



Oral History of Jonathan Seybold

Interviewed by:
Burton Grad

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Jonathan Seybold

Conducted by Software Industry Special Interest Group

Abstract: Following a brief discussion of his early life and college years, Jonathan Seybold talks in detail about the work that his father, John W. Seybold, and he did in promoting the development and implementation of computerization in the printing and publishing industries, beginning in the 1960s. They first joined efforts to run the company, ROCAPPI, which was a pioneer in digital typesetting and hyphenation and justification (H&J) technologies. Jonathan then became the leading communicator for desktop publishing technology and the evangelist for the nascent desktop publishing industry. Jonathan worked as an industry consultant and founded Seybold Publications. He also founded Seybold Seminars, which grew into large, bicoastal gatherings and trade shows for both industry users and vendors. These forums were instrumental in promoting and disseminating information about the use of desktop publishing technologies during the 1980s and 1990s.

Burt Grad: The Oral History of Jonathan Seybold, with Interviewer Burton Grad, was recorded on May 24, 2017 in Mountain View, California This oral history interview of Jonathan Seybold is part of the ongoing oral history program of the Software Industry Special Interest Group, which is part of the Computer History Museum. We are here in the special oral history studio of the Computer History Museum.

Early Life and Schooling

Grad: Jonathan, you've had quite a career. You've made an incredible difference in both the newspaper world and even more so in the desktop publishing world. Let's go back to the beginning. My record shows that you were born in 1942.

Jonathan Seybold: That's right.

Grad: Where were you born?

Seybold: Bryn Mawr, Pennsylvania, at the hospital. My parents were living in suburban Philadelphia.

Grad: That's part of the Main Line, isn't it?

Seybold: Part of the Main Line. My father had been teaching economics previously at Swarthmore College. During the war, I think he was the regional director of the War Labor Board in the Philadelphia area, so they were still living in the Swarthmore area.

Grad: What did your mother do?

Seybold: My mother was a full-time mother and a housewife until the kids were grown. She had been an art history major in college. She went back, after the kids left the nest, and got a Master's in Library Science. That's what she wanted to do, and she helped with libraries for a good deal of her life after that.

Grad: Give me the names of your parents.

Seybold: John Warren Seybold is my father and Gertrude Blood Seybold is my mother.

Grad: Had the family been in the United States a long time?

Seybold: Yes. At several points along our family history, people have gone out and looked for our family roots. There are all these legends that get passed down, and you hear the stories. The most ironic one is my middle name is Webster, and one my ancestors is Noah Webster of the dictionary, but I'm a terrible speller.

Grad: Oh, my. He would be disappointed.

Seybold: I didn't get those genes.

Grad: Noah would be disappointed in you.

Seybold: When they went back in the history, my father's family were all people who came pretty early. My mother's mother was second-generation Irish.

Grad: So, you weren't a recent immigrant family?

Seybold: No, no.

Grad: How long did you live in the Swarthmore area?

Seybold: That's where I grew up. I went to Swarthmore High School. I grew up in suburban Philadelphia. In fact, a major motivation for wanting to be an exchange student my senior year in high school was I'd grown up in suburbia, in a town of 5,000 people where there was almost

no change in the population. The school social structure got set in kindergarten and continued all the way through. But more than that, it was 1950s America, and it felt really, really stifling.

Grad: What do you mean by stifling? You've used that word with me before.

Seybold: Very conformist, racist, misogynist. My parents were Quakers. They'd both come to Swarthmore College. They converted. They were active in civil rights stuff. They were active in social kinds of things. As a family, we were at odds with society to that extent. It always felt that you were in this sort of unnatural bubble.

One of the things that people forget or don't realize is that the 1950s were a really exceptional time in U.S. history. We were the only industrial country left standing after the war. It was a time in which you could be a factory worker doing fairly menial stuff and be middle class. It was a time when we had the lowest proportion of women in the workplace of any decade in the 20th century. It was a very unusual time. It has always struck me as odd that some portion of the population looks back at that and says that was normal. That wasn't normal. That was abnormal.

Grad: What kind of subjects in school did you particularly enjoy, did you have any hobbies, and what kind activities did you do when you were a high school student?

Seybold: I could afford to be a lazy student in high school. It was a good high school, but I was good enough in everything that it didn't really require much work.

Grad: Were there any subjects you particularly liked? Sciences, literature, history, any of those things?

Seybold: I really enjoyed everything.

Grad: You were an A student, I assume.

Seybold: Yes.

Grad: In spite of not working hard.

Seybold: Right, but it was assumed that that's what you would be. It wasn't anything anybody thought was exceptional. Everybody assumed that you would be that. In fact, when I came to apply to college—and this actually applied to both of my daughters too, but it's changed now—it never occurred to me I couldn't get into a college because I was good enough at doing the stuff that that wasn't ever an issue. It's only when I got to college that I had to learn how to work.

Grad: The economics were not questioned in terms of your going to college. That was always assumed?

Seybold: I graduated from a school in the U.S. and one in Paris that I'll get to in a second. In both cases, the students who didn't go to college out of those high schools were the exception. There were very few.

Grad: What were your non-academic activities while you were in high school?

Seybold: Even though I was small, I was fast. I played football until, unbelievably, I got injured too badly. I had a back problem the rest of my life from doing it. They always joked that the average weight of the team dropped by 10 pounds when I was playing.

Still, football ended up being important in my life because to be successful at that required a lot of determination. It really rewarded being tough, being persistent. We had a small high school. We were playing against bigger teams. We usually won in the last quarter because we were in better shape than they were.

John Seybold's Connection to the Printing Industry

Grad: During this period, was your father still a professor?

Seybold: No. After the war, he did two things. He was a labor arbitrator. I went on some of his arbitration things from time to time, which was fun. He also became the executive director of the Printing Industries of Philadelphia, which was the trade association for the printing trades in that area, which was a pretty big industry in that area. A lot of what he did involved labor relations. A lot of what he did involved the call at two o'clock in the morning from somebody who had just had sugar put in his gas tank by the teamsters. So, I grew up with that environment, with that sort of thing. He got his Ph.D. in 1950 or so, and he'd written his dissertation on the 1948 typographer strike, which was the seminal thing in the U.S. printing industry. It was a nationwide strike, and it shut everything down.

Grad: Why the printing industry for your father?

Seybold: I have no idea.

Grad: There was no family or historic relation to your knowledge?

Seybold: No family, nothing. I think it must have been from contacts with the War Labor Board. It must have been because he was working with all these people.

Grad: They were a major union in the Philadelphia area.

Seybold: That's right. That's right. Yes.

Grad: That's an interesting thing. I hadn't thought of that. Anything in your life while he's doing this kind of arbitration? Does that affect you? Do you get interested in the printing industry? Is there something like that?

Seybold: It sort of was always there. I knew about these things because it was always there. But I didn't go off and set type or anything of that sort. At home, he had a darkroom, which is a hobby I've always kept up as well. I learned photography very early, making prints, and everything else. I've been taking pictures all my life since that time.

Grad: So, there's a photographic connection there in that regard?

Seybold: That's right. That's right.

Grad: How about the newspaper at the school? Anything of that sort?

Seybold: Nope. In fact, let's fast forward in this. When I graduated from college, I was an economics major, honors in economics and so on, and between English and French, I'd actually taken a fair number of courses in college that involved writing, just because they were interesting courses, and you explored ideas and so forth. I had no idea that I would spend so much of my life writing. You follow the things that interest you. And if you're lucky, you begin to put together a life that uses those things.

Grad: We'll talk about that further, but I think seeing an opportunity and being able to make it work for you makes such a difference for so many of us. It seems certain things resonate. Then if we're good, we're able to make them work.

A Year Abroad

Grad: So, you ended up going to France?

Seybold: No, I went to Holland.

Grad: How come? How did it happen?

Seybold: I was an exchange student. I'd had German in high school, so I had some leg up in learning Dutch. I lived with a family, and that was a marvelous experience. I arrived in

Europe, where the ravages of World War II and the scars were still visible. That was something that was really important to me because, from that point on, I had a much more global, international view of things than I would have had if I had not done that.

Grad: This was almost 14 or 15 years after the end of the war. You still saw a lot of the damage?

Seybold: There was still rubble in Rotterdam. They cleared a lot of stuff out, and they built some new stuff, but there were still sections that were in rubble. I arrived in June and spent the summer basically getting acclimated, learning Dutch, and so forth. We went for a camping trip with kids into Belgium. The little town next to our campsite had bullet holes in all the buildings.

Seybold Family

Grad: Tell me about your siblings. You had two siblings?

Seybold: There were three of us. I was the oldest. My brother Andy, Andrew, was the middle one, and my sister Patty (Patricia) was the youngest one.

Grad: Age range?

Seybold: Basically, three years apart. We were four years apart in school. I was four years ahead of my brother in school because of where our birthdays fell. They both went to Swarthmore schools as well. The exchange school program then took you through the first semester of your senior year—it changed later. You were supposed to go back and finish at your U.S. high school to get a U.S. degree the second half, but while I was there, my father, who was head of the personnel committee for the American French Service Committee, saw an opening in Paris for a position, a two-year stint position that they couldn't fill. He was interested, and he got it. I was writing letters home, and he became intrigued about having the whole family have a European experience. So, he took a leave of absence from his job and arrived in Paris in January 1960. I went from Holland to Paris and ended up spending the second half of my senior year in the American Community School in Paris.

Grad: You could still get a U.S. degree that way?

Seybold: I ended up getting a U.S. degree. Because the credits got transferred, I got a diploma from my U.S. high school, so I got two high school diplomas.

We were in Paris in 1960. It was still the end of the 1950s in Paris. Very few people had cars. They were still in the recovery from the war. We were kids, but we had the run of the city. It was

a marvelous group, 22 or so very diverse people. We're still friends with most of them. That was exhilarating.

Grad: You had to learn French?

Seybold: Yes.

Grad: Were you able to learn French while you were there? You were only there six months. That's why I was wondering.

Seybold: I was there six months, through the summer and back the next summer. No, I didn't learn French. I didn't take French. I just got all the other stuff taken care of. I didn't take French until I got to college.

Grad: Being in an American school, you didn't need French day to day for educational purposes?

Seybold: You just needed a little bit of the French to get around the city.

Influential Teachers

Grad: Any particular story about either the high school in Holland or in Paris?

Seybold: There were a couple of high school teachers that made a big impression on me. The first one was the physics teacher I had in high school in the U.S. His emphasis was on understanding the principles. If you understand the principles, you can just work out the rest. Basically, I ended up doing that all my life. If I could understand the basic principles of something, I could deduce the rest.

When I got to Holland, I found myself tutoring Dutch students in physics who had had like four years of physics because they'd been taught by rote. I'd been taught to get in and understand the fundamental principles. It was a whole different way of learning.

Grad: I agree completely. The other thing you seem to have done later in your life is structure. You put in frameworks. You put organization around information.

Seybold: Everybody's mind works differently. I have always found that I see patterns in all kinds of things. Later in life, I went to trade shows, and I'd walk around to see what people were doing. Somehow, trends, patterns, things sort of organize themselves in my mind, and I

assumed that was normal. I found that other people weren't doing it, but if you lay it out to them, they say, "Oh, yes."

Grad: To an artist, pattern has one kind of a meaning. To a person who's a photographer, it has another kind of meaning. To a director, it's a third. I see tables. I see spreadsheets. I dream spreadsheets. Do you have a picture that shows up when you think of patterns?

Seybold: That's a good question. I don't have a mental picture.

Grad: It's not a visual thing?

Seybold: Not a visual thing. I love sitting and listening to a lecture on something I don't know much about. If it's an interesting lecture, I find myself listening to it and drawing connections between what I'm hearing there and other things. If you will, it's more diagrammatic. You've got a box here, a box here, and a box here, and you start drawing connections.

Grad: But you don't see the boxes?

Seybold: No.

Grad: That's interesting. I've done a number of these interviews, and it's one of the things I'm always interested in. These obviously are all top people in the computer and software fields. Invariably, they have some form of patterning or structuring. It's been interesting to see what they have to say.

Seybold: It's fascinating to me that everybody's mind seems to work differently.

Grad: It does.

Seybold: I discovered, at one point, that I dream in movies to the point that I can do flashbacks. I can stop them, rewind them, and so forth. I've always wondered: do I do that because I grew up in a cinema-graphic world and therefore that informed how I think? Or was there something natural about why people think like that? I have no idea.

Grad: We have no idea. Let's go to your college experience. You come back to the states to go to school. Were you an active Quaker personally, if I may ask?

Seybold: I went to youth group in Swarthmore meetings and so forth. I didn't do much after that. I went to meetings a little bit in college, but it was basically too political. I stopped doing it.

Grad: Really?

Seybold: One more thing in high school that's crucial here. The teachers at the American Community School were these amazing people who were there because they were in Paris. Two of them stand out in my mind. One was the math teacher; our final exam was basically mythical creatures whose behavior could be described by mathematical formulas. That was lots of fun.

Grad: Wow.

Seybold: Then there was the English teacher. I had to catch up to get the midterm exam. I was coming into school just before the midterms. They'd been doing "Hamlet," and he had me get the notes from his best student, who ended up being my wife. Then I had one-on-one sessions with him. One of them stuck in my mind. I forget who it was, but we were talking about motivations for someone taking some actions. He taught Shakespeare as a window into the human condition, not as just literature. And he said, "Why did this person assume that person was going to behave in a certain way?" And I said I didn't know. He said, "Because that's what he would have done if he were in that situation."

Something about that just completely clicked with me; that sort of solidified the sense that I have that you always need to be able to see the world through somebody else's eyes. Over the years, I learned that, ironically, that's easier to do if you have some separation from that person or that situation. The closer you get, the more intimate you are, the more you have to remind yourself of that, and the harder it is.

College Years

Grad: Interesting. Let's move ahead then. Talk about college. You decide to come back to the United States for college?

Seybold: Yes.

Grad: You went to Oberlin.

Seybold: I applied to Harvard to prove I could get in, but I didn't want to go there. I went to Oberlin. Besides being a really great college at the time, it was also on the forefront of social change, very deeply involved in the Civil Rights Movement. I was an economics major. I hadn't planned to do that. I had no plan coming into college, but that really drew me because it

combined my interests in society and social things with the technical. I felt very comfortable with both of those kinds of things. That seemed like a natural place to go.

Grad: Did you see it in terms of what kind of a job you might do?

Seybold: At least in those days, people were not career oriented. We were just soaking things up and trying to learn what we could learn. I ended up going to graduate school with zero effort. I was handed off from Oberlin to Yale without even applying because the chairman of the department at Oberlin, Ben Lewis, was internationally known. Every once in a while, he'd recommend students. If he did, they would take them. He recommended two that year.

Grad: You obviously did very well in college then at Oberlin.

Seybold: Yes. I had to learn to work the first two years. I'd never actually had to study; I never had to actually work before then. But I got that. I was top 10 senior class and highest honors in economics.

Grad: Again, any particular subjects in economics or in other areas that resonated with you?

Seybold: I really enjoyed economics. My honors dissertation was on labor economics. There was a big debate at that time about the discouraged worker theory, about whether if employment goes up, more people come into the labor force. I did a statistical analysis of the 1960 census data that was a cross-section in time and found marvelously good correlations. That was my first use of computers.

Grad: Had your father started ROCAPPI by that point in time?

Seybold: He started ROCAPPI when I was a senior in college. They started doing the first programming. The first work got produced after I was in graduate school.

Graduate School at Yale

Grad: I'm just trying to see the timing there. Many people, 10 years earlier, felt they had to have a job getting out of college. You had to have a skill that you knew you could sell.

Seybold: This wasn't even a thought. If you come out of college, you went to graduate school if you were in the top part of the class. I feel very guilty about dropping out of graduate school because Yale only had a few places. People came there from all over the world. I didn't work to get in there. From their standpoint, I threw it away.

The big thing we learned in graduate school, at least the first year, was that you could demolish almost any argument by looking at the hidden assumptions. You pull those out, and most of these elaborate constructs, views of the world, begin to collapse.

Grad: You're absolutely right. I've seen that in a statistical field. During the war, they used what they called the Dodge-Romig tables in order to determine which lots went forward and which lots should fail. On my first job at GE, I was working with a professor from the University of Iowa, from Ames, Iowa. He was proving that the Dodge-Romig tables were completely wrong because they assumed that the cost of putting a bad lot out was about the same as rejecting a good lot. He said, "No, if it's in an airplane, and that bad part doesn't work, the cost is pretty much higher."

Seybold: That's right.

Grad: Your point is the assumptions are what we take for granted.

Seybold: That's right, exactly.

Grad: It's what throws us off. It's a way of thinking that you're describing.

Seybold: Yes, exactly.

Grad: And In 1965, you were 23 years old?

Seybold: I was 22 when I left graduate school.

Grad: Why did you leave graduate school?

Seybold: Two reasons. The first thing is that mine was the first year to get a National Science Foundation fellowship for economics. It was always in hard science before that. That should have been a warning because what I discovered in graduate school was there was, at that point, a movement to try to turn economics into physics. That meant you had to be able to quantify everything to put it into formulas.

Unfortunately, it was very clear to me that a lot of the really important things were not quantifiable and therefore were exogenous to the models. They were basically still assuming that human beings are rational. And human beings are not rational. I would have been trying to make my way in a field in which I was already at odds with the mainline thought in that field at the time. That's easier to do when you're established, but harder to do when you're starting out.

More importantly, I'd done the stuff with computers when I was in college. I had been following what my father was doing. I was convinced that computers were going to get better and better. In college, what struck me was—from economic history in particular—was the importance of information and the importance of education. What I saw was that we could take computers and could program all the craft skills required to make information public into the computer. We could democratize the distribution and publishing of information.

Grad: This was something you saw at that point in time? Or was this something you saw later?

Seybold: No, that's what I saw then. We were talking about words. But there was no reason, if the technology kept getting better and better, why you wouldn't be able to encompass illustrations, pictures, motion pictures, sound, everything. You could see how you could start with print and go all the way through the entire chain of how people communicate.

Grad: Let's stay with that. Was this something you think you picked up from your father?

Seybold: No. No.

Grad: Was it something you picked up on your own? That's a fairly mature vision for a young man of 22 years old.

Seybold: In economic history, they had us reading East India papers and things of this sort. There was a lot of detailed stuff in it, terribly taught, but it gave me a chance to sort of ask questions: Japan went from a feudal country in the middle 19th century to fighting wars against Russia at the turn of the century and winning and then fighting a war against the U.S. less than a century later. No natural resources. How did that happen? The thing that people weren't focusing on was that 19th century Japan was the most literate country in the world. It had a hard-working, disciplined, literate population. Human capital was what they built on. Those kinds of things were jumping out at me, and that's why I put this stuff together.

Grad: What was your computer experience during your college years or prior to that?

Seybold: We didn't touch computers during college. Well, during college, I did because I had to do my dissertation. I worked with a professor on it. We tried to do it initially at an IBM computer at a steel plant in Lorain, Ohio, that was programmed with actually plug board type stuff. It just wouldn't do the job.

Because ROCAPPI was starting, and they didn't have a computer yet, they had computer time for debugging programs and so forth. So, I got a slot of computer time at two o'clock in the

morning at RCA in Cherry Hill, New Jersey, and I wrote a little program that formatted the stuff. They had an analysis program that was part of the suite, so I didn't have to do a whole lot of programming to do that. I wrote a program and never had a chance to debug it. You get one shot, so you're really careful about what you do. Fortunately, it wasn't a very difficult program.

I went in and fed the cards in that had my program in it. Then I had these boxes and boxes of cards that had been punched up at the data center, which was a tabulation thing at the college through the card reader. I will admit now one of the cards tore going into the card reader, so there's a data point that never got in there.

Founding ROCAPPI

Grad: That's an interesting story. I'm going to move ahead. Your father had started the company, ROCAPPI.

Seybold: Yes.

Grad: I'm going to push by some areas where you have a lot of documented material or we talked about at yesterday's conference on desktop publishing. Let's talk more about you, how you solved problems, and how you did things, more in detail? Why did he start ROCAPPI?

Seybold: Going back to the typographer's strike, my father had seen that there had been two commercial uses of hyphenation and justification at that point. We're talking about very early 1960. One was in the *L.A. Times* on an IBM computer. One was at the *West Palm Beach Times* in Florida on an RCA 301 computer. That was just hyphenation and justification of wire service copy to drive line casters—very simple stuff. But he saw that, if you put something in the computer, you could do commercial-quality work. You could do hyphenation, justification, and page makeup. You could store stuff. You could update it. You could put it out in different forms at different times. He saw the potential to do that with text.

Grad: Stay with me a minute. Here's a gentleman who had been a college professor, was a Quaker, had taken an assignment at American Friends, and had worked for the War Labor Board. All these kinds of things are not very commercial in the normal sense of the word.

Seybold: That's right.

Grad: He then became an arbitrator and, you know, was obviously making money doing that. But all of a sudden, he starts a business, became an entrepreneur.

Seybold: This was partly his son's urging because he kept trying to get people to do this. I kept saying to him, if it's such a great idea, do it yourself.

Grad: He can blame you for starting ROCAPPI?

Seybold: I'm sure I wasn't the only one. But basically, it was partly my pushing and partly his frustration that nobody wanted to do this.

Grad: He was a man in his fifties probably?

Seybold: Yes.

Grad: And he takes the leap of faith to start a business?

Seybold: Not only that, but the business turned out not to be profitable for a long time and was a financial burden.

Grad: This is my question. I gather he was making money fairly consistently as an arbitrator.

Seybold: Sure. He was making a nice salary as the director of this association, but he'd been doing that for years. I'm the same way. You do something for too long, the challenge goes out of it, so you need to expand. You need to move on. You need new challenges.

Grad: He had still two kids that he had to support.

Seybold: That's right. My mother thought it was a crazy thing to do. That was a problem.

Grad: I did a somewhat similar thing by leaving IBM at 50 years old and starting my own consulting practice. My wife, and my children who were still in the house, were somewhat aghast at that decision.

Jonathan Joins ROCAPPI

Grad: How did you make the decision to join your father?

Seybold: The revelation came to me about the potential right toward the end of my first year in graduate school. I suddenly could see very clearly what could happen. Here was a chance to be part of what could be a profound technological revolution. Rather than teach economics to college students someplace, I could be part of a revolution. That was compelling.

Grad: You started graduate school in the fall of 1963.

Seybold: Right.

Grad: And you joined ROCAPPI by June 1965. He'd already had been working on ROCAPPI. Had you been working with him?

Seybold: No.

Grad: You work any summers?

Seybold: No.

Grad: You hadn't done anything there in the summer of 1964.

Seybold: In the summer of 1964, I was in New Haven. I had to do a summer crash course in German. I wasn't worried about passing the French, but you need two languages for reading economics in graduate school. French was going to be easy for me. I hadn't done German since high school, so I took a crash course in German that summer.

Grad: Okay, so you had no work with ROCAPPI.

Seybold: No.

Grad: Did you talk with your father much during that time about the company?

Seybold: Yes. I went back on vacations, and we talked about stuff. I'd seen things, but I was not involved with it.

Grad: Did he invite you, or did you invite yourself in?

Seybold: I just said to him that this is what I really wanted to do, and he said that he would love me to come. So, I did.

Grad: Always a risky proposition going to work for your father.

Seybold: It is. Going to the future, that's part of the reason later on I went to California because you'll always be the son to a certain extent. In his case, it was a matter of not showing favoritism, so what I did there I had to earn.

Grad: Did you consider any alternatives, any place else you wanted to work?

Seybold: No. This was the only company in the world that was doing this. This was absolute cutting edge.

Grad: You were a college student. You don't know the rest of the world. You had limited information, and it was all funneled through what you heard from your father. Come on.

Seybold: I knew enough. I mean I knew through him because he'd looked at things thoroughly. I knew from him the outlines of what was being done elsewhere. We knew about MIT (Massachusetts Institute of Technology). We knew about Palm Beach. There was nobody doing anything remotely like what he was doing.

Grad: That's great that you were aware. Again, I think about your age. You were 23 when you left Yale?

Seybold: I was 22 and married.

Grad: Oh, you got married. Tell me about that.

Seybold: I met her my first day in high school. We became a couple. There were actually two couples in the class. This was pretty remarkable. We are friends to this day. We dated through high school. Then she went off to Mount Holyoke, and I went to Oberlin. Her parents didn't approve of this, so they pulled her out of Mount Holyoke after a couple of years and sent her to the University of Florida. She accelerated her course there. She came up to the Philadelphia area on Christmas vacation, and we got married in January 1964. Her name is Patricia Maston. Her father was second-generation Lithuanian, and her mother was third-generation Italian.

Grad: Did your parents approve of the marriage?

Seybold: I never gave them a choice. I never asked them. This is what I wanted to do, and they supported it.

Working for ROCAPPI

Grad: Where did you locate when you were working for ROCAPPI? Where were you living?

Seybold: We had an apartment right in the area. ROCAPPI was actually in Springfield, which was on one side of Swarthmore. We were on the other side of the town, so we were four miles away or something. She was teaching in the local schools. She taught junior high school

and high school when we were in New Haven. She ended up teaching elementary school, fifth grade, when we were in Swarthmore.

Grad: Let's talk about what you did at ROCAPPI.

Seybold: When you have a startup company, you end up doing whatever needs to be done. That's what I was doing. You sort of evolve into people assuming responsibility. I started out doing whatever needed to be done, wherever there were problems, and as I got trained and learned more about this stuff, I ended up within a few years being in charge of all the software development. The hardware reported to me. And I was in charge of several major accounts.

We had hired a guy who was a typographic salesman named Hans Weiss, who knew more about typesetting and printing than any human being I've ever encountered. I learned everything from Hans; he'd take me around to show me stuff. He had a real engineering kind of mind, which sort of fit with mine. We could talk about not only what things were doing, but the mechanics of it, why it was done this way, and what the constraints were. I got really steeped in the craft that we were trying to replace.

Digital Typesetting

Grad: Who were your clients?

Seybold: Clients were major New York publishers (McGraw Hill, Holt, Rinehart, Winston), the Christian Science Church, Ford Motor Company, Chrysler, Federal Mogul Corporation, and National Geographic.

Grad: What were you selling them?

Seybold: All of them produced typeset output. The book publishers were publishing books, and we tended to want to look for books that were going to be revised and updated so that being on the computer was an advantage. The other people were publishing things where some data manipulation plus typesetting was useful, such as a parts catalog. We did the first library catalogs. We did a map index for National Geographic. It was a big project.

Grad: You say, "We did." What does that mean?

Seybold: My father thought, when he started out, that he could be a trade shop and a service bureau for trade shops. That didn't work. We had to deal with the publishers. We had to go in and understand their problem and say, "For this kind of work we have a solution that takes you into a new realm you didn't have when you were just sending things out to be typeset. Here are the advantages, and here's what putting this all through the computer can do for you."

Grad: What did you build on the computer to enable you to do it? Or did you get programs from other people?

Seybold: We wrote everything. We had to write our own assembler because the RCA one was terrible.

Grad: You were using the RCA 301?

Seybold: Every piece of software was written by us.

Grad: What kind of language? Assembler?

Seybold: Assembler.

Grad: This was the 1960s. We already had Cobol. We had a lot of languages.

Seybold: We had a 20K, 6-bit machine. The first time we assembled the main hyphenation program, it didn't fit in memory. We spent time crafting stuff.

Grad: You were short of money? Is that why you had such a low-end machine? Were you going to deliver the machine programmed to do this, or was someone going to deliver the machine?

Seybold: No, no. We were a service bureau. National Geographic, for example, was doing the map index. They would come up in a car, and they would give us that week's worth of stuff for making the maps, for all the entries that went on the maps for that week. We had these old ladies who were Friden perforator operators. They were typewriters with a bunch of paper tape. The women would type the stuff all up with the codes we had and put it into the computer. We built this database, and then when we had the whole database, we'd sort the thing into the sequence they wanted. Then they actually had their own typesetter. We sent them back paper tape to drive their Linofill machines.

ROCAPPI Financing

Grad: This was 1963 to 1965, and you go on right until the 1970s. When do you replace the 301?

Seybold: We replaced the 301 with a 360 after we were acquired by Lehigh Press in 1967. We were living hand to mouth before that.

Grad: These were some pretty significant clients you're talking about. An RCA 301 in the 1960s was certainly an outdated machine to say the least, but you didn't have the cash to do more.

Seybold: That's right. When we started to move to the 360 at the end of the decade, that meant rewriting everything, and it meant rethinking everything because we had done this to the constraints of a machine that had no random-access storage. When you get random-access storage and big memory, everything changes.

Grad: Did you get a Model 30 [IBM System/360] , or something larger?

Seybold: Yes, a Model 30

Grad: Your father started the company with no outside financing, just personal money?

Seybold: It was friends and neighbors because nobody in the industry would put money into it. There was no such thing as venture capital then. We were always short on cash because we were always dependent upon money coming in from jobs. If payments were late or a job was late, for that week's payroll we'd have to pay from the bottom up.

Grad: Were you getting a salary?

Seybold: Yes.

Grad: How did you negotiate your salary with your father?

Seybold: I didn't. <laugh>

Grad: I see. He told you what you were going to make?

Seybold: He offered me a salary. I accepted. This was not something I was doing because I expected to get rich at it. It was something I was doing because I believed in it.

Grad: How many employees did ROCAPPI have during this period before Lehigh bought it?

Seybold: There were certainly 40.

Grad: Are you including all the people doing the key punching?

Seybold: Yes. It could have been more than that because we did the National Geographic stuff on the night shift for the keyboarding, so it could be 50.

ROCAPPI Management

Grad: Who was managing it?

Seybold: When I arrived there, we had some people who were ostensibly managing the thing, but basically what happened over time was that they weren't terribly good at what they were doing. They were from other areas and didn't have a background, so I ended up taking over gradually a lot of the jobs.

Grad: What did your father do?

Seybold: He was the visionary. He had the ideas.

Grad: He was a salesperson in a sense?

Seybold: He went out and had customer contacts as well, and he did a lot. Early on, he did most of the relationship building with the people who were going to be our customers.

Grad: He would have known them from his previous work there.

Seybold: Not necessarily. The Chester County Pennsylvania Library just came out of the blue. The Chrysler Corporation stuff came from a typesetter in Detroit. Stuff came in from different ways, and we were very visible. We promoted what we were doing. We were visible. We were known, so at some point, stuff starts coming to us.

Grad: You mentioned doing a book on the CRT (cathode ray tube) typesetters for GCA.

Seybold: My father had been the executive director of this piece of the Printing Industries of America, which became the Printing Industries of Delaware Valley. He was in this environment from the very beginning. He always kept those contacts, and he convinced the Printing Industries of America that computers were the future for publishing. They started a subgroup called the Graphic Computer Communications Association, GCCA, that later was shortened to just Graphic Communications Association.

Norman Sharff was the director of it right through into the 1980s. He started doing little conferences to promote this stuff. We spoke at those conferences. While he was doing other research on CRT typesetters for our use, he asked me to do a book and then a video on it,

which I did. I made up a whole test suite of pages that ROCAPPI had done. They were very varied pages that we used as a test suite to test out the different machines in terms of speed and quality of production, and we published the whole thing.

Grad: You were now 27 years old or so. That's quite an accomplishment at a very young age.

Seybold: I never thought about it. <laugh>

Grad: You didn't?

Seybold: No.

Grad: <laugh> Self-confidence is a wonderful character attribute, isn't it?

Seybold: Yes. <laugh>

Grad: I love it. Let's talk about your relationship with your father.

Seybold: The two of us ended up running ROCAPPI. I had my bailiwick and he had his, so we worked as a team. Publicly, I was always the son, but inside the company, he almost never questioned what I was doing.

Grad: You were managing, supervising, directing a lot of people who were considerably older than you. Was that ever a problem?

Seybold: No, no. Most of the people were not older than me. The ladies who were the perforator operators ranged in age from teenagers to a lot of them were mothers, but the computer operators were young, so the key people who made the company successful were all young.

Grad: Interesting. I was working at GE as a 20-year-old and was on a union factory floor and that was a problem. I remember my boss telling me, "You either have to listen to their fishing stories and talk to them, or you're going to get killed." <laugh>

Seybold: The programmers were all young. One of the best programmers I've ever seen was Pat Steuber, who took a programming course between high school and college in the summertime. His father had been at Los Alamos. He went to Swarthmore College, and then started working for us and dropped out of college. That was my first exposure to a brilliant

programmer who was arrogant because he thought that everybody else was inferior to him and who was difficult to deal with because of that.

Lehigh Press Acquisition

Grad: So, on to Lehigh. You were cash short.

Seybold: That's right. Holt, Rinehart, Winston said to us that we needed a steady flow of work. When we had work, we were doing fine, but the work came in spurts and we had slow periods. We used the slow periods to create the Bible database, but we weren't getting paid for that at the time, so we needed a steady flow of work. Holt Rinehart said to us, "We have this whole series of stuff we will give to you, but we don't dare because this is a very vital part of our business and you're not financially stable. If you will agree to be acquired by one of our favorite suppliers, we'll give you the business."

Grad: It sounds like a forced marriage...a shotgun marriage.

Seybold: Yes. Right.

Grad: What was the deal when you were acquired?

Seybold: Basically, we ended up moving from Pennsylvania into an addition that they'd built on to their plant. Financially, they acquired the company, which meant that the ROCAPPI stockholders got their money back, but I don't think they made a whole lot of money.

Grad: You didn't get stock in Lehigh?

Seybold: No, no. We were employees.

Grad: You just came over as employees.

Seybold: That's right.

Grad: Did they pay you for your technology?

Seybold: They rescued the company.

Grad: Ah!

Seybold: It was instantly successful. Our big problem was the lack of steady work. We got acquired, and that was instantly solved. That was in 1967.

Grad: That's when you switched computers?

Seybold: The first thing we did was buy the cathode ray tube typesetter because the thing that was limiting us was the output device. Then we started the process of doing the conversion to the 360. That meant rethinking everything we were doing and saying, "Now the game has changed." We got a bigger playing field. We got random access.

Grad: You were still going to operate as a service bureau?

Seybold: Yes, and we still wrote the stuff in Assembler because computer time was still expensive, and we needed to be as efficient as possible. I can remember sitting down with just three of us, two programmers and I, sitting down with a calculator and the 360 manual that had times for all the instructions, debating different ways of doing the main loop of the H&J program. Every character we'd go through and therefore it had to be efficient. We were gaming different strategies for how we did things and sitting there and figuring out instruction issues and times.

Grad: At that time the model 30 wasn't a very powerful machine.

Seybold: No, no, no.

Grad: You were doing a lot of complex function stuff.

Seybold: That's right. That's right.

Grad: You made that transition during the 1967 to 1968 period?

Seybold: It was still not complete when I left.

Working for Lehigh Press

Grad: You left in 1969? Your father was an employee at that point still?

Seybold: I left in 1970. I had a three-year employment contract, and I left at the end of the summer in 1970 when it was up. My father left in December 1970.

Grad: How did you feel working as an employee in a company like that?

Seybold: I learned things from it the first year. We were acquired in 1967, and because I had to be responsible for budgets, basically I was running the company inside of it.

Grad: You were still running it as an independent unit?

Seybold: Yes. I got called into the president's office. These were printers. They were rough-and-ready people, and they had a company whose stockholders were mostly family members. John DePaul, the president, said to me, "You missed your forecast for December." The revenue I thought was going to come in December did not come in until January, and he says, "That means X number of cents per share for the Lehigh stock. I've got these shareholders, and they're really unhappy about this." He said, "Don't ever, ever miss a forecast. You can beat a forecast, but don't ever miss a forecast because we're depending on it." That was drilled into me, and when I ended up later on running my own company, I did a lot to run that by the budget.

Grad: Interesting. Budgets have the two elements. You're talking revenue forecast.

Seybold: That was revenue forecasting.

Move to California

Grad: You were with then with two companies, Composition Information System and then with Autologic.

Seybold: Before I left ROCAPPI, I had previously gone to California on a consulting project. I knew we were going to be leaving. We would have loved to have gone to the south of France because we loved it, but I couldn't figure a way to make a living there. I went to Southern California and figured this was really much nicer than living in Philadelphia. There was a newsletter that was serving this sort of nascent industry called composition information services, and I was offered a job. It was run by one guy. I was offered a job to come in and basically take over a lot of the stuff of doing that newsletter since he was doing two of them. It was a chance to move to California. It was good pay, and they paid for a chunk of the move.

Grad: Did you have children by that point?

Seybold: Yes. By that time, we had our older daughter Nancy. Nancy was born in 1967, and Karen, our younger one, was born in California in 1972.

So, I started working on this newsletter, and it was fun to begin with because I was gathering all this information. A lot of the stuff was getting press releases, assembling press releases, and so forth. We wrote stuff. After some months, he called me into his office and said about something I

had just written, "We can't publish this." And I said, "Why not?" He said, "We can't bite the hand that feeds us."

At that point, I discovered that he was being paid to provide favorable coverage. I hadn't encountered this before, but he was being paid by most of the major established companies in the industry. At that point, I said, "No."

Grad: You did some writing when you were part of ROCAPPI, but that wasn't a major part of your work.

Seybold: Correct.

Grad: Now you took a job where research and writing are a major part of your job. That's a significant change. You were running a business, and then you changed to be a researcher and writer. Why do this, other than wanting to move to Southern California?

Seybold: I didn't know how to do this yet, but my sense was that I had been a pioneer, but there were all these other people coming and doing things. ROCAPPI was alone when it got started. By this point, there was a bunch of stuff happening, and if my focus was to be part of a revolution and move things forward, I felt I had to pivot between being a pioneer to being a catalyst. Basically, lots of people were going to do things. There were people piling in, ideas coming in and so forth. The thing that was going to be big was communication, coordinating, getting conversations going, helping this to move along, as other people were doing the work, were off there doing the development. I was no longer doing development. I had the advantage of having done it before so I knew what was involved, but at that point there were lots of people doing it. Being one of those people doing it was no longer compelling to me. What was more compelling to me is being able to be involved with everybody who is doing it.

Industry Consulting

Grad: You were 28 years old. You had one child, and you moved out to Southern California. You found out these people were really not playing the game with your set of principles, so you left them.

Seybold: That's right.

Grad: Then what did you do?

Seybold: I took some unemployment, and I started looking around. I put feelers out and so forth, and the thing that was most promising was there was a nascent company in the San Fernando Valley called Autologic. It was a spinoff from a company in New York called

Alphanumeric. They were setting out to develop a low-cost cathode ray tube typesetter. I became a full-time consultant for them. They were going to build something that was one-third the price of anything that had existed before. It was going to make a huge impact on the industry. I invented the command language for it because I had a pretty good idea of what these things could do, and I wanted to finally build a machine that would do everything that these things could do. So, I invented the command language for it. I worked with the guys who were running the control software.

Starting Seybold Newsletters

Seybold: My father had left ROCAPPI at the end of 1970. We started having conversations with Norman Sharff about doing a newsletter. I had newsletter experience. We were going to write books, but then we realized books would be obsolete because things were moving so fast you couldn't just write a book about it, so we ended up doing a newsletter. The way to be the catalyst was to write a newsletter.

Grad: The consulting was a relatively short assignment?

Seybold: That overlapped with doing the newsletter, so when I actually came into the newsletter to write the article about the APS-4, the machine that was being developed, right up front I had to say, "There's a conflict here. I had a hand in developing this."

Grad: Whose idea was it, yours or your father's?

Seybold: I don't remember. I think it was a mutual decision.

Grad: What did your father do after he left ROCAPPI?

Seybold: He started doing consulting also.

Grad: Who was he consulting for?

Seybold: I don't recall. He was doing some consulting on the East Coast.

Grad: You were in California, and he was still back in Pennsylvania. What kind of communications do you have during that period?

Seybold: Frequent phone calls. Also visits.

Grad: So, it was a good, positive relationship?

Seybold: Yes, sure.

Grad: Did your father have that same vision as you did?

Seybold: Yes, we talked about doing books and realized immediately that wasn't going to be a thing, so the next thing was doing the newsletter. He talked to Norman Sharff about it. Norman said, "This is great." They would publish and distribute it, and they would pay us a percentage of what they sold.

Grad: You were not going to distribute yourself?

Seybold: Initially, we had a jump start because GCA had its whole membership, so they could put it out immediately, and they would get subscriptions for it. We were not going to make our living doing the newsletter. We were going to make our living doing consulting, but the newsletter was our way of pushing the industry forward. It was our way of having this conversation and trying to advance the technology, to advance things and keep things moving in the right direction. We did have visions about wanting things to be done right rather than being done wrong, so helping people write a good hyphenation and justification program was really important because we knew how to do that.

Industry Customers Versus Vendors

Grad: You were doing a newsletter and consulting. Didn't you see a conflict of interest?

Seybold: Our consulting was primarily for users, people who were going to acquire the products of this industry, so our long-term relationship, the things that would last over some period of time, those were all for users.

Grad: Who were the users?

Seybold: My clients included Time Inc., Justin's American Yearbook, and a bunch of different newspapers. In our parlance, they were the customers, and the people who supplied the stuff to them were the vendors.

Grad: What were they vending?

Seybold: They were selling computer typesetting systems. They were mostly turnkey packages, and for them we did typically two different kinds of things. We did consulting days—a day here, a day here, a day there. That was mostly a matter of someone had something they were developing and they wanted us to come in and critique it, to say, "You can do this better. What about this? What about that?" In our view, this was entirely in keeping with us trying to

move things along. We were trying to help people who were building the stuff build what they should be building for the people who were going to use it.

Grad: In a sense, you were taking what you knew of customer requirements and applying them against what these other people were trying to do.

Seybold: Right. And we were helping people map what they were doing to what the customers wanted or needed and helping them to do a good job of it rather than a half-assed job. Most people who were doing this stuff were going through a learning curve, learning what good typography is, what the quality standards are, what's required. We had to help them and say, "This is what you need to be doing."

Grad: It seems to me there are three levels to what you're talking about, but you also had to make a living. The buyers of the newsletter were going to be the users primarily rather than the manufacturers.

Seybold: Both.

Grad: You expected to aim at both.

Seybold: Yes. For example, Lee Lorenzen [Ventura software in the 1980s] said he read the newsletters and that's how he knew what he had to do.

Grad: Was this also true in the 1970s? Did you have that same vision?

Seybold: Yes. It never changed.

Grad: Your market was both the developers and the users?

Seybold: Yes. We were trying to move an industry along, which meant both the people who were developing the product and the people who were using the product.

Grad: You really didn't consider yourself as part of the computer industry or the software industry, did you?

Seybold: No, no.

Grad: In 1969, IBM unbundled [software and services from hardware]. There was a fairly significant independent software industry starting to develop, but you didn't consider

yourself in that area. There were also companies who were serving them; Larry Welke with his publications, and the Gartner Group starts to come in around then.

Seybold: No. We were trying to move the publishing industry into the computer age, and that meant working with people from the computer side of things as well. That meant DEC, IBM. My involvement with IBM didn't come until later, but it did involve IBM both in the New York and in Boulder, so we were involved with all the computer companies increasingly during the 1970s.

Computer Automation in the Newspaper and Magazine Industries

Grad: You mentioned book publishers, magazine publishers, and newspapers. Were they part of the early picture, or did they come later?

Seybold: Newspapers, yes. There was all the stuff happening on the commercial side, which is where we came from. Then in the 1970s, the big thing that happened in terms of the newspaper systems, as I said in the desktop publishing sessions, was automating the entire company. The product of the company was produced through the newspaper system. All of the interactions, all the professional people right down to the classified ad takers, all went through that computer system. It was absolutely the central core to how everything was organized.

Grad: Those are what we call mission critical applications, and that was certainly mission critical to newspapers.

Seybold: This is more than mission critical. If you have something like a reservation system that goes down, you've got a problem. But in this case, the entire company was built around this.

Grad: There were other parts though: the distribution of the newspapers, the advertising, the sales elements, all these things.

Seybold: But the advertising was part of this as well. In classified advertising, those people were salespeople, not ad takers, so you provided them tools, as Richard Ying explained, to help them sell. What was outside of this system were the outside people who were selling display advertising and then everything that happened after you had a piece of film that went on to the printing press. The actual distribution of that, putting it onto paper and delivering the paper to your home, that mechanical process was outside this.

Grad: Did you start your company in 1971?

Seybold: Yes. I gave a speech at the National Computer Conference in 1971 or 1972, and these two guys came up afterward and wanted to talk. It was Doug Drane and Charlie Ying from Atex.

Grad: We won't cover that now because we covered that during the desktop publishing meeting, but apparently at least Richard Ying talks about you as being the primary force in how they decided what needed to be done and what should be done.

Seybold: That was my father. What happened was my father had *U.S. News* as a client. *U.S. News* had a huge problem. They were changing their printing company, and they needed to be able to transmit stuff electronically to Donnelley, the printing company, in a very short period of time. They could find nothing that would do the job. These guys came up to me and described what they're doing. My first thought was, "This could be interesting," so I pointed them to my father and *U.S. News*. They went to *U.S. News*, and all the relationship at that point was from *U.S. News*. My father was a consultant paid by *U.S. News*, but part of what he had to do as a consultant was make sure these guys built a system that was going to be good enough to produce *U.S. News*. That meant teaching them what to do to meet the client's requirements.

Grad: We're not going to cover the Atex story here, but it is an unbelievable story that three guys who hadn't a clue were given the responsibility of doing this complete automation. And they built one heck of a company over the next five to 10 years and dominated an industry in terms of the technology.

So, both your father and you were doing consulting?

Seybold: Right. We had separate clients. *Time* was my client. *U.S. News* was his.

Grad: How were you getting paid by these clients?

Seybold: By the day.

Grad: What kind of rates were you charging then? Do you remember?

Seybold: I don't remember. <laugh> I remember thinking at one point that I needed to charge more because I was paying my lawyer more than I was getting paid per hour.

Mission of Seybold Publications

Grad: That's a good test, I think. Let's talk about the economics of the newsletter business in those early years.

Seybold: After the first year, we were producing it ourselves. It was all in house.

Grad: For record purposes, what was the mission of the newsletter?

Seybold: We were trying to push an industry forward. That was the whole idea. To do that, we were trying to gather, evaluate, and disseminate information.

Grad: Let me challenge you on this a minute. It sounds to me like the mental goal was to enable the users to automate their processes. You were aiming to give the information to the users, so they could make intelligent decisions.

Seybold: We were focused on both the users and the vendors who supplied them because the vendors had to make this stuff. We were equally focused on both sides of this. Let me give you an example. There was a company in Sacramento that was a competitor to Atex at the high end of the market called Systems Integrators. I wrote a review of their system, although I forget what year it was. The review appeared in time for the ANPA Newspaper Show, where all these people showed their systems and they got it. It came out just before the show, and when I got to the show one of the people who worked for Systems Integrators took me aside on the first day and said, "Do you know what happened?" I said, "I don't know what happened." He said, "We came into our office on a Monday morning, and your report appeared. Jim Lennane, the owner of the company, had gone through this and circled every area where there was a criticism of the system and put it on the desk of the person responsible for that part of it and said, 'What are you going to do about this?'" We were trying to help the buyers decide what to buy, and we were trying to make the people supply them better and better at what they do. Move people along. That's what led me to Seybold Seminars later on, trying to exchange information and move this stuff along.

Grad: That is really a different vision and a different view. Your total vision was clear. You were trying to move an industry forward, but you did it in two ways. One was providing unbiased, objective information for the users, so they had the basis to make intelligent decisions. Number two, as a result of that, if the suppliers were intelligent and didn't simply say, "Hey, you're wrong. You must be getting paid by somebody," they would listen to what you were saying and try to improve the product.

Seybold: If they asked for advice, we'd give them advice. If they said, "How should we do this?" we'd say, "What about this? What about that?"

Avoiding Conflicts of Interest

Grad: You have some basic principles, which are very important, but that's where the potential conflict of interest comes in. You knew what everybody was doing. How did you avoid advising Competitor A that Competitor B is doing it this way? How did you avoid that?

Seybold: You can't do that.

Grad: Then how do you advise them how to improve without taking advantage of what you knew?

Seybold: Let's take an example. I go to Xerox PARC and Gary Starkweather, who is doing laser print stuff, shows me this thing he's working on. One of the problems with laser stuff is wobble. Gary has had this idea of using a pentaprism rather than a mirror. A pentaprism can wobble, but since both facets are wobbling, it stays flat. Brilliant idea, no one else had thought about it. I cannot tell or suggest this to anybody else.

Grad: But another company has a wobble problem. They say, "What do you suggest I do?"

Seybold: I can't suggest the same thing because that's proprietary information. You've got to draw those walls.

Grad: I understand that, but it's a tough line to draw as a consultant, isn't it? They're paying you money for your best advice.

Seybold: I'm sorry, but there are walls around stuff. I could not talk about anything PARC was doing until it was public. There is stuff I still can't talk about today that people were doing.

Grad: You mentioned to me before we started here that there were some basic things you wanted to make sure we covered as we talked about Seybold Publications. You talked about the objectivity. This is an example of it.

Seybold: Yes. From the beginning, this has gone all the way through. You cannot have either a financial or emotional stake in the success of any of these vendors.

Grad: You never had stock in any company?

Seybold: No, you cannot. You cannot morally because how can you be objective? Even if you think you're being objective, there are subjective forces there. I could never understand why

most people I knew in the computer press were buying and selling stocks of the companies they were dealing with. I didn't understand how you could do that. You also have to have some wall, some separation between how friendly you are with the people. There are people you like, and people you get along with and have dinner with and so forth, but you've got to be really careful that you're not personally or financially biased.

Grad: You obviously had no advertising.

Seybold: No.

Grad: That's an obvious way of creating a bias, as you had seen in previous companies. Interesting. You speak also about the culture. What do you mean by company culture?

Seybold: That really applies to the Seybold Seminars.

Grad: So that's a later point in time?

Seybold: Yes. Basically, the production operation and so forth of the Seybold Publications was in the East Coast, and my father ran that. The Seybold Seminars, which we'll get to next, is the first company I had a chance to run myself.

Grad: Did your father and you both see yourselves as catalysts in a revolution? That was a term you used.

Seybold: Well, I was always the person who saw things in the grander terms. He was more of an accepting type of person, and I was the person who always thought in more strategic terms.

Grad: Would you use the word pragmatist for him?

Seybold: Yes, yes.

Grad: Yet he took that leap of faith in starting the company. Interesting combination of things.

Seybold: <laughs> Yes.

Grad: Dreamer is not quite the right word, but you have a vision of what things could be and should be, and you want to make them happen.

Seybold: That's right. That's right.

Seybold Publications in the 1970s

Grad: Let's stay with publications and stay in the 1970s for now. So, newspapers became the driving force during that period of time?

Seybold: The newspapers were a whole separate thing onto themselves, okay? That was a whole separate industry, a whole separate world. There were at least 24 people making systems. People were even building systems for the baby newspapers.

Grad: Did you and your father focus on the newspapers?

Seybold: Yes, we focused on the newspapers. The only thing that came close to it was his thing with *U.S. News*. But I did virtually all the newspapers stuff.

Grad: You both did the writing?

Seybold: Yes, I always wrote because he had the production and so forth. I always wrote more articles per year than he did.

Grad: How often did the newsletter come out?

Seybold: It was twice a month and 22 issues a year. We didn't do a second one in December, and we skipped one in the summer.

Grad: And you did this all throughout the 1970s?

Seybold: Yes.

Grad: Starting in 1972 or 1973?

Seybold: Yes. And don't forget, a feature article was 14 to 16 pages. That meant eight, nine, 11 pages with two columns in 10-point type. There was a lot of text in there and pictures and everything else. This was pretty in-depth stuff.

Grad: Were you writing one or two of those a month typically?

Seybold: Yes.

Grad: Did you have to do the research yourself, or did you have people to help you do it?

Seybold: We did it ourselves. Over time we doubled the staff. The newsletter circulation grew. I never took out as much money as I put into the newsletters. We were doing these every month and we were doing tutorial things. We'd get up in front of people and talk to them and tell them what was happening. That was very useful because it forced us to organize our thoughts about what was happening and we always changed it. We got paid for that. That was done through GCA in the U.S. and other people outside the U.S. The money went into Seybold Publications, although I actually took out less in salary than the money going in for that.

Grad: I'm a little confused on the organizational structure. Was there a parent company in which you all held stock?

Seybold: The parent company was Seybold Publications.

Grad: Were there any suborganizations? How did you keep separate financial records?

Seybold: There was a brief time when we had a Seybold Consulting Group that was a separate organization. That was a two- or three-year thing that was organized as part of my father withdrawing from things in the early 1980s. But basically, it was Seybold Publications.

Grad: You talk about keeping your money separate, and you talk about the money going back in. I don't understand what you mean by that.

Seybold: We did conferences for GCA. Two of us were doing that. They paid us so much per person for everybody who came there, and we got paid a percentage.

Grad: Did that go into the company, or go to the person?

Seybold: Not to us. Seybold Publications did these things.

Grad: How about your consulting practice?

Seybold: That went to me.

Grad: Did you have your own corporation?

Seybold: No. No.

Grad: Did your father?

Seybold: No.

Grad: So, you just got direct consulting fees?

Seybold: That's right.

Grad: Okay, so that's how you kept it separate.

Seybold: The consulting was our primary source of income.

Grad: Who were the owners of the Seybold Publications?

Seybold: My father and I were the owners to begin with. Later, some key employees got stock. When my sister joined, she got some stock as well, and then it got split up later on.

Grad: Did your father and you keep the same ownership throughout?

Seybold: No. This was a bone of contention where it was supposed to be a partnership. Then he incorporated everything else and ended up taking more of the stock for himself. I rationalized this by saying, "He's got the burden of doing the production, and I don't. So that's fair."

Grad: The production was actually producing the newsletter and distributing it.

Seybold: That's right. He had the burden of that, and I didn't. As we grew, all that stuff reported to him, so that unequal partnership made perfect sense.

Grad: It wasn't an argument?

Seybold: No.

Expansion of Seybold Reports and Staffing Up

Grad: When did your sister join?

Seybold: I think she joined in the mid-1970s. She came from an office background, and she was really interested in word processing. That was an obvious thing for us to go into, so she ended up starting a separate publication. That was the Seybold Report on Word Processing,

which later became the Seybold Report on Office Systems, because it became more than just word processing.

Grad: Did she start that during the 1970s?

Seybold: Yes.

Grad: Was she also a good writer?

Seybold: Yes.

Grad: Tell me more about staffing up.

Seybold: First, we staffed up the production people in Pennsylvania. Then as we grew, we began to add more editorial people. After that, as we grew, we began to add people to do consulting and writing, but they were not co-located. They were in New England. We also had people in the UK and people in France.

Grad: Who managed the business?

Seybold: My father did.

Grad: There was some talk of switching roles in 1980.

Founding Seybold Seminars

Seybold: In 1980, there was another inflection point in the industry because the technology was really coming together. I could see that things were going to move ahead very rapidly from that point forward. It was obvious to me that we needed to have some place where the people who were doing this work could come together and exchange ideas and talk. Every industry needs this. We didn't have that, so I created it with Seybold Seminars.

The idea was to get the top people together. We would have sessions, talk about stuff, and discuss things. Again, the emphasis was on openness, sharing, and helping each other. It was aimed at both the people who are using the technology and the people who were developing the technology because you want the exchange between them to take place. And you want to encourage your users to talk together, vendors to talk together, and users and vendors to talk to each other. You want those conversations to take place. That's why it was a weeklong meeting. It was hard getting everybody together in the same place. We had sessions and discussions, but the real benefit took place outside of that, all the personal conversations.

I structured it so that someone would give a presentation, and the rules were no sales pitches. That was enforced by the fact that we had a moderator after a presentation, first it was me and later we had other people doing the moderating as well. We'd get up to ask follow-up questions and act as a surrogate for the people in the group because it was a reasonable sized group. Then we'd open it up to questions from the floor. But people knew that they were going to be asked questions about the stuff and they couldn't just say something and walk off the stage.
<laughs>

Grad: Was that your business Seybold Seminars?

Seybold: Yes. That was my business. That was deliberately my business because the publications were basically my father's business. I had a chance there to start to build my own business with my own ideas of what the culture should be.

Grad: Also, what the financials should be?

Seybold: It was entirely mine.

Grad: But you were still a part of Seybold Publications.

Seybold: Yes. I used the publications people as moderators, for example, so the seminars would pay the publications.

Grad: Were they two separate corporations?

Seybold: Two different corporations. My seminars would pay the publications for services that publications provided.

Grad: Were you the 100 percent owner of the seminars?

Seybold: Yes.

Grad: Did you continue some ownership in publications?

Seybold: Yes, I did.

Grad: Did you continue to do newsletters and so forth?

Seybold: Oh yes.

Grad: How did you find the cycles to do all this?

Seybold: Well, that's why I eventually sold the company. It just grew and grew and grew. There was an intellectual side of what I was doing, which was the content for the seminars and writing stuff for the newsletters, and there were more newsletters by that time. I had that, which the company was hugely dependent upon. Then I was trying to be a business person and run a business, and I felt I wasn't doing either job to the standards I would've liked. I felt stretched. So, I sold the company in 1990.

Grad: That was 10 years later.

Seybold: That's right.

Grad: You played both roles for 10 years.

Seybold: That's right.

Grad: Were you getting an income from Seybold Publications?

Seybold: We had a health insurance plan with GCA. The publications were under that. Then I had a salary for publications. I qualified for that. Later, as the seminars started to grow, we actually attached seminars to that as well and got our health care through GCA. At that point I was taking no income from the publications.

Grad: But you still were producing articles for them.

Seybold: Oh yes.

Grad: Had you stopped your consulting practice by that point?

Seybold: I was still doing consulting, but I did less consulting because I had less time for it.

Company Culture at Seybold Seminars

Grad: I just don't see how you had time. You built quite a business. Talk to me about the number of seminars you ran and the numbers of people coming there and how that tied in with trade shows. Give me some of that picture.

Seybold: Let me start by talking about the vision of what you want to do in a business. I've seen inside of an awful lot of companies. You have your own ideas about what you want to do. I

first went to my attorney, who'd been my business attorney for some period of time. I said. "You know I was wrestling with how do I set up compensation and deferred compensation for the employees."

We started talking about this and employees and so forth. He told me a story that drove what I did from then on. He said he had recently been in some legal conference. He was sitting next to the managing partner from a law firm in Denver that was famous for its collegiality, which is unusual in law firms. Michael asked him, "How'd you do it?" And the guy said, "It's very simple. If I'm thinking of bringing somebody new in, overnight I ask myself one question, 'If I hire this person, if I brought this person into the firm, would I look forward to coming to work more tomorrow because the person was there than I did today when the person was not there?' If the answer is yes, it's the right person. If the answer is no, it's not the right person."

This sort of crystallized my thinking, and that's what we did. I did look for people who had skills we needed when we needed particular skills, but I never hired anybody on the basis of what they had done. I hired them on the basis of who they were. That's particularly important when you have a small company. You can't provide the kind of supervision over them that you would if you were just running a large company. And people are going to make their own jobs. You're hiring the person and how the person fits into your culture.

At one point later on when we were established with a bunch of people, we had a new hire to make, and we were debating which person to hire. We had a couple of contenders. I forget who it was, but someone asked the key question. She said, "Which of these people can you imagine taking their shoes off and walking around in their socks?" Now this was a company culture question because we all did that. And it was instantly clear to us only one of them met that criteria.

Grad: Ah, that's an interesting story.

Seybold: You're building a business, and the people are building the business. It was morally the thing to do. You had to do profit sharing. This was a collaborative undertaking. Everybody had to share in it.

As we went along, we started to grow, and we had more and more people. Although there were a few exceptions in terms of specialist things, like the finance guy, virtually all of the employees were recommendations from existing employees. People said to their friend, "This is a great place to work. You ought to come here." That was gold because this person had been vetted by someone who'd known them for 10 or 15 years and who wanted them to succeed and wanted the company to succeed.

Over the 10 years, from 1980 to 1990, we had one person leave because she was Swedish and her husband couldn't get a work permit in the U.S.; he was also Swedish. We had a couple of people that we asked to leave; we said, "You really are going to do better someplace else." Later on, after the 1990s, I had a programmer leave because she'd maxed out. I told her she needed to go someplace else because professionally she'd be stuck if she stayed with us. Nobody else left.

Grad: How many people are we talking about? You built quite an operation.

Seybold: It wasn't as big as you think. I ended up having to run Seybold Publications by proxy. My father retired in 1983 or 1984. The company was split up so that my sister had the word processing stuff. The PC newsletter was given to my brother, and I took the publishing stuff. That breakup was official in 1985.

Grad: What did your father do after that? Did he really retire?

Seybold: He really retired. The seminars company had 20-something people. After the Ziff acquisition, it probably went to 30.

Staff for Seybold Seminars

Grad: Did you bring in temporary people for the seminars and things?

Seybold: The seminar people were the moderators. All of them were people who were writing in the publication. We had a large staff of people talking to the business side. There were two key seminar people in Malibu with me. Craig Cline was the second in command for the publishing seminars. Then in 1990, when I moved to doing Digital World, I recruited David Barron to do Digital World.

This is a perfect example. David had actually worked as an intern at one time for us. He was my daughter Nancy's super sibling at Yale. I seduced him into leaving the theater and come work for what was going to be the future. I said, "Come to California and do this." David is a natural networker. He has just amazing talents for networking and bonding with people. We were moving to make a deal with a bunch of new industries, and I needed somebody who had the skills I didn't have in terms of instantly bonding with people and making connections. He was fantastic at it.

Grad: So, he came to work for you?

Seybold: Yes.

Grad: Did Nancy ever come to work for you?

Seybold: Early on when we were doing the Seybold Seminars in the 1980s, she would show up and help hand out stuff in the beginning, opening sessions. It was really a family thing.

Grad: I understand that.

Seybold: We hired local kids to help prepare stuff, including Michael Penn, who was Sean Penn's brother. Sean was a terrible worker. Michael was a very good worker.

Expansion of Seybold Seminars and Trade Shows

Grad: Let me get some statistics on the record, if I might. You started doing seminars once a year?

Seybold: We started out once a year. We started in February and then moved to March very quickly because we needed time between Christmas and the event to do proper promotion for it. It was in Southern California.

Grad: How many people came to the first one?

Seybold: Two hundred. And then it grew.

Grad: By 1990, how many were coming to the seminars?

Seybold: In 1990 we were in Boston. By that time Seybold Seminars was probably 1,000. It was in the high hundreds actually coming to the seminar things.

Grad: Did you have two, one East Coast and one West Coast by then?

Seybold: We started with Seybold Seminars on the West Coast in the spring, and that actually drew people. It was a great time because all the East Coast people and all the Europeans were sick of winter by that time. Coming to Santa Monica or Beverly Hills the first week in March was very attractive to them.

Then in 1986, we had a demo area that sort of grew into a tradeshow. In 1986, with the desktop stuff coming along, I decided we were going to do a tradeshow with a conference. The first one was going to be a tradeshow with a conference; and that was going to cost \$250,000, which is all the money I had. So, we had to be successful at it. We were trying to attract more than the

audience overlap between the Seybold Seminars and the Seybold Publications. This was reaching out to a much broader audience.

I had just signed the contract for the space at the Hyatt Regency Embarcadero in San Francisco. They have a nice trade show area down below, a nice conference space. I was committed for a quarter million dollars. There was a new magazine called *Publish*. I went to see who had a shuttle vehicle we didn't have. Then I went to see the editor and publisher to enlist their help. I said, "You know, I'll give you some visibility with this. You can co-sponsor it." He listened to me and said, "This is a great idea. Okay, we'll do it, and we'll pay you to run the conferences." I said, "No, that's not the idea." And he said, "If you don't do that, we'll do our own and we will bury you because we have the promotional reach and you don't." And I said, "No." So, we left and we decided we were going to do it ourselves. At that point, we thought we were going to have competition, but he never got off the ground with it, and we did.

Seybold Seminar and Trade Show Audience

Grad: How did you contact the desktop publishing user community?

Seybold: We just started direct mail, trying to get whatever we could get.

Grad: I'm thinking about the companies that were selling to those users. They had the contacts, and they knew who they were.

Seybold: I knew all of them.

Grad: Did they help you by giving you names?

Seybold: No. They were selling, but they didn't know who they were selling to. No one knew who they were selling to. No one knew who this audience was.

Grad: This wasn't the newspapers. It wasn't the magazines: It wasn't the books.

Seybold: It was a whole new class of people who had not been in this sort of thing before. This was reaching out to an entirely new audience.

Grad: Just for the record again, we've covered a lot of what the company did and the tremendous impact it had on the industry during our desktop publishing meetings on May 22 and 23, 2017, here at the Computer History Museum, so I'm going to spend less time on this than I would normally do. But I want to put some numbers on the record because this is about the size and scope that people just won't appreciate. How many people eventually were showing up at the tradeshow?

Seybold: In 1993 it was at least 40,000.

Grad: Wow. And the seminars?

Seybold: The seminar in 1993 was more than 2,000 people.

We ended up doing two Seybold events per year because the distinction between desktop publishing and professional publishing was going away. As professionals were going to be using desktop stuff. So, what happened was we moved the spring one to the East Coast and called that Seybold Boston. We left the San Francisco one there, and that became Seybold San Francisco. There was overlap between them in terms of attendance and people who exhibited, but the San Francisco one was more desktop focused and by far the largest. In 1993 there would have been 40,000 plus people coming to the tradeshow in San Francisco and 17,000 or 18,000 to the one in Boston.

Grad: You had become the evangelist for the whole desktop publishing industry?

Seybold: Yes, if you go back to what I started with, this is where we wanted to go. We got closer and closer to being able to give everybody the ability to publish and breaking down all those barriers.

Grad: The technology caught up with your dream.

Seybold: Yes. I had confidence that it would. I didn't know what was going to happen in terms of computer technology. I didn't know how fast it was going to happen, but knowing a little bit about the sort of physics involved, I had confidence that we'd find ways to make these things cheaper and faster. As you build more and more computers, the economies of scale would suggest that they would get cheaper and cheaper.

Sale to Ziff Davis

Grad: Talk to me about the sale. How did you close out Seybold Publications and Seybold Seminars? What did you do?

Seybold: I was getting to the point where I was really feeling stretched. At that point we had the Seybold Report on Publishing Systems, two issues a month and the Seybold Report on Desktop Publishing, one issue, and a new publication, which we were just about to start called Digital World, one issue a month. By then I was spending most of my time on the multi-industry stuff. Most of my time was spent talking with all these industries that we're colliding with. That was fun. That was the new thing to do, but I had this whole legacy operation going. It was also clear that the tradeshow business, as you mature, is going to be a business in which only a

couple survive. For tradeshows to be seminal they have to be must attend events. That was true as long as there was rapid development in the stuff we were doing. It was going to be less true as things went on, and scale matters.

The other thing was I was doing profit-sharing with the employees. There was no exit strategy for anybody involved in the company, including me. There was no way for any of the people to actually capitalize on what they built. I had offers all along from people to buy the company, but I was then approached by a serious company making a serious offer.

Grad: This was Ziff Davis?

Seybold: No. Another company. I said, "Okay, I think the time is right now in terms of all the things that are going to happen here." I wasn't sure about the company. So, I called somebody at one of the Ziff Davis publications who had been poking me for some time. I called her up and said, "You've been poking me for some time and now things are in play." A day later I get a call from Bill Ziff. So, I got a proposal from both of them. I ended up picking Ziff because I felt that under Bill it was the more compatible of the two companies. It would be a better home for the employees. The dollar numbers were about the same, so I ended up selling the company to Ziff. What I didn't know was that Bill himself was about to retire and hand it on to his sons.

Grad: The company changed dramatically?

Seybold: It changed dramatically.

Grad: When did the sale take place?

Seybold: 1990.

Grad: You continued to work on the seminars?

Seybold: I had a five-year employment contract, I committed to five years and then serving a two-year non-compete thing after that.

Tension at Ziff Davis

Grad: You were paid well and then became a manager working for Ziff Davis.

Seybold: Yes, and that was fine at the beginning because they left us alone and we could grow. They never understood Digital World, and I felt that was the future of the industry, and the future for Ziff Davis. That was where things were going to go. It was a gold mine and we were

the first to do it. We were the first to bring together senior executives from all the industries. Before that they'd never met each other; they talked different languages and had very little communication. It was like they were from different worlds. The idea was to bring these people together because they were all going to collide. There was going to be common technology and common standards, and you'd better pay attention to that.

Some leading-edge people were doing this stuff, and immediately one of the things that happened at that conference that never happened to me before was people began to really worry about the moral and sociological impact of what they were doing. They could see that the change was going to be profound. They could see good stuff, and they could see bad stuff. We ended up with a bunch of really interesting sessions about the bad stuff as well as the good stuff.

But Ziff didn't understand this. Their model had salespeople. We never had a salesperson. We never had a single salesperson. If people wanted to exhibit in the tradeshow, they called us. They called us because they wanted to do it. We had service people. The people who were in the tradeshow side put in a lot of effort training the tradeshow managers at different companies. They trained them. The job of our PR people was to help the press and help the PR people in the various companies make the connections, and help people write stories and get the information, not to promote us. Ziff wanted to bring in salespeople to sell more space in the exhibits. They wanted to do all things the Ziff way, so that started to happen.

They acquired two companies about the same time, and one was in the Bay area with a culture that never worked. They thought we needed to combine these two companies for efficiencies because they thought bigger was more efficient and if they brought the Seybold people up then that culture will prevail. But it didn't.

Grad: Was this is in the 1993 to 1995 period?

Seybold: Yes.

Silicon Valley Startup in the 1990s

Grad: In 1995, your five-year contract was up.

Seybold: That's right.

Grad: Did you leave?

Seybold: Yes. I made appearances at Seybold San Francisco once or twice after that, 1996 and 1997 probably, but I wasn't really involved with the company.

Grad: After that you seem to be doing a number of things. You started a company called PGP Inc? What was that?

Seybold: Pretty Good Privacy. I'd known Phil Zimmermann from the conferences. It was really interesting starting that company. I was concerned as well as other people were that we were losing privacy in a digital world. The obvious way to try to protect that is to give people the ability to encrypt information, and that's what PGP did. That was a really interesting experience in Silicon Valley during the late 1990s when everything was driven by money. I hated it.

Grad: Did you close it down after a couple of years? What did you do?

Seybold: I don't want to blame anybody on record, but we had a president who believed that you get bigger or you die. You have to get big fast. He believed that the next round of money was coming in so he could spend everything he had. When the next round of money didn't come in, it was dead.

Grad: You run the business out of money. Yes. We had a number of those in the software industry.

Seybold: It was all money driven. It was a belief that you could raise this money and you could keep spending the money and you didn't have to pay attention to it. That was wrong.

Nonprofit Work and Later Startup

Grad: You've done a lot of work since, and you spoke about the nonprofit work you did.

Seybold: I tried to help save the College of Santa Fe, which was failing at the time. We didn't succeed and it had to be sold off. Then I was also involved heavily in pulling together a bunch of stuff in Santa Fe to get a bunch of land out of private hands into public hands to develop trails. That was fun because that meant working with all these different nonprofit organizations, the state legislature, the city, the county. and all this other stuff.

Grad: You certainly had enough money from the sale of your company.

Seybold: Yes. If I had been in Silicon Valley in the 1990s, I could've made a ton of money. But after the sale of the company, we had enough that I didn't have to work again. I wasn't going to buy jet planes and make multimillion-dollar contributions, but I had enough money to live on comfortably. That's all you need.

Grad: Santa Fe is your primary residence then?

Seybold: Yes. Another thing I was involved in was to startup a company that did these focusing eyeglasses.

Grad: What does that mean?

Seybold: About three minutes after you're born you can focus a certain distance. As you age your eye is less able to focus. You notice it in your 40s when you can't read text without reading glasses. You can then use them until about age 65 when it sort of bottoms out. The only solution for that is to have different prescription glasses for different distances or put them all into one set of glasses, which are called progressives.

Grad: I can't wear them because I get dizzy. <laughs>

Seybold: What you really want to do is have a pair of glasses that focuses the way your eyes used to focus. People have been trying to do that for a century. One guy succeeded. We built a company around those glasses. It was a very successful company. It was growing rapidly. Customers loved it. We were selling stuff mostly on the Internet. You know, you buy them and you can exchange them if you don't like them and almost no one returned them. But we could not get any venture capital money, so we funded it with friends and family.

We were on a path to break even. We were less than a year within break even and we could not get funding. We had a deal to sell the company to a major international company that fell through because a 43-year-old guy in management didn't see the need for the technology. At that point we decided we'd pull the money out.

Grad: Where are the patents and stuff?

Seybold: The patents are sitting in a shell company right now. We actually had designed four glasses, which are indistinguishable in appearance from normal glasses, and the way that we manufactured them they are only a few dollars more than progressive lenses.

These were circular to get the best possible vision. You can't do ones that are thin and rectangular because this involves deforming the surface and you can't do that very well. You could do most other shapes that you see.

Grad: Jonathan, I could spend another two hours with you easily. <laughs> And I'm threatening to do so sometime if you misbehave. Thank you so much for your time.

Seybold: Thank you. I really enjoyed it.

END OF THE INTERVIEW