Oral History of Richard Gentry

Interviewed by:
Burton Grad

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Table of Contents

Richard Gentry

Conducted by Software Industry Special Interest Group—Oral History Project

Abstract: Richard Gentry, a consummate programmer, describes his personal background in Texas, his education at Texas A&M and then his service in the US Air Force. He discusses going to work at IBM and teaching punch card equipment and thenpro0gramming on the 1401 and 1620 computers. He talks about how he came up with the concept of the Gentry Monitor and how it turned into the FASTER Type II Program at IBM. He relates leaving IBM to work for SYSDYN (founded by Bill Millard) and then working as an independent contractor after SYSDYN closed its doors. Richard covers how he and his wife, Grace, founded Gentry Inc. which used independent contractors not employees to perform professional services projects for its clients. He describes some of the major projects in which he was involved over the years including his work at Computer Election Systems and MJB Coffee and Hills Brothers. He closes with his going to work as the Systems Administrator at Gentry Inc, in order to sell the company.

Burton Grad: This is an interview of Richard Gentry conducted by Burton Grad on May 24th, 2006, at the Computer History Museum in Mountain View, California; this is one of the interviews that the Software Business History Committee has been performing as part of its ongoing oral history program. Richard, I'm glad that you're here with us.

Richard Gentry: Thank you.

Personal Background and Education

Grad: I would like to start by talking about your personal background and education.

Gentry: Well, I was born in Dallas, Texas in 1935. I attended public schools in Dallas and graduated in January 1952 from Woodrow Wilson High School in Dallas. I had been accepted and was going to attend Texas A&M College, but it wasn't going to start until the fall, so I got a job as a mail clerk in the mailroom.

Grad: Please go back and give us a little more family history. Was your family from that area, what did your parents do, that kind of thing.

Gentry: My mother was born in Plano, Texas. Her mother and father actually were in on the opening of the Oklahoma territory. They homesteaded there. She had four sisters. My grandfather apparently ran away after the last child was born, and no one ever heard from him since. He, so the family story goes, forged my grandmother's name to her homestead and sold it in Okalahoma. Anyway, they moved to Dallas, and we lived in the Dallas area. My father was born in Baxter, Tennessee. He was raised, at least partly, in Gentry, Tennessee, which was a town that my grandfather actually established. I think it had two stores and three houses, or something of that order, and then they moved to Lawton, Oklahoma, where he went to high school.

My father worked for the First National Bank in Dallas most of his life. That was really his career. My mother and father were divorced when I was about seven. I was raised by my mother, since my father was an alcoholic. I didn't see him for probably eight or nine years, and then we got back together. He solved his alcoholism problem by going to AA. So, my mother worked all her life. She raised us.

Grad: Did you have a lot of other family like aunts and uncles in the area?

Gentry: On my father's side, there were about seven siblings. He was in a family of eleven. There was one aunt and uncle, who lived not too far from us, and that aunt made the best biscuits in the world, but they're the only ones that we really associated with, because again, our families had separated, basically. I spent some time with my mother's sisters' families. That's about it.

Grad: Okay. You were saying that your first real job was working as a mail clerk, back in 1953 then.

Gentry: If you don't consider carry out boy at a grocery store which I did one summer. Yes, I made 96 cents an hour as a mail clerk, as I recall, and I was waiting to go to Texas A&M until my buddy graduated from high school, and we could go together. We went in the fall of 1952. Texas A&M at the time had about 5,700 male students. It was all male. It was a military school. Most attendees had to be in the ROTC.

Grad: Where is Texas A&M located?

Gentry: It's located in College Station, Texas, which is about 80 miles north of Houston, 180 miles south of Dallas. I spent four years there, majored in physics, graduated in May of 1956 and was then given a commission as a 2nd Lieutenant in the US Air Force.

Grad: You were in the ROTC that entire time then?

Gentry: Oh, yes.

Grad: Let's stay there at the college a little bit more before we go ahead. Were there aspects of the physics program that you were particularly interested in? Were there aspects that were of no interest to you? Can you describe any of it?

