's going to be and how it's going to grow, or you're not going to become a business. You're going to become a one-product company, and it's hard to do that today. You have to have multiple services off of that business.

I'll go back to Steve. I hate to keep quoting him, but in fact, we had a conversation that I recently read in my notebooks. He called me on a weekend during the dot-com boom, and he said, "I guess people think there's no end to this, that they really don't have to build anything. They just have to take the money, and it happens on its own," he said. "But you really have to build a strong team. It's the people who make things. It's the teams that you build." He was emphasizing the quality of the teams, and he did that. He always had a very strong team around him, and even in instances when he was isolated from the rest of the company, his team was always really loyal to him and willing to go to the ends of the earth to make things happen. I think you need that kind of reach, that kind of team effort, in early ventures.

The most negative things I've seen in startups were boards who constantly questioned and created new strategies. It's strategy of the month, direction of the month. When they start seeing things aren't going well, they're not willing to stick with it. I can even remember going to the backers of one company that I was involved with—they were coming into one of the down periods in the industry and they had built a strong technical team. The products were in the enterprise space, and they were having difficulty getting into the enterprise against some of the major players that were there. Most of us felt that it would just take another year of funding, or another two years of funding. But investors get impatient. They're not willing to essentially stay in there with money. In this case they said they wanted to get out of the business. I said to one investor, "You've put $5 million into this company, and you're just going to walk away from it, and then you're going to go out, start another company and spend $10 million to get the same kind of team that you have here."

But that's not always their logic. They're often trying to get quick hits. Some of the venture companies used to call it "the cookie cutter business"—get something that you stamp out, make a lot of them, and get it out there fast. The world has changed dramatically, and sometimes you hit on those kinds of things and it's sufficient. The Google public offering made a lot of money. Billionaires. Not millionaires—billionaires. That was one hit that some people had once in a lifetime. They didn't have it twice in a lifetime. The majority of companies in Silicon Valley at that scale are in the one to five billion range. They're not in the five to a trillion.

Hollar: That board phenomenon you were talking about a second ago is a story about the wrong kind of contribution that a board can make to a startup. How do boards like that get built, in your experience? And maybe in answering that you could talk about, from your perspective, how a good board gets built— one that really does the right things?

McKenna: It varies from company to company, but I think the wrong boards get built because the company feels they have no alternative. They're turned down by the major venture firms, the top-notch firms, so they seek money wherever they can get it. As a result, they bring people on the board who will put money in but don't necessarily have any contact or any long-term interest in sustaining that industry or that business. They're very short-term.

I actually just watched a company disintegrate over that. In fact, I've watched two recently that I can think of, in which the board basically—no. I can think of three now. I could probably go up—

Hollar: Uh-oh.

McKenna: Yes. I can go up, and it's where the board is forced together. People come onto the board because you can't raise money, so you go where you can get money, and you reach further down in the barrel. You get down where the sentiment is not very lively and not very interactive and I don't think there's much outreach.

I gave a talk about 10 years ago on building a board. It was at some kind of entrepreneurial conference. I said to them that it's more important who invests than how much. Afterwards, a young man came up to me and told me little bit about his business and said, "We need introductions to this industry and this industry and this company," and I said, "Well, why don't you get your board, your investors, to do that?" He said, "They don't do that. They just give us money." I said, "Give the money back."

Bill Campbell recommended that, too: "Give the money back." Because you're not really going to succeed with that kind of a board. I've seen it happen—and, as we're talking, I'm thinking of four, five, six, seven companies, where the people on the board who have given the most money, not the most useful intellectual input, are listened to more.

When I give my talks on Silicon Valley, one of the things I talk about is the fact that the reinvestment of money is one thing, but more important than that is the reinvestment of intellectual property. People make money, and then they put it in venture funds, and then the funds invest in more startup companies. But the best people that I've seen do that and who then go on boards are people who also have just simply been around a while, and who also give their intellectual knowledge and advice.

I'll use a particular individual as an example because I think most people do admire him. I've been on a board with John Young for a long time. You can imagine—former president of HP, a very highly respected man, good thinker, and—regardless what people thought about him at HP—he has certainly had a broad range of experience in industry. You can imagine the advice he can give, the kinds of analysis he can bring. He'd run big companies. He knew different aspects of things. I've seen that from other people who've had that kind of experience. They know you form a good board by getting people who have various expertise in various areas that you think you're going to need.

I think entrepreneurs are not given enough advice on that. Hold off on taking money from people if you can. Don't just take it because you have to survive. Later on you'll wish you hadn't done it.

Hollar: I can see how that would be a confusing message to many entrepreneurs who might think, "No. I've got to have the money to get my company off the ground." What you're saying is—do it the right way from the start and the money will tend to follow. Is that what you're saying?

McKenna: Exactly. Again, it's not that the company isn't going to make mistakes.

A practical example is a company called Nanosys. I've been on the board, I think, going on 15 years. It's a materials-based company. They build the quantum dots that Samsung uses on all their color TVs. They sell to display companies that want to get higher-quality color or really differentiated color out of their displays. Nanotechnology and quantum dots were going to solve every problem in the world, and it took about 8 or 10 years to focus it on displays. Before that they were a little bit of everything and were unable to build any kind of steam.

They've had pretty much the same board and very good quality investors. It's a very good board, who eventually brought in the right management, and were able to focus it down. They raised something like $80 million when they were getting started, and they got good, quality investors who stayed with their investments over time and who were willing to give advice and see the company change and shift with the market.

At RMI, I used to say it was never my job or my company's job to predict the success or failure of a company. Our job was to try to help the rocket ship get to the moon. You help shape it, you help change it, you help move it in the right direction—not where the moon is, but where it's going to be. You help. The technology creates, but the market refines. Marketing is the feedback loop, and, defined as a feedback loop, it contributes to the change.

Software changes constantly because you're always getting feedback. They monitor everything they get back from the marketplace. They're saying, "Here are where the issues are. Here are the changes we need to make." So the next revision is always a change. They're constantly adapting to the marketplace. It's kind of the perfect business, and that's the way all businesses should be.

Hollar: That's a perfect segue into the next segment that I wanted to talk about, which is the January 1991 article you wrote for the Harvard Business Review called "Marketing is Everything."

McKenna: You have that.

Hollar: I have it here. It has been, for a long time, one of the most requested reprints from the *Harvard Business*

Marketing is Everything, Harvard Business Review, January-February 1991

Review, and it's a very simple article. It's only 12 pages, but it was a revolutionary way of thinking about marketing. It seemed to make such an amazing impact at the time. I want to talk about how it came about, Regis, and how it distilled so much of what you feel about marketing.

McKenna: Let me talk about people who helped me with that, and also how the idea came about initially.

At the time, *Harvard Business Review* was an East Coast publication. The authors were either McKinsey, Harvard Business School professors, or whatever. [HBS Marketing Professor] Ted Levitt was alongside Peter Drucker in his knowledge of marketing and business, and I met him through Businessland. He became an advisor to Businessland through the president. Ted took over *Harvard Business Review* and decided to do something different. So, he did interviews, and he added cartoons, which really shocked the world. He had asked me to do a series of articles, and this was the first or the second.

The managing editor was Alan Webber. Alan was my editor and he worked with me on that article. I brought the idea, wrote the original paper and then gave it to him. We worked on it together over time. Alan, by the way, is now the mayor of Santa Fe, New Mexico, where he retired. He also started *Fast Company* magazine. I was one of the initial investors.

Hollar: Such a fabulous magazine.

McKenna: Yes. I think I was one of his very earliest investors, and I got John Doerr to be an investor, too.

In any event, the article came out of working on the whole quality movement. My perspective started here in the semiconductor industry. At the time, there were all these quality programs—Theory Z and other things that came out of Japan. Japan was looked at as the model. Quality was considered to be the reason why the semiconductor solid-state memory business left for Japan—because they built higher-quality parts than U.S. companies.

TQM, Total Quality Management, became the watchword in the United States. It was the latest fad at the time, and every company had a total quality program. The idea was that total quality started with the board and went all the way down to the shipping clerk. It had to be a hundred percent for a company to get awards or whatever from the government in quality, and to get the quality award you had to present a case on it.

TQM got me thinking about marketing. Really, good marketing is the same in that it's not just a function within a company. In the quality business there was a quality control manager. We had them in the early days of the semiconductor business. Before a product could be released it had to go through the quality control manager. He could say "Yes" or "No," and so one person was responsible initially. Then some of those functions were transferred to the customer. The customer would get prototypes and would say "Yes" or "No," and they were the gatekeepers on whether you got a contract or not.

When I wrote the article, my view was that marketing was the same, and even more. Marketing was really the total function within a company. I mean, it was responsible in traditional ways—the types of

advertising you do, any kind of public relations, any type of sales literature, conferences, trade shows. But the real marketing was product marketing. Marketing people were the people who could help shape the technology for the outside world, be the interfaces, have a voice inside and outside. So I began thinking about that as applied to marketing.

Apple was intended as that kind of company. I think it was intended that way, up through and into the launch of the Mac. It fell from grace in the following 10 years, but still, the idea was that marketing is something everybody in the company should think about. Manufacturing people have to think of it in terms of quality. People who do design have to think about it in terms of ergonomics, ease of use, flexibility. Each area could define the role they play in marketing differently, but it all ends up being marketing—because if any of those are not there, you're not going to sell your product. You're going to have products in the marketplace that are your own worst enemy.

As I said earlier, the more you promote a bad product, the faster you go out of business, and that's true. Maybe the examples at Apple are the Lisa and the Apple III. They were defective, and the more they got out there, the more that bad reputation got out there.

There are so many things that go into creating a good market and a good environment for your product that it really involves everybody's job. The service, the way it's designed, what the company stands for. All of those things become part of that circle, and that circle then becomes "marketing is everything."

Hollar: There are so many striking things about the article. First of all, just the date. It was published in the January/February 1991 issue of the *Harvard Business Review*, which means you were working on it during some period of 1990.

McKenna: Right. Well, the idea came out over three or four years before that, yes.

Hollar: Tim Berners-Lee didn't release his public version of the World Wide Web until June 1991.

McKenna: Right.

Hollar: We now know what the internet has enabled. It's just what you're talking about in marketing and consumer choice, and this article predates that by at least five years—maybe even a decade by the time the web gets fully penetrated. And yet the third sentence in the article is, "Technology is transforming choice, and choice is transforming the marketplace." That is exactly what happened.

The whole article today reads as if it were written last week. Did you have an expectation that that article would have an evergreen quality to it the way that it has?

McKenna: Well, there were actually two. This was one. The other one was "Real Time."[1]

---

[1] [Editor's note] "Real-Time Marketing," Regis McKenna, *Harvard Business Review*, July-August 1995.

Hollar: "Real-Time," yes.

McKenna: I just got a press release from a company announcing real-time software, which transfers data into your spare databases in real time. It's not that I invented the term. That was originally a military term. But today it is kind of collective knowledge, particularly if you follow the technology.

I've always felt that marketing follows technology, it doesn't lead it. You had to have mass technology before you could have mass marketing. You couldn't have it the other way. Television and radio expanded the marketing voice, but there was no feedback loop. Television not only didn't enhance that— it actually made it much more difficult to get feedback because it was so fixed in time. This began to change with the microprocessor. The ability to have infinitely programmable components meant that everything from clothes design to airplanes would be constantly changing, because of the ability to make these modular units and constantly adapt and alter them. The idea of "marketing is everything" meant that marketing was going to become adapted to this, because it followed previous technologies.

Hollar: And in addition to that, as you make clear here in the article, the customer was going to be in charge, and the feedback from the customer was going to be so pervasive and so brutal that, as the world became more customized, marketing couldn't be approached in the old way.

McKenna: Yes. And so why is Amazon successful? Because of the variety. It's not just what they have in inventory. It's the alliances and networks of retailers and products that allow you to get almost an infinite variety of products on demand. It's saving you time and it offers variety.

For maybe 30 years, one of the things that I researched was the leading market share in almost every industry. Every year, the leading brand is "other." It's not any one brand. It's "other." Who's got the largest market share of beer in the world? It's "other."

Hollar: <laughs>

McKenna: It usually starts out in most industries that way. Certainly in the computer business it used to be that way. As an industry matures, and people become dominant, others fall by the wayside and the "other" principle becomes less true as industries and products, develop. But "other ways of doing things," too, becomes a competitor. So "other" is part of that idea, and that's what led me to that list.

The consumer doesn't follow a set of—what was it? The hierarchy of needs…

Hollar: Maslow's hierarchy.

McKenna: Maslow's hierarchy of needs, which was the basis of a lot of advertising. With the rise of technology, consumers have preferences, and they change those preferences constantly. In hard times, brand becomes less important than price and choice. We're constantly changing our preferences.

Now we do that with our computer. We change our preferences online to the kind of information we want, or what we want to prioritize. So the consumer is now much more in charge of how they see the world.

It used to be that everything was formulaic, and you paid attention to that. Technology changed that. Technology allows you to say, "Well, here's how I think, and you have to respond to it."

Now, I went so far in that article to take it to the next level. I said that the real technology marketing person within a company is the CIO, the chief information officer. I don't know how many talks I gave around the world to CIO organizations and computer industry groups, giving that sort of presentation.

Hollar: Did they stand up and cheer when you said that?

McKenna: No, no. They were afraid of it.

Hollar: Ah.

McKenna: And a lot of CIOs denied it. I said, "So what happens if the network's down in your company? What work gets done?" "Well, nothing gets done." I said, "Okay. So who's responsible for keeping the information flowing from your company to your distributors and dealers and retailers and now online to the customer?" "Well, it's the CIO," and I said, "Yes—so you're as intimately involved in the marketing process as anybody in the organization."

Let's imagine that you come out with some bad products and the company goes into a decline. Who gets fired? The CEO. And I said, "So the chief marketing officer is the CEO, because that's the one who's ultimately responsible and whose job's on the line when things don't work." So, when you start defining people's jobs and responsibilities and who at the end of the line's responsible for holding it together and seeing that it's working on a consistent and real-time basis, then it's the CEO and the CIO. It's the C's in the organization, and so they are—they should be—intimately involved in the marketing process, because it involves all of the things that they're responsible for.

Hollar: When you think about that 10-year period from 1990 to 2000, when you were seeing all of this come into being in a really impactful, hard-hitting way, who do you think among your clients was the best at responding to that set of forces?

McKenna: Intel certainly did, under Andy Grove, with the CRUSH program. Jim Lally was in that group, by the way, and was one of the leaders. Bill Davidow was in that group, and Dave House. They're all people that you know and that are associated with the museum. I was involved in that group. I was the only outside member. It brought people from all different talents in the company together to try to devise a strategy to become dominant in the microprocessor business. When they were clearly losing the design-in battle against, Motorola, they came to the realization that everybody in that company had a responsibility to stand up and fight.

We just talked about customer feedback. That program all got started with feedback to Grove from the Northwest sales manager, regional manager, at Intel, who wrote a memo to Grove about this. So that stimulated it. It came bottom up, not top down. Then Grove pulled the group together. To have me in there was, I think, an innovation in a way, simply because he was asking for an outside view. At the time, I was practically living there, and so were a lot of my people, so I was very much part of the company. Still, many companies wouldn't do that kind of thing. They'd say, we can't let anybody in from outside. It's too secretive. But Intel certainly did it.

And I certainly think the biggest examples have to be Apple and Google. They've implemented these things throughout their business. It gets them in trouble at times, because they're trying to extend things out beyond their companies, and it's hard to keep things under control and under wraps. People know who the suppliers are to all these companies. They know who their partners are. They know X employees. Still, these networks get involved, and in fact, these companies are trying to bring multiple parts together to recognize and participate in the business.

I can tell you one company that I think failed by not doing it. That was Sony. Sony was the worldwide example of a company that could take technology and miniaturize it and get it into consumers' hands. From the transistor radio to the Sony Walkman, Sony became the ideal. Steve [Jobs] constantly used the Walkman as an example of what he would like the Mac to be— not meaning that small but reproducible at scale, easy to use, and used by everybody.

Hollar: He finally got there with the iPhone.

McKenna: Yes, and that had to do with the technology all coming together at the same time. He couldn't have done it in 1985. He had the vision, we know, very early, even in 1980. But the technology, the internet, the processors' complexities, the memory technologies, the graphics engines, sensors—all of that came about at the same time, and he had come back to Apple.

When Steve came back to Apple, he was interviewed by *Time Magazine* and he said in the article, "We want to become the digital Sony." I thought about that and I said, "Yes. Now why didn't Sony do it?" They had everything but digital. Back East, Xerox had everything but digital. Kodak had everything but digital. If you think about that, they were not looking to new technologies as the driving force for social change, or for the way their consumers bought things and looked at things and used things. They were simply trying to milk the system that had been around for generations. That was also the old consulting model—you know, stick with the high, ride it up the curve—meaning mature products get better margins and make you money. But with digital, the products coming up from down here are what make you a lot of money.

Even at HP, they didn't quite learn that lesson. The head of R&D at HP told me this—their studies showed that every three to five years, their product line was completely replaced by a new generation. Their customer and their product base completely turned around. So they knew that technology worked along that law—if it wasn't Moore's Law, it was some law that said, "Things are going to change and become exponentially different in the marketplace." Even in perception.

Hollar: That's a very short cycle.

McKenna: It's a very short cycle. Cycles accelerated in the '80s because of the microprocessor and programmable technologies and software that allowed you to change things more rapidly, from your manufacturing lines to your individual product design to modularity.

When you have your car serviced today, they just take out one module and put in another. I bought a new car in the early '90s and had problems with it. I took it into the dealer. The guy opened the hood, and he looked at the manager and said, "Do you know where the computer is in this thing?"

He didn't even know, you know? If it had been my old car, he would've looked at the battery. He would've looked at the pistons. I don't know what it was, but he would just look at the mechanical parts and the electromechanical parts. Cars are all software today.

When they first began being multiple functions managed by a computer, people didn't know how to service them. They companies built them modularly, and so this is how you can have multiple brands and multiple varieties within a brand, because they're all built on set pieces that can change individually but work like, as I called it, the Rubik's Cube of technology. These pieces can be moved and shaped all end up as something different and customizable for the customer.

This is how you've got to think about how the future's going to be. It's going to become one large Rubik's Cube in which the technology's going to constantly reshape itself and put more of that capability into the hands of the user, and less into the hands of the manufacturer.

Hollar: That's exactly what this article said. Well ahead of its time—probably behind time for you, right? You were probably thinking, "This is overdue." Still, today, when I read it, it's just stunning how forward-looking it is.

McKenna: I still get calls, interviews on it.

Hollar: In this same time period, AOL was starting to emerge as a company and you did some early work for AOL.

McKenna: Right.

Hollar: Can you talk a bit about your experience with them as a company and the context in which that happened?

McKenna: Again, it was the marketplace. There were already a number of companies There was a company called Prodigy, an early one, which became a joint venture of IBM and Sears. I was brought into a meeting with the president of IBM and some other people. I don't know how that happened, but I was invited back East to sit in a session in which they were evaluating it.

I had a little bit of experience in that world, and the founder of AOL, the real founder, was a guy called Jim Kimsey. Jim went to West Point with Frank Caufield, and he approached Frank about this company and about getting it financed. They thought it was going to be more of a marketing company, Frank asked me to go on the board, but I didn't. I was doing a lot of traveling, and I said, "I don't want to go back to Virginia once a month or even more than that, but we'll take them on as a client. I can help them that way," which I did.

Steve [Case] was really the marketing guy, and Kimsey thought that he would retire. He put Steve in charge and became CEO. They were struggling to raise money, and so it wasn't so much of the traditional job of us trying to help with promotion and that sort of thing. It was really a lot of strategic thinking.

One of the things that came up was to essentially license the product to Apple. Apple was trying to get into that business at the time.

Hollar: Was the idea that AOL would come bundled as a service with the hardware?

McKenna: Yes. That was the idea, but I think the main reason was that they needed money. It was a business that was foreign to most venture firms. Today, obviously, everybody does everything online. But at that time the internet was still in the future, really. You had to have a modem and use dial-up as a means of getting on the internet, and one of the companies we worked with was one of the early modem companies that was out of Georgia. It was one of the dominant modem companies and I went down there and worked with them a lot. So, again, I was involved in periphery stuff, and that was really how I was helping—just to be someone to bounce ideas off, to build strategy with.

I helped Steve Case and introduced him to Apple. Apple was going to pay them a lot of money to license AOL, but he was hesitant to do that because Apple had built a product that was actually an online fantasy world of some sort. You could use your Apple II to build sites and have group games and all that sort of thing together and—

Hollar: There was a lot of development going on at that time by all these companies.

McKenna: Yes.

Hollar: Just think of the companies you've named—IBM and Sears and Apple, and GE had a product, too. There were a number of companies we wouldn't necessarily think of today as getting into that business, but everybody could see something was about to happen.

McKenna: Right. This is true with most technology. It was true with the personal computer. There was enough going on in the marketplace that if you stepped back and really thought about it, and had a little bit of experience, you could see it happening.

I'll just go back to Intel, for example. The Altair was a box of switches on the front, but they called it a personal or hobby computer, and the first two products that were sold in that way had 8080 processors in them. We used them as applications at Intel to potential marketplaces. So I was already involved in understanding that term personal or hobby computer. People feel that somehow or other I turned Apple down initially because they were something new. That wasn't that case at all. I just didn't think they wanted to listen to what we had to offer, and that didn't change.[2]

But back to AOL. They were able to sell or license their technology to Apple and I was very much involved in that. I got calls all day long, weekend, nights from Steve.

Hollar: Steve Case?

McKenna: Yes, Steve Case, because he was hesitant to do it. By the way, Steve Case had a brother, Dan, who was a financial analyst out here in San Francisco. A really fantastic guy—covered the technology industry and was really a good person, and who died very young.

Steve [Case] was hesitant to do the deal because he thought, "You don't give up your key technology." In the meantime, Apple—just because of Apple and its problems— was never able to really focus on it. AOL became a side project and I did some work with the people at Apple on it in marketing. But they just never were able to give it much attention. They were selling computers. They weren't selling software solutions and games and services, and they didn't do it very well in those days, anyway.

So while Apple did pay for a license from AOL, they never really ended up fulfilling it. Just because of the distance, we lost daily involvement with it at my company. We had companies in Silicon Valley.

Don Valentine used to say he wouldn't invest in a company that he couldn't get to and back in one day on a plane. Today he's got a bigger plane. Maybe he could go further, but I think in those days that was kind of from here to Dallas and back.

Hollar: Were you surprised that AOL went on to do what it did based on what you saw of the company and Steve Case?

McKenna: No. I think they did a lot of experimentation. They did some really unique and different things. They packaged the early program disks with cookies and gave them out on airplanes. The fellow who came in to do marketing had an ad agency back there, similar to ours. I think they were acquired by AOL He used to say he was copying us, or we were copying him. I don't know. I think he owns one of the big sports teams back there now, so he did pretty well, by going in and helping them implement their marketing programs.

Hollar: Oh, is this Ted Leonsis?

---

[2] See Oral History of Regis McKenna, Part 4.

McKenna: Yes. Ted Leonsis was an ad agency guy.

Hollar: I didn't realize that. You're right. He owns most of the sports teams in Washington.

McKenna: Yes, and that all came from doing ads.

Hollar: Let's talk about that period from 1995 to 2000 now, where you're trying to figure out what to do with the company and with you personally. What were the things that were going through your mind at the time?

McKenna: With respect to my own firm, 1995 would be a good year to pick because it was the year in which I began to sell off portions of the what we called PR, which was largely dealing with the media and the press and the analysts and so forth, to concentrate on the consulting business. The consulting business had grown somewhere between probably $5 million and $10 million, but the PR business was declining. It was about $5 million. So the idea was to get rid of it. Plus, I made a comment that, as I said, came back to haunt me a bit. It was in *The Wall Street Journal*. I said, "PR is dead."

Hollar: What was your thinking behind that?

McKenna: The idea was certainly looking at the internet and saying, "A journalist doesn't have to rely on intermediaries anymore." They can go direct to sources. They can go right to the third parties. So the internet becomes the flow of information, and people can control their own. Companies can go on the internet and create their own blogs, their own newsletters, and so forth, and communicate directly to their customers and/or the public, and/or analysts.

As companies grow, they want to control the media, somehow or other, and so they bring PR in-house and think that will allow them to control it. It really doesn't. I actually think it makes them more vulnerable, because people internally are known to be intellectually captive, and compromised. External people can maintain their integrity, can act more independent. More references are accumulated that way.

Some of our companies, particularly Intel, started moving more and more stuff in-house. We had, at some point, 20 or 25 people working on Intel worldwide, but Intel really wanted to control all those functions themselves. No amount of discussion or argument would overcome that. It had to do with Andy. In my mind, Andy Grove was a very control-oriented person, and this function was no different to him than any other. He had certain goals and objectives, and you either carry them out or you don't work anymore.

Hollar: You've referred to that in earlier segments of the history too.

McKenna: And I had ongoing, sometimes arguments, with him over that. But it's inevitable. You don't have control over that.

Companies take control, and I think today it's helping to weaken the whole idea that the media is the voice that can be trusted. There's already a built-in distrust of the media as publishing their own personal

views, or views that are colored by some perspective of the world other than the one people have. So at least the outside PR firms, if they really were independent, could essentially begin to convince both sides that it's better for them not to try to exert such control.

For example, when companies get into trouble, the best thing is to do is admit it and get it over with. If significant things happen, get it out there, get it into the news, satisfy the media by getting them as much information as you can. Then it goes away. If you try to hide it, if you try to stonewall it, if you try to put a flavor on it that doesn't exist, it lasts forever. This is just human nature. It's not any deep kind of intellectual thought.

Some of our people were training executives on how to speak publicly, and how to work with the media. Those were functions we had. But when I said, "PR is dead," I really did mean that the internet was taking over those functions and would continue to expand in taking them over.

Cover of Regis McKenna's book Real Time

Certainly many of the leaks you hear about out of industry come from within companies. Almost all of them. People know about things instantaneously. It's not that anybody is going out and having a meeting with anybody. It's that they have access to the internet and they can do it wherever they want. It's also a major issue in the world. The reality was that disintermediation, as they call it, was already taking place in the PR business and I didn't see a future in it. For us, anyway. Not the kinds of things that we did.

Companies also want to maintain their own strategies and their own input. As you got into more and more proprietary strategies, they wanted to keep that within solid walls. There was always a suspicion of anybody that was outside, particularly if you sat in strategy meetings and marketing meetings and all those kinds of things.

Hollar: Well, and all of that's proven to be true, Regis.

McKenna: Oh, yes. Yes.

Hollar: That's exactly what's happened. In fact, corporations have taken the next step and become their own media companies.

McKenna: Yes, exactly. The largest ad agency in the world is Google.

Back when my book *Real Time* came out, which was in the early '90s, I gave a talk at Procter & Gamble in front of its management, including the president and all their top executives, on that very subject, on "real time." When I finished, the president at the time asked me if I thought their ad agency would become a software company. I said, "Yes, I think that's very likely. That's very prescient of you, because that's where I see it going." Indeed, it was, and I didn't know that Google was coming. I just knew that the internet was going to bring revolutionary changes, particularly in the communications area.

So in my company we had to look at the question of, "How will we make money in the future?" We worked alongside consulting firms—in some instances with McKinsey or with other consulting firms—and they seemed to get a high return for simply an idea or a thought. I felt we should be doing that, too. So, I raised our rates, and when we gave advice, we didn't give it away quite as easily as we did before.

Hollar: Given what we just talked about, beginning with your 1991 essay "Marketing is Everything," you must have also seen what was going to happen in a world where you could get immediate, instant feedback from consumers on everything.

McKenna: Yes, and I'm not plugging these, but I wrote two books in a row that had very similar topics. The one called *Real Time* was about the impact of real-time technology, the ability to gather information, analyze it and feed it back to the marketplace in literally seconds. Today it's not even seconds. I said that would revolutionize marketing.

Actually the idea came from an article written by an economist about 1900. He said the telegraph was a marvelous device because you could order goods from as far away as Australia and have them delivered to your doorstep by simply sending a message.

Well, think about that. At one point I built a chart that showed the different ways of communicating and the speeds at which it happens. The first one was the Pony Express, and the chart showed the amount of information it carried, the average mail people got per day. The chart went all the way out to the railroads, to television, radio and then out to electronics, and so on. That chart showed the speed and volume of information going from weeks, and two or three letters a month, to hundreds, thousands and now millions of messages per second. The speed with which things travel exponentially increases the output. The book *Real Time* was about that—about how the world is changing because of everything becoming instantaneous.

The next book I wrote was called *Total Access*, and the idea was that access is replacing broadcast. Once you only had a dozen major channels on your television. My question was, "How many channels are there on the internet?" There are tens of millions. All you need is an address, right? It's just like a phone number—except an internet address is already built into the software.

So you have access to millions and millions of different sources of information or products or technologies or alliances, and so access really replaces broadcast. We don't sit around and wait for a program to come on TV. We record it, or we watch it on our iPhone, or view a synopsis of it on our iPhone the next day, or a day later, or a week later. Somebody says to you, "Oh, did you see that skit on 'Saturday Night Live' last night or last week?" You could just go on and get it. You don't have to be there to watch it. Access controls broadcast, because broadcast is time and space limited and the internet is not.

Cover of Regis McKenna's book Total Access (2002)

Behind all of that are real-time technologies, networking, increased bandwidth, increased speeds of networks, all those kinds of things. So looking at technology can really tell you how the world's being shaped. And it's both positive and negative.

Hollar: Here you are, around 1995, seeing all of this on the horizon. You've sold most of the bits of the PR business off and you're thinking about the future. What was your thinking at that time?

McKenna: I was back to being a boutique consultant, but—

Hollar: You're almost a startup again, aren't you?

McKenna: I think the business was restarted about three or four times during that time.

When I exited the Peat Marwick alliance, we had to start over. We had a foothold and were able to actually build millions of dollars of business with IBM on things like small servers. That was a division we started working with. Also, there was a whole new technology that was coming out from companies like BEA and others, which IBM was trying to get into, and we worked with them on that.

I attended meetings back at IBM with their management on how to prepare for changing the company, looking at new technologies where they might focus their attention and energy. This all came about because Jack Kuehler, who would later be president of IBM, and I were on the board of trustees at Santa Clara University, where he got his undergraduate degree. He was the only president of IBM that was an
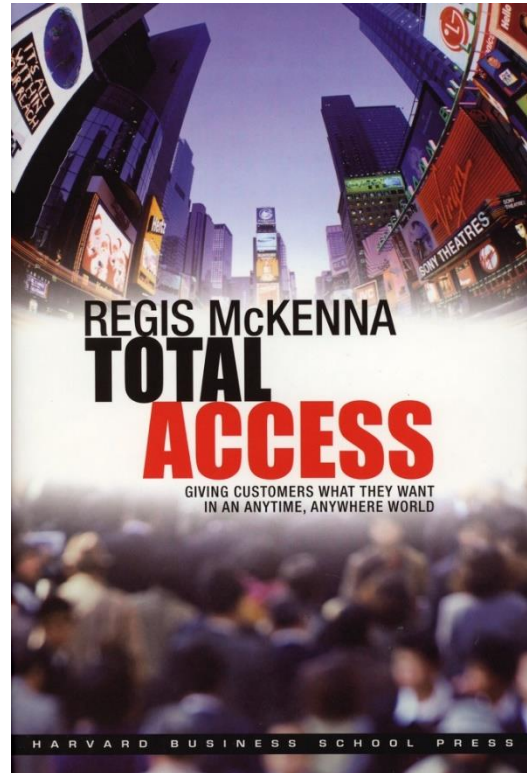
engineer, and he was known as the engineer's engineer, because he was one of these people that tried to build an elite class of engineers at IBM. He really defended engineering down to the tabletop, and he had their respect and admiration, too.

He and I got involved with projects here at their Almaden labs, and I worked with people there that really were thinking about the impact of technology on society. I learned a great deal there. I participated in a number of programs. They had a program that brought in certain big customers, Bank of America and so forth, and various financial firms and industries, and IBM gave them a presentation on the future of technology, and I was a speaker at that several times.

They then started a program called "The Science of Services." They began looking at how the world was becoming more service-oriented. If you look at agriculture, manufacturing and services, the services sector is the dominant industry in the world—financial services, medical services and so forth. Most of the things that come through your iPhone are services. Google's a service company, eBay's a service company. Believe it or not, Apple is a service company. Most of the bigger companies in the Valley today are service companies, or they're creating platforms for services. Oracle and Cisco. These are companies that are creating the means for services to exchange value or to build platforms for creating new services to your customers.

IBM had a huge research program on the science of services. How do people learn? How do they learn new things? What happens at the interface? All of these kinds of things. I got to know the president down there very well. We spent a lot of time together and it was a PhD in Science for me, in a narrative that I liked.

I had studied and gathered a lot of files on service marketing back to the '70s. There was a woman named Lynn Shostack, who was the first vice president of marketing at Citibank, the first woman to achieve that position, and she became a consultant to a lot of service companies throughout the world. She had a particular perspective on service marketing. I'd read some of her articles on product marketing versus service marketing—how different they are and how a product is different from a service. But then I was getting into software, which was both a service and a product, and so it becomes a hybrid, but isn't tangible. You can't see it, you can't feel it like a tangible product. That area seemed very unique to me to try to understand and study.

So it's this constant learning with technology—so you can adapt to what's going on as things emerge in the new world. I started doing that early on and I just loved doing it. Sometimes it turned into a good business and sometimes it didn't.

Hollar: There's a great quote from one of your essays from 1995, which was your 25th year in business. You wrote, "We forced change on ourselves. We didn't have to go through all these changes. Not everyone can deal with change. Our culture is one that says we must strive to be more than we are today. We are never content with the status quo. This is what makes us unique and why people like to come to work." That, I think, is a pretty profound statement about your company and your culture at the time.

McKenna: Yes, and that was pretty much the business plan.

Hollar: How did you manage to find people who were so open to change? Most people don't like change.

McKenna: As you go along, there are people who have been with you, and who have done it with you, for a long time. And, as you go, you're hiring younger people who are much more adept at change and have grown up in a changing culture. They are much more willing to deal with that kind of an environment and have a better understanding of it.

After Steve had gone back to Apple, he invited me over to lunch. I think he had been there maybe a year already, but they hadn't yet gotten the public image of change yet. It took him about two years to really get out there with the new products that changed things. He said that the average age of the Apple employee was something like 25 or 30, where it was like 50 under the old regime. He said that all those young people coming out of school, out of college, have this environment—they're part of it, they understand it better, and associating with young people and getting them into your business means you're constantly rejuvenating your business with new, bright young people.

Engineers coming out of school today certainly are learning. If you went into electrical engineering in 1950, you found that the people that came out in 1960 had an advantage over you because of the changes that occurred. In 1950, you were working with electromechanical systems. By the 1970s, you were working with electronics systems almost exclusively.

I think back to my first employer in publishing. He had a magazine called *Electronic Systems Design*, and one called *Medical Electronic News*. This was in the 1950s. Those were things that people weren't thinking about. He told me he was writing about these because, "This is what's coming next." Even our luncheon meetings there with the journalists, or the editors—they were people who were thinking about the next thing and the next thing. I remember having a whole luncheon discussion about the future of cars and how fossil fuel systems were going to kill us. How would we replace the car? There was a big debate on what kind of cars they would build, and things like that.

These were people who were constantly stimulating my thinking about tomorrow. I think I've been very fortunate to be with firms like that—Intel, Apple, and certainly dozens and dozens of others—from inception that were thinking that way and trying to build businesses around that concept.

Hollar: What finally led you to plan an exit to the business in 2000, and how did you go about it?

McKenna: It wasn't easy, because we had recruiting firms trying to find somebody to run the business and those were all failures. You can't bring somebody from the outside into an organization like that, which for 30 years had been built on basically one driver and identified by name with one person. It's very hard to maintain people--

Hollar: Would you—let me just interject a question here. Would you have wanted that if the right person had come along? Did you have a picture in your mind of the perfect person, and if that person had been discovered whether it would have been a good fit?

McKenna: Yes. I had people in the company who probably could've done it. In fact, I had more women than men who could've done it. But there was also another factor. We had partners—we had maybe 10 partners. They would never buy into it.

Hollar: So structurally, the way the ownership was shared among these partners, it just couldn't have worked.

McKenna: Yes. But even after I shared the ownership, they didn't want to do it. Even when each of them owned equal shares and had more shares than I did as a cumulative group, they didn't want to do it, and they didn't.

I mean, it's hard running a business. I've heard Steve Jobs wax on this and say, "I don't understand how anybody can be married and start and run a business today in this environment because it's really hard." He emphasized that, and it is. You're giving a hundred percent of your time and effort, and a lot of your family life to that, to sustaining it, and I'd done it for 30 years.

I was certainly happy where I was. I was involved in investing in companies and serving on boards, and I was doing quite well, so it wasn't something that I did by necessity. You find that, as a business, you've got a leading position in the market, but it's going to take another revolution in the business to get to the next level of change and the next level of business. Along came Google and Facebook and those kinds of companies. They were not out there, and we were not able to get into those kinds of businesses and industries because their networks didn't keep moving out. Networking is a full-time job—lunches, dinners, meetings. A lot of time wasted with meetings that you're probably never going to see any production out of. You're going in and hearing presentations because everybody's kicking tires. Some stick, some don't. Some of them take your ideas from those meetings and don't call you back. I know of a few that did that. I know more than a few that did that.

McKenna: And, you know, the whole idea of the influence network is probably used in almost every technology business today that has a communications firm working with them.

Hollar: Yes. And so you looked for a successor, and it sounds like you were hoping to replicate the model you had, which was you leading the business and thinking of a future where it wasn't Regis McKenna but it was someone else who could plug in and take it forward.

McKenna: Yes. I would've preferred that it be somebody internally. We did try outsiders, and they just miserably failed and really hurt the business rather than help it, and so that experimentation was a disaster. And so, as I said earlier, I had the idea of just giving them the shares and saying, "It's yours."

Hollar: "Take it, and—"

McKenna: "Take it and do what you will."

Hollar: "——do what you can." Yes.

McKenna: And just fading into the sunset.

Hollar: In retrospect, how do you think that worked?

McKenna: For the individuals, I think it worked well. The partners certainly ended up on their feet doing very well for themselves, and most of them are still around. Some of them are individual consultants. Some have started businesses. Some have gone into venture and other types of businesses. So I think, individually, they did well.

Having sat on board of directors and having heard presentations from firms who wanted to be like ours, I've never seen any that approaches things the way we did. I remember sitting on a board in which the advertising manager, marketing, communications manager, whatever it was called, came in and said, "Regis, you're going to love this," because they only saw everything that was promotional coming out of our firm. But they never really looked closely. What their firm proposed was putting the name of the company on rockets that the government launched in Florida. Those kinds of things. Or advertising on television—and I was totally against most technologies advertising on television because they're reaching an audience that aren't their customers, by and large. Most of their customers were business-to-business.

Then there's the point at which is you don't fight it anymore. It's not just all fun and games. You are fighting to get done what you want done. From the first time I was doing ads, several times I agreed to pay for the ad if it wasn't successful—to pay for it myself, when I couldn't afford that. It was a constant fight for a better way or a better approach or something that wasn't specsmanship. If you really want to move forward, you've got to fight for it.

In 30 years, I have a lot of bruises and made a lot of really good friends. It was a lot of what I loved doing, which was learning, and absorbing. I have nothing to complain about whatsoever.

END OF THE INTERVIEW

Oral History of Regis McKenna, Part 7 of 8

Marketing philosophy and strategy

Interviewed by:
John C. Hollar

Recorded January 14, 2019
Mountain View, CA

Abstract:

This is the seventh transcript from an eight-interview series with Regis McKenna, whose pioneering work in technology marketing and business strategy contributed to the success of hundreds of companies for more than five decades. McKenna was a talented, innovative marketing professional from the earliest days of the technology revolution in Silicon Valley. He came to the Valley in 1963 at the age of 24, worked in marketing in the early semiconductor industry, and then established his own company, Regis McKenna Inc. (RMI), in 1970. McKenna became a globally sought-after strategist and marketing expert, and RMI opened numerous offices around the world. His personal and professional relationships at RMI included Steve Jobs, Robert Noyce, and Andy Grove. His more than 700 clients included such legendary companies as Apple, Intel, and Genentech. He is the author of five best-selling business books and one of the most reprinted articles in the history of the *Harvard Business Review*, "Marketing is Everything" (1999). McKenna was recruited to many outside boards and advisory roles, among them his service as a founding advisory board member of the Computer History Museum's Exponential Center.

The interviews took place at the Museum between June 13, 2018, and January 15, 2019. The interviewer was John Hollar, president and CEO of the Museum from 2008 to 2017.

This seventh interview session took place on January 14, 2019. It covers Regis's overall approach to marketing and "lessons learned" over his long career.

* * *

Hollar: We're with Regis McKenna today in our series of oral history interviews. Today, we're taking a step back from many of the details that we've talked about and are going to talk about your overall approach to marketing—especially how you developed it over time.

First of all, the basic question: how did you develop your approach to marketing?

McKenna: The most important quality for a marketing person or executive, or anybody in technology where the industry is moving so quickly, is curiosity. It's the drive to say, "What's next?" or, "Who else might get into my business?" or, "Who's in it now that I don't see?" It's important to be constantly looking at your surroundings and your situation today and questioning yourself about what's coming at you.

As I noted before, Peter Drucker said that in the 21st Century your business will be influenced more from the outside than from the inside. We've seen exactly that—market events, global competition, and all of the other major things that are affecting companies, are all coming from the outside. Yet most companies are not aware of anything outside their doorstep.

You can no longer think exclusively about the inside. You've got to be aware and have your sensors out in a variety of ways to gather the right information and make judgments on it. Your theories really are swiftly moving. They never sit still. You're constantly changing them.

In the 1950s and '60s for example, technology marketing mainly meant technology magazines. They were in vogue because engineers read the magazines. For consumers, it was television or radio, but mostly television. That was a demonstration medium. It was not a feedback medium. As we moved into the age of the microprocessor, the personal computer, and the internet, with bandwidth expanding and more computer power across networks, you were able to have feedback loops. That led to one-to-one marketing and real-time marketing, which is a book I wrote.[1] We entered an era of instantaneous response, and I described that in the book.

"Real-time" came from military aircraft. If you're in a fighter jet, you don't have time to react. The machines sense and react for you. A rocket is sensing the environment and adjusting all along the way. I frequently used a presentation slide of a rocket going to the moon. If you don't constantly adjust your trajectory, you'll fly into space. To hit the moon, you have to fly in an arc. So the rocket is sensing thrust, power, the environment encroaching on it, and adjusting along the way, or they're measuring that from a ground support station and adjusting the rocket manually.

You've got to have these mechanisms in a real-time world to continually adjust to the market around you. And it's always changing. It's not static. I don't think the theories that we used in the '30s, '40s, and '50s, or '60s really work today. I'm sure a lot of people disagree with that. I still know people that are teaching those theories. But in a real-time world, the whole situation has to change.

Hollar: I want to talk about notion of the feedback loop. When technology enabled that, you were there. You were on the edge of that curve. But let's go back to the era before that actually happened. Even then, your theories of marketing and the importance of getting data back to the company, back to the executives, the product managers, and so forth was a very important principle. You were talking about needing feedback and needing interaction from your customers from the very beginning as an essential element of marketing. When you first began talking to people in the technology industry out here, was that hard for them to understand or accept?

McKenna: First, I was very fortunate to work with some of the people that I worked with in the early days, like Don Valentine at National Semiconductor. Don said, "You're only going to learn things if you're out in the marketplace. You're not going to learn in a cubicle." He gave me the freedom at a young age to go out and talk to the world. Once you do that, you hear. They volunteer it. You don't even have to ask questions when you go and you're representing a company. They'll give you the feedback.

The semiconductor industry prided itself on telling it like it is, which is a common phrase now. And in fact, the feedback was there. And so you gathered it.

I did not have a deep technical background. As a result, if I went into a meeting with a group of our own engineers, and I were to give them my opinion about something, they would look at me skeptically. And that did happen. But it changed if I went in and said, "Well, I was talking to such-and-such, a customer, I was talking to the distributors, I was talking to the reps or the salespeople." Giving that feedback in a meeting to make a point always worked for me. I started that fairly early.

---

[1] [Editor's note] See Oral History of Regis McKenna, Part 6.

That's why I started doing customer interviews. Before we were going into a client, I would ask for the names of 10 or 20 of their top customers. Then I would either call them or go visit them if it were convenient. And then I got to know a lot of them. They would give me feedback on a lot of different things.

That really served me well because I could bring that information into my presentations. I could stand up in front of people and say, "Your customer is saying this, and you're saying this. Tell me what's real."

And it wasn't me saying it. I was a surrogate. And it works. At least, it did for me during that period.

Hollar: Did anybody push back when you said, "I want to talk to some of your customers before we get started?"

McKenna: It's amazing. Some people couldn't even come up with a list, which is really strange. Even large companies. Others were so bureaucratic that they might first say, well, you've got to talk to the sales manager. And then he has to talk to the regional managers. The regional managers have to talk to the salesmen. And it all has to go down the line. So it could take a long time to actually get the names. And a lot of them just didn't want to give them up simply because they felt you'd be stealing something, or passing it on. So there were a lot of hidden agendas, and some people wanted to hold back.

Over time, we evolved our approach. First, we'd say, "Well, if we're doing this on the outside, why don't we do it on the inside?" So we'd interview the top management in the company and some of the salespeople. Then, second, we'd go out and talk to customers. We'd ask the same questions and then compare the two sets of answers. And you'd get two completely different responses.

I got feedback from the CIO at Citibank in New York that a particular company that we were doing research on hadn't called on him in a year. At that time, Citibank was the largest bank in America. And the CIO told me that he hadn't seen a representative or a salesman from our client in over a year. Inside, they told me just the opposite. They said, "Well, we know our customers, and we talk to them regularly." I was able to put up a slide and say, "Well, how come one of the top CIOs in the country said he hasn't talked to you in over a year?"

That upset everybody inside. And in fact some of the people at the client didn't want to work with me any more after doing that.

Hollar: How many people actually came to hire you because they knew you would upset the apple cart and you'd push them to do things differently?

McKenna: Yes, that grew over time. My handwritten notebooks that I've kept since the early '70s tell the story. I've gone back and read every page for the last 15 to 20 years, and I noticed that, as I went on, our client list of larger companies really grew. In the early days, we were working with relatively small startups referred by venture capitalists, or somebody that we knew in the area. Eventually, I think the work became well-known. And so, we were working with people like Xerox, IBM, NCR. We were working with very large corporations. And in Europe, Olivetti, and Honeywell Bull and the like. Those companies knew something was missing and they wanted to put new life into the company.

I had that with Varian. The new CEO, Thomas Sege, came in, and he felt the company was lazy, was just hanging in there but not really up with the rest of the Valley in innovation. People have hired us to help them rethink their R&D activities—to make them more market-oriented. And those were larger companies. They don't mind giving you the information if you're on their side and you're trying to find out. And John Young invited us in to help him when they came out with their line of RISC processors.

Hollar: At HP.

McKenna: At HP. John Young was president, and he was very open. He directed his people to give us what we wanted. So, the internal and external audits were always were open to us. And that I think worked very well for both of us in the long run.

Hollar: I want to turn now to your philosophy about marketing. I should preface this, as we've talked about, by saying you defined marketing the way Regis McKenna thought about marketing. You didn't define marketing as others defined marketing or even as that term might connote today when people hear it or read it. I want to talk about your approach to helping a company deliver into a market, or develop a market, perhaps even where one didn't exist. Apple, certainly, was one of those types of companies. Talk about how you thought about it, and defined it, and why that was different from the way classically people think about marketing.

McKenna: Yes, I look at marketing as a feedback loop of learning where you're constantly engaged with the marketplace, the customers, the channels, even your competitors, and getting feedback. Then you change, and they change, and there's a constant loop, a constant exchange of information. It's a learning process on both sides, so that the customer learns about you, and you learn about the customer.

You gain from listening, and you change your products. Then people change and adapt based on new products. That's why the computer industry used to have beta sites all the time—because they wanted feedback.

There were certain companies in Silicon Valley—in fact the company that used to be where we're sitting [Silicon Graphics]—who once told me that beta sites couldn't give them any information. Beta sites didn't teach them anything, so they didn't need to do that. They could ignore it. Needless to say, that company vanished, not necessarily just because of that. But in fact, the engineering mentality was "we know what's best for the customer." That may be true in some instances, but in most instances there's always adaptation to the current marketplace and adaptation to the customer's needs.

I can give you a little case study on that. We were hired to help IBM in Almaden with their memory storage division. The whole division was supplying IBM internally. There were no external customers for them, so it was all transfer pricing inside IBM. Everything was done through their own internal mechanisms, and rules and regulations. But they wanted to go OEM, and they felt that they could take their product to the world in a quality fashion.

The process is a funny story. The president of that group [the IBM Storage Products Company] was Ray AbuZayyad, who has since passed away. Ray was a really open, wonderful person. I first asked him if I

could meet with their salespeople. I did meet with their salespeople and had a conversation. It was a big meeting. They were all around this big table in a conference room. I came out of the meeting, and I went into Ray's office and I said, "You're in trouble." And he said, "Why?" And I said, "Because I was the youngest guy in the room." And I said, "You're not going to have those old time IBM salesmen calling on Apple, and Compaq, and all of the new upstarts in the computer business who are getting into volumes. You're going to have to get some people that can have a conversation with these people and be on their terms," which is what he did.

He went out and essentially took application engineers who had been in the field and put them into prime sales positions. I would get calls two or three times a week asking, "Do we negotiate pricing? Do we use our internal pricing or external pricing?" I said, "You do market pricing." They were completely oblivious about how you actually put a product out there as a component in a system and how you took it to market. But they ended up turning that into a $5 billion business in about five years.

It pays off when you get that feedback. They kept adapting and changing the way they did things. They learned that they had to get pricing back much faster than taking it up the corporate hierarchy and getting approvals all the way up through accounting and finance. They did change, and they forced that change when they saw the way things had to be done.

Hollar: You insisted on companies getting product to the market first and learning from that, right? That was your point about Silicon Graphics, the company whose building this was, choosing not to do with some of its beta sites.

McKenna: You could put prototypes out there. You could do lots of things.

Even Intel and their initial microprocessors—it wasn't a big market for them. The number of OEMs that they sold processors to was relatively small. It wasn't consumer volumes. It was a few hundred manufacturers that led various industries—telecom, computing, instrumentation. They brought them in early into the design process—a small number. I don't know how it is today, but back then, Intel would actually show them a spec sheet and say, "This is what we're thinking about building for the next generation," and get feedback on it at each step along the way. By the time they had the final product, the people they had consulted felt they'd had a hand in the design. And Intel was literally mostly sold out of those products by the time they launched them in the marketplace.

Taking customers into your confidence—not all of them, but a select group of them—is why we have user groups. This is why we have beta sites. It becomes part of your company's reference system. You've got to get that going, and you also do it to raise money. Most venture capital people want to see some traction, as they call it, in the market before they invest. They want to see some sales. The way to do that is to bring target customers in early. You can do it under non-disclosure if you want. But get them engaged in what you're doing, and get them excited about it.

And then adapt it. In the IBM case, they had to adapt their interfaces because not everybody wanted the same interface. So they had to redesign some of their products to meet the customer's demands. And you do that if you want to get early traction in a market. You'll jump through all kinds of hoops.

The marketing process is not done by a marketing department. It's done by everybody. That's the key thing that I think we miss. If it isn't called marketing, it's not marketing. But there are many CEOs, many directors of engineering, many directors of manufacturing, and many others in a company who are out there talking to customers all the time. That's marketing. Again, they don't call it that. But that's what it is.

Many CIOs today actually control all the communications between the internal and the external, who set up the programs and facilitate the communication channels. That's marketing. The people who sit at the front desk, and the chairman of the board—those people are all in marketing because they're part of or directing the whole package—to bring it together into a unified whole.

In the late '70s and early '80s when quality became an issue in the semiconductor business, and people were losing business, that wasn't a marketing issue. Some people thought it was a marketing issue. It wasn't. It was a real issue of testing and even selecting the kinds of products that you wanted. It was the kinds of customers you had and the kinds of guarantees you gave them. You lost business, whether it was perception or reality, and it really involved getting to higher levels of credibility in your organization and the interfaces you had with your customers. And that solidified it.

Again, I'll use the OEM business. I think Intel did that really wonderfully. Noyce and Moore and Grove were in front of customers all the time. Any time a new product was launched, the whole executive group, Dave House, Bill Davidow—all people who are engaged in the museum here—they were out there talking to customers all the time and getting feedback at the executive level. They were in the marketing business even though their titles didn't reflect it.

Hollar: You mentioned the Macintosh rollout as another example.

Macintosh launch montage, 1984 (Regis McKenna personal collection)

McKenna: The Macintosh was planned for more than five years. It was launched in 1984. I think I had my first meetings with Steve and his group on that in 1982. We had regular meetings at least once a week, maybe every other week, to discuss the whole package. It took on a life of its own—objectives, goals, and so forth.

Objective one was to seed the marketplace in advance. I came up with a list of about a hundred influential people, including people like Seymour Cray, and analysts like Ben Rosen—people like that. They were given a Mac in advance to play with, and so you got feedback as they became users. You'd check with them constantly to make sure they were happy. If they had any need, you could address it. They became references. It's a way of generating word of mouth with the most influential people in your marketplace. Authors do that with books all the time.

I can remember helping Intuit in the same way in its early days. When they came out with their first software package, Kleiner Perkins was backing that. I used to drive around with a trunk full of their product and just hand it out to people.

You need a feedback loop, not only [to] keep your product relevant, but also to get feedback about what you're missing and what you should do next. It's not a huge audience, so you're not blowing everything at once. You're getting feedback, and you can adapt along the way.

Hollar: This is an important part of what today is called the agile development, isn't it? The notion that you get a product, maybe what's known as a "minimally viable product" that represents what you want to do, put it out there in the market and then begin collecting feedback and refining the product. Is that taking something very traditional and putting a new spin on it?

McKenna: There was a study done at, I believe, Stanford maybe 20, 25, years ago now, in which they compared the Japanese software industry and the American software industry. They said the Japanese built a really, really good software product but took years and years and years. By the time they actually got it to be error-free and perfect, the market had changed. In America, companies get product out with minimal bugs, but certainly not free of all bugs, and then constantly send out updates. Today the internet allows you to do that more than ever. So, it's just one circular thing after another.

I get a Microsoft email every week with changes. Maybe it comes out every day. It's a long list of changes that are automatically done to your software or your operating system. In effect, they're constantly increasing and improving the product while you're using it. That system keeps America in the forefront of software. If you just build one product that you make perfect, it's probably going to fit a few people, but certainly not everybody all the time.

Hollar: People also came to you because of your expertise in communications and in developing the message—the whole array of communications that a company needed to talk about itself and its products. But communications, for you, was only just one element of the whole approach to marketing. How did you adjust people's thinking and help them understand that your approach was actually something different?

McKenna: A lot depends on the client and how open they are to having discussions. It usually involved several conversations with multiple layers of people. And it depends on how open and excited you are about them and they about you.

If you feel you can work with them, then you may start doing something at one level and then move up in the organization. That was always the challenge. I would try to talk to my people about that—constantly move up in the organization, because you get decisions made at a higher level that you're not going to get three or four or five levels further down.

"Silicon Valley's Svengali," Newsweek, July 23, 1984 (Regis McKenna personal collection)

That's a hard thing, particularly for, let's say, PR agencies, and ad agencies, and so forth. They're probably working for a vice president or even a director of marketing and a director of advertising or public relations. They're four or five levels below the CEO. I was fortunate in that we were working with the founding CEO in so many companies. One couldn't have put just one hat on Steve Jobs. Was he the designer? Was he the marketing guy? Was he also involved in manufacturing? Yes. Was he involved in the design of the product? Yes. Was he involved in spec-ing? Yes. He was involved in every aspect of the business. So, in a way, he was the perfect CEO. He was the salesman, too.

I think that was true of people like Andy Grove and Bob Noyce and Gordon Moore to some extent. They were able to talk to the customers, not only in technical terms, but in application terms, and in terms of what their product could offer them and how it could change their businesses. They were able to sell the product—not just as a technical product, but its market implications.

Take the microprocessor. The 4004 came out in about 1971. But it was really the IBM business that made the market take off, and that wasn't until about 1982-83. Intel spent 10 years looking for a market while the processor was increasing from four bit to eight bit to sixteen bit. That required a change in thinking

about the microprocessor within Intel because, at first, they saw it as a component, and not all the customers saw it as another component. Eventually, people like Dave House and Bill Davidow came in from the systems part of the business, and they saw it differently. They saw the microprocessor as getting you to market faster, cutting your costs, being more flexible in the functionality you can perform, being reprogrammable so you had infinite customization. That was a management message, not an engineering message.

Once it became a management message, you could start selling at the top of the company and move down rather than starting at the bottom and moving up, and the microprocessor took off. We did that consciously to move up and sell the product at a higher level. And we sold it based upon economic and market terms rather than on purely technical terms.

Hollar: How did you help your people understand the approach to take that would move you up in a company if that wasn't where you naturally started when you first got the business?

McKenna: There are two young fellows that I hired back in the 1970s. They've stayed good friends with me and I see them every once in a while. I had lunch with them about a month ago. One's from Portland, and one's from the East Bay now. They were just raving over the fact that, as young kids, basically—I think we called them the kids—that they were working with Bob Noyce. They were working with senior people in companies, like Steve Jobs, because it was sink or swim. I mean I had a lot to do. We had a zillion clients banging on our doors, which was probably difficult for us to handle. To get people trained quickly, you had to throw them into the fire. I think that worked well because they then went on to get much higher in the client organization. So, people who worked for us were very often right at the forefront of working with top executives in the company, because that's who would generally call us.

Hollar: We talked about your "Marketing is Everything" article for the *Harvard Business Review* in earlier interviews. You referred to the bias toward communications that please internal forces rather than face outward to influence market and consumer forces. How did you combat that?

McKenna: It wasn't easy, and often we didn't succeed. There's a certain mentality at the executive level, and also I think with engineers—I hate to keep dumping on engineers—but with engineers that have a mentality that their product is really super. Therefore, everyone should beat a path to their door. But the media may or may not have any technical depth or any perspective on it the way the engineers do.

On the other hand, particularly through the '60s and '70s, and into the early '80s, the trade media, and then people like Business Week and *Fortune* and those kinds of magazines, reached the executive level. You had to be on the customers' communication level rather than on your level. I used to call it engineering baby talk in many ways. Some were quite technical, A lot of them were engineers themselves.

I wrote pamphlets and articles directed to them and emphasizing that journalists are independent. They're not in advertising. They're not there to promote your product. They're there to take an honest appraisal. They'll talk to your competitors, and they'll compare products. It took constant education, and, quite

frankly, getting them in front of editors so that they got an exchange of ideas from both sides. You could sit at a table, and have a conversation, and learn.

That led to our "Evening With …" program. We invited the editors of *The Wall Street Journal*, and *Fortune*, and *Time*, and *Business Week*, and so forth, with their editorial boards. We brought them out here. And then I would invite people from the industry—not necessarily clients by the way, just executives, chief executives, from a number of places. It would be an open exchange. But the rules were clear. We can ask you questions, and you can ask us questions, in an open forum, but no stories are to be written on it. This wouldn't happen today.

Hollar: And people observed that rule?

McKenna: They observed that rule. If they wanted to do it, they could come back later and have conversations on the record. Mrs. Graham brought out her editorial staff from *The Washington Post*, which was a really great event for us, and it became well-known, so other people were willing to do it.

It brought an open exchange of ideas, even some debates back and forth. Everybody learned from it, and they grew to appreciate it. I didn't mind if they called each other directly. They didn't have to go through me. I mean, they didn't want to talk to me. They wanted to talk directly to the people that were involved in the company and the product. So for me, I was facilitating that, but I didn't necessarily have to be the intermediary.

Hollar: Who were the most memorable of those "Evening Withs…" in addition to Kay Graham?

McKenna: I think almost all of them were memorable, simply because certainly the people from *Fortune*, from *Businessweek*, would ask more business and financial questions—the impact on the industry and on the market, return on investment, and those kinds of things.

Hollar: Was it unusual for them to sit down and get that kind of off-the-record exposure to the top executives you were inviting to those dinners?

McKenna: Yes, yes, yes. Not only that, I can tell you that the managing editor of *Business Week* told me—and I have this in my notebooks—that they never saw any executives from Texas Instruments, or from Motorola.

We were traipsing these people through New York all the time and eventually into D.C., and into the halls of Congress, and to the analysts in New York, and so they became familiar with these people. The editors saw that these weren't some crazy West Coast people— which, quite frankly, a lot of them really believed.

When I went out and did it my own meetings ahead of a press tour, one analyst said to me, "There's only one company that we think will ever survive, and it's IBM. It's the only technical company we care to cover

or we're even looking at." That was at, I think, Morgan Stanley. He was one of their head analysts. I even had a press release from Intel returned to me with a note saying, "Please take us off your mailing list."

Their view of what was going on out here in California was that these were renegades. In fact, the quote from the analyst was, "It is unlikely that any small company is going to make major market penetration or growth happen simply because they don't have the resources. It is more likely to be a division of a large company." I'm paraphrasing. "It's more likely to be a division of a large existing company, because they have the resources and the people available to put on that product or service. So forget about those little startups out in California."

Hollar: Then as these companies grew, and capital and intellectual property and talent and so forth began to flood into Silicon Valley in the '80s and '90s, how pervasive did that East Coast / West Coast bias remain?

McKenna: I don't think it remained long after that, particularly when the microprocessor and the personal computer became a reality. The personal computer went on the desktops of every analyst and journalist. They were using the technology, and they could see it. If you were coming out with a linear amplifier, or a three-lead or four-lead chip, they couldn't identify with that.

They couldn't identify with a lot of the technology that was coming out because it was invisible. It was [en]capsulated in something, but they could identify with a computer that was doing things for them, and that just became further enhanced with the internet. They could now do real research and not just go to a particular database that you had to pay lots of money to access. You often had to learn the database code yourself. I did that too, in doing early electronic research. It was very limited in the early days. But once all writers, all journalists had access to the internet, and Google, it grew steadily better and better.

I think a lot of the old institutions remained quite fixed in their ways for a long time on the East Coast. I think that's where we saw companies like Digital Equipment fall away. Everybody thought DEC was going to displace IBM at one point. Xerox and Kodak and companies of that sort really weren't open to constant innovation and change and the improvement in speed and power of different technologies that enhanced their products.

And they didn't look for alliances. They were basically thinking they could do it themselves. I was told by Ken Olsen, the president of DEC, "The PC's not going to go anywhere. That industry doesn't have a chance." I was told that same thing, by the way, by the CTO at Tandem Computer. They were both selling against IBM, so they had that big-computer mentality. They said the PC cannot survive. It doesn't have the computing bandwidth, doesn't have multiple layers of communication, doesn't have the speed or the power or the memory. They didn't even think to analyze Moore's Law. One person at IBM told me there's a Moore's Law for everything. He said battery technology has a nine-year Moore's Law. Every nine years you see new battery technology, at least at that time. Under that kind of thinking, every technology is constantly improving in exponential ways—it's just the time frame that differs. Yet Moore's Law held true at around every 18 months, and nothing else, I think, met that DNA analysis.

Hollar: Furthermore, when you're talking about exponential change, the difference between 18 months and nine years is lightspeed.

McKenna: Yes. Yes.

Hollar: Even IBM struggled. It faltered a lot from time to time as technology swept through all these businesses and industries, didn't it?

McKenna: Yes. And I think that there was a certain generational aspect to it. I think you'd see that the newer generations at IBM changed significantly, and that they brought in younger people out of the universities and so forth.

I was told that, for example, the second-largest recruiting campus in United States for IBM is San Jose State University right here in Silicon Valley. I think that keeping in touch with what's going on at both the university level and in your nearby marketplace is much easier here than it is in other places.

Hollar: I want to go back now to this notion about feedback being the driver of all marketing. Couple that with the rise of consumer choice as the ultimate market force, as you've called it. Decades ago, long before the rise of the internet, you were writing about the rise of consumer choice.

McKenna: Right.

Hollar: When did you first crystallize that into something that you wanted to write and speak about and hammer home as a component of your approach to marketing?

McKenna: The writing came out of presentations that I had done while working with a few consumer companies in the '70s. One was a company called Saga Foods. Saga had three restaurant chains and were a food service organization for universities. They were up here on Sand Hill Road.

They were a huge company, and they did a lot of market research. They had Yankelovich doing research on future trends. Yankelovich gave presentations there twice a year or so, and I was invited in. The whole idea of social trends research really struck me.

One of the things they talked about was the diversification of products in the marketplace—probably long before it actually came about. I had developed this whole notion that mass marketing had to have mass manufacturing first. You couldn't have a mass market without mass manufacturing, and so the technology came first. So what technologies are coming first? The microprocessor, which, as I said, was infinitely programmable, and as you began using the microprocessor you could start varying the output. Some of the early microprocessors, even before the personal computer, were in machine tools because you could constantly be reprogramming the machine tools to produce different kinds of hardware and parts. I think Cincinnati Milacron. was one of the early users of the microprocessor, and these companies were building the circuit cards that went into the machine tools. That was an early application.

When you start seeing that companies have the ability to change things quickly, you start thinking about, "Well, with mass manufacturing, the real problem is how do you adapt it to different marketplaces?" So I just started doing research in that, and learned some things.

One of the early questions I would ask people, for example, is "Who has the largest share of the beer market in the United States?"

Hollar: Market share of beer?

McKenna: Yes, market share of beer.

Hollar: Coors.

McKenna: It's "Other." It's all the little microbreweries. It's all the small, homespun breweries. That's true with just about every product, particularly in the early phases of a market.

It was true with personal computers. There are still over a hundred manufacturers of personal computers in the marketplace. There are over a hundred manufacturers of microprocessors. Apple basically designs and makes its own microprocessors and has them produced somewhere else.

The tech industry is broken up into bits and pieces with different jobs being done by different independent people so that you don't have a company having to do everything here. You could have parts of it done here, parts of it done there, and then through logistics bring them all together. I think we had client companies in all those phases.

Early on we had an office in Japan. We had offices in Europe. We had the ability to visit so many different companies from different parts of the world and to see what technologies were developing and how it was happening— particularly coming out of the semiconductor industry, which I think was moving faster than any other. My first nine clients were semiconductor companies, and they were all making different kinds of semiconductors. We started with these people and their ideas, and then we moved up a layer. Clients that made components wanted to produce finished products, because they talked about driving whole markets, and the market driver was volume. If they couldn't find volume in the military, they found it in the consumer business. Even the industrial marketplace was relatively small.

That's why the first products they started making in the late '70s and the early '80s were things like calculators and watches. They thought there was a volume market there. But in many of those products, particularly in watches, they found that a semiconductor doesn't add much value because people were looking at watches as a cosmetic thing, not a piece of electronics.

It was a process of learning and being curious about things. I do a lot of research, and I always have. I still do. I have a folder on just about every subject imaginable, because when it was just magazines and newspapers, I was a ferocious clipper. I still have files and files and files on everything from soup to nuts on technologies and markets and whatever.

Hollar: It's fascinating to me that you started that story with a food company.

McKenna: Yes.

Hollar: You mentioned you were already working in market research and they were using Yankelovich and so forth, but what light bulb went on as you observed them and thought about consumer choice as a driver?

McKenna: It was the customization of products, ultimately, to fit a consumer market. Having worked with Intel, I'd been through a kind of constant conversation of trying to think through, "What is the value of the microprocessor to our customers?" There were meetings every week for almost 10 years. When I go through my notebooks, it's always, "What is a microprocessor? What does it do? What are its benefits?" and gradually the discussion changed from a functional description to an economic discussion, and then to a productivity discussion, and then that evolved into presentations to customers, and that's where it started to take off. I lived through that experience, thanks to Intel.,

Hollar: The evolution really obliterated the distinction between business-to-business and business-to-customer.

McKenna: Yes. And today everything ultimately is a service now, right? One manufacturer's now a service to someone else. Everything is a cross-network of services. I suspect more money is spent on logistics today than just about anything.

Hollar: I want to talk a bit now about, with that all firmly established, the rise of the internet and how the internet unleashed consumer choice. How did you first come to experience the internet and its likely impact on your clients and on your business?

McKenna: Some of that obviously came through our clients. One client was Hayes, the largest modem manufacturer, out of Georgia. Our offices were filled with these Hayes dial-up modems. BBN (Bolt, Baranek & Newman) in Boston became a client at some point, and I went on their board, and that helped me learn more about it.

Plus I was always experimenting myself with it. I put a high-speed line into my home. They had to run cables to do it, and it cost me a fortune, but I had my own high-speed network and played with it constantly. It wasn't that I knew the technology of it, but I was searching for things, trying to get answers,

I think it was just the kinds of clients we had who were all moving in that same direction, and we heard a lot about it from them as innovations came about. For example, my email is my-name-dot-com, regis@regis.com. I obtained regis.com before the clearinghouses existed to register it, and so I was sued by Regis hair salons and other people that wanted it. They actually shut us down for a while until I showed them that our ownership preceded all of that stuff.

I used to try to tell our clients that RMI was like a high-tech company. We weren't another PR agency, another promotional agency that's here to implement someone else's ideas. We're here to create our own ideas and to constantly innovate, and so we try to come up with new products, and new services, which we had a long list of, and we try to have everybody as automated as possible within our office. We hired someone to network our office as soon as it was possible. In fact, the guy who did it was the guy who originally was working on the landing module for the Mars program. He did all of our networking at the office. This was, I think, in early or mid-'80s. So overall it was our curiosity, it was working with clients that were pushing ahead toward openness and expansion, and using the model that, "We want to be like our clients. We don't want to simply be another manufacturer. We want to be innovator." Along with that came the tools that you had to use, and out of that I was able to find a lot of really good people who enjoyed doing that as well.

In any company there's a core group of people that do that, and we were the same. We had a core group of people who were the drivers.

Hollar: Were the business opportunities for your existing clients and for clients who were coming into the internet space on their own immediately apparent? When did they first become apparent to you?

McKenna: You never know. Right? This is why at least half, maybe two-thirds of all startups fail. Been there. Yet they're backed by venture capital.

I would say the tipping point is only seen in a rearview mirror, and so you don't know when the first opportunities come out. You might think something will work but you don't know at the beginning. I still hear that from people who look at Apple today. It's like the people who say, "Why didn't I buy AT&T stock back in the '20s?" My father used to say that. Why didn't people just gobble up Intel or Apple stock early? Because they would've had to know what they would become. But they didn't know what they were going to become. It was a work in progress.

[Stanford University historian] Leslie Berlin put that in her book. Everybody was experimenting. Everybody was only one page ahead of the next person, and so you felt your way along. You experimented and you moved forward. Everything was an experiment.

I told Bob Noyce once that over half of Silicon Valley companies fail. I had read a study on that. We were on an airplane, and he said to me, "Maybe more should fail," and I was taken [a]back by that. I said, "What do you mean?" He said, "Well, when you fail, it means you're trying new things. So if more companies fail, it means they're trying new things." I think you just have to keep recovering and make sure that no failure is catastrophic. It can nearly come to that at times, yes, and it does for a lot of companies, and it did for a lot of our clients. Maybe the product plan didn't work, or the product failed. There are all sorts of reasons. Bad management. Companies succeed and fail for all sorts of reasons, and it's very hard to predict that looking forward, if not impossible.

Hollar: Let's turn now to your ideas about branding, especially about what a brand is and what it isn't. First of all, talk about what people perceive a brand to be versus what you really believe the definition of the word "brand" means.

McKenna: A brand by definition has to have a history. I always say it's not the first product that your customers buy, it's the second one that's important. That means there's a history there. You as a customer had an experience, and you're going to buy it again. So you have to have a history to have a brand.

History isn't an ad. It isn't a data sheet. It isn't a spec. It's something real, and it is tangible. The customer experience has to be somewhat consistent over time for you to have a brand. To have a national brand or a huge brand, you have to be <u>very</u> consistent.

Advertising happens at the hundred-million, several hundred-million-dollar level, yet half of all products that are introduced into the marketplace fail. I had this debate once with IBM's ad agency in New York. A woman at IBM's agency was arguing about their brand and the strength of it and so forth, and I said, "So what happened to PC Junior?" I was in a debate once with the woman who was marketing for Martha Stewart, and I said, "Putting your whole brand behind one name is tenuous and it could be chancy," and she said, "No, not Martha. She's up there on a pedestal," and that was before Martha Stewart went to prison. I'm not castigating her for that. I think there were other circumstances involved and they were trying to use her as an example, but in fact, things do happen with your brand that can change it overnight.

We saw that some of the most established brands in United States were quickly wiped out, even in semiconductors, when the Japanese entered with a higher-quality product, or cheaper prices. When that happened I started thinking that the term "branding" is also relative to many other factors: the economy, the availability of choice, the manufacturer, the social circumstances. For example, in a recessionary economy or in a down market, people will buy cheaper cars. They'll buy cheaper clothes. They'll buy things on sale. They're less concerned about the brand than about just replacing things or getting something that's convenient or conventional. So brand is relative to what's going on around you.

Here's a second big thing about brand. It never fails that whenever people say, "We need a new brand," or, "We need to refurbish our brand," what do they do? The first thing people do is get a new logo, or a new slogan. They change colors. They run ads. They do those things, and that's not where your brand comes from. It comes from the product or the service you're offering. Many times changing your brand may require redoing your product, or changing your product, or coming out with new product.

Take Steve Jobs when he went back to Apple. First, most people don't realize that it took him over two years to get back to where he wanted to be with Apple. Then he ran these wonderful television ads. It was a very good advertising campaign that we put on. But their market share didn't change at all. It was something like three or four percent, and it was still three or four percent after they ran that ad campaign.

It only changed when he came out with those new color Macs—the Jelly Bean Macs. Those sold like hotcakes and it got them back to profitability. Profitability is your number one marketing tool in my mind. If you're profitable, you're doing something right, and your competitors know it, the analysts know it, the world knows it. If you start faltering with profitability, then your competitors are like the predators waiting for you to limp. People begin questioning your business rationale, your strategy. The CEO's job is generally on the line, and if the CEO is not the chief marketing officer, why do CEOs lose their jobs whenever the market goes awry for the company? They're the first ones to go.

So I think we just don't understand brand very well. We want to label it automatically as something, and that creates a huge industry of people creating logos and slogans and what they describe as brands, but all of that isn't really contributing to the value of a company, in my mind.

Hollar: How did you approach it when someone came to you and said, "We want to change our brand," or, "We want a campaign that repositions the company"? That's a phrase that you frequently hear in business, and I'm sure you must've heard that all the time.

McKenna: Right.

Hollar: What's the nature of the conversation you would have?

McKenna: I would use it differently in each case. From a branding standpoint, when somebody says, "We need a new brand," or, "We need to change the brand," I think that's extremely complex, particularly in today's marketplace. First, you probably have to spend—and I don't know exactly what the numbers are now—but I would say to establish a national brand or an international brand, you'd have to spend about $500 million over a two, three-year period. To reposition a company is different and depends upon other considerations. As I've said to my clients, "You're judged by the company you keep." It's something your mother told you. Who are your developers, for example? What are your alliances? Who are your distributors? Who are your channels? Who are your suppliers? Who are all the people that you rely on to get your product to market? If you're in hardware and you're trying to reposition yourself to software developers, who are the key developers?

This is why the IBM brand grew in the PC era. The Mac third-party developers moved over to the IBM PC because it had the volume. The volume on the product drew developers, developers shifted from Mac to IBM, and Apple was left with very small shelf space in most of the retail shops.

To change that position, I felt they had to do something really radical. In fact, in my first presentation, the first time I presented a marketing plan for Apple, in 1976, I included the idea of Apple retail stores. I made two or three presentations over the years to the executive staff on that, and I kept feeling that they had to have their own outlets. You just weren't going to have some third party give the demonstrations you needed to give. The kinds of products Apple was creating required a demonstration. This is why Steve stood up on stage and showed you the product. He showed you how it worked. People now stand up all the time. That started back with the Mac. It was this whole notion that they're complex products, they

need demonstration, and you don't have the money to do it on television. So you demonstrate it live. You may have to do it around the country, which we did do.

Hollar: You were always an advocate for live product demonstrations.

McKenna: Yes. And that's from reading Marshall McLuhan. That's from reading about the media, about what television did for you. But we couldn't do television because we didn't have the resources to spend on television in those early days. So that created this show-me strategy.

Steve was a good showman. I always said that when Steve was showing you a product, he was lost. He loved the products that he was working on and he really did have the enthusiasm that he was putting out to the audience. I think that's how Apple repositioned itself in the marketplace. They did it with products that were more sophisticated and that looked approachable.

In the early days of the personal computer, the first question anybody asked is, "What personal computer should I buy?" Everybody was asking that question in the early 1980s. I used to ask large audiences, "How many of you have asked someone the question, 'What personal computer should I buy?'" And all the hands would go up, because they were insecure about buying a computer. It just had that IBM-ish big computer kind of thing about it. What will I do with it? You would reference friends for a personal computer just like you would reference them for a physician.

So selling a personal computer in those early days became a reference selling system. And that changed Apple's position in the marketplace from being a wild little hair from Silicon Valley to becoming a serious computer company.

Hollar: What are some of your other favorite success stories, Regis, on clients that you had where you worked with the idea of a brand, a brand tied to a product, and built those two things simultaneously into real successes?

McKenna: There are probably a number of them—although, as I mentioned, we had a lot of clients over the years, and if half the startups in Silicon Valley were failing, a lot of our clients were failures in the long run, too. They don't always become successes in the long run.

The two most successful long-run clients for us, certainly, were Apple and Intel. They were clients between 20 and 25 years. That's long term, particularly through several management teams. Most of our clients were short-term—four to five years, maybe or longer.

Genentech was probably three or four years. Most biotech companies—and we had a fair amount of those— don't really want you for product marketing because that's really a function of first getting FDA approval, then getting through certain channels, then getting partners, and so forth. But knowing that process, with Genentech, one of the first things we did was get information about Genentech out in the national business media, and we did that even before we were supposed to because they were supposed to have had peer reviews and all of that. I got beat up by a number of people in the pharmaceutical industry for releasing this before the peer reviews. But I felt we were renegades out here on the West Coast, so, let's act like one.

We got pretty detailed articles on what Genentech was and what it did in both *Business Week* and *The Wall Street Journal.* As I've said, that led to a call from Lilly, which had 80 percent of the insulin market. And then Lilly came out, visited them, and then they ended up licensing that insulin product. It became Novolog, which was like human insulin, engineered in a distilling kind of process rather than being extracted from pigs' and cows' pancreas, which was a long,

RESEARCH

A commercial debut for DNA technology

A tiny San Francisco company, just two years old, has scored a biomedical research coup that may have left its competitors in the dust. Genentech Inc. will get the patent rights to a new means of producing a brain hormone called somatostatin. But the exciting news is that scientists for the first time have employed controversial recombinant-DNA (gene-splicing) technology and the young science of artificial gene synthesis to produce the hormone. In addition, somatostatin has potential both as a research tool and as a medicine, and variations on its structure might well open the way for a whole new family of drugs capable of treating diseases that today defy medicine's best efforts.

The scientific breakthrough came at the University of California at San Francisco, where researchers—along with the City of Hope Medical Center in Duarte, Calif., and the Salk Institute— had been pursuing the new technique since mid-1976. "Molecular biology has

Genentech: Planning to market a synthesized brain hormone, somatostatin

reached the point where it can become involved in industrial applications," says Herbert W. Boyer, leader of the research team and a co-founder of Genentech, who now serves as a consultant to the company. "Our strategy," says Robert A. Swanson, Genentech's 30-year-old president, "is to concentrate solely on recombinant DNA and to manufacture and market products to major medical, pharmaceutical, and industrial companies."

Lots of competition. Genentech's connection with UC-San Francisco has led to unease among scientists in Boyer's lab— a feeling that is shared by some science policy advisers within the White House. And the advance comes at a time when many scientists and citizens still worry about recombinant-DNA research and its potential for harm.

Nevertheless, there are nearly 300 recombinant-DNA research programs now under way in the U.S., most of them funded by the National Institutes of Health (NIH), which oversee the safety of such experiments. Though Genentech followed NIH guidelines, because of the unique arrangement covering its research, the company will be first to exploit the somatostatin results commercially. Once production is under way—perhaps by the middle of next year—UC-San Francisco will share in the

128 BUSINESS WEEK: December 12, 1977

royalties, along with the City of Hope where the gene synthesis work was done.
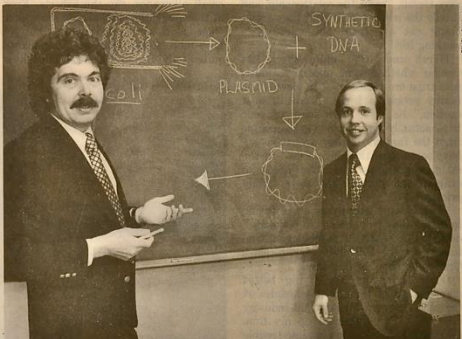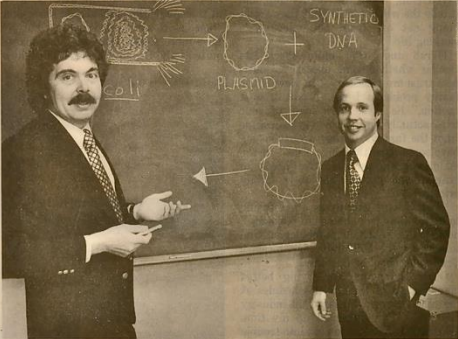
Funding such research is expensive: The somatostatin experiments alone cost several hundred thousand dollars. But Swanson claims to have raised nearly $1 million in backing so far from sources such as International Nickel Co. and his former employer, the venture capital firm of Kleiner & Perkins. Despite the obvious risks of exploiting an unproven technology, Swanson insists that "our investors have deep pockets."

Though Genentech seems to have a clear headstart, it is by no means alone in its determination to cash in on the potential of recombinant-DNA technology. Across the bay in Berkeley, six-year-old Cetus Corp. is also opening a recombinant-DNA facility to complement its work on conventional chemical and radiological means of mutating bacteria. "This is the hottest area in biology today," says Peter J. Farley, Cetus' executive vice-president. Two months ago, Standard Oil Co. (Indiana) bought one-fifth of Cetus for about $10 million.

Elsewhere, Upjohn Co. will soon open its own recombinant-DNA lab. According to Joseph E. Grady, head of Upjohn's infectious disease research, the company expects to develop marketable applications within five years. Abbott Laboratories is just now beginning work on recombinant DNA, while Miles Laboratories Inc. is becoming the major supplier

of the so-called restriction enzymes that the gene synthesis work requires for recombination. Altogether, between 10 and 15 industrial labs are now pursuing recombinant-DNA experiments.

Trying for insulin. The Genentech research began with the construction of an artificial gene by the team at the City of Hope under the leadership of molecular biologist Arthur D. Riggs. The scientists

Genentech's Boyer and Swanson: With gene-splicing, they hope to synthesize insulin.

chose to construct the gene for somatostatin because the hormone's chemistry, worked out at the Salk Institute, is reasonably well-known, and because sensitive tests are available to measure whether it is actively working within a cell. More important, somatostatin seems to play an important role in regulating body growth and inhibiting the production of insulin in the pancreas. Thus, it and other hormones now under study seem to have wide possible application in treating diseases such as diabetes. Today, somatostatin costs around $30,000 per gram to synthesize chemically, but Genentech believes it can bring the cost down to $300 or less.

Once it had an artificial gene, Boyer's team at UC-San Francisco used restriction enzymes to cut open a ring of DNA known as a plasmid in the cells of a special strain of *Escherichia coli,* the human gut bacteria most commonly used in recombinant-DNA work. The strain the team used, called K-12 bacteria, had been specially mutated so that it could not survive outside laboratory

RESEARCH

Genentech profile, BusinessWeek, December 12, 1977

cumbersome, and costly process. So Genentech got onto the map very quickly by getting out to the business marketplace rather than go up through the science trade journals and so forth. They said, "let's go out and start at the top." And that led to a major deal that put them on the map.

Certainly another was Spectra-Physics, and that goes back to the 1970s. They were a wonderful company because they were one of the early laser companies, one of the first laser companies here in the Valley. We introduced the first laser, and as that happened, it all unveiled itself in front of our eyes. I think it was a hundred dollars, which brought it down to the consumer level. And then it started showing up in supermarket scanners. Then both NCR and National Semiconductor produced the supermarket checkout systems. They were a client. Dave Martin was the president of National Advanced Systems, and he's on the Computer History Museum's board. Dave was a client very early on, and he was working on trying to get National to compete in that area.

The guts of Spectra-Physics was scanning UPC codes. That enabled grocery stores to go from five thousand products on the shelves to ten, to twenty, to thirty, to fifty, to a hundred, and now hundreds of thousands of products, simply because you could inventory them quickly. You had just-in-time inventory, so you didn't have to keep them in the back closet. You could keep them in a warehouse somewhere and have just-in-time delivery every day and just stock the shelves. That process came about because of laser scanning and computing technology.

We were in the middle of it because we were also working with the companies that were making that equipment. That's exactly what we set out to do, in the early days of Spectra Physics, as I said in my notebooks. We looked at scanning with for a low-cost laser.

Other clients in other various segments included a company called WebLogic, which created a Java server. It was a little startup in San Francisco, and I gave them their first check to publish their manuals, and went on their board, and helped bring in the CEO, and raise money, and so forth. WebLogic was sold to BEA for about a third of BEA, which was an established company—maybe over a billion at the time. They gave WebLogic a high value. Once it was sold, BEA stock split, I think, three times. So if you held onto your stock, you did very, very well.

The president of WebLogic was a guy named Ali Kutay. Ali had fun the software programs for manufacturing at Lockheed. He was a young guy out of CMU, out of Pittsburgh. I actually met him in Japan but started doing things for him at Lockheed. I tried to get Lockheed to spin out their software products, and they didn't want to do that. So, basically, I recruited Ali to come and be the president of WebLogic. He did well there, and then he became the CEO of a company called Golden Gate Software, which was a high-speed backup system across multiple software and hardware platforms. That was a very successful thing, and it was based upon a book I wrote called *Real Time*.[2] Everything they promoted was real-time processing.

Now on their third company, the same team. And they still use the term "real time." Now it's streaming. But it's real time in-line processing and analytics done while it's streaming. That's been their model since the '90s.

That's three generations of companies with pretty much the same senior management team that's moved from company to company. The last two companies they did were bought by Oracle. So, they've done very well.

There are really so many companies we worked for. As I was doing my list for this, I started writing them down. It got to be a long, long list of companies that we worked for—hundreds.

Hollar: We'll be including that Excel spreadsheet, which I'm sure is not complete.

McKenna: No, it's not.

Hollar: But it's got hundreds of companies on it.

---

[2] [Editor's note] *Real Time: Preparing for the Age of the Never Satisfied Customer*, Harvard Business School Press (1997).

McKenna: Yes.

Hollar: Of course some names were, and still are, exceptional, just by virtue of their unique leadership, their commercial success, and their longevity.

This is one last question as we finish this section. I want to talk about the executives you worked with at Intel and Apple. Were they the most impactful in the way that you saw this marriage between product and marketing play out over decades—not just years, but decades?

McKenna: Yes, and, quite frankly, I think more Intel than Apple, because Apple came later, and also because I learned so much from Intel. There really wasn't time not to learn. You were learning all the time.

I'm guessing, but I think Intel introduced somewhere between 70 and 80 products or product-related activities a year. It was just product after product after product. They were always trying new things. Some of them failed. Bubble memory was a big failure, and they put a lot of effort behind that. The large-scale mainframe on a chip—they spent a lot of money, and that was not successful, alhough Andy Grove later told me that what they really learned from that was to develop design tools. For very large VLSI devices, they had to have design tools. By working that project, they had to redesign their design tools, so that helped them with future generations. We were just constantly learning from these people.

Intel was intense—very smart people driven by product managers. They had maybe ten different product lines that we were working with between Portland, and Phoenix, and here, and Europe. We had offices in all their locations. You were always forced to innovate and come up with new ways of thinking about the business. It also was always a struggle because, particularly when we had an advertising business, their ideas on advertising and mine were a 180 degrees out of phase because theirs was much more "show a picture of the product and a spec." Mine was much more "use analogies, be colorful."

We used third-party artists, for example. With Spectra-Physics, I used artwork from Jean-Michel Folon. He's a French artist. Most of the modern museums of art have his works. He did illustrations for us. I licensed them and got to know him quite well.

He's the first person we tried to hire to do the Macintosh themes. And in fact, on my desk is a little button that says Mac, and it's one of the little characters that he had designed. Ultimately he had to turn it down because he got so busy. He did set designs. He did illustrations for magazines. He saw no limits to art. It could be a magazine cover. It could be an annual report cover. It could be on a theater stage. He didn't have these sort of barriers that said, "I've got to be in fine art museums, or I'm not an artist." He stretched the boundaries. He did a lot of silkscreens on aluminum—really fantastic stuff.

So we used artists, if we could, to really make a difference to say—hey, your technology is unique. It ought to be out there on the edge of the mainstream. And what you're doing in your ads is reflecting that into your products and your company. And the audience got it, but a lot of times, the engineers didn't.

Hollar: I want to return to this theme just for a minute about working with engineers and working with non-engineers. That's not an easy line to straddle, and yet you've straddled it your whole career. What made you successful in being able to do that where so many people are not?

McKenna: I don't mean to dump on engineers, actually. I learned so much from them.

Hollar: But it's well-known that it's sometimes a hard line to straddle. You wouldn't be the first to say it even if you said it in your—

McKenna: No, no, no, no, I know that, but I think it also becomes a little bit of a cliché to say that because there are certainly engineers that are well-read. There are engineers that—

Hollar: Of course.

McKenna: I can remember that I was talking to a group of engineers about somebody like Picasso. I'm going to use that name, but it's not that name. And they said, "What company does he work for?" I think he was being facetious. There was a fellow at National that ran manufacturing who was quite astute in modern art. It's just that in terms of—

Hollar: I'm asking more from the marketing side of it.

McKenna: Yes, more the practicality of it.

Hollar: Yes.

McKenna: There's a reaction, I think to feedback on your marketing and advertising. If it's negative, they shrivel up a bit. At Intel, if they heard some noise coming from the upper level, they would react. The marketing VP would say to me, "The executive staff doesn't like that." There was that feeling that they could shake you. I would just shrug. I mean, then fire us if you don't like it.

Examples of RMI advertising campaigns for Intel, 1974-1985

I had many arguments with Andy Grove over that, whom you don't argue with. He once told me in the parking lot at Intel that he could save a lot of money at Intel if he would fire us. And I said, "What are you talking about?" And he said, "Well, the engineers are arguing over your ads in the hallways." He said, "If we fired you, they wouldn't be arguing. And they'd get some work done." I felt you want to at least be out there and get people talking about you, and not just be different for different's sake. I always felt that if advertising had a good reflection on things, then it was worthwhile. But I sold our advertising business fairly early, mainly because I was trying to always move up the ladder.

We moved on to what we called "market relations" rather than PR. We called it MR. It included all the segments of the market—the media, which is communications, but also analysts, and partners, and distributors, and salespeople, and whoever was in an intermediary position between the company and the marketplace. All of those were included in this idea of market relations. We kept building on that until the time when we got out of implementation and into pure strategy consulting. But that took twenty years.

Hollar: Two questions: when did you decide that you really wanted to make that change? And then how did you go about doing it?

McKenna: It was the pattern of following in the footsteps of the technology companies around us, and that is to integrate forward. The thinking behind implementation, particularly when you're talking about things like advertising or media, is not valued. There was a time when you could do a press release for a couple hundred bucks. But what people didn't see were the meetings that you had in determining not only what the product was going to be, but also what the pricing was going to be. Usually, pricing took lots and lots of negotiation before your client would go out with it. So you had these long internal discussions. How are we going to announce it? Do we get it into our key customers first? So you go through weeks and weeks of discussions before you launched a product, even though at the end of it you put out a little piece of paper that had a few words on it. You might charge them a lot of money based on the time you put in on that product or on that service, but the output didn't equal what the value was.

Hollar: Even that still didn't equal it?

McKenna: Even that didn't, no. And we increased our prices. We were pretty expensive. But on the other hand, what you heard was, "You're really expensive."

Hollar: Did that bother you?

McKenna: No. I said, "Fine, find a replacement." I have said that. And I don't think they could have found one because by then I had a really good staff of technical writers and people who could sit down and write their articles, and their speeches, and everything else. We had a staff of people that could do services that almost nobody in this area could do, nor did they know the company as well and the history as well.

The other influence on me was working for so many different companies. You could sit in on meetings at Intel. And then you'd go over to Apple. But then you might go up to Genentech. Then you might go over to Memorex, which is something completely different. Then you might go to Spectra-Physics, which is a

laser company. And then you might go do something else. And so you were constantly moving across these boundaries that, at some point, were going to have common interests. But by and large, you were just learning something different about all of the various elements that come together, all of the pieces of the Rubik's cube. And that is what adds up to being able to give some advice because you see what works and what doesn't work.

I mean it was night and day going to a meeting at Intel, a management meeting with all of the senior management in it, and then going to a senior management meeting at Apple. It was just night and day. Apple was largely dominated by one person. Steve was very dominant in those meetings. There were other inputs, and there was a lot more arguing over things, whereas at Intel, there was more working toward a common goal. There might have been disagreements, but it was never isolating to the individual They wanted you to make your arguments, and the better you did that, the more they could justify what they were saying or measure it against some opposition.

I felt that Intel was almost the perfect place to get an education. And I would say that most of the executives that I know, even today, who worked at Intel through the 1980s, will tell you that it was the best learning experience of their lives. There was a process. Everybody was smart. Everybody was moving. Everybody sat down and looked at their goals, objectives, and deliverables, and so forth.

I remember sitting in a meeting where we had done a lot of research on a particular company. In that same meeting, they had brought in some McKinsey people. The McKinsey people were taking notes on our presentations, and I thought, "Here they are making, I don't know, five hundred dollars an hour, and we're making two hundred dollars an hour. And somehow or other, it's only perception."

Hollar: And perhaps a lot of what you were saying in that meeting was going to somehow get incorporated into some future McKinsey—

McKenna: Oh, yes—

Hollar: Advice to its clients.

McKenna: By the way, that was true with a lot of the analysts. Analysts would call me and ask my opinions on things, and then I'd see it show up in their analyst reports—simply because we had a perspective. So, it wasn't that I was making this up in my own mind.

And I was constantly moving. I mean, you saw my calendar, what it looked like. I was just moving from one company to the next company to the next company. Just constant movement. And so, you absorb a lot. And if you're curious, you then go home and do more homework. It led to the ability to say, "Hey, I can offer you something in terms of perspective and advice," and, quite frankly, the longer you're around, the more they want that. I get asked now for all kinds of advice and opinions that I would never have been asked for thirty years ago, simply because I've been around a long time. People want your perspective.

That was one of the key motivations that I remember very clearly for moving to a consulting practice. I was saying that we've got to step up and get rid of the argumentative points, which involved having people redo the implementation, and get back to the basics. What changes a company isn't the ad or the

press release. What changes a company is the fundamental strategy that goes behind all that. We had to ask, "What is the company doing to establish itself in the marketplace?" And that's a variety of things, not only in terms of product planning, and partners, and channels, and alliances, and finances, and profitability.

I can't tell you how many times I said that to a company that wanted us to reposition them. I told them the most valuable thing is your financials. Once you become profitable, you'll see things change. I remember saying that to Steve when he went back to Apple. I told him to get profitable, because no one's going to take you seriously unless you have profitability to back it up.

All of these factors have to come together, and strategic thinking is thinking about all those factors. And you see that when a company falls apart in one place or is doing well in another place or not doing quite right in one place or another. One of the reasons I kept notebooks was for reflection on all of that. I've gone through those notebooks in the last month. I'm not quite done yet, but I've probably gone through a hundred notebooks to date, and I can almost see that happening in terms of being able to go into different meetings and suddenly start writing down my reflections rather than just what's going on in the meeting.

Hollar: Since you were increasingly doing that work, that strategic work, I can see the desire to flip the whole company up, if you will, or to make a major change so that a major focus of the business was at the strategic level, and less and less of the execution level. How did that work in practice, though?

McKenna: I sold off the advertising business in 1981. I sold off the what we called the public relations business in 1995 to the employees who wanted to do that. And so I was left with a business that we had to build ourselves. It turns out that a lot of that business came from larger companies that were not necessarily startups, although some venture people would have me go in and talk to their companies or meet with them and do some advising.

The early companies were like AT&T Semiconductor. I did a trip to Japan for them. I did a world tour with NCR announcing a new technology. IBM became a very large client of ours on their midrange computer systems and services and in Almaden Labs.

And so these were bigger companies, who needed outside input, more objective views of what they were doing. Maybe they just didn't want to pay the larger consulting firms. We were still a bargain, and we had a ton of experience with technology—a ton of experience. By then, most of our people had come out of technology businesses. That's where we were hiring them. And a lot of them went back into that. So, I felt that we had something to offer.

But it was gradual. You just can't jump into it. You have to build the resume, and the resume becomes billings from companies you've done work for, and references. That happened from roughly the beginning of the 1990s through probably 2005. We had a really good consulting group, a lot of good, sharp young people. Several of them started their own technology companies and are very successful. There's a couple who are in venture capital. And some are still just doing individual consulting. I keep in touch with a lot of them.

So from the1990s to about 2005, we just had a really good group of consulting type people who could go out and get business. I think up until that point, you were trying to make people move internally from this side over to that side. It didn't work very well. A lot of these people not only didn't want to do it, they didn't know how to do it. They thought they did. And a lot of them emulated it. But they weren't that successful at it because you do have to be able to kind of show your gray hair and show that you've been around and done some things. A lot of the people's experiences were more in the promotional area than in the actual strategy area.

Hollar: Also, I think in your case, Regis, it's an ability to synthesize so many different inputs that any business requires. You've talked about all the internal things, but then all the external things. And your capacity, which, at that point, you'd being doing for decades, of pulling all of those different perspectives together.

McKenna: I often said that people are unwilling to do the homework. It does take a lot of homework and prep work. For this interview, I took about six pages of notes that I did on my own. I may not look at them, but I at least thought about them, and you really have to do that—find some references, go back and look at other things you've done, or whatever. To do the homework today, you go online, but, in those days, you needed to talk to a lot of people that you knew in the industry who might have an opinion. And I think there's a lot of people that just honestly don't want to hear the truth in many circumstances. I've certainly had that happen a lot. They don't want to hear actually the real truth about—

Hollar: Meaning what's actually happening in their business and with their customers?

McKenna: Yes. They are sure that it's not their fault. And I can think of three very prominent companies that you would know that basically did that.

Hollar: At a moment when they were in trouble as companies, you were delivering news they didn't want to hear?

McKenna: Yes. One that I could tell you about is Segway. I was never really comfortable with the machine. John Doerr had me come in and talk to them. I felt that they should have licensed off all of the technology and exited the business, because I didn't think it would ever have the value that they put into it. They put something like one or two billion into it, and it wasn't the revolution that it was purported to be.

My question is this is: How would you like to see a thousand of those things going down Fifth Avenue New York? If it's going to become a mass transportation tool, as they said it was going to be, then you have to expect that every sidewalk in New York would be covered with them. That wasn't going to happen. They did find it hard to sell the product. They even put it on Amazon.

When I talked to the founders, I don't think they wanted to hear that. I know that companies like DEC, when I went out and did research among their customers with the CIOs of those companies, I don't think

they wanted to hear that research. They had done their yearly survey, and they felt that was all that they really needed. Check the box: are you happy or unhappy? Whereas we had conversations with them.[3]

Or, for that matter, at Apple, when I made the presentation to Gil Amelio. He didn't want to hear that presentation.[4]

Hollar: This was the presentation on how to fix Apple?

McKenna: At the time we had a partner, Gemini, which was a large international consulting firm, and so a partner from Gemini and I worked on it and went in and made this presentation to him about how to fix it. We started by looking at the financials—

Hollar: Which at that point were really bad.

McKenna: Really bad. We talked about partnerships, about creating some models to start cutting costs, some of the basic stuff to get back to profitability. We talked about the need to do product reviews.

As it turns out, Steve came in and did it by fiat. He just came in and wiped out a lot of the projects that were going on, because they would have three or four projects all doing the same thing and overlapping and competing with one another. Steve came in and said "There's going to be three groups. There's going to be the computer, the iPhone and the iPad" and he said "and all of you are going to work for one of those three groups, and you won't be fighting anymore. You'll all be working for the same objectives."

Makes sense. Very simple, but if you had people who had come out of big companies, and there were a lot of IBM people who were brought in by Amelio at that time, they could have 20 projects going in parallel and pick the one that won the competition. You can't afford that in a company that's struggling to survive.

Hollar: I'm thinking about this period now from 1995 to 2005 after you repositioned RMI to do strategic advising. Which companies were the most important to you during that time? Which ones did you think took to your style and your advice the best, that you really enjoyed working for, maybe had the best leadership so that the whole package came together and you really felt like your vision for what you wanted the company to do, and you wanted to do personally, matched their needs and reactions?

McKenna: It was actually a team, and I mentioned them before—the teams that [WebLogic founder] Ali Kutay had put together. It was three different companies, and I'm still on his current company's board, so I have a long-time history with him. I know the people. The engineers are really wonderful people, the people that do the software, and have become very close friends. They've taught me a lot.

Also, it was Microchip, which is a microcontroller company out of Phoenix. This might've been a little bit earlier, but Microchip was under bad management. They had a factory but no management. But there was a young guy there named Steve Sanghi, who was down the ranks—a very sharp guy. And he just

---

[3] [Editor's note] See Oral History of Regis McKenna, Part 5.
[4] [Editor's note] Ibid.

assumed responsibility for improving the manufacturing bit by bit, and making it happen, even with old equipment, and getting good quality products out.

The board finally turned the company over to him. The board was me, Don Valentine, Pierre Lamond and a few other people. He just did a marvelous job. Quarter after quarter he was improving everything. I think if you were to talk to the analysts in that world, they would say that Microchip was one of their star pupils over the last 20 years. For most of those years they didn't lose a cent. They had quarter-to-quarter profitability. Their stock price remained high even in the recession.

The same is true of Linear Technology. I was on the original board. They were all friends of mine who spun out of National. And Bob Swanson—same name as the Bob Swanson that founded Genentech, but different guy—Bob was a Linear engineer, and he put together a company that competed with National and TI and Fairchild, through unique design and quality products, and by paying attention to customers.

Both Microchip and Linear paid attention to customers, and I used to say, "You may never have heard of them, but their customers have heard of them, and they keep repeating their orders, because they keep growing, and the analysts in those fields know them, and quite frankly, from a brand standpoint, they are an outstanding brand." I can tell you I've never sold a share of either of them. I've had it for 20 years, and it's still worth a lot of money. It's valuable. I think those two companies really are outstanding in this timeframe.

Actually, IBM also became a very good client of ours during that period. Jack Kuehler became president of IBM, and Jack was a graduate of Santa Clara University. He was also the only engineer to become president. Most of them have been marketing people, including the founders of IBM. They were all a lot of sales and marketing. But Jack was the engineer's engineer. The engineers really loved him there, and they admired him greatly, and he was just a fine individual.

I was at a board meeting in Santa Clara and just come out with a book called *Who's Afraid of Big Blue?* It was about all the little companies that were nibbling away at IBM—the Compaqs and the Apples and the Digital Equipments and other types of companies that basically were taking little pieces out of IBM's hide. At one time there was the BUNCH: Burroughs, Univac, NCR, Control Data and Honeywell. Those were five big, big companies that they said were competing with IBM, and they were the ones who IBM was supposed to compare to, but in fact the competition was coming from all these little companies that were starting up and taking bits and pieces of IBM's market by innovating new products and new technologies. I'd come out with this book about all that.

I was sitting beside a woman, talking to her, at this board meeting, and I mentioned something about IBM. She said "Well, yes, Jack Kuehler's my husband." And I said "That Jack Kuehler?" She said yes. So I knew of him, but didn't know him, but he was there, and we got introduced, and he invited me back to Armonk, and we got to be pretty good friends.

One of his goals was to create an alliance with Apple, which came about. They created two joint ventures with Apple. This is after Steve left. And he was hoping to work together with Apple to create some new

technology ventures that were joint investments and joint operations by both companies. I think the disconnect was pretty obvious, and they didn't last long, maybe five years. But some of the best people in engineering were working on them.

Jack and I became fairly good friends, and he introduced me to a lot people at IBM. That got us into IBM as a company, and I gave some talks back at IBM to different groups. I used to give talks to IBM customers at Almaden Labs, because once a year they would bring in their top customers to brief them on what was going on in the labs. I was invited to give talks at those, and one thing led to another. We ended up with a fairly sizable piece of business with them. We did well there until the 2008 recession. At that point, everybody cut out all consulting firms, and it hurt us badly.

But when we were working with them, they were very open to our ideas. I was invited into a lot of top-notch sessions with the engineers. I met Fred Brooks, the fellow that ran software for the original IBM 360 mainframes. He wrote the book *The Mythical Man-Month*. I spent time in meetings and so forth.

IBM has really brilliant people, lots of really deep thinking going on about the human interface and the nature of technology and society. For me, it was a wonderful learning experience. It was largely the people, and then it was a lot of different things.

We also worked on a major product introduction out of Xerox in the east, and that was both good and bad. I got to work with Paul Allaire, the chairman and CEO. Xerox was going to build this humongous printing machine that was 20 or 30 feet long—you would put paper in one end, and a book would come out at the other end. Digital technology was coming into the mainstream, and they were advertising themselves as "The Document Company." They were spending millions and millions of dollars advertising that on national television. I told them they should make it "the digital document company," and put that massive printer behind a wall with a little hole at one end and a hole at the other and not even show the machine, and things like that. We helped them with the whole introduction process, but I think it was a difficult struggle.

We also worked with Digital Equipment, Olivetti, Philips, and with Bull, who was the largest computer manufacturer in France. I actually was the go-between when Honeywell bought them, and I, and they negotiated it in my conference room. I was part of that.

Hollar: These were big, strategic relationships, and people were relying on you for all kinds of additional strategic advice. It was the change you were looking for.

McKenna: Right. And the technologies were changing very rapidly. I think everybody admired what was going on here in Silicon Valley in terms of the entrepreneurism. Many of these big companies were trying to create entrepreneurs inside their own companies. They were trying to figure out the puzzle and how it worked. So we were able to do work for not only European companies but big US companies and Japanese companies as well, including Sony and Mitsubishi.

Hollar: Another question that I wanted to ask you in this context: what are some memorable mistakes or missteps that you saw? You mentioned that conversation you had with Noyce on the failure of companies, and I'm not thinking so much about company failures. I'm thinking about other kinds of missteps like Ken Olson, for example, saying that the PC was never going to make it. I'm thinking more about either failures to grasp opportunities the companies had right in front of them, or opportunities that they somehow let slip away that shouldn't have slipped away.

McKenna: We've seen that even recently, right? Not that we were consulting for them, but where Intel missed the mobile phone market.

Hollar: Exactly.

McKenna: So it continues to happen to companies. A lot of it is hubris.

There was an old BCG [Boston Consulting Group] chart illustrating different segments of any market. One segment was the established marketplace that you milk—you just keep milking that segment to pay for everything else. I think all companies fall into that. Even small companies do. They see big success with their first product, and they fail at everything after that.

At Apple, you saw the Apple II be wildly successful. It was an open system. It was flexible. It fit into education. It fit into a lot of different marketplaces. But then the Apple 3 was a failure. Then there was this concept of the Mac, but along came Lisa, and Lisa was a failure even though they put tons of money into it. These successes and failures happen right beside each other.

From an Apple standpoint, it was lack of industry experience, quite frankly. Pretty much a lot of them were hackers. They were renegades. They called themselves pirates, and they scoffed at people who had been around a while, particularly technical people. I had conversations with Sculley about how no one on the board or the executive staff had any depth or experience in computers, and how it would be really great to have some people like that who could at least tell you about what comprises modern-day computing systems. Systems, not just a computer, but, let's say, a system in a large corporation. Why didn't they get into the business marketplace? Because they didn't understand computing systems. They may not have wanted to do it then, because the technology changed that allowed them to then get into it. The internet leveled the playing field for everybody, and once that took place, then compatibility became less of an issue, and so once you had the internet, then that solved a lot of people's problems.

But let's take people like Silicon Graphics, who really felt that they had the world in their hand, and that hubris killed them. They had an opportunity, and I was asked my advice on it. IBM approached Silicon Graphics, which had a workstation, to put one of Silicon Graphics' graphics engine cards into every IBM PC. This was the company with [the] world's largest market share of personal computers. They turned it down, because they felt they could do it themselves. When they asked my advice, I said "Do it. It will put you on the map. It'll put your graphics engine on the map," but they were opposed to it.

Hollar: And was hubris the central reason?

McKenna: I think so, yes. "We can do it ourselves" was the attitude, and it turned out their personal computer ended up being a luggable desktop. I don't think they had their eyes or their hands on the real marketplace. I think that so many companies do that. They really feel as though a little bit of success means a lot of success, and I think what they don't realize is that success is only as good as your next new product.

Again, I'll use Intel as an example. They didn't let a bad product stop them. They were already on the next one and the next one and the next one and the next one. I look through my notebooks; there's just product after product after product. You're running from one group to another group to another group, because everyone was filling you with new ideas and new products and new ways to get something into the marketplace.

Hollar: It's interesting that you contrast Silicon Graphics with Intel, because SGI was a company that made a finished product, the Silicon Graphics Workstation, and didn't want to become a component in somebody else's business. Then in Intel, you had a company that essentially was a component product, but they eventually were able to make Intel Inside such an essential part of the finished product that every single PC, no matter whose brand it was, finished that commercial with the Intel ding and the Intel logo.

McKenna: That has both a good and a bad side to it.

Hollar: Yes. Say more about that.

McKenna: It certainly enhanced Intel's identity in all of these products, but it also made the PC a commodity.

I used to say that you go into Fry's, you look at all the machines, and every one says "Intel Inside." So what do you look for? The price. If they're all Intel Inside, then they must all be equal, and the difference is the price. Almost everybody made the same beige covers and computers.

Apple was the only one that was different, so Apple was the one product that got a premium price for their products because they didn't have Intel Inside and didn't look like everybody else. They did something different. I always felt that it looked like the old slogan: The ad won all the awards, but the company went bankrupt. People loved the advertising and the promotion, and I'm sure they still talk about it, but they hastened the commoditization of the personal computer, and that drove prices down. IBM got out of the business as a result. So Intel's biggest customer, quite frankly, vanished.

Hollar: So in other words, it succeeded in making Intel a household word even though it was only a component, but at the same time it also depressed and eventually unwound a big part of the market.

McKenna: Yes, it's a component, but it's really a system. This is one of the things that they learned in marketing the microprocessor.

In the early days it was looked at as a component, and people said "It will sell a lot of memory." That was the reason they were promoting it, because you had to have a lot of storage hanging off of the machine. But as we went from 1971 to '75, '76 and on into eight-bit, particularly the 8080 and the 8086, then it became looking more like a system on a chip. Then as they got into 32-bit and so forth, that went even one step higher. So these became systems products, and you were essentially putting a module inside a case that gave it all its smarts and brains.

Intel was marketing a full-functioning processor. You didn't have to build cards themselves, because Intel made a single-board computer. And so to market Intel's contribution as a chip was not the way it ended up. They marketed it as a completely packaged computer within a computer, and you didn't have to do much but add the applications and some unique functionality. It was pretty much given to you, and you could get to market fast.

It's why IBM bypassed the original IBM channels. Remember, they went to Boca Raton. Don Estridge became the president, and Don went to Intel and Motorola and had them compete for the processor. They went out and basically captured Microsoft to be the software supplier, and so in effect, both Intel and Microsoft became 90 percent of the PC marketplace because of IBM's selection, and that was a big marketplace. They went to market much faster than they would have. It would've taken them five, seven, eight years to get to market, and instead it took them, I think, two or three, so they were in the marketplace very, very quickly.

I think that was also a model for other people within the hardware business. What really counts is the software and the architecture and the systems and the nature of the suppliers and that you got to supply those critical parts. Apple eventually got into that business themselves by doing away with all of the manufacturing and piece-picking and put it all into a logistics system.

Hollar: Was it contentious within Intel to embark on this Intel Inside strategy?

McKenna: That came in the late '90s, and we were not involved. But I know the people who did it, and I don't think it was contentious. I think the real contentious aspect of Intel was when they had the RAM memory business and the EEPROM business, and then started the processor business. They were investing in the processor business, but there wasn't a return. Memory was a hot business, but prices were being driven down by Japanese competitors, so they weren't making money on memory, and they weren't yet making money on the processor. So the memory people and the microprocessor people were a bit at odds.

Hollar: I want to ask you in this last segment about your company's publishing strategy. It was really your publishing strategy. In the oral history, we're going to include PDFs of the marketing brochures that you wrote and samples of newsletters and other things that you initiated as part of the building of the company. Can you talk about the genesis of that strategy, and the impact over time?

McKenna: Almost everything began with a slide presentation. I would do talks to either my own people or to customers or to people who hired me to do it, and that would crystallize my thinking around a subject. And then I would write it up, usually on an airplane somewhere. I spent a lot of time on airplanes, and that was where I got more writing done than anything, back and forth between countries and East and West Coasts. And I would write them out in a notebook.
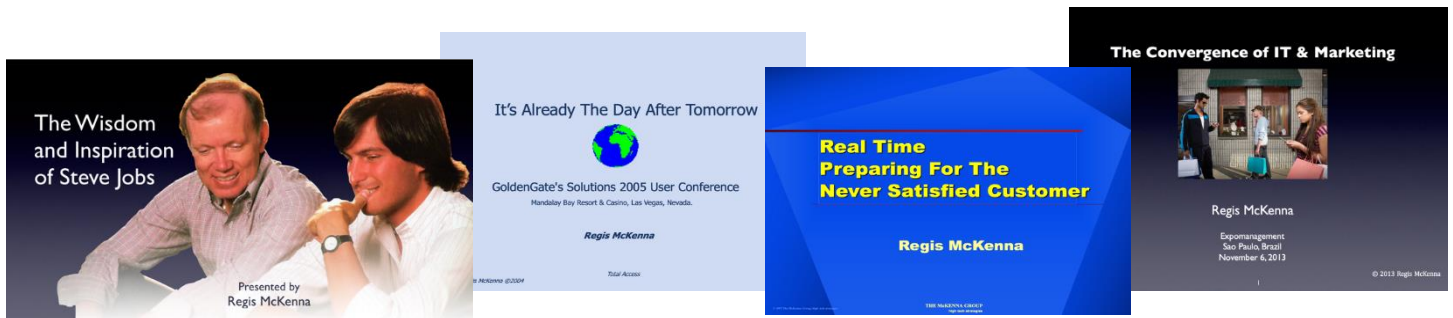
Regis McKenna slide presentation examples

The whole idea was to educate our customer base, our client base. But just like the "Evening With…" programs, I sent it to everybody—all the people on my mailing list. I had a list called an FYI list, and these little FYI stickers, and I would personally sign them, and we would put those on the pamphlets or newsletters. I hired a writer from *Electronic News* to do a newsletter for us that we did regularly, and I got beat up over that by the journalists who said we shouldn't be in the journalism business. But it was an objective newsletter. I gave the guy carte blanche to do it as a journalist, not as somebody who worked for us.

When the personal computer was coming into the business, we were publishing a magazine called *Apple*. We published four editions of *Apple Magazine*, and it was really a slick magazine. In fact, the original copies of it are at the Smithsonian. One was on business, one was on education, different subject matter like that. I wanted to sustain that, so I hired some editors, I hired writers, and Apple decided to do it themselves. So they took it over, and they never did it. They never did issue number five. We did a newsletter for Genentech, and they never did issue number five.

We would do these things for companies, and then they would say "Oh, it's too expensive. We'll cut the cost. We'll do it ourselves," and they never would, whereas I had all these writers and so forth that we could use. So I thought very seriously about creating a publishing business—that's where I started, in the publishing business—and becoming a *PC Magazine* or whatever. But with all the clients we had, and trying to pay attention to that, and in the meantime having clients say, "We'll do it ourselves," it took revenue away from the early products. I couldn't afford to keep that staff anymore, so it kind of dwindled away.

Hollar: But you did keep short-form client communications alive for a very long time.

McKenna: Yes, the pamphlets, the pamphleteering and other things that we put out. Those are largely little lessons, and it came from the idea of our founding fathers who did pamphleteering to start the American Revolution.

Hollar: Really?

McKenna: We're in the middle of Silicon Valley, the revolution, and I thought, "We need a revolution in marketing." I felt clients and prospects had to start understanding that marketing isn't sales. It isn't engineering. It's not the same.

So I started writing pamphlets on different aspects of marketing and then publishing them. I think probably the symbol of it being successful was that, after Steve Jobs went back to Apple, he called me one weekend and said he was going through his desk drawer and came across several of them that he kept. He wanted to know if he could reproduce them for his internal marketing people. I know he did that, so that proves that they at least got some exposure beyond the original distribution.

"Trees Have Blemishes, But the Forest is Beautiful" pamphlet, Regis McKenna, Inc., 1981

I think they were very successful. They were hard to do. Just finding time to do them, and doing them on a unique subject was hard. Some came from speeches I would give. I gave a talk at an international symposium in Hong Kong and published that talk. I also wrote about other things that we did. I tried to keep them from being promotional.

We also did articles and even backgrounders on companies. The idea was that the most credible backgrounders on a company were done by analysts, because they didn't use all the adjectives, and I used to say a good backgrounder has no adjectives, no superlatives. We're not the first, the finest, the best, the most, the fastest, all those sorts of things. Forget about all that talk and just tell people what it is in as plain English as you can. That's what we do with our backgrounders. We would have people work on those for weeks and months at a time on a company, on products, on product lines, on the company itself.

Hollar: And how did you use those?

McKenna: The company used them. Those would become part of the company, and we would send them to the media and to the analysts. In fact, on the backgrounder on the Intel 8080 processor, I even got rejected 8080 chips and had one pasted on every copy, on the front, so the recipient could actually see what the processor looked like. It was just part of getting the message out and getting the education out there. It was just something innate in me, I guess.

Hollar: Same with the books?

McKenna: A woman named Anne Dilworth was my publisher. She was a publisher in Boston at [Ed: Addison-Wesley]. They published most of the computer books.

Anne approached me and asked me if I would write a book. That was *The Regis Touch*. So I did that one, and of course, you've got to do follow-ons, so I did a total of five books. The last three were done by Harvard Business Press. They were acquired, and then my publisher was *Harvard Business Review*. I got to know Ted Levitt, who was the editor of *Harvard Business Review*, and he invited me to write some articles for *Harvard Business Review*. Up until probably the early '90s, most of the articles in *Harvard Business Review* came from the big East Coast consulting firms, or from professors. Ted Levitt changed that. He even shocked everybody by putting cartoons in *Harvard Business Review* and by doing interviews. I think he interviewed Bob Noyce for one. He tried to make it a much more interesting journal, and readable.

He asked me to do some articles, and Alan Webber was the assistant editor. Alan became my editor at *Harvard Business Review*. He left later on and went on to found *Fast Company* magazine, and now is the mayor of Santa Fe.

Hollar: Was your process with them the same as it is with every publisher? You have an idea, there's some dialog about it? Or were they really very quick to say, "Yes, this is a book we think we want to do"?

McKenna: No, no. We had a lot of discussions over it. You do an outline, you do a proposal. I was fortunate that Anne Dilworth wrote most of my proposals for me. I would talk to her about it, and she would write it, because she was a publisher. So she helped me with most of my proposals.

The books themselves largely came out of working with clients in the industry. *The Regis Touch*[5] was just a synopsis of what I had been doing up to that time, and it was much more based on OEM kinds of marketing—face to face, being able to change and re-engineer products. *Who's Afraid of Big Blue?*[6] came out of watching all the small companies and working with a lot of them. *Real Time*[7] came from watching the speeds of things increase— knowing that first there was radio, and then you increase the bandwidth and get television. As you increase bandwidth you start finding more and more stuff you can put across the channel. It had to change, it had to become more robust. It was just logical to say that would happen. It wasn't anything magic.
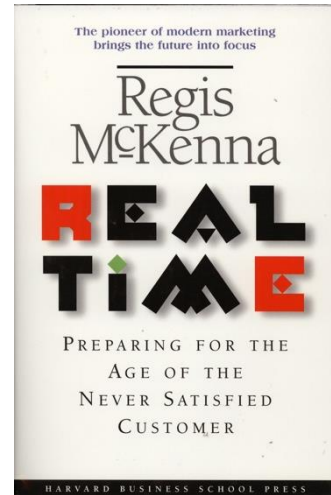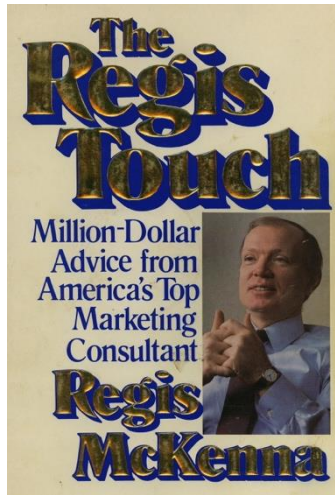
Covers of Regis McKenna's books

You just knew that was going to change our lives, because you could look at the consumer industry, at the fashion industry. Fashions were changing very quickly. I got to know the head of Japan's Nike division, and he told me they were changing their styles every three months in Japan. This means that manufacturing is becoming more flexible, the design is becoming more flexible. You look into that, and you start finding fashions are now done by freelancers. They're telecommunicated to somewhere in Japan or Korea or Taiwan, and basically within two weeks, they're on the racks at Macy's.

So if you looked into the background of it, you started seeing all of these real-time things occurring. And then the distance between want and satisfaction goes to zero. So you think about Amazon now, where you order something and you get it the next day. If they can have their way, you'll get it that same day. It's more of a want than a need, but it's instantly satisfied.

When you train the consumer in that way, they want that in all aspects of their lives—maybe unconsciously. I think they want solutions now, and why, perhaps in political circumstances, they're so willing to elect somebody who says, "I can solve your problem now."

It can become very dangerous. I've written about that, about the fact that we'll see faster turns in political cycles and so forth, just because of that.

---

[5] [Editor's note] Regis McKenna, *The Regis Touch: Million-Dollar Advice from America's Top Marketing Consultant*, Basic Books (1985).
[6] [Editor's note] Regis McKenna, *Who's Afraid of Big Blue? How Companies are Challenging IBM—And Winning*, Basic Books (1988).
[7] [Editor's note] Regis McKenna, *Real Time: Preparing for the Age of the Never Satisfied Customer*, Harvard Business Press (1997).

Hollar: And then what about *Total Access*?[8]

McKenna: *Total Access* is based on the idea that access is replacing broadcast. Think about the early broadcast channels. There were the major networks, which were the prime channels. From there I would ask people, "How many channels are there on the internet?" There as many channels as there are individuals. Everybody could be broadcasting, and that's tens millions of channels on the internet. So that means that people will no longer wait for something to be broadcast. They'll access it. Access replaces broadcast.
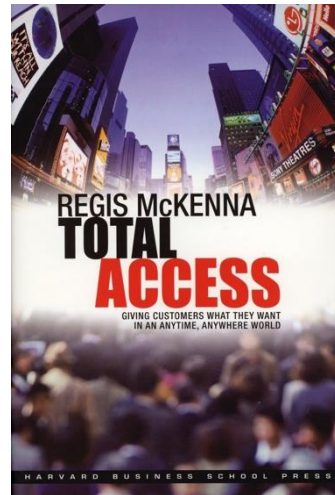
That means you have a lot more people to listen to, which means you've got to have automated listening systems. It's automatic. We've gone from rotary dial to push button to automatic. What you listen to is now there instantaneously by code, so you put that into software and

Cover of Regis McKenna's book Total Access *(2002)*

systems that essentially do all of the work for you behind the scenes. So when you do a search for a product, the response is less than five seconds and accesses a myriad of databases. It's not just one database. It might be comparing them across a whole spectrum. They may find models, they may find all kinds of things, but it's instantaneous, looking at data from a variety of sources, pulling it together, and giving it to you without you having to wait, because if you wait more than 20 seconds, you're off. You hang up.

Hollar: Yes. You think you've got a wi-fi problem, or something has gone wrong.

McKenna: Right. Yes. People in online retailing used to find that shopping baskets were left full most of the time, because the customer might go looking for something else they wanted to put in that basket, and not find it, and they never finished. I think it's probably still that way, but less so, because the delivery cycles, the logistics system has become so sophisticated.

Of course, if I were to write a follow-up, I'd have to talk about the downsides of "total access." The downsides are what I said—people become manipulated simply by the speed of data. Some of the large software companies now are using that data. That data becomes the product, so you're essentially supplying them the product that they sell. It's more valuable than the system itself. That's the downside of it, this accessibility into everything you think, know or want to know, or want to buy. I've had one person who was head of the logistics systems of a major personal computer company tell me, "I can tell you what you're going to want to buy next month."

Hollar: And mean it.

McKenna: And mean it, yes.

---

[8] [Editor's note] Regis McKenna, *Total Access: Giving Customers What They Want in an Anytime, Anywhere World*, Harvard Business Review Press (2002).

Hollar: So your partnership with Harvard on these books, it got them three really terrific books, and it provided you the outlet—

McKenna: But fighting, a lot of fighting, because this is where we get down to East Coast versus West Coast again. They would take the draft of the book and pass it around to Harvard Business School professors and say, "Would you critique it before we publish it?" I remember one of them wrote, "Regis McKenna is drinking the West Coast Kool-Aid." That was a comment on *Real Time.*

They were still selling their textbooks from 20, 30 years ago and making a lot of money on them. Their textbooks were running $150, $200 or maybe more, so they wanted to keep defining marketing as the four Ps. There were the famous four Ps from a marketing professor at the University of Michigan.[9] I always said that "customer" doesn't begin with "P."

Hollar: What sort of response did you get from people in marketing at Harvard Business School to these books?

McKenna: Well, "Marketing is Everything"[10] became one of the, I think, bestselling reprints—

Hollar: One of the most reprinted articles in the history of the magazine.

McKenna: Yes. So I think that's the answer. And I'm still asked to talk on that, even now.

Hollar: Would you say that if there's one piece of writing that distilled your thinking about marketing in one place, that article is it?

McKenna: Oh yes, yes. I think I would write it differently today, because there's more evidence.

Hollar: Is there an article out there called "Marketing is Still Everything"?

Regis McKenna's famous article Marketing is Everything

---

9 [Editor's note] E. Jerome McCarthy, *Basic Marketing: A Managerial Approach* (1960). McCarthy's 4 P's were price, product, promotion and place.
10 [Editor's note] Regis McKenna, "Marketing is Everything," *Harvard Business Review* (January-February 1991).

McKenna: Probably. Logistics have become so much more sophisticated, and it's more machine to machine than it is human to machine or machine to human. The ability to record, see where you've been, see where you're going, see what you're selecting, and then feed that into the system and have it anticipate your needs and wants, makes it almost Orwellian. So I think that would have to be thought through very carefully— to do a book and describe what is happening, and is it good or bad for us? I don't think it's totally bad for us, but I think there are ways in which we are still learning to adapt to it.

There are people who are hurt by it. We've seen that in part with Facebook, for example, which was used as a weapon in political battles. So are lots of other social media. It certainly wasn't intended for that, even by, I think, the founders, but tools in the hands of the wrong people become the wrong tools. I think this is going to get more serious consideration in the next decade. It has to.

I was the one of the founders of the Center for Science, Technology and Society at Santa Clara University. There is a chair there called the Chair for Science, Technology and Society, which I've funded. The whole purpose of that, which was more than ten years ago, was to look at the social implications of technology— how technology is changing humanity, how it's changing our societies, and how particularly students can begin to learn more about how it's impacting people's lives, and to do some serious work on it—going into companies and looking at how you design software, how you design products, how you become more ethical in what you're doing.

I think some of the people in social media today are truly out of the technical schools without any liberal arts background—no background of looking at the world, the history, the societies, the impact of culture, all of those kinds of things. I define culture as the things that we learn in our society in order to survive. I don't mean just physically survive, but culturally survive, socially survive.

People adapt in order to think they're part of the current culture, and they're absorbed in it, and captured by it, without ever thinking about it—because you don't have to think about this stuff anymore. You turn it on, and it's there. You used to have to work at it, even with a newspaper.

I'm reminded of a story about one of my granddaughters a few years ago. When she stayed with us we'd always have conversations about politics or about the latest things I'd read in the newspaper—*The New York Times* or *Washington Post*, the *Atlantic*, or whatever. But to her everything was going online or searching on her iPhone or whatever. One morning she came down for breakfast and was looking at the morning newspaper, *The New York Times*. She was reading an article really intently, and I looked at her, and I said, "What are you reading?" She said, "You know, it's amazing what you can read in a newspaper."

Tony Ridder, who was the publisher of the *San Jose Mercury News*, told me 25 years ago that the only people who were reading newspapers today are white males over 50. It was declining so rapidly, and that's continuing. They're looking for alternative ways to make money now, to sustain the salaries of journalists and publishers. We've got to have good journalism and good perspective and objective writing, and now you have to search for that. It's not automatically there. What's automatically there is the easy stuff, the stuff that you don't have to work to get, and it's being manipulated.

Hollar: That brings me to one final questions or area that I wanted to talk about in this session. You learned marketing in a certain context—a context of media, business, and society. People are graduating from marketing programs today, let's say in 2019, with a social and business and communications context that is very different from that one. I wonder, with your having written and researched as extensively as you have over your career, how do you feel marketing professionals today regard the world, and regard us as consumers, versus the way marketing professionals regarded those in the past? Does that begin to feed on itself? Do the differences that they experience now cause them to think and act in a different way, and suddenly the whole thing is kind of spinning forward, as you say?

McKenna: Yes, and I think that one of the big demarcations for me, in my career, was the point at which marketing became more "marcom"—marketing communications—and less strategy, less product development, less feedback systems, channels, partners, and those sorts of things. It's become more promotional, and that business is thriving and doing well.

Hollar: The marcom business.

McKenna: Yes. Twenty years ago or more, I started buying old books on marketing that go back to the 1920s and '30s. Marketing was actually coined as a term between 1920 and 1930 at farming universities in the Midwest. If you studied marketing, you didn't call it marketing. You studied economics, you studied distribution channels, what we would call geologistics today. You studied all of those sorts of things.

Economics became really important to early marketers. A retail clothing store in Pittsburgh called Kauffman's, a department store, came up with one of the first credit cards. Back then, people were saving their money to buy things. It may have taken you two years to save enough to buy a bedroom furniture set. With your Kauffman's credit card you could buy a bedroom set and pay $5 a month for so many years. That brought retail marketing up to a new level— the financing of ordinary people to buy goods. It was marketing and economics. People didn't have access to capital. The retailer asked, "How do we give them access to capital, and we all win?" They got a little bit of interest, but what they really got was increased orders and faster turnaround on their inventories. Economics was behind that.

As I went back and read these early marketing books, I found they had really the right sense of marketing. It really is about economics. It's about the enhancing of the marketplace so that there's a return for everybody, and a learning experience.

Now information has become a consumable, and it's no longer a valued experience that you want to retain, and hold onto as something precious. It is forgotten very quickly. Today you experience something and that's it—that's that day, because there's so much coming at you every day, and you just can't keep up with it. Even the most brilliant people have a hard time keeping up with the deluge of new facts and data coming at us every day. That's not the way it used to be, and I'm not saying we can go back. We can't go back. But we've got to find a way to put more human values into our communications today. I'm not sure I know the answer to that, but I think people are going to increasingly demand it.

You can see the furor that's being raised over social media today by all sorts of people. Facebook has lost millions of customers in the last two years. I hear of more and more people doing that. There are

books coming out on it and other types of scrutiny that I think are going to make them sit up. Congress is not going to take any action until it has to. I just saw an article called "Why is our Congress so Dumb?" I sent it around to a lot of people. It used the Congressional interviews of the social media presidents, where the Congressmen simply didn't know that Facebook sold advertising. They didn't know the difference between an iPhone and Google, those kinds of things. In a way, that's the fault of the people who are not educating them, one way or another.

I suspect there are more and more schools that are taking this sort of subject on, because it's interesting and students want to learn about it. Right now, I have three or four college students who have contacted me to simply meet and talk about marketing, because that's what they want to go into, or that's what they're in, at various universities around the United States. So I go to Starbucks with them, and we sit and talk, and they've stayed in touch with me. I've sent them some of my old pamphlets, and they tell me what they're learning, and I try to tell them what I think marketing should or shouldn't be. They're just private friends and they absorb it very fast.

Hollar: Are you surprised at what they're learning?

McKenna: Not these particular people, but when I've given talks recently at a couple of business schools, I've had others say to me, "If this is what marketing is, we're not learning it."

This is a true story, and I'm not going to mention the professor, because people would recognize the name, but he is a well-known professor who's published marketing books and is still selling the same books that he wrote years and years ago. I was in Brazil giving a talk called something like "Real Time Logistics and Marketing." I made a chart listing all of the traditional functions of marketing—customer surveys, product selection, pricing, distribution, about ten things. That was on one side of the chart. Then, over here, I put what most marketing people do today. None of those really apply. Distribution is logistics. Pricing is done by comparative pricing across the network, by looking at where prices and spot markets are, and so forth, and then combining the data and running algorithms that look for the optimum price for products. So any aspect of marketing today, even the advertising, is combined with all of that, put into an algorithm and done at the last second for you specifically. If you're looking for something, that system can go out and find out what you're asking, compare it against databases that have a lot of different data, pull it together, synthesize it, put it in an algorithm and say, "Here, here is your specific answer and product that you're looking for." It's completely out of human hands.

So I put up this chart on marketing and we went into the speakers' room afterwards, and this professor came over to me. I'd met him before but hadn't had a lot of conversation with him. He said to me, "Is that real?" I said, "What?" He said, "That chart you put up of things changing." I said, "Yes, it's absolutely real.

It's what's happening today." He said, "Could I have that chart?" He had never been to Silicon Valley. He had never really visited any of these companies.

Marketing & IT Converge

Marketing Functions		IT Processes
Product Refinement	➡	Direct-connect: Product & Customer Feedback
Distribution	➡	Logistics -inventory, scheduling, status
Pricing	➡	RT competitive analysis, dynamic changes
Forecasting	➡	Correlation and predictive analytics
Segmentation	➡	Data Mining/dynamic transaction management
Research	➡	24/7 realtime feedback and analytics
Service	➡	Real-time/ Self-Service / Media Networks
Advertising	➡	Placement bidding/ key-word links/eMail/Social Media
Competitive Analysis	➡	Business Intelligence / Google analytics
Customer Management	➡	SalesForce.com-like
Lead qualification & sales mgt	➡	
Customer generation	➡	Customer self selection such as through social media

Other online management activities include licensing, franchising, loyalties, rights management, fee sharing, etc.

C Regis McKenna 2014   18

This is the hubris of, "It's going to be the way it always was." And it isn't. It isn't. You've got to get used to change and figure out how to get a step ahead of it if you can.

Hollar: Bringing it back to your earlier comment, when a student says to you, "If this is what marketing is, this is not what we're learning," it means they're actually behind the curve in some of what they're learning—not thinking about the world as it works today.

McKenna: I don't think that's true in engineering. I don't think that's true in software. I don't think that's true in a lot of the sciences.

Hollar: Well, there it can't be true.

McKenna: It can't be, no. Whereas I think it is true in some of the more classical areas, like marketing. I mean, there are some schools that bring students out here and have them work alongside Silicon Valley companies, or offer internships in companies, and so forth. So you get on the ground, you get real life experience and that's probably the best way to do it.

In my company, we always hired summer people out of school and had them work with us. I put them right in there with all the other people and let them meet the same clients, and see how things are done, and see how fluid and changing it is, and how demanding it is.

I think the whole idea of broadening your horizons and your knowledge base is not really taught today. I was taught that from a very young age—to be curious about a lot of different things, because they ultimately all have impact on each other.

Hollar: That takes us all the way back, really, to the first session that we did to start this series— your experience, your education, and the people you met and who made an impression on you as part of your educational experience. Thank you.

END OF THE INTERVIEW

Oral History of Regis McKenna, Part 8 of 8

Politics, philanthropy and higher education:
A life beyond business

Interviewed by:
John C. Hollar

Recorded January 15, 2019
Mountain View, CA

Abstract:

This is the eighth and final transcript from an eight-interview series with Regis McKenna, whose pioneering work in technology marketing and business strategy contributed to the success of hundreds of companies for more than five decades. McKenna was a talented, innovative marketing professional from the earliest days of the technology revolution in Silicon Valley. He came to the Valley in 1963 at the age of 24, worked in marketing in the early semiconductor industry, and then established his own company, Regis McKenna Inc. (RMI), in 1970. McKenna became a globally sought-after strategist and marketing expert, and RMI opened numerous offices around the world. His personal and professional relationships at RMI included Steve Jobs, Robert Noyce, and Andy Grove. His more than 700 clients included such legendary companies as Apple, Intel, and Genentech. He is the author of five best-selling business books and one of the most reprinted articles in the history of the *Harvard Business Review*, "Marketing is Everything" (1999). McKenna was recruited to many outside boards and advisory roles, among them his service as a founding advisory board member of the Computer History Museum's Exponential Center.

The interviews took place at the Museum between June 13, 2018, and January 15, 2019. The interviewer was John Hollar, president and CEO of the Museum from 2008 to 2017.

This eighth interview covers McKenna's major involvement in Democratic politics, his long-term relationship with Santa Clara University and his service on outside advisory boards, including his work with Toyota. The end of the interview contains answers to a series of questions asked of every participant in the oral histories conducted for the Exponential Center at the Computer History Museum.

* * *

Hollar: This is the final session in these oral history interviews with Regis McKenna. Today, we're going to depart from the themes we've been talking about and cover another important area of your life and career, Regis, which is your work in Democratic politics, both at the state and the national level, your work in higher education, and your archive. Those are three pretty meaty subjects.

Let me begin, if I can, with a quote that may set the stage a bit as people are watching and reading, because my guess is that those who are using these oral histories for various purposes may know quite a bit about you and your background in marketing, but they may not know as much about how you brought the way you think about the world into the political sphere.

I'm going to begin by reading a quote from your 1999 essay called "Governance, Technology, and Civil Society." You said, "The digital revolution is giving rise to the age of the unsatisfiable customer. In this world, there are no citizens, only consumers, and individuals are treated as such in more and more aspects of their lives. Political platforms, policies, social interactions, are all marketed as the consumer model becomes universal. All these changes are most clearly evident in the US, where the digital economy was born and remains most highly developed. Political responses to consumer demand are faster and less consistent. Social trends display the same tendency."

CLOSING REMARKS - TALES FROM THE SILICON VALLEY; GOVERNANCE, TECHNOLOGY, AND CIVIL SOCIETY

MAY 27, 1999
WASHINGTON DC

Regis McKenna
Chairman and CEO, Regis McKenna Inc.

Regis McKenna closed the conference with an impassioned paean to the almost limitless possibilities of the digital revolution and sketching out how this era differs sharply from those that preceded it.

Two quotes frame this account of Silicon Valley. First, as Paul Vallery said, "The future isn't what it used to be." In the case of Silicon Valley, the future being formed by the capacities and possibilities of technology and innovation cannot be anticipated as an extrapolation from the past. This is one of those rare and extraordinary moments in history when the future is indeed unwritten because the possibilities of the present are so vast. Second, we should accept the implied counsel of Paul Boorstin when he observed that "innovation and change have never been impeded by ignorance, but by the assumption of knowledge." Given our current inability to understand the limits and potential of the technological revolution underway, policy makers should not assume knowledge they do not have and impose policies that might impede technological and economic progress. That we have in fact entered a startlingly new era is born out by the information we do have. Economics, medicine, politics, design, institutional organization, and administration are all being transformed by new information technologies and networks.

I thought that quote was a wonderful distillation of everything we've been talking about, but brought to the political sphere.

McKenna: Yes. The term "we are no longer citizens, we're all consumers" came from Peter Coyote, the actor and narrator. People recognize his voice more than they do his face. He lives in San Francisco, has been there, I think, his whole life. We were at an event and I was sitting next to him. I was talking about the need to get more and more citizens actively involved in the political spectrum. He said, "But there are no more citizens. There are only consumers." That phrase really hit me and I thought, that's right, because people start referring to political candidates, particularly those for say, president, as a brand. So the brand becomes something you market. It's often cosmetic. It's shallow. It doesn't have a lot of depth to it in many instances. People try to shape the brand of the individual.

Here's a little story. We always think about Al Gore as being stiff. In front of a camera, he often wasn't very good. I was watching a television interview of him in which he was talking on a football field about—I think he went to the University of Tennessee?

Hollar: Yes.

McKenna: Yes. I think they were playing Florida and they were talking about that game. He was holding a football, and he was very conversational—just talking directly to the interviewer and the TV audience. So when I saw him later, I said "Al, you should be acting like that in front of the camera and in front of everybody, because that's you. That's natural. It seems as though you put on something whenever you're trying to—" and he said, "I'm trying, I'm trying," because he had all these advisors who were telling him how he should be presidential. We hear that phrase today. But they try to shape something that isn't there, and don't allow the natural person and their natural inclinations and thoughts and ideas and intellect to expose themselves, because they might stumble. They might fall. They're so afraid of failing that they do. So I have to thank Peter Coyote for the impetus to write that paragraph.

Hollar: Let's go back to the very beginning and how you developed your interest in civic and political issues, not just as someone who was interested in it, but someone who wanted to roll up his sleeves and get involved in it.

McKenna: I was very active in school government. In fact, I really wanted to go into politics. I think my first major was political science.

My freshman year in college, John Kennedy was the junior senator from Massachusetts, and he came and talked to our school. His talk was about the value of being a member of the political class in society, and that more people should consider going into government because it's a great profession and it serves your country. It really inspired everybody. I think the whole school became political science majors the next day. It was an inspiring talk.

I kept that talk, by the way. It was in the college newspaper, and it was all yellowed and torn. I just gave it to the president of St. Vincent's College, because that's where Kennedy was talking. He inspired a lot of people to get involved.

In our society, you can still be a citizen. You can still be a very active citizen. My wife had that same inclination. So when we moved here to California, actually, there was a priest activist. His name was Father Boyle. One of the first propositions that we worked on back when we were in our mid-20s, was open housing, because there was a lot of discrimination going on. That was a highly contested proposition. There was a strong social movement for it. We walked door to door, we walked precincts, and were fairly active in that campaign, and it was successful.

My wife went into politics, largely because she joined an organization in Sunnyvale called Orchards. The orchards were vanishing. The politicians, who set codes for land use and so forth, were in the pockets of the developers. So open space was vanishing. She went to a meeting and spoke up, and she came home and she said, "I think I put my foot in my mouth. They elected me chairman." Then she went on to become city council member and mayor of Sunnyvale twice. Then she went for county supervisor, Santa Clara County, which is Silicon Valley, and then on to become a commissioner of the California transportation system. So she had a long career in politics, which we heard about every night at the dinner table. kept us actively engaged, I think, more than anything else.

The other key factor was the Semiconductor Industry Association. That was formed by a handful of semiconductor executives—Charlie Sporck, Bob Noyce, Jerry Sanders, LJ Sevin and a number of those people. They were the ones that were very naïve players in the political system.

Hollar: What was the purpose, the stated purpose of SIA?

McKenna: The semiconductor industry, as has happened, particularly for electronics consumers, had vanished from American shores. Cheaper, lower cost goods came in from Asia particularly, and Japan Inc. was the dominant force at that time. The semiconductor RAM business was vanishing. First of all, the Japanese were producing higher quality. Also, the way the financing is done in Japan, they had a lower

cost of capital, so they could essentially finance their exports through government subsidies. That was a disadvantage to US companies.

So SIA was fighting for a number of things. One was a level playing field. That became a very common theme. Another one was, we've got to—and I think this is often not talked about—but one of the things that those people really stressed was trying to re-instill technical education into the classroom. They felt that there was a boom at the Sputnik era, and then it collapsed, and there was less and less solid study in STEM areas in the schools, high schools in particular. So that was another one of their pillars.

I started working with them because I had worked for Charlie Sporck. Of course, Bob Noyce had hired us at Intel, too, and so they enlisted me to help them, and I did. I worked with them pretty closely through the first, I don't know, five or ten years.

John Sculley (l), Regis McKenna and Jerry Sanders, 1995

Hollar: When did that all begin?

McKenna: It began in the late '70s, early '80s. People used to say to Intel, because they were dominant in RAM memory, not "Why are you in it?" but "Why should you be in it?" because they weren't making any money. They were trying to compete on a price basis and they were undercut, always, in the marketplace. We talk about the cohesiveness of American industry, but quite frankly, the people who are using semiconductors and the people who make them are two different breeds of people. The people who use them really don't care where those parts come from, as long as it's the right price and the right performance. I'm sure that's how it should be. But there was a hard road to get up, not only for economic reasons, but also to recapture the market.

Hollar: Let me ask you about something you said a minute ago, about the founders of SIA being naïve. When you talk about names like Sporck and Noyce and Sanders, these are not men who by nature are naïve about a lot of things. What made you use that word about them in this political context?

McKenna: We used to do media tours, and I did a Washington tour. I knew a lot of the new Democrats in Washington. So I took Sporck and Noyce and Sanders—I think that's the three—and we went to Washington DC. We met with Congressman after Congressman, both sides of the aisle, and told the story of how the Japanese limited access to their market, yet they had unlimited access to our market. The cost of capital was a big issue. Education was an issue. These kinds of things.

The feedback was, well, we haven't seen any money from you people, so why should we vote to benefit your industry? That shocked them. They were absolutely blown away by that. They thought, why do we

have to give money to people to do their job? They're supposed to be representing America. They really felt that the semiconductor industry was essential technology to the future of America. It is and was.

Hollar: And yet?

McKenna: And yet they were shocked about that. They just couldn't believe it. All they talked about afterwards was these people holding their hands out.

Hollar: It was that direct. You haven't given us any money. Why should we be listening?

McKenna: Yes, it was absolutely that direct. I mean, I can see the Congressman sitting across the table and saying that we haven't seen a penny of your money.

I think that's continued. I think Silicon Valley is looked at as a wealthy area, and therefore should be giving more money to politicians. And it has been in recent years, but it wasn't always that way. It was very, very hard to get money out of Silicon Valley. At least if you were a Democrat. But it wasn't as if Silicon Valley was Republican. It's fairly well split, and it has always been.

Santa Clara County, if you go back over the voting records, is pretty even, but it's more liberal than conservative. It will tend to be economically conservative and socially liberal. But we've elected Republican governors and we've elected Democratic governors. Most local people are more Democrats, probably, than Republicans. The people who lived in the Valley were the voters. The people who were running the companies lived up in the hills. So there's a differentiation of wealth that determined the bias.

Hollar: So in other words, at that time, top executives like Noyce and the rest were just not politically active. They weren't getting to know Congresspeople or senators.

McKenna: No. I can remember when I was at National, and I went there in 1967 when it first started up here in the Valley, a lot of the local political people in city government in Santa Clara wanted to meet the president of National. The politicians were going to be passing zoning laws and other kinds of things. The executives didn't want to meet with them. They thought it was a waste of time, and handed that off to somebody else in the organization to do. It offended a lot of the political people.

Again, the executives in the industry felt they had to get to a certain level of politicians to make things happen. They felt not much was going to happen at the local level so much as at the state and national levels. Even the state doesn't have a lot to do with trade. It does today, perhaps, but then it was an overseer, not an active player in international trade issues. Intellectual property rights were still an issue. So there were growing issues in the industry that were critical.

I think my company, for at least the first five or six years, was the only company that was a member of SIA that was not a manufacturer. I got a call from somebody from Jerry Brown's office when he was in his first term. He came down and met with me. He was with one of his aides, political aides, and we had a long conversation about what was going on. Then Brown invited me up to Sacramento to spend an

afternoon with him, and I did. We went up, literally kicked the shoes off, sat around and just talked for hours in the afternoon about what was going on in Silicon Valley, and largely about the trade issue. As a result of that, we then decided to have a meeting down here. So I had a dinner at my home, to which we invited key executives from Silicon Valley, including Jobs and Noyce and people of that nature.

Hollar: We have a picture of that we're going to put into the oral history, of everyone sitting around your dining room table. It looks very casual, very informal.

McKenna: It was. And Jerry handled himself really well, a very smart guy. They were quite impressed. They just didn't know what he could do.

He then formed the California Commission on Industrial Innovation, and I was the president of it. He really was the one that ran

Dinner in Regis & Dianne McKenna's home, 1978, for California Gov. Jerry Brown (far left). Sandra Kurtzig, Steve Jobs, Bob Noyce, Ron Cape, Charlie Sporck. According to Regis McKenna, this might be the only photo of Steve Jobs and Bob Noyce together.

it. Dave Packard was part of that, and other executives, some from the biotech area, and others. The object was to try to decide—what is it that we can do? How can we lobby Washington from more of a position of power? How can we work that?

I remember Brown saying, "Your strength is in numbers. So the more people you can get you're your organizations, the more you will be heard."

Hollar: Let's go back just for a minute before you move on. I want to talk about your initial meeting with Jerry Brown, your first impression of him. This would have been the early, mid '70s probably, right? If he was in his first term.

McKenna: Yes.

Hollar: Talk a little bit about Brown as a young man, as a young governor, as a young politician, and your impressions.

McKenna: He had a hard time sitting still. He was highly animated. He was very bright, and he could handle things very well. Largely, he was asking questions, a lot of questions, about things, and probing.

He had a fascination for technology. When they called him Moonbeam, that was because he wanted to put up a satellite system for California so that industry could start connecting through satellites. They then nicknamed him Moonbeam, but in fact, the satellites exist today. So it was actually a good idea, but people labeled him with a pejorative term.

I think he was young and like a young bull in a china shop. He was running into a lot of issues and problems, but I thought he was a good leader and an effective leader, and he always had a lot of ideas. When we had that dinner that night, I remember Sandy Kurtzig was there and Noyce was there, Jobs was there. There were several other people from the SIA, and there were some people from biotech. He held his own. He had no problem holding his own.

Hollar: He was, in age terms, a contemporary of the rest of them, maybe even younger than some of the people around the table.

McKenna: Yes, Yes. He didn't hesitate. He didn't appear to pause on anything or feel as though he didn't know the answers to anything.

Hollar: Were you happy with the way that evening went?

McKenna: It went very well, I think, yes.

Hollar: Was he happy with it? Did you get feedback from him about it?

Regis McKenna and California Gov. Jerry Brown, 1982

McKenna: We stayed long term friends after that, yes, and continued to talk from time to time. He called me and we would have conversations. Then, through the California commission, we met frequently. That included larger and larger groups of people.

Hollar: His advice that there's strength in numbers.

McKenna: Right.

Hollar: That must have been true both for that commission and for the SIA itself.

McKenna: Yes. Of course, as the semiconductor industry grew, so did SIA, and it took on different ideas. They were looking for more government finance, even out of the DoD. But there were funds available in government for projects that can't be done by any one company alone. The whole idea of the Sematech research center down in Austin was, originally, to work on creating more flexible manufacturing in semiconductors. They got a lot of people down there, smart people, and got funded. That was a continuing, lifelong journey for Bob, because Bob moved to Austin with Ann Bowers.

Hollar: Bob Noyce.

McKenna: Yes, and he took charge of it, even though he didn't particularly want to do that. But nobody else would do it. He literally felt it was his obligation as a citizen to do that, because he felt that the semiconductor industry was vital to American interests. That's the way he would put it.

Hollar: Why did Sematech end up in Austin?

McKenna: I'm not 100 percent sure, except probably that it was neutral territory. That was required because so many semiconductor companies were from all over the United States, although TI was there. But IBM was a member of SIA. More and more of the companies who manufactured their own semiconductors, even though they were large systems companies, joined it as well. So, it became a powerful force.

Hollar: Were you involved with Bob Noyce as he was thinking this through and trying to make the decision to take that role and leave Intel?

McKenna: No, but I knew about it. I knew that he was contemplating it. I knew that the decision they made was a difficult decision because he had basically spent most of his career here in the Valley, and to pull up and move was a significant factor.

Hollar: I've heard others say that he took it on with a little bit of a fatalistic attitude, because it seemed like such a difficult thing to pull off. An industry consortium is one of the very hardest things to build into a success.

McKenna: Yes, and to keep everybody happy. There were a few semiconductor company leaders who disagreed with the whole approach. They didn't want anything to do with government. That frustrated Bob a great deal, that I know, because I went down there to spend some time with him on strategy about three weeks before he died. That was the topic of conversation.

What they were saying in Washington is that even your own people don't buy into this. There were a few outstanding examples of that, which was ludicrous, because the industry started with government support. It would not have survived here in its infancy if it hadn't been for government support. They were the only major customers and they were funding a lot of research and development.

Hollar: And yet these companies, at that point, didn't have anything remotely resembling a government relations office, or a person who was thinking about that.

McKenna: Well, they had salesforces, because we sold to DoD. When I was at General Microelectronics in 1965, I ran a technical writing group and we did proposals on the semiconductor technology we were developing to all of the major aerospace agencies, DoD, or if I remember, Wright Patman Air Force Base, those kinds of things. I even had to have secret clearance because this stuff was considered highly proprietary. It was really early days. At GMe, it was the early days of MOS technology.

Hollar: I'm thinking about your observations on going to Washington with these semiconductor CEOs and the reaction you got. Was that a light bulb moment for you as well as for them? Did everyone begin to understand, hey, if we're going to be effective at the policy level in Washington and tap into these government initiatives as well, we're going to have to have a real organized political activity here?

McKenna: I think that evolved out of it, definitely. They would have to start putting together resources to start getting even some lobbyists. That evolved out of those meetings.

I think one of the things that was so shocking is just what the industry was up against. After the Washington visit, we went up to New York City and we went to *The New York Times* and *The Wall Street Journal*, and a few of the major publications, to talk about what we had been talking about in Washington. The headlines were, "Semiconductor Industry Goes To Washington For Handout." That wasn't at all what they were there for, but that was what industries did. So they were thrown in with everybody else. They were trying to be good citizens, and Washington saw them as promoters looking to get money in the industry. It was what the media had been used to seeing, so they just assumed that's what the semiconductor industry was doing.

Hollar: They thought the industry had finally grown up enough that it could go to Washington and ask for a handout.

McKenna: Which is the complete opposite of what they were doing. These people were politically conservative people.

Hollar: When you think about the politicians at the state and national level in that period, say, during the '80s when you were really beginning to ramp up your own involvement on behalf of these companies, who stands out for you as people who were the most capable, maybe the most effective, the ones who really understood the issues and worked hard to make a difference on them?

McKenna: On the elected officials side?

Hollar: Yes.

McKenna: As we moved further out, certainly one was Bill Clinton. He liked Silicon Valley. He spent a lot of time here. I think he understood the issues.

Hollar: How did you first meet him?

McKenna: I'm not sure who arranged it, but when he was governor—

Hollar: He would have been a candidate, perhaps, or maybe before his candidacy.

McKenna: He wasn't even a candidate. It was when he was contemplating. There was a meeting arranged between my wife and me and him at the Fairmont in San Francisco. We met him in a suite—just sat and talked for a couple of hours about his intentions and how he saw this area and so forth.

Hollar: What were your impressions?

McKenna: My wife asked very pointed questions about his background, and I found him to be very knowledgeable about what was going on. He read a lot and he was familiar with the players, and he understood the issues.

Several years later, he proved it directly. There was a proposition on the California ballot that essentially enabled trial lawyers to file more and more frivolous lawsuits. That was plaguing the industry, because they would be sued for anything they said. If you put out a brochure on a product and used an adjective, they would pull that out and use it against you as you were promoting a product and inflating the stock. I was sued by them. Everybody who was close to it was sued. It was a fellow by the name of Wlliam Lerach. He was one of the chief lawyers—really the most onerous of all of them. Some people say that they wrote the proposition so that they could continue. They were making hundreds of millions of dollars a year just by settling, because now your industry felt they were wasting money going against these people, so just pay them—pay them whatever they wanted, or negotiate a payment. So they were collecting free passes and a lot of money.

Most of Clinton's staff told him to stay out of it. I did write him a letter. I had a friend in the White House that actually gave it to him, so I know he got it and it really spelled out the issue. He came out here. He met with me and Gordon Moore and John Doerr, and several other people in San Jose, and told us he was going to support us on this issue. It was not a popular issue. He saw the real danger in that sort of thing. It would have driven a lot of companies out of California.

I think he really had a large influence on the industry. He must have made 20 or 30 visits here. He came here a lot. We had a meeting with him and a group of industry people and venture capitalists at my home, again, when he was president, and that was a big event. They didn't pick my home because I was a political ally. They picked it because my home was the closest to Moffett Field where he would fly in and could get to quickly. John Doerr was very active in that as well. As I've said, Gordon Moore attended these meetings and others. So Gordon was quiet but effective, and forceful, and had a very profound insight into things. He didn't engage in many fancy kinds of conversations. He just would say something that would penetrate the surface and make people aware of what the issue was.

Hollar: What sort of following did Clinton develop here in Silicon Valley as a result?

McKenna: Oh, he had a huge following. I think it was the turning point in terms of more of the young industry leaders going more liberal and more Democratic, and today California is a blue state. I think that's what the result of it was.

Hollar: Why was he so switched on when it came to technology issues?

McKenna: It was a cool subject. There were lots of fascinating and mind-blowing kinds of technology going on. When you start thinking about putting 25,000 transistors on a little piece of silicon, size of a thumbnail—and that's nothing today, but at that time it was enormous technology. Just to take them through the process, take them through a tour of a foundry, was mind-blowing. Then when you went into the biotech labs and you saw the potential—there were all kind of companies addressing diseases and genetic engineering and things of that nature. It became a fascinating place to visit, and people continue to come here from all over the world to see what's going here, because this is where a lot of new technology originates.

Hollar: Have you stayed in touch with him over the years?

McKenna: I've seen him a couple times. I haven't kept in touch, but I've seen him at some events where we both attended.

Hollar: Yes. Of course, the intellectual twin of Bill Clinton when it came to technology was Al Gore. They were joined at the hip for that entire period. Talk a little bit about Al Gore, your exposure to him and his work here.

McKenna: Of course. Al joined the board of Apple, and he enjoyed that. He was more of a techie than anybody else, I think, in terms of pure gadgeteer. He joined Kleiner Perkins once he left and was continually active, I think, on other boards in the technology area.

Al was always a little bit aloof in terms of, I think, approaching the broader public, but personally, when I see him, he gives me a big hug. We talk about old times. I just treated him like he was a human being and not vice president, and I think that's the way he wanted to be treated. You call him Al. You don't call him Mr. Vice President and so forth so, and I think he appreciated that more than anybody else. He didn't like the trappings of the office.

Hollar: Did he have his own independent set of contacts and friendships and relationships here in Silicon Valley?

McKenna: Oh, certainly. Yes, absolutely.

Hollar: What were his areas of interest that you were exposed to?

McKenna: I think he was really fascinated by the personal computer because he was a journalist once. I think the ability to use a personal computer for writing the news, for sending it to different places, for

absorbing it, researching online—that area was of interest. He was beat up for saying that he invented the internet, but he was very instrumental in moving the internet through to commercialization in Washington, very instrumental in that. I think he has to be credited for that because most people still thought it was some sort of a remote science network.

There was this agency called InterNIC, which was the agency that was formed to manage the internet, and that's where you would apply for your email address.

Hollar: In your work professionally, Regis, how much was political advice a component of what you did for the companies you represented?

McKenna: Very little. I got beat up for it a couple times, was even threatened through letters, particularly when I supported Cranston over Ed Zschau. People actually took out ads in local newspapers.

Hollar: And that was your personal decision? Or was it—

McKenna: No, it was my personal decision.

Hollar: Sure, to support Cranston and not Zschau, which was your right as a citizen.

McKenna: Yes, but they took out ads saying I should be ashamed of myself. I was told privately at lunch that I would lose business as a result, but I didn't let it bother me. As you say, it was my right to do that, and I did so. At the time, I think we were well known, and I used it as a platform as well. So I had no apologies because I thought that our heart was in the right place.

Hollar: Was it a conscious decision to separate political advice from consulting?

McKenna: Yes. Absolutely. The political advice was more individualistic, and I think if you are representing an Intel or an Apple, you can't expect everybody to follow the leader. They have the freedom and the right to do what they want to do, and set the direction, and so I don't think any of them really wanted that sort of thing.

The one thing that I would do is invite people to various events. I did have lists of people, mostly Democrats, that I would know, and I would send invitations out to that list. For example, Gary Hart was a good friend of mine. I ran a fundraiser for him—actually, I think it was the first major fundraiser for a presidential candidate here in the Valley of any size.

Hollar: How did you meet and get acquainted with Gary Hart?

McKenna: Through my political channels in Washington. Then I introduced him to the technology side of business, and actually I spent a lot of time with him. He was a very bright policy person, great historian, understood the politics, the government well. I even went to the Kentucky Derby with him, and we shut down the Lion & Compass on a Sunday and I had a brunch for him. We packed the place with people

who came and listened to him talk. I think we raised—this was when he was running, which was quite a few years ago—I think we raised $25,000, and that was big bucks then.

Hollar: In 1988, that was a lot of money. What did you think of him?

McKenna: Until people found out about his hidden life, I thought he'd make a superb president. He may have made one anyway, right? As we know, those things can be separated and have been separated in people's minds. He would have made a superb president, I think, just because he thought very seriously, He got a Fulbright scholarship on understanding international governments. He was a scholar as well as an able politician, good speaker—and had one problem.

Hollar: Which turned out to be the problem.

McKenna: It was called a Bimini problem. I think I said that.

Hollar: It was.

McKenna: And that was a shock even to his staff. I knew people very close to him who were just blown away by it. It just devastated them, and many of them left politics for the rest of their lives.

Hollar: How often did you find yourself back in Washington working on various issues?

McKenna: Actually, I was part of a couple of organizations back there—the New Democrat organizations and so forth, so I was back there maybe once a month, if not more. I was there frequently. I gave testimony to Congress at least once on the SIA issue, and so I was meeting with different people back there and making friends. Washington is a great place to visit. There is a lot to do there, and so it's never a disappointment to go, even if you just see politicians and visit the various museums and so forth.

Hollar: I'd like to talk for a minute, too, along those lines. You mentioned the New Democrats and that organization.

McKenna: Let me interject something. One of the things that I did a lot of there was participate in the Berkeley Roundtable on the International Economy, which was out of the Berkeley political science department. They were a quasi-political organization doing background research on trade issues and other things. I became a member of BRIE, and through that I was often on panels or giving talks about the social and economic implications of technology. It wasn't about what a chip is all about, it wasn't preaching about Apple or anything else. It was largely showing that, like the whole issue of real time, technology is getting faster, and it's having more impact on our society in terms of people not having time to actually absorb information.

It led me to write a couple of chapters on how information is now disposable. We don't keep anything in our minds anymore. It just constantly comes and goes and becomes a consumable. Just like food. I wrote

about how that has all kinds of implications for our society, and also political implications, and what to expect out of that.

I gave a talk on the internet in the early days of the internet about the fact that when you have everybody on the internet, you're going to have positive and negative forces, what I call matter and antimatter. So you can put something out there that matters but there is always going to be someone who has antimatter, and antimatter kills matter. I had a slide on that, and I would explain and that our society was going to be filled with this matter-antimatter conversation over the internet because everybody has their own microphone, and the world is going from access to broadcast. I gave that talk to a lot of the political staff as well as quite a few senators and congressmen. I remember some prominent ones disagreed with me, and said that will never happen.

Hollar: This was early on. You were giving these talks in the early 2000s when we'd gone through internet 1.0 and the internet was here to stay, although a lot of people felt it was going to die off, and it certainly wasn't as penetrated as it is today. Did they feel that you were completely off base?

McKenna: Yes, they didn't think that that would happen. I said there would be more fragmentation, and that comes from, quite frankly, looking again at the technology.

Look what happened when you had programmable manufacturing. It's no longer one unit. Before technology, the machine tool people changed only every so often to make a new configuration. But when you had the ability to constantly change the production line to something new all the time, or update constantly, then you could start producing items at lower cost for narrower segments of the market than was economically possible to do before—because you could only find economies of scale when you ran a lot of the same thing. Now you can make a lot of different things in different ways. Your cars are modular. Your entertainment systems at home are modular. Your refrigerator is modular. Everything we buy today has customizable modules that can be plugged and played, and you can assemble everything in the world today through these customizable modules that can be adapted. I saw that just by watching the technology evolve. I had written on that in several of my books as well.

So talking on that and trying to prepare them for what they were going to see in the future—I don't think I was successful, but I think some people listened. Yes.

Hollar: You were pretty far ahead of your time with a lot of those ideas. This is another quote from your 1999 essay. I mean, we're sitting here in January 2019, so 20 years ago you were writing these words. "The U.S. will be the first to feel and deal with the problematic aspects of the digital economy in society. Social, political, and economic organizations will have to confront a world of shallower commitments and more volatile demands. The digital age has also begun to produce another byproduct, increased inequality. Each of these trends will require responses if the health of society, polities and the increasingly global digital economy are to be maintained."

McKenna: Yes, and again, it's because digital technologies fragment. We moved out of the mass marketing world of mass mentality, to every segment of our society wanting to be heard.

Hollar: And now can be heard, potentially.

McKenna: I saw another example of that very, very early here in the Valley. This was maybe 40 years ago or maybe even 50 years ago. The West Coast edition of *The Wall Street Journal* was published and printed up on Page Mill Road, and they would adapt editions around the country because they could use computers to do the typesetting and take excerpts that fit this area and create a custom newspaper. So the Vietnamese community in San Jose get a Vietnamese edition. The Hispanic community in this area get an Hispanic edition, and that's all programmable. When you begin to essentially feed each of these segments like they were back in their own country, then they begin to feel comfortable here because they can speak their native language. They can find their culture's foods. You can get any kind of food in the world you want within 10 miles of where we're sitting and it's adapted to the diversity of our society. That's due to the ability of technology to create this segmented support system, from newspapers to food. I think that you could see this coming with the customization of technology.

They set up SIA down in Austin to create more flexibility in the manufacturing process. Think about the EPROM. In fact, I read Toffler's *Future Shock* many years ago, and he said, "We will soon see the age when diversity costs no more than uniformity." And I wrote in the column, "That's an EPROM," because it's programmable, but they make it like a semiconductor so it could be made in a mass process. To program it you simply, at the time, you passed a light over a little window and it erased the program and you could then write it again. If you looked at technology, you could extract a lot of the implications. You could see societies mimicking it later in various social forms.

Hollar: In that quote I read a minute ago, you also wrote about increased inequality. What did you mean by that?

McKenna: The digital revolution means that, quite frankly, you have to have an elite class of people who go to school and learn how to make algorithms, learn how to create computer technologies, learn how to deal with the new world of physics, and the education was just simply becoming more and more expensive. Access to the tools, even online tools, was limited. We always said you could learn through television, but it's very hard for people who are trying to move themselves up the ladder of society to get access to those tools and to that education system.

My feeling at that time was that if you walk through Silicon Valley, you do see a lot of people who are really well educated. Not necessarily all of them came out of wealthy families, but they somehow got access to education, which is a form of wealth for this society. If you don't have an advanced degree in this society, you're not wealthy, and so education differentiated a lot of people. I felt that that fragmentation was going to continue.

Hollar: I want to go back now to something you said a minute ago as a launching point for another set of questions about the relationship between Washington and Silicon Valley. You said that you were giving these far-sighted talks about the coming effect of technology on society, and that some people in Washington didn't see it and disagreed that it was going to happen. Of course, now it has come to pass, but that leads me to think about my own observations about the distance in so many ways, not just

geographically, between Washington and Silicon Valley. That's almost a metaphor for the distance, the way they work. They work differently. They think differently. They move at different paces. They have different lenses for seeing the world. Did you experience that, and if so, how did try to bridge it both through your work for clients and in these other organizations you were part of?

McKenna: I think there was a ray of hope and light in the 1980s where we felt that technology, while sometimes a negative, could be used as a positive, too. Let's say computer networks and computer storage and so forth aggregate medical knowledge from multiple sources around the world and apply it to a specific disease. That can and does work. Look at the internet. When it was started, the idea was that it could be a tool to bring people closer together, not to create the fractionalization that's occurred.

But technology appeals to the lesser nature in man as well as to our higher nature. These are the two extremes, and it's something that technology has known. We have nuclear technology that can be used for good or for bad, and I think that's true of all technologies. We haven't learned how to live with this. That was always my ending—we haven't learned how to live with this in society, and we have to learn. It takes a lot of effort and a lot of work and a lot of study and a lot of understanding.

I read an article the other day: "Why is Congress So Dumb?" And you wonder. Here we are in an advanced, really scientific age, and our Congress is dumb. When they interviewed the various executives in social media, they didn't know what questions to ask. They didn't know even the basics of the industry. Now, the article says it's because they've cut funding on all their staff, so they have nobody to do research for them anymore, to present them with a briefing before they go into these hearings. And what is gerrymandering but fragmentation? The fragmentation of our society has reached a point where nobody of significance can influence Washington.

I think it's a bleak time for society but it's a boom time for technology. Those two, I think, aren't really in sync. I do believe that it's a matter of society learning how to engage technology in a fruitful and positive way. The 20th Century has been perhaps one of the more violent centuries of the last 5 centuries. We were supposed to be in the industrial age of growth. Germany, prior to World War, I was a democracy. It was on the leading edge of industrial technologies, and the same with Japan. These fell apart for political reasons, not necessarily because of technology, or maybe it was a mixture of both. There is a need today for more social philosophy, if you will, of how to operate in a society that is conflicted with itself. That's why I helped initiate the Center for Science, Technology and Society— to try to get young students to look at this in a serious way and start trying to figure out how technology can be used in a positive fashion in our society, and how we can absorb more people into the fold so that they're not looking at it as a hindrance to their progress or growth.

Hollar: What, in your experience, has worked in getting members of Congress in particular more clued into this?

McKenna: Money.

Hollar: Is there a way to impart, along with that check, some insight?

McKenna: Yes, there are certainly some people who are much more altruistic, I think. I think much of our Congresspeople here in the Bay Area, and in Northern California have been very good. They are probably sharper on technology than most of the people in Washington just because they know. They visit the companies. They know the people who are running the companies. They reach out to them and they get tours and they get educational materials from them. And when they need something, they go to those people and they ask them.

Those are our elected representatives from California. I don't think that's true in a lot of other places. I think they tend to listen to lobbyists from various industries but not necessarily directly from the industry leaders. That's why people are shocked by, let's say, Facebook's Zuckerberg not going directly and speaking to Congress because so many of our leaders have done it individually, as leaders of companies. They've met with them personally. Eric Schmidt has been very active in politics and willing to educate anybody from Washington who wants education on what's going in our digital society, and he's very good at it. Some are doing that but not certainly near enough.

So when I say the money speaks, it still does. My story on that is that in Fiddler on the Roof," Tevye, the main character, sings a song, "If I Were a Rich Man." I'm paraphrasing but he says, "If I were a rich man, I'd sit in the temple and I'd lecture to the wise men all day long and it wouldn't matter if I'm right or wrong. When you're rich, they think." I'm always amazed at wealthy people who become spokesmen and Washington listens to them on everything from education to taxes on the political spectrum because they are wealthy. They do have the voice that's loudest and heard clearest in Washington.

Hollar: Any thoughts on the current group of leaders? We have a new governor in Gavin Newsom. We have a Speaker of the House who is a native Californian. We've got a whole new crop of Democrats, a lot of which you know and have become acquainted with during their candidacies over the last few years. What are your assessments and hopes about what's going to happen?

McKenna: I've known Nancy Pelosi for a long, long time, and Zoe Lofgren and Anna Eshoo. Those are two of our Congresswomen here in the area. They are very, very well engaged with the technology companies here. They know most of the leaders. They meet with them and they ask them for help. I know that I still get asked for help on them. I see them frequently—maybe not as much as I used to, but I certainly do see them. I know that when NAFTA was up that Anna Eshoo called me and asked me to have dinner and we talked for a whole evening about NAFTA. She does reach out and try to find out from other people what she should be doing. They're not just sitting there making independent decisions on their own. I think they operate in a Silicon Valley manner of reaching out to your constituents and engaging and learning.

As for Washington, I think that it's still a little too early to say. There is so much antimatter. The House is one body of government, and I think they will be a strong body of government that will create opposition to the executive branch and perhaps even an overriding capability when certain issues come up. It's close in the Senate. It's not a wide margin of dominance by the Republicans.

I think the thing that bothers me more is that there seems to be an anti-government, anti-intellectual, anti-science view. We've seen that in the last couple of elections at the national level. There has been a growing tendency toward anti-intellectual and anti-science and anti-technology thinking. I think that's just harmful to the country. We see the growth of technology. I've seen in it 55 years. We've gone from a single transistor to a watch with 5 billion transistors in it. It's just going to explode from here in the next 20 years because so many different people are working on it, as with China putting a spacecraft on the dark side of the moon.

We're finding more and more out about everything. More knowledge is available to us today than since the beginning of mankind, and the cycles are getting shorter. It's Buckminster Fuller's knowledge-doubling curve. It used to be generations. Then it used to be years. Now it's down to hours. I really feel it's essential that we get a Congress that's knowledgeable about new science and the new technologies, and will fund education in a way that maintains a high standard for all of our people. It's going to be a very hard world to live in unless you're educated and capable. That's my feeling, and I'm not sure we've seen much help from Congress in that area in the last 20 years.

Hollar: This is a good point, given everything that you've just said, to segue into the second topic for this session, which is your work at Santa Clara and your long involvement there. I want to make sure that we cover that as part of this oral history. Can you talk about how you first became involved at Santa Clara and what promoted your interest in the university?

McKenna: Actually, strangely enough, I think they contacted me. I believe it was William Rewak, who was the president before Paul Locatelli. He was a Jesuit and he called and they were trying to figure out a way to engage these new emerging industries that are out here. The way they were described to me as a university by some of the people in the community was this: there are these adobe walls around it that you can't see in, and they like it that way. But they wanted to open up more to the world. He wanted to open up more to the world, and so I basically put them through the same kind of process I used with my prospective clients. Let's talk to internal people and interview individuals that are in the administration, and then some of the professors, and then let's go out and talk to key people in the community.

Hollar: And the focus of this was technology and what was happening socially.

McKenna: Yes, to try to get them more engaged in the community, because they knew that if you're in this community—and they had been in it since 1850-something—that it was no longer agriculture but these new emerging industries. They felt that it was essential to the survival and health of the university that they become more knowledgeable about it and prepare students for it, and so that was the beginning.

Hollar: What did you find when you put them through the Regis process?

McKenna: They were isolated.

Hollar: They were inside the adobe walls.

McKenna: They were inside the adobe walls, but they were well respected. They had high academic standards. The graduates were well prepared for the world academically, and it was a really fine school to go to. But they really did lack any sense of the current emerging industries and technologies.

But it wasn't just them. A lot of the universities had that same aspect. They were late coming into it. Stanford didn't create a microelectronics lab until the mid '80s, and the semiconductor industry had been around since the '50s. So although they may have done work in semiconductors, their major commitment happened later. I was on the advisory board at the Stanford Business School and the Haas School of Business at Berkeley, and also Georgia Tech University. So I was able to see different universities and what they were trying to do in terms of engaging the technology people and businesses.

One way to do that was to form advisory boards from area industry, which is the people you would recruit, and the members of the advisory boards often became lecturers and guest lecturers in the classes. This is, again, what happened to me just being on the advisory boards. I was starting to do guest lectures, and more and more programs centered on technology. The Society for the History of Technology had their annual meeting in Santa Clara 15 years ago, or 20 years ago. It's all academics, and they do an international journal. They organized a panel as part of the meeting. The three people they interviewed were Doug Engelbart, Gordon Moore, and me, in this two-hour long program of questions and answers with students. That's where the students started getting more and more interested, started asking questions.

They also wanted internships at companies. My company had interns from universities. Every summer we would take on people to work for us. Andy Grove's daughter worked for us. I mean, a lot of my clients had kids in school, and they would work for us, and it was great. They worked hard, they were interested, they participated. We brought them into meetings with clients and so forth, but they weren't capable of giving much feedback, but they were learning. So it became an educational process for them.

Hollar: You were involved, as you said, in the advisory process at Berkeley and also at Georgia Tech. What persuaded you to really go deep at Santa Clara? Was it this work that you were asked to do by the administration?

McKenna: Yes, and then I became a member of the board of directors there very early, and so I——

Hollar: This is as the university began to turn more outward?

McKenna: Yes. And what you find is, like any university, it's very hard to influence it in any rapid way. I was on the board of trustees for 30 years, and I found myself in the last meeting fighting some of the same battles that I was fighting in the first one. You just have so many different interests within the university, and universities don't want to change rapidly because it just upsets too many apple carts. You have to deal with the faculty who have a board that they look to for their leadership, and the student council, and there's all these various factions that come together. But you're exposed to more and more of the deeper problems. You're asked to hold them in confidence.

Father Paul Locatelli was just an outstanding leader, and his reign came coincidentally with my going on the board. He became president shortly after. So, I was there for most of his rise there, and that's when the campus changed thanks to people who went there. Like John Sabrato, who was very active in the university and its development, as was just about everybody on the board. Jack Kuehler, who was the former President of IBM, went there and also was a trustee. Mike Markkula was a trustee. So there were a lot of very fine people representing the Valley.

Hollar: And representing technology.

McKenna: And representing technology and speaking up.

The big thing was that the early board meetings were run by the administration, and you're quiet and you vote on a few things, as ever. As the technology people began coming in, things were challenged. I remember the last meeting I was in. There was Mike Markkula's daughter, [Ed: Kristi Bowers], and [Ed: Jeff Miller], who was a product marketing manager at Intel and then became a senior executive, he was there. And, boy, they just kept challenging everything, and you didn't hold them back. They were up out of their seats on every issue. I felt that was really, really good, and it needed that.

I think that it's improved as a university. Its academic standards are still very high. It's respected. It still hasn't really been able to adopt the culture of technology that you see at many other universities, though, that have adopted technology in a full-blown way. It's there, but it's still hidden. Just getting the school networked took forever. There's a technology committee, and they were putting up the same proposals time after time after time.

When I was young, I'd always thought I'd become a professor somewhere. After 30 years as a trustee, I'm glad that I didn't. It's really hard. It's hard to move anything, and everybody does get frustrated, and some people are happy to get tenure and then ride it out.

But at Santa Clara I've got so many friends. I didn't actually join the technology committee. I was on the academic committee, so I was much more concerned with academics overall, and I was on the advisory board for the English Department. I felt that with the rise of the internet in particular that they could do a traveling English class for people who only knew how to write in 16 characters and things like that, and that was a lot of fun. Hanging around academics for some part of your life is always encouraging and gives you a lot of incentive to stay connected to literature, stay connected to the advancements in technology and engineering and science, which you see all the time when you go there. When you're involved in the various subcommittees and board meetings. The students are still as bright and as enthusiastic, and they're when you're down, you have a bunch of students in to talk to you, and you suddenly become lit up again. Young people are always filled with energy and excitement about the future.

Hollar: Talk a little bit about the Center for Science, Technology and Society which you've been involved in.

McKenna: This came from a provost, and he actually he got the idea from me. I gave a talk, I think, at which I spoke about the influence of technology on society, and—

Hollar: Yes, I mean, if you look at the title of the center, and you look at all the writing and work that you've done over the course of your career, there's an immediate obvious overlap.

McKenna: Right. A fellow by the name of Jim Koch was in the Business School and was very keen to that whole idea, and so he became the first director. I was chair of it. We had people like Bill Davidow and many people from the industry on the advisory board. We would meet once a quarter, and I think it worked very well.

The whole idea was to have various centers of excellence on the campus, and it was like a hub and spoke. The professors could engage with these centers, and students could engage with them. There were several different centers— the Ethics Center, the Center for Science, Technology and Society, and a few other centers, and that they would be expertise and bring in outside people. So we would hold conferences and things of that nature that would address the subject of the center.

Hollar: And what was the hope for this center in particular?

McKenna: It was to come away with better knowledge and understanding of what's happening to us. How is the science and technology, so much of it coming out of this Valley, influencing our lives and our societies and our governments? And I think the sad thing about it was that it could never get funding from people in the Valley. They were much more interested in the pragmatism of getting something specific done, not an academic exercise of having students better understand what our society's about. They probably paid for their children's tuition, but not necessarily to have a study do that, and so it had a very hard time getting funded. It always struggled for funding.

There were proposals about doing more work helping entrepreneurial organizations around the world. Local entrepreneurs in Africa, India, Latin America are starting companies for maybe just a village or two, doing things like installing solar panels that light small areas, or providing traveling medical kits for delivering babies. These small businesses would do very well, and the whole idea was to find ways to scale that, and get outside funding for them. A group at the Center was very interested and active in that. One was Jeff Miller, who was at Intel. I knew Jeff there as a product manager, high energy, running a million miles an hour all the time, and then he became the President of Documentum, a big company over in the East Bay that sold to IBM.

He actually took over running the Center along with another woman there, and they have focused it on entrepreneurs around the world—to try to affect them and have impact on them. I think they're talking about impacting 5, 10 million people in various environments and societies throughout the world. The Center is doing very well doing that. It just wasn't in sync with what I wanted to do, and so after 10 or 15 years, I retired from it.

I still think we need the answer to the bigger question. That might be my disposition for a more philosophic view of things. I still think we've got to better understand our society. There are lots of other organizations that are helping these small companies grow.

Hollar: Is there an academic outlet out there for this kind of thinking?

McKenna: Oh, there are many. I think there's a Center for Science and Technology at Stanford. There's many. Almost all the major universities have one, and they do serious academic work and produce papers and journals.

Now I don't want disparage the Center at Santa Clara University. It's now called the Miller Center, because Jeff and his wife funded it sufficiently to sustain itself, and the students at the university work in teams and do visit these places in Africa and Latin America and India and actually live and work with them for weeks at a time, or months at a time, and help them develop their infrastructure. Then they have an annual conference during the summer where they select 30 or 40 entrepreneurs to come to Santa Clara where, over a course of about a month or six weeks, they're taught how to write business plans, how to raise money, more of the business aspects of it.

Hollar: That seems very in sync with the way Silicon Valley likes to see a center like that operated. It's very much the Silicon Valley take on things.

McKenna: Yes, and it's working.

Hollar: The third thing I wanted to talk about in this session is your archives. It's a multi-part story, I think, but the centerpiece of it is your notebooks, which we've referenced throughout the oral history. We'll have lots of pages of your notebooks included to illustrate these sessions, so people will understand the nature of them. But just for the record, talk a little about your notebooks and your notebook system—both what that means to you, and the kind of archive it represents.

McKenna: First of all, I'm an eclectic person, so I keep files, and artifacts, and I have too much space filled with things that other people would call junk. I've collected things that my clients were making, and things of that nature. I have boxes filled with chips and devices and gadgets. I have a silicon ingot and wafers out of the silicon conductor industry, and brochures and articles and things of that nature. Largely I did it so that I could have my own reference system, particularly for articles and books.

I kept a journal when I was in high school, and put it away, and in college picked it up and then put it away, and I didn't use a creative journal for a lot of years. But when I got into business, and particularly as the business started growing, I think initially I was just filing papers and things. When I saw engineers and particularly product marketing people keeping notebooks, I thought, gee, that's a good way to keep track of everything. I might visit four or five clients in a day—long days, and certainly many more than that in week, and then you have to do the work, so you have to go back and remember what you were talking about and direct other people. So the whole idea was to keep track of the work process.

Initially I didn't keep it as a journal as such to make reports from, or even to go back and refresh my memory about what was going on in meetings and so forth, because a lot of the early discussions were about products. Particularly at Intel we were working on so many new products, and so many new areas of technology, and they would have lots and lots of meetings and sessions on them, and you were keeping track of the products and the features and the benefits and the plans and when it was going to be announced and how it might be announced and what they needed to overcome or to achieve.
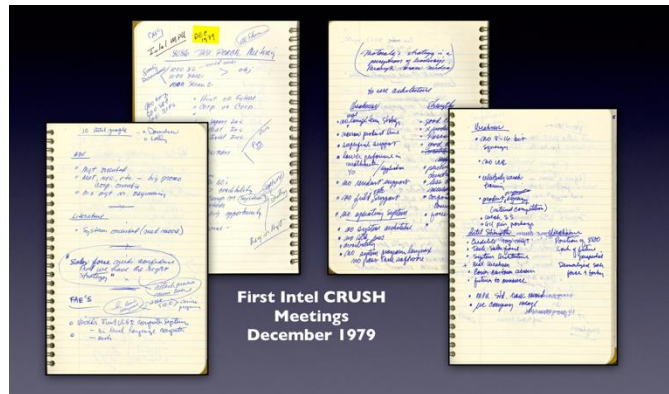
Regis McKenna notes from Intel Crush meetings, 1979

An example of this might be when they came out with bubble memory. The architecture of bubble memory had to be actually very similar to core memory—little ferrite cores. You can see examples here in the museum. It had to be structured the way core memory was built, very much the same kind of input and output patterns. You could go through this whole history of computer storage based upon these really primitive technologies that have evolved to current technology and even solid state memory. The people who ran these things would go through this history for you and identify the issues—how do we overcome that and so forth.

Hollar: It was almost like a mini class of technology—

McKenna: Always, yes, almost every one of these are mini classes. You write down what strikes you as interesting.

There really wasn't any long-term goal to doing the notebooks, but I've ended up with an entire set starting from around the end of 1971 or '72. A single year can range from, depending upon the workload, two to five notebooks. I kept them certainly through the history of my business, from 1971 or '72 until 2010, when I really stopped doing it.

Looking back at them now, I see that some contain much more elaborate prose about what was going on, and others just outline product. Some have little funny sketches. I would include strange stuff—personal things, reviews of days, whatever was on a scratch pad that was in front of me all the time, notes I took when I was on the phone. I quite often got phone calls from Steve Jobs, ever after he left Apple, and so I would record notes of those, just from my memory of them.

Hollar: Your notebooks on your Apple work, which you've shown me, are very deep and very detailed. They not only include what happened, but also your own interpretation of events as they were happening.

McKenna: Right. And when you look at my Intel notes versus Apple, it's really kind of interesting because they were clients at the same time.

Intel was very organized, very process-oriented, very direct. We had goals milestones, objectives and accomplishments, and everything was a process. So my notes reflect that.

Apple was a hacker kind of thing. It was random access—random thoughts and discussions and so forth. So it became very interesting.
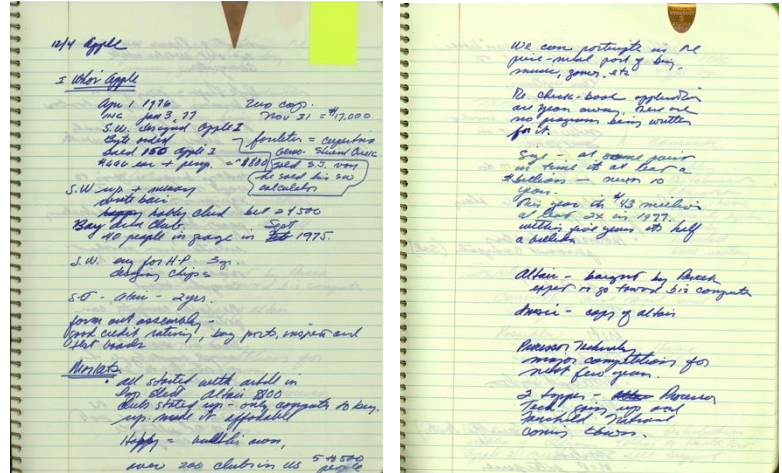
Regis McKenna notes on first Apple marketing plan, December 1976

I always felt from the beginning of putting together Apple's program that Apple was a story. It was two young dropouts who had picked the name Apple, which was all-American, but the multi-colored logo that we created put them inside the psychedelic era, and so Apple became an American story, and that's the way it was written. It was a story you wanted to follow to see where it was going. That became part of my notebooks. It was really the Apple story. I think portions of my notes, maybe a lot of them, make interesting reading—even if they're not published, but are just in my notebooks.

When people come out with books on Apple, I can check my records. As you saw, I have calendars that have meeting dates and so forth all well noted. Some companies are much more interesting that way, and others aren't. So I tried to record the feeling of what was going on.

Take the period of the Mac intro. My first notes on the Mac date from 1982. The Mac was introduced in 1984. My first notes are from the first meetings to discuss it. Over the ensuing years the story got more and more elaborate in terms of what it was, what it was going to be, what they'd like it to be. In the meantime they were developing the Lisa, and off to the side I have notes on when Steve read in the papers about Lisa being his daughter and his reaction to that. So those kinds of things are in there.

I was fortunate to be on Apple's executive staff, which was all the key decision maker and operations people. It was no more than 20 people, maybe not that many, and I was on that from about 1983 to 1988. That was the key period in which the Macintosh came to market, then collapsed, and then Steve left and Sculley took over. I kept very detailed notes during those periods, and I do have those sealed at Stanford until sometime in the future because I don't particularly want to have them published at this point.

Hollar: Let's talk about that and about what's happened with those notebooks. You've made a gift of them, more than 100, to Stanford.

McKenna: Yes, all of them. I just haven't transferred them all to Stanford yet. It's largely because I got to know Leslie Berlin, who's the archivist there, in the early days when she was doing the book on Bob Noyce. I got to know her because I had a lot of stuff on Intel and Noyce. Bob never really published anything, and there's not that much that you can read on him, but I do have a lot of interviews and things like that, and I took notes on interviews with him.

I let her use my notebooks, and she approached me on getting them into the Stanford Library system where they could be accessible to researchers. At some point they'll be accessible to anybody that wants to do research on either my firm or Apple or Intel or other technologies.

In the meantime I've been working on projects like Apple, let's say. We started working for Apple as our client in 1976 before they were incorporated. I wrote an outline and the first marketing plan, so you start there and go all the way up until shortly before Steve died. I have notes on that over many, many notebooks over many years. I'm taking all the Apple sections from each of the notebooks and putting them all into one file. The same with Intel, and with most of my other major clients, so that you don't have to go through all the notebooks to see all the Apple stuff. You can just go into one file, where the notes are dated and referenced.

Hollar: You're curating your own collection.

McKenna: Right. Because I'd be the best one to do it.

There are certain things that don't necessarily have to go in those kinds of files—like a 10-minute meeting where nothing was said of vital interest, so I would leave those out. But the majority of Intel and Apple and Spectra-Physics and a company called Measurex, which was the first manufacturing digital company, and probably 30, 40 clients that I had over the years, I've broken out into separate folders. So researchers will be able to go in and look at any one of those, if they can read my writing. But it's fairly legible.

Hollar: You also have another part of your personal collection—your clippings, papers you've written, manuscripts, other things.

McKenna: It all goes to Stanford.

Hollar: Talk a little bit about the contents of the rest of your archive.

McKenna: Well, I have, for example, boxes and boxes of presentations that our company made to companies and then the workbooks that we did for them, the research that we did. Fortunately, I had people who worked for me who kept very good records as well, and they gave all those documents to me, and so I was able to have full files on various businesses.

For example, one of our clients was the Open Source Association, which was promoting open source. There's probably somewhere between 10 and a dozen key technologies that we were responsible for

helping them to educate the market on, from Ethernet to the PC, to microprogramming, and so forth. I mean, it's an extensive list. I really haven't drawn conclusions from those files, and I may have to do at some point.

I gave Stanford 20 boxes of material, and I still have all my clipping files, which are easily another four or five boxes of just magazine clippings. I have files on algorithms, artificial intelligence, machine learning, networking, choice—an eclectic set of subjects that I used when I was doing books or other things. And I just clipped everything that was of interest. During my time in my company, as I talked before about before, I would send clippings out with little FYI stickers. I would do FYI clippings of, let's say, things on the personal computer industry, an article on IBM or Sony or whatever. I would clip it, copy it, put an FYI sticker, on it, and send it to Steve Jobs, John Sculley and so forth. I would constantly be sending these little clippings out to my clients—specific things that they would be interested in.

I also have some of the books we created called econs, although I don't think I have many copies unfortunately. In all the moving over the years, a lot of stuff did get lost. But the econs were books that we prepared about once a quarter, and they were all charts and graphs that were published on trade and economic changes in my country. These came from SIA, the *Financial Times*, *The Wall Street Journal*, Business Week, *Fortune*, other people who used a lot of graphics and charts. We made copies of those charts, usually after they were referenced somebody else, and we would reference those organizations, like SIA, and then I would take all those charts and graphs and publish them as a book. I would send them not only to my clients, but also to executives who weren't clients, just to continue to show them what was happening.

I always wanted to try to be part of the industry rather than an appendage or a supplier. I didn't want to be a supplier. I wanted to be a part of it, and that ingrained us as a part of the industry. That certainly, I think, played out with many of the people that we got to know and work with.

Hollar: All of this collection in the future will be publicly available at some point, so any researcher can go over to Stanford and just roll up their sleeves and begin to the work.

McKenna: Yes. It will happen over time. I do have commentary in my notebooks at times that might embarrass people, or observations I felt when I was there. Take the Apple meetings. I was there as an outsider, but they actually made me an active member. I voted in executive staff on whether Steve should stay or go. I voted on issues, but I was also there at their good graces, and because I was a consultant and I didn't want to violate that. And while what's in my notebooks is probably past due now, still in all there are things that could certainly embarrass people.

Hollar: I totally understand that because the Computer History Museum is doing contemporaneous history, and that has its ups and downs. On the one hand, it's very exciting to be able to sit down and talk to someone like you who represents so much history and so much knowledge. On the other hand, contemporaneous history is tough because there are differing views, and personal feelings, and all of that is kind of caught up in it.

And that's why, for that reason, I wanted to get a couple things on the record as part of this oral history. First of all, that your archive exists at Stanford. Second of all, ideally, that this oral history and that archive can be used in tandem so that people who are discovering things that you and I have talked about, that they may not have known about, can then go over there and do the actual research.

McKenna: Yes. Also, there are other things I felt, particularly my family, too, being close to Steve Jobs. He may have had this with lots of people, I'm not sure, but when he would call, particularly on a Sunday afternoon or Sunday evening and we'd chat, these were very personal kinds of conversations.

I feel that much of what's been written on Steve Jobs is not really him. It's like the story about blind people touching an elephant and all describing a different experience. I think where you encountered him, and under what circumstances, determined your view of Steve. So much of what's being said and written is what people want him to be rather than what he was—certainly a man with defects but also somebody who gave his life, quite frankly, to the technology and the development of Apple. What he was doing was sincere. Hopefully my notebooks shed a little light on that because it's word for word what he said.

I can say this. When people were beating him up in the executive staff over the Mac getting all the resources to be the Mac, there was a debate between the Apple II people and the Mac people. You have two different platforms, each trying to get, say, the education market, each trying to get the small business market, each of them conflicting, and the Apple II actually kept getting a resurgence by upgrading its products. The Mac was static at least initially. Not until later did it really get upgraded, and so Steve was obstinate in trying to get all the resources over to one platform. He didn't have a lot of experience in management. He didn't have a lot of experience in how to work within a structure. He was much more somebody that worked outside a structure his whole life.

At one point, he basically said, "I really want help." He said this in the meeting. "I really want to learn more about management." He said, "I've been a founder of Apple and all of a sudden I've got all these people that I have to manage, and I have no management skills." And he said, "If I were at some company," I think he used some example like Kodak, "If I were at Kodak and I became an asshole, they'd fire me." He said, "But I had no one here to fire me when I was a jerk," and he told everybody that.

So, he knew that when he was out of bounds. He knew it. You didn't have to tell him, but there were a couple of people that could tell him. I told him several times to knock it off. Ann Bowers was very good at telling him as well, and I'm sure there were others. But he always was apologetic, and he would always back off.

I know one time he treated my assistant very rudely on the phone and I told him, "Don't you ever do that again, or you're going to find somebody else working for you." He called her up and apologized. So, he had this yin and yang personality, but I always felt that he always felt he only had so many days in his life. I don't know why, but I think he had a melancholy conscience and I think he was in a hurry to get everything done, and that drove him.

Hollar: And much of this is reflected in your notebooks and in your notes. You have insights about him that no one else has, and they're unique to your time with him.

All right, so that ends that part of this session, and now we're moving to topics that are specific to the Exponential Center, entrepreneurship and innovation. First of all, Regis, I'd like for you to talk a little bit about your work beyond Silicon Valley, in other areas, for example, your membership on the advisory board of Toyota and as an advisor in other high-tech regions of the world.

McKenna: The Toyota thing was very interesting. I had an office in Tokyo, and I have some Japanese friends that I've known for long, long periods of time. One was also a senior advisor to Toyota, and he's the one that recommended me. They started the advisory board, I believe, in the mid-1990s. I looked up the names that were on that advisory board and there were at least three there that were no longer on when I joined. I have a feeling that people left and they were looking for a few new members, and I believe that a fellow by the name of Sir John Jennings[1] and I went on the board at roughly the same time.

It was a collection of people that the chairman, Hiroshi Okuda, had commissioned to advise the board of directors at Toyota. These were operating people that ran different divisions. They would run the research operations, or manufacturing, those sorts of things. So, it was senior executives at the company, and it was fairly insular. I think Okuda felt they needed more outside influence and conversations, so they decided to get people to advise them who had some view of the world other than Toyota's view.

They put that together in this advisory board. We met a couple times a year for at least two days, sometimes longer, and those would be separate meetings with the board of directors of Toyota. The advisory board was made up of people from just about every continent in the world. There was Bob Hormats, who was a senior member of the Kissinger consulting group. He also became vice chairman of Goldman Sachs and he had a global view of the economies in different countries. He was very close to China and some of their industries. Qin Xiao was the chairman of China Merchant Bank, which is the large merchant bank in China. He's still chairman of it. He had really wonderful, global insights, particularly on what China was doing. He was educated in Australia so he had a little bit of a Western influence, as well. There was Paul Volcker, former chairman of the Federal Reserve. There was a fellow from Brazil who was the ambassador to the United States at one point. There was a fellow named Pedro-Pablo Kuczynski, who actually left in the middle of his term when I was there to become a minister of finance for Peru and later became prime minister. Most recently, before the current president, he was president of Peru. I mean these are very nice, marvelous people that sit around and just talk, tell stories. The subject matter didn't have anything to do with marketing or with, for that matter, technology. I was on there because of my knowledge of Silicon Valley and the cultural morays of it.

The board might ask a question, let's say, whenever the U.S. was poised to go into Iraq, about what influence that will have on global companies doing business in the Middle East and around the world. What should Toyota be prepared for? What should we look out for? There were questions when a new president came on board here in the United States. What should we expect? So it was political, social,

---

[1] [Editor's note] Sir John Jennings is former chairman Shell Transport & Trading.
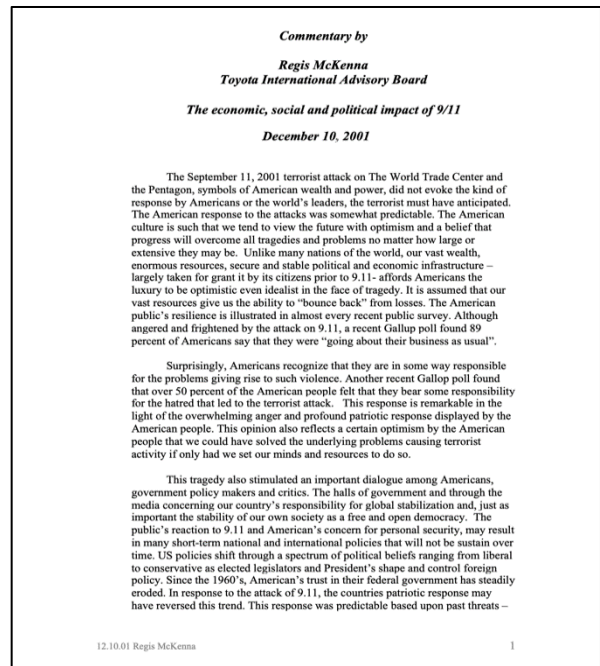
and cultural. I made a couple presentations on the social influences of technology, which Paul Volcker got up and mimicked in a nice way. He's a very funny guy. But if you attended these sessions over a period of five years, it was like having a course in international economics and culture from people who lived it.

John Jennings was the chairman of the Shell distribution companies, geologist, very senior. There was a fellow who came out of the United Nations and was the chairman of the United Nations Commission on Environment, and he was very outspoken about environmental issues. I think it was pretty courageous of them to put people like that on the board. A lot of them had some sort of political influence, some sort of political background. And I think that's because Martin Lee, who helped Okuda put together the board, and he was a senior official in the United Nations at one point. I think he picked people that he knew from his world and then later on, they started getting people in more diverse industries.

John Jennings and I were the last of that era. They stopped having an advisory board, but then I understand they picked it up again later. I thought it was just a marvelous thing for any company. They don't have to have high-level influence, but they have an advisory board that's global in their outlook and can give objective perspective. Any one of those people, Bob Hormats, John Jennings, could have been on the board of Toyota, and they would have been able to make positive contributions. They were mature enough to not simply be polite for Japanese sake but to say what they thought the issues were and put it right flat on the table in front of them. And that's the way the advisory board was. It was peer to peer. It was not, oh, we're here subservient to the board. They never felt that way, and we had wonderful times afterwards. We'd go out afterward. Pedro-Pablo Kuczynski liked Irish whiskey and told me that he knew where all the bars that served Irish whiskey in Japan were. So we would always head out and they would tell stories. Paul Volcker would talk about fishing. They were just normal people with a lot of brilliance and a lot of experience in their careers, and they could offer a great deal to Toyota.

Hollar: One of the things I want to attach to this segment is the essay that you gave me about the economic, social, and political impact of 9-11, which you wrote at their request.

McKenna: Yes, that was one of the things that they asked. They would give you projects before each meeting to prepare. So, you would do a statement on each of these. Everybody on the advisory board would do that, and you would get a synopsis rather than the complete statements. Then they would publish the full statements. I also wrote several articles for Toyota's internal newsletter on technology and cultural change in society.

Commentary by

Regis McKenna
Toyota International Advisory Board

The economic, social and political impact of 9/11

December 10, 2001

The September 11, 2001 terrorist attack on The World Trade Center and the Pentagon, symbols of American wealth and power, did not evoke the kind of response by Americans or the world's leaders, the terrorist must have anticipated. The American response to the attacks was somewhat predictable. The American culture is such that we tend to view the future with optimism and a belief that progress will overcome all tragedies and problems no matter how large or extensive they may be. Unlike many nations of the world, our vast wealth, enormous resources, secure and stable political and economic infrastructure – largely taken for grant it by its citizens prior to 9.11- affords Americans the luxury to be optimistic even idealist in the face of tragedy. It is assumed that our vast resources give us the ability to "bounce back" from losses. The American public's resilience is illustrated in almost every recent public survey. Although angered and frightened by the attack on 9.11, a recent Gallup poll found 89 percent of Americans say that they were "going about their business as usual".

Surprisingly, Americans recognize that they are in some way responsible for the problems giving rise to such violence. Another recent Gallup poll found that over 50 percent of the American people felt that they bear some responsibility for the hatred that led to the terrorist attack. This response is remarkable in the light of the overwhelming anger and profound patriotic response displayed by the American people. This opinion also reflects a certain optimism by the American people that we could have solved the underlying problems causing terrorist activity if only had we set our minds and resources to do so.

This tragedy also stimulated an important dialogue among Americans, government policy makers and critics. The halls of government and through the media concerning our country's responsibility for global stabilization and, just as important the stability of our own society as a free and open democracy. The public's reaction to 9.11 and American's concern for personal security, may result in many short-term national and international policies that will not be sustain over time. US policies shift through a spectrum of political beliefs ranging from liberal to conservative as elected legislators and President's shape and control foreign policy. Since the 1960's, American's trust in their federal government has steadily eroded. In response to the attack of 9.11, the countries patriotic response may have reversed this trend. This response was predictable based upon past threats –

12.10.01 Regis McKenna   1

Hollar: You had offices around the world, and as a result, you got pulled into advisory roles in other high-tech regions, whether formal or informal. Toyota was a certainly a formal role. Can you talk about other regions where you have been active?

McKenna: In many areas, I was asked to give advice on development of regional venture funds, such as in Barcelona. I was at a conference there where I was asked to advise the local leaders on whether they should build a public venture capital fund. I was opposed to it. They wanted to have a public fund of something like $150 million in U.S. dollars in a venture fund, and I just thought that was peanuts. One question I asked them was, "So what if you lose $100 million of that?" And they said they couldn't do that. I said, "Well, if you're doing venture, it's always a possibility." They felt that would be too politically dangerous for them. I think they thought you go into venture capital, you make a lot of money, and you support a lot of companies. But it's not that easy, and most people in other areas of the world, including the minister of trade at Japan, thought it was. I advised Japan indirectly with Bechtel, the big construction firm, when they were charged to build a technopolis center in northern Australia and in Italy. The governor of Montana came down to see me about clean industries. They were dependent on copper mining and those sorts of industries, and he wanted to get more into technology. He asked how they might do that. We indirectly got into that through one of my early partners, Don Kobrin, who did plant location work for Bob Noyce and Fairchild. Noyce had called Kobrin after he went to work for me and asked him to help Intel locate a plant up in Oregon. So that's how Intel went to Oregon—through, indirectly, our work. Anywhere people were looking at trying to create centers of entrepreneurism, things of that nature, we tended to be involved in a lot of them.

The most successful was Ireland. Ireland had, when I first went there, dirt roads. Communication was poor. The hotels were terrible. The roofs leaked in your room. The services were bad. They had been under 600 years of British rule and all the services were just absent. Then they joined the Common Market in 1973, and that allowed money to be invested in them from the other Common Market countries—the wealthy European countries wanted to balance things out, so there was funding for poorer countries to bring them up to a level.

One of the things Ireland had versus other countries was a 98 percent literacy rate. It was higher than the United States. They had very good education systems from elementary and to college, but everybody tended to leave Ireland after college. So the population went from something like 5 million before the famine of the 1840s down to almost 2 million. It came back to about 2.5 million to 3 million, but university graduates would continue to leave the country because there were no jobs. So the idea of creating a high-tech community really was interesting to them.

I read a study about where high-tech firms are located—entrepreneurial firms—and they're located where there are other big firms because new companies tend to spin out from big firms. For example, here in Silicon Valley, roughly 15 companies produce almost $1 trillion in revenue. They're big companies, and that's the stability of technology here. They're diverse companies—software, biotech, hardware, AI, chips, and that creates economic stability for small companies—an ecosystem. Ireland understood that. They knew they had to have some big technology companies there, and it really didn't matter much what end of

technology they were in. It had to do with just having that presence where people could work and begin to get an idea of how technology companies operate.

So we set out to entice companies to Ireland. We made a list of companies, first of all, with senior management that had Irish roots. We looked for senior people who liked to play golf, and we would take them on golf tours there. They had some companies that had set up shop in Ireland so they could essentially export duty free into the rest of the European market after having goods manufactured in Ireland. There were several pharmaceutical companies like that. I said, "Let's use those as models." So other companies could go in and see a process, see the assembly lines, see people doing things that were certainly health-oriented. There had to be to certain specifications and an infrastructure.

And then there was simply introducing people to them. One thing I had them do almost immediately was set up an office here in Silicon Valley. I told them that you have to go to all the events. You have to be present. You can't operate from Ireland or New York and try to influence Silicon Valley. You have to go to the AEA [American Electronics Association] meetings. You have to go to the conferences. You have to go to the yearly SIA conference and rub elbows with these people and get to know them. They did that, and they put a fairly good-sized staff here.

Hollar: And the vehicle for this is the Ireland Development Authority, right? That's...

McKenna: Yes.

Hollar: The IDA was really the center.

McKenna: Yes, the Irish Development Authority. We got some really key companies early on. Amdahl and Intel were fairly early, and eventually Apple. I helped get the information into Apple through Ann Bowers, Bob Noyce's wife, who was running HR at Apple. She brought it to the executive staff's attention, and that got their interest piqued. Then we worked here on the ground. We operated as agents to help the IDA and Apple develop the business.

As I said, it not only changed the country. It changed the economics. It provided jobs. It improved the education system, because now people didn't move to other countries. They stayed in Ireland and worked in the education system. You've been there and you've been to the universities there. They're really fine universities.

Hollar: They are, and there is a tremendous high-tech base established in Ireland now. In fact, Dublin is the center of a lot of technology, and American corporate headquarters for all of Europe.

McKenna: Right. So it went from a sort of third-world country to one of the top industrial countries in the world. It was not given much credit to be able to do that. There were some really pejorative articles published about what would happen if Ireland got involved in these kinds of industries. They said Ireland would just destroy them. The workers would go on strike. They would be able to come up with no ideas. They felt the Irish were the tail end of the labor force. It's not unlike the way certain people think of

Hispanics today, or people of color. They were historically treated that way. I remember there were signs in the windows in Pittsburgh that said, "Irish need not apply." Yet both through politics and technology and education, they were able to essentially create a model for the rest of the world.

Hollar: Let's talk now about your mentoring, Regis. You've been a mentor to at least a couple of generations of people in marketing, in technology and beyond technology. Talk a little bit about your approach to being a mentor and your feeling about talent development.

McKenna: We were working with really leading-edge companies and we were working with mostly, in those entrepreneurial days, with senior management. At Intel in the early days, you were working with product marketing people. And maybe you weren't directly working with Bob Noyce or Gordon Moore, but encountering them in meetings was quite common. You'd see them there. You could talk to them regularly about things.

Andy Grove came in and became a key driver there. I think Andy liked sticking his nose into marketing. He was a communicator, and we got to work closely together very early. Les Vadasz was another driver. Les is a lifelong friend.

Intel and many of our other client companies absorbed us like employees. You weren't an outside vendor. You were part of the team. That's the way we were at Apple. That's the way we were at Intel. That's the way we were, almost all of the initial startups that we worked for. I never had a badge at Intel or Apple. You just walked in. You were part of the team and people recognized you and so, and you could bring in people from your company and expose them to all of this.

Intel/RMI team photo

In mentoring—initially I had two young fellows that worked for me back in the 1970s that are now in business for themselves, but we get together every now and then and the last time was just a couple months ago. We had lunch and they were just, again, raving about and appreciative of the fact that they were able to sit in meetings with Bob Noyce and Gordon Moore and people like that. They said, as a young person, it was so life-changing for them to participate in meetings with them and have conversations with them and to hear how they talked and how they thought. It was a life-changing experience.

RMI team photo

We also did a lot of training. We had a huge training center. I brought in outside people from all over. I brought in professors from Stanford to give talks on marketing and business. We had clients come in and

teach. When the whole quality movement arose, I had the head of quality control at Intel come in and talk to all my employees about what the process was like, what they did, how they did it, and what were the key issues. We had an international marketing advisory board that included Dr. Joshitada Doi, chairman of the computer science lab at Sony, and Dave House from Intel. We'd have these internal discussions on marketing and contemporary times, and they were all in a big session with employees around the sides of the room, and those were recorded. We really pushed internal education in a big way, had a lot of offsites. All the presentations I would do outside, I would first do them inside, usually, to the employees.

We also tried to discover and create products out of these things in the service sense. Market Check was a way of going out and doing analyses of the marketplace, the competition, the changes that occurred over the last year or were occurring. We would do an audit of the marketplace by talking to analysts, talking to customers and getting feedback and putting that together in what I called a Market Check program. It was very specific. We did internal and external audits, talked to the senior management of our clients and then talked to their prime customers and then compared inside and outside views. All of

Tom Perkins and Regis McKenna skunk camp

that, while we were doing the implementation, led to and moved us further and further to a consulting business, and that happened throughout the 1990s.

Hollar: So the mentoring process within your firm was both a personal one-on-one process and also almost a process of osmosis, right? You were exposing people at all levels, very junior people in many cases, to real opportunities for growth if they were capable of taking advantage of it.

McKenna: Yes, so they tell me. I think I told you about one employee who worked for me for a number of years told me that, I gave him not just a job but a career. He was able to take that experience and then move into more senior marketing positions in other companies. I've met a lot of product marketing people who have said, "You taught me a lot about marketing." This sounds a little bit self-promoting, but at the last Intel conference that was here at the Computer History Museum, Andy Grove was there, and when I walked up the steps he came over and gave me a big hug and said, "My teacher." And I said, "Boy, I wish you had said that a long time ago." I think we spent a lot of hours arguing but Andy was always open to ideas, and eventually he would turn around and, if it's a good idea, would adopt it. Steve Jobs was the same way. Steve was very much the same way and basically told me the same thing after the iPod introduction. I was in the audience and he came down and gave me a hug and said, "You started all this." And so those are little personal moments of reward.

Hollar: You've described a process by which people developed the skills and the talent and the knowledge they needed to grow and to excel. That may or may not involve what we today call mentoring, which I think, in the minds of people who wanted this question asked, is probably much more of a one-on-one situation—where you really take someone under your wing and you explicitly mentor them. What you're talking about is not really that, is it? It's much more of a, "Here it is, I'm exposing you to everything you could possibly need to succeed. It's up to you to take advantage of that." Is that fair?

McKenna: Yes, I think so. I mean, certainly we did classes. There was a fellow that worked for me, Rob Brownstein, and he was an engineer's engineer. He taught classes on basic technology. And I think most of them were recorded. It was just, "What is electronics? How does it work?" He taught those classes to new employees. I think almost all of the technology companies, and particularly Intel, had classes that taught new employees how to benefit from the culture of Intel.

RMI managers and new employees

RMI reunion, 2004

I had a lot of tutors myself, and those tutors were my clients. Bringing young people into meetings with, as I said, senior managers who saw you not as a vendor but as a part of the team—when you brought young people in on that as part of the team, the mentors became the product marketing people at the client companies. They gave you the history, gave you the why we're doing this, gave you much more than simply a, "Go do this." Intel was really good at it. In fact, most, I think, product marketing people who have an engineering degree and an MBA or a business degree have the ability to take a broader perspective and package it, in a way, in a presentation. So the product marketing people exposed me and a lot of our people to the technology and the process and the rationale and so forth.

These were people that are well-known in Silicon Valley. Product marketing people were people like John Doerr and Dave House and Bill Davidow, people of that nature who were very successful venture capitalists and executives later on, and very influential in our society. They were people who were many times leading the teams that we were involved in on projects at either Intel or Apple. In fact, that's where Dan'l Lewin, the President of the Computer History Museum now was. I knew him at Apple, back when he

was running the education programs, and we became friends. He was close to Steve, and so Dan'l and I crossed paths quite a few times over the years.

They were all really teachers, because their job was to take what they learned from engineering and communicate it to customers or potential customers. That was their job and we helped facilitate that. And create new ways of doing it. And so as part of that team, we were always in a classroom, always. I always looked at everything we did as being part of a classroom. Marketing is an educational process—learning more about the market, and the customer learning more about you and your products. So it's a closed loop.

Hollar: There are five questions here that are common to all the oral histories being done for the Exponential Center. Let's talk about them.

First of all, talk about a significant professional mistake or failure, or something that didn't work out the way that you had expected it to, and the lessons you learned from that. You've said several times in these interviews the famous line from Bob Noyce about, "Maybe enough don't fail," or, "Maybe more should fail, because failure is the way to learn a lesson." Talk about that for a minute.

McKenna: Yes, those sorts of little homilies are really comforting, but they hurt when they happen.

I think if I were to start a company in the marketing business today, I would have at least one partner or two partners to share the name of the company. Because when it's only your name, everybody wants you. If your name's on the door, that's the person that they want to talk to. And so you get spread really, really thin. And as we grew, it became harder and harder. I was traveling more than 200,000 miles a year and I've showed you copies of my calendars. They were jam-packed. Doing that for 30 years was exhausting.

In this context I would also talk about the alliance I created with—at the time it was called Peat Marwick. It's now KPMG. There was a phase at which they wanted to get into the consulting business. They were obviously one of the big three, or the big four or big five, whatever it was at the time, in accounting and audit firms, and they made their money doing audits. But they had a consulting group, a technology consulting group. They had launched it by buying a couple of companies in the technology area. One back in Boston was called Nolan Norton, [Nolan, Norton & Co.] and they were an IT consulting firm. We partnered with them on a number of things, and we worked very well with them. Then they brought in a person, not a company, out here that was in manufacturing consulting. And so they were trying to get into that business. Then they presented to us a proposal to acquire an interest in our company—not full ownership, but an interest. We did that and merged our offices out here in one building.

Unfortunately, they had an audit mentality, and basically wanted to have all our clients become audit clients. So the goals and objectives were different. And it also turned out that they, as accountants, were very good at keeping track of their time. They had a hard time really understanding the world of technology, and so they wanted us to do a lot of the work. But the work would show up on their billing

sheets. So we had conflict constantly, and it was not a good relationship. I think we got them some audit clients, but they never got us any business.

Then a young group of new executives rose up at Peat Marwick in the late 1990s, and the new chairman, John Madonna, who was one of the young turks that took over from the older partners, came in to see me in my office. He said, "You know, Regis, this isn't working." And I said, "Yes, that's what I wanted to see you about." And he said, "And I want to tell you that you are the most successful of the ones we bought into." He said, "Nolan Norton went out of business." They just couldn't do anything where they were really good under Peat Marwick. So, none of the things they invested in really turned out well for them.

We made a deal, and I bought it back. But when I bought it back, the finances were really bad. They had got us into a number of offices. We were overstaffed by Pete Marwick people, because we jointly staffed them, who were earning more than they were bringing in. Our receivables were out more than 120 days, and millions of dollars. And so, I had to clean that up, and that was hard. That was 20-hour days, and just a lot of work with a lot of people. I brought in a CFO who was really sharp and good, and who cleaned up the finances and got us a nice cash flow by just cleaning up the receivables. We got rid of all the people who were basically costing more than they were earning. It was quite a few people, actually. I think I got rid of about 20 executives that were mostly from that side, but it was hard. And you aged during the process. But you know what? In a way it was a lesson, too, and—

Hollar: I was going to ask you, what would be the lesson, other than, "I'll never do that again."

McKenna: The lesson is that there's no white knight out there. I mean, there's nobody who's going to magically make the business bigger or better. My initial thought was that to get involved with one of these professional organizations would cast light on us as more of a professional consulting firm. Peat Marwick said they wanted to do it, and that they would put people and money into it and said that they could have an influence helping us in the consulting world. And their clients were a lot of the big companies in the United States. But down at the working level, that didn't bear fruit. And so that really is the idea—there's no magic bullet out there. You've got to work. The way we did it was really working from the grass roots up and proving our capabilities year after year after year and taking one step at a time.

My wife, Dianne, says my answer to everything is, "You just put one foot in front of the other and keep moving." And that was the way we got back into business.

Hollar: This question may be related to the first one we just talked about, which is a dark moment and how you surmounted it. Certainly, the Peat Marwick episode was not a sunny moment, and you overcame it. Is there another one that comes to mind?

McKenna: No, I think that the consulting business, by nature, is a project business. See, Intel and Apple were clients of ours for maybe near 25 years, 20 to 25 years. That's a long time for somebody of our measure to stay with a company—to stay for that long and over that period of growth. And particularly through the 1980s and into the '90s. There was a lot of turmoil, management change, and those sorts of things. And we lived through all of those days.

I eventually resigned both clients. Intel started absorbing a lot of the work we were doing. I think they wanted to have control over it, but it took them seven years to actually rid themselves of us. We had deep roots into Intel and all their divisions, both here and in Europe and in Oregon and in other places. We had teams of people working with them, and their people had come to depend on us helping them in the communications area. But it got to a point where, as more and more of what we were doing was absorbed inside, it meant our revenues were going down, and I felt that we could earn more money by actually working with their competitors, or near competitors. And that's what I did. I called Andy Grove and told him. So we walked away. No big issue.

We continued to do business, and we got new clients like IBM and Philips and other big companies throughout the world. Sony, Mitsubishi, some larger companies. And our consulting team just moved into projects within those companies. I think it actually got more technical consulting. Throughout the '90s we brought in more technically competent people, I think. Some of them have started their own tech companies and are doing very well. One of the partners in MyFitnessPal came from RMI. A telecom company that was started in San Jose, a very successful company over the last 15 years, was started by one of the people who worked for us. Others found their way into lots of managerial positions. The VP of Marketing at Symantec came from our company.

As you get into these larger companies and you get freedom to do projects, you have to know more. You have to have more capability. And the people you're working with demand it. It's not a question of your doing an errand for them, or executing on something that was their idea. It's a question of offering ideas, and then having those ideas get through to fruition. Intel trained us a lot to do that. I talked about the Crush Group and what I learned that influenced me so much. That was the turnaround in the microprocessor business when Intel was losing their leadership, and the Crush Group was pulled together, eight or nine executives, senior people, that Grove assigned to come up with a strategy for the company. He put me on that Strategy Group, and I subsequently was on other task forces at Intel, helping solve problems. The demand there is that you deliver on what you say you can do, and they measure you on that. So it was good discipline for a business that was in its early days.

People would say about RMI, "Well, you really don't need management. You're just a bunch of artists, right? You just put your ideas out there and let people work on them." I was told that. They didn't think that we should be writing management books, or that we needed to do that. It was just opposite.

Hollar: There was a dark moment for Silicon Valley certainly in the downturn of the early 2000s, 2001 through maybe even '05 or '06. It was a long period, and things really bottomed out. What is your observation about what happened? How were you and your business affected by that, and how did Silicon Valley rally? That's perhaps a dark moment we could talk about.

McKenna: Yes, it was. I don't think we even talked about this, but in 1986, I became a half-time partner at Kleiner Perkins, and there's always a question of whether or not I was distracted with that, though I was trying to do both, and it just added more lines to my calendar. For me, I never invested in a dot-com. I tried to do more platform companies. I liked more basic technology companies. I never invested in a marketing company, as such. It was always something that had more platform to it, or more substance.

And I was involved in a couple of chip companies—as I said, Microchip and Linear. And so I was personally fine, but the RMI business suffered, probably catastrophically. Because major clients cut all consulting. Companies like IBM said, "External consulting needs to stop." The recession hurt us a lot. And so the business was shrunk down, and it was starting all over again. It was almost like after the Peat Marwick adventure.

Basically, I had to reboot and restart everything. And I really didn't want to do that. And so I essentially created an opportunity for all of the existing RMI partners at that time. I simply distributed all of the shares of the company to them, and said, "It's yours." I was a minority stockholder, and the future decisions were up to them. Eventually they decided to create their own paths. They started taking their clients and doing their own thing. For me, that was a perfect way to do it.

Hollar: It was a perfect way to wind it up—to hand it to your employees.

McKenna: The other way I could have done it, and I had opportunities to do it, was to sell the company. Actually, I had talked to McKinsey senior partners, and Burson-Marsteller. I had long conversations with their people, including Marsteller. So many companies wanted to acquire us.

But the way you buy a service company is an earn-out. They may give you some cash at the front end and then you earn out the rest over the next five years or so. Then you make profits, and out of those profits you buy yourself back. You essentially pay for the company. I used to say, "I'm not going to buy myself. I'm not going to do that. So if you want to buy it, you pay cash and we can just pay off the stockholders, the employees who own stock, and that's it." People would then essentially walk away.

When I sold the advertising business in 1981, Jay Chiat did that. I said, "We'll just go with the straight cash deal, no guarantees, I'm not going to come back and save a client, and there's no earn out." And that worked. He did very well by it. I think he maybe even still has Apple today. Jay was always a close friend and a good mentor to me. And so we were able to work that out.

I think other places were just looking for a way to get into Silicon Valley. I had a lot of consulting firms want to get in here in a lot of different ways. But it was always an earn-out kind of deal, and I wasn't willing to do that. I mean, I could easily do things on my own. I had venture investments and continued to invest in start-ups.

So, for me, giving the company to the partners was a perfect answer. I think, in fact, everybody that I know of that was a partner at the time is doing quite well today.

Hollar: So now we move to the one-word campaign.

McKenna: One word again.

Hollar: What one word of advice would you have for an aspiring entrepreneur? And what's the story from your life or career that illustrates why it's important?

McKenna: I was in Japan, in front of a Japanese audience, with a Japanese moderator, and he asked me a similar question, "What one word of advice would you give to marketing people?" And I told him, "Curiosity." And that was 20 years ago, I think.

I still feel that my life has been driven by curiosity. I have a library of thousands of books. It's all very eclectic. I'm reading one of the original books by Galileo right now, the original translated edition of the dialogs of the two different theories of the planets. It's fascinating to read. If I find something that I'm interested in, I read about it. I read about algorithms and things like that, even though it's not in my nature to read those kinds of books. I like history books. But I collect lots of diverse things that stimulate your curiosity and give you ideas.

I think if you're going into business today, or if you're interested in business, you have to be curious about the world around you. Where is technology taking you? What other technologies have impact on me that I'm not paying attention to? What companies are on the horizon that could influence what I'm doing?

Peter Drucker said that the 21st Century is going to be a century in which there are going to be more outside influences affecting your company than inside influences. An internal reorganization doesn't change you as much as the reorganization of the society and markets that you're going into. And so I think my book on IBM was right. It wasn't the big companies that affected IBM, it was all the little companies. What killed Digital Equipment? It wasn't another big computer company. It was the shrinkage of the microcomputer onto a chip. It was small personal computers getting more and more capable. It was the internet. It was all of the other technologies that came along, that created competitive forces that were overwhelming to them. That's going to happen time and time again.

We're in a new world, and it's not the old world. It's just a sample of what the new world is going to be in megatrends. Again, I'm repeating myself, but I like to show that single transistor from when I started 55 years ago in the business. I was marketing transistors—one little die, and if I dropped it on the floor you'd have a hard time finding it. Today this [Apple] watch has five billion transistors in it.

So that 55-year career—going from one transistor to five billion in a small space—is probably going to happen in the next 20 years, or less. And people going into the marketplace today are going to be deluged with the need to be constantly on an education path, to learn things. And you learn, not in a linear way, but in an eclectic fashion, because you never know what's going to influence you. It isn't necessarily what's in front you. It could come from behind. It could come from the side. It could come from all angles. But you gotta have curiosity about the world that keeps you looking and searching and discovering.

Hollar: Curiosity.

McKenna: Curiosity.

Hollar: That's your word.

McKenna: Yes.

Hollar: As you look back at particular peces of work that you've done, Regis, they did want me to ask: what work are you most proud of? This question specifically calls out advertising, but it may or may not be an ad, or something else. I think it's more, "What are you most proud of?"

McKenna: I hardly remember the advertising anymore, because I was in it for such a relatively short period of time—for ten years, basically, and then sold that in 1981.

The programs were really, I think, the things I'm most proud of. The IDA of Ireland was a significant program. I think being a member of the task forces at Intel—the Crush task force, which really transformed Intel. To be there even if I were just a fly on the wall, it was worth sitting in those meetings and being part of making presentations weekly to the executive staff at Intel, and having my share of responsibility to get things done.

I think the whole evolution of Apple, the story, the creation of the story, the follow-through on how marketing is everything at Apple. It really is—it's every aspect of Apple, it's everybody there. I think not necessarily driving all of that, but being part of it, and telling the story so that it became known worldwide was certainly an accomplishment.

I think the work with Genentech was certainly significant. It was the first instance in which a protein, insulin, could be created in a laboratory recombining DNA, through a process that's like putting yeast in bread or beer, where it grows, and then you kill off the bacteria that creates the factories, and creates insulin that's more compatible with the human body. Being a diabetic, that had a huge impact and influence on me.

I think even working at Kleiner Perkins with Tom Perkins, Gene Kleiner, both people I got to know well. I did some work for both Dave Packard and Bill Hewlett personally. They had investments and friends and little companies, and they asked me to look at after them.

There probably isn't a major technical company in the world that I didn't get to do something with, or get to know the CEOs of, and it was an exciting life. I met a lot of presidents and prime ministers and people of that nature in other countries. There was always another layer of the onion to unfold and see something new.

I say to people that you can get a job in a cubicle and do the same thing year after year after year, but every day I was going to something new. I was seeing something different. I was seeing the rise of software. At Intel, Ed Gelbach was the VP of Marketing in the early days of Intel and he wanted us to do an ad for Intel that said, "Are we ready for software?" Because there was a time when everything was hardware. Software only came in with the microprocessor. It was the first time that you had an operating system on a microprocessor.

That was created by Gary Killdall, who was a client, and who used to fly from me down to Monterey where he had his company. He would come up here to my office and I would fly down there with him. And with the SIA, Noyce and Gil Amelio and I were the marketing committee, and Noyce liked to fly his jet. So we would fly down to Los Angeles to have a meeting, because he liked to fly. A lot of executives flew their private planes and so I would often go with them. I went out to lunch one day with one executive who said, "Do you mind if we stop at the airport?" When we stopped at the airport, he says, "I just want to take off for a little spin. I haven't done it in a while." So we flew around San Jose Airport and we landed and went back to work.

I mean, getting to know people at that level, and in that intimate way, and getting to know them personally, was something I don't think too many people in my profession get to do today. It's much more arm's length, much more abstract, and much more of a contractor relationship. We never felt as though we were contractors. We were part of the industry.

Hollar: Thank you so much, Regis. I think that's a perfect way to wrap up this series.

McKenna: Good, good.

Hollar: Thank you.

END OF THE INTERVIEW