Gentry: Well, I just got into physics because it really interested me in learning how things work, what gravity is, and so forth and so on. I think that when I graduated, I was only one of two physics graduates from the school, so it was not a terribly popular major.

Grad: I had started as a physics major at RPI, and there were some physicists there where I said, "Hey, these guys are a lot smarter than I am. I better get out of this."

Gentry: Oh, well, yes, I can remember one class I went to and our instructor and one of the TA's, I guess, were standing over at the side, and they were talking electronics. I couldn't believe that anyone could think that fast, much less talk that fast about it.

Grad: Two more things. Were you involved in sports or athletics and what hobbies did you have while you were in high school and while you were in college?

Gentry: I'm kind of anti-organized sports, and I'll tell you why. I was about 12, when the Little League started, but it wasn't little league then. I think the YMCA was starting a little league, and so I thought, "Oh, yes, I'll go play baseball." So I went up and, you know, they line everybody up, and said, "Okay, you're going to be the captain, and now you choose." Well, guess what? I was last in line. I was small for my age. I had also been over promoted twice, so I was probably two years younger than most people in my class, and I thought, "Who needs this? You know, I don't need this," so I went back and made all A's in school. That was my sport.

Grad: That's what I was trying to get at. You apparently were a very strong student while you were in high school.

Gentry: Right, I was salutatorian in high school.

Grad: So that was the number two, valedictorian would have been in the highest grades, typically?

Gentry: The valedictorian and I made the same grades, but I had made my one B the semester before she made her B.

Grad: Oh, isn't that funny. You and I share some interesting common background in places. I was also number two in my class, not number one, and I had skipped grades when I was younger. I was the smallest one in my class, and so forth. Did that affect you in the way you related to others, or to the people you spent time with?

Gentry: Well, yes, because being two years younger, when I was in the ninth grade, I was 4'11" and weighed 97 pounds, okay? And, you know, the girls don't like kids, so you can skip that, and the jocks don't care for you if you're that small. There's nothing you can do for them, so I was an outsider, and we had a small group of about five outsiders. We were good friends, we enjoyed each other, but I felt that difference.

Grad: Games like chess, were any of these kinds of things of interest to you?

Gentry: I loved chess. I haven't played chess, however, in probably 45 years.

Grad: But at that time you were a good player?

Gentry: And everybody complained, because I would win, but I only won because I took a lot of time. I don't know whether I could win if you set a timer on me.

Grad: How about writing, and literature, and things like that while you were in high school? At college, I expect you didn't get much of that.

Gentry: Well, I'll just give you an instance. I mean, we had English classes and we did essays, and stuff like that, but I'll give you this instance. Forty years after leaving A&M, I got an email from a guy that I hadn't seen for 40 years, and he was a really good friend of mine, who lived next door to me in the dorm when I was a freshman, and we now spend time together, but at any rate, when we got together for the first time, he handed me this folder of things that I had written as a freshman. He said, "You got me through that class."

Grad: You weren't just good on math or science stuff. You were also capable in the writing and communication skills.

Gentry: I'm not sure I still am, but I was at the time, yes.

Grad: Anything else in that period of time that you think was significant or may have affected what you did?

Interest in Computers

Gentry: Well, yes. During either my junior or senior year our physics professor took us on a field trip to Atlantic Refining Company headquarters in Houston. And we saw our first computer. They had a 704, and we walked up to this glass enclosed room and opened the doors, and we were met be somebody in a white jacket, and they put a mask on you, and it had air conditioning, and the whole bit, and it was very impressive, obviously, and I enjoyed it very much.

Grad: So where did your physics interest come from? Just from the teachers at high school?

Gentry: No. When I was in grade school, junior high and middle school, I liked to read. We had a Book of Knowledge, or whatever it was, and I liked to read it, and I got very interested in some of the stuff that was going on. I was raised during World War II time, so there was a lot of technical type stuff going on, and gee, will this work, and why won't that work? This is how, and this is very new, and this is how that works.

Grad: I was wondering if your interest had to do with nuclear physics, atomic physics; it seems like that might have been a stimulus for you, or not, given when you were growing up.

Gentry: Well, it certainly would have been. The fact of the atomic bomb, and its use was probably a key factor in everybody's life at the time, and while it didn't start my interest, it certainly enhanced the interest. What is available, what is the world really made of? What is possible?

Grad: One of the other things that we've asked others is did you build things, either electrical, electronic, or physical things, projects of those kinds where you were doing those kinds of hands on work when you were in high school, or before? It doesn't sound like you did.

Gentry: No, I didn't. I was just remembering that during World War II, when I was a kid, you made all your toys, because there were none for sale. Metal was unavailable, you know. The guy next door to me had a small wood shop, and he would let me use his saws and things, and so I would occasionally make carpentry types of things, but it was not engineering things.

Grad: We've had a number of people bring up that they made their own radios, and did things like that.

Gentry: Yes. Well, I did make a crystal radio. I did it a couple of times, actually. Yes, and that was fun, that was interesting. One of my best friends at the time lived in the house

right behind us, and his older brother was a Ham Radio operator, and he got us interested in a lot of those kinds of things.

Grad: You gave me some notes ahead of time in which you speak of an event in an English class. Do you remember that story?

Gentry: Oh, yes. In one of the English classes, each of the students was required to prepare and get up and make a speech, demonstrating any process, or how something worked, describing something, and I don't remember what I did, but I remember this one kid's description, because he got up and he described a system of storing and accessing data using punch cards, and something that looks like a needle, you know, where you push it through-- oh, you want all with that date? Well, you push it through this hole, and pick them up, and now you've got all the cards with that date.

Grad: These were edge punch cards, if I remember correctly. As you lift the ones that hadn't been punched, it would leave the particular cards that you wanted.

Gentry: Right, right. And I was very impressed by that. I had no particular use for it at the time, but it stayed my mind.

ROTC and Other Activities

Grad: Talk a little bit more about your college work. Were there any particular extracurricular activities you were involved in, or other things that later on turned out to be of value to you?

Gentry: Well, I took fencing one semester. That was fun. No, not really.

Grad: You had grown up by then. What are you, 6 foot now?

Gentry: Yes, I grew ten inches in my senior year of high school.

Grad: Oh, my goodness. That changed your perspective, so to speak.

Gentry: Well, actually, it did, but my vision of myself, I guess, has always been that I'm small, and it's only been the last maybe 15, 20 years, I realized, "Hey, I'm not that small. I'm big enough."

Grad: Interesting.

Gentry: Yes, it is strange, but I guess it is what you get stuck with or grow up with.

Grad: Did you consider yourself shy when you were in high school?

Gentry: Yes.

Grad: College, too?

Gentry: Yes.

Grad: Do you still consider yourself shy?

Gentry: Yes. Not as shy, but yes. I'm not effusively outgoing, as my wife is, for example. I guess the answer to that question is not really. When you're in ROTC, it's like a military institution, so my extracurricular activity was being company commander, or being on the battalion staff, and those kinds of things.

Grad: So that really used up an awful lot of the time...

Gentry: It used up a lot of time; that, and my studies. When I was a freshman, this one other guy and I used to put the whole dorm to bed every night, and everybody else would go to sleep, and we'd be up to 1 or 2 in the morning.

Grad: So you were an intensive student, then. You worked very hard at it.

Gentry: Well, there will be people who will disagree with that, but yes.

Grad: Because a lot of people in college end up with fraternity stuff, end up with drinking. These are a major part of the curriculum for them. I gather that was not the case with you.

Gentry: No. They used to have beer busts at A&M. Our big thing every year was building the bonfire for our game with the University of Texas. And that took a lot of time; but yes, I would say most of my time was spent either studying or doing a military type thing.

Grad: Talk to me a bit more about-- because you did go into the service after that. Talk to me about the ROTC. You were a leader, you were a company commander? What were the titles that you had there at ROTC, do you remember?

Gentry: Yes, let me put it this way. Freshmen are always the underdog. I mean, it was truly a military school. Hazing used to be very popular at A&M. The actual physical hazing had stopped by the time I was there; well, it hadn't really stopped, but it was theoretically outlawed. Sophomores, excuse the language, are called pissheads. Nobody likes sophomores, because their duty is to work over the freshmen, okay? You get to be a junior; juniors were called serge butts, because they wore the serge pants, as opposed to regular khaki pants. Seniors wore senior boots, the old Calvary uniform actually. Okay, freshmen were basically privates; sophomores were like corporals, if you will, and squad commanders. Juniors were platoon commanders, first sergeants, that kind of thing. Seniors were the officers. When I was a junior, I was on the battalion staff. When I was a senior, I became the company commander of my particular squadron, but there were probably 20 units, 20 companies down there. There were probably four air force squadrons maybe, and X number of artillery squadrons, infantry companies.

Grad: A real mixture of those things.

Gentry: Yes, yes, any kind of ROTC. So company commander was as high as I got.

Grad: But that meant that you were leading a group of 30 or 40 or 50 young men?

Gentry: Yes. Yes.

Grad: Did you enjoy that leadership role?

Gentry: Oh, Yes.

Grad: But that was a new role for you, from what you described of your previous activities. You weren't a sports leader, or things like that, which some of the younger people might have been, those who were involved in sports.

Gentry: Yes and no. I enjoy a team approach to things, and in fact, in my career in computers, I've quite often been the project manager of the team, team manager for putting stuff together. I like it when people work together.

Grad: You're not an autocratic leader then, I gather.

Gentry: No. I always feel that I can learn something from someone else.

Grad: That's wonderful. That's very interesting. You were 17 years old when you went to Texas A&M?

Gentry: Yes.

Graduating and Getting Married

Grad: And you graduated in 1956.

Gentry: Correct.

Grad: And so you were just 21, or just turned 21 when you graduated?

Gentry: Yes.

Grad: You got married about that point in time?

Gentry: I got married that July the 11th. We had been engaged and had a church wedding already set up for August the 11th, but it turned out that on the 12th of July, I was supposed to report for active duty in San Antonio. I realized that Grace didn't really want to get married at the time, but anyway, I talked her into it; I said, "Let's go elope," and so we went up to Durante, Oklahoma, because Oklahoma did not have a waiting period for testing and stuff like that. So we drove up, got married. On the way back I had to write a hot check for $5 for gas, and I called my dad who worked at the bank, and said, "I wrote a hot check." I didn't tell him why, "Would you cover it?" and he said, "Oh, yes, okay." So, yes, we were married on July 11th, and this July we will have been married 50 years.

Grad: Oh, isn't that wonderful. Where did you meet Grace?

Gentry: Actually, this is a story in and of itself. As I had told you, I was very shy. I had been, I think, only to one teen party in my life, and I was a little anxious over that. Anyway, my mother and Grace's aunt worked in offices in this commercial area, side by side offices, and they were friends, and her aunt apparently said, "I have a niece I think your son would love." This is unbeknownst to me; so I was home one Saturday, and my mother said, "Oh, Richard, I've invited Jeanette, and her niece, Grace, who must have been 16 at the time, or 17, over for homemade peach ice cream," and I said, "Wait a minute, do I need this? No!" Well, my job was to make the homemade peach ice cream. It is my favorite food in all the world. I still make it. A couple nice things about it, peach season is only so long, so you get to eat ice cream all year round. I had started making it when I was two years old, because my uncle made it, but he let me crank it. Anyway, so I said, "Argh." She said, "Go get the stuff, and bring it back and make it," so I got in the car, and I was thinking that I'll just drive off and not come back, and let her figure out what to do about the peach ice cream. But I love peach ice cream. So I went back

home, walked in the house, and there was Grace standing by my stereo set, looking at my records, and saying, “I like your selection of records.” That’s how we met.

Grad: That’s a nice story. So you continued to go out together while you were in college?

Gentry: Not really, but kind of sporadically. I took her to one football game my sophomore year, and then I think that Christmas we spent a little time together. But the Christmas of my senior year, we spent the whole time together, and I guess I had already fallen in love with her. At any rate she went back to Radcliffe, I went back to College Station, then I guess I got a message from her, and she was coming back at the end of her school year, and would I pick her up at the airport. And yes, I did, and we spent several weeks together, enjoying each other’s company, and one night I said, “There’s something I got to ask you. Would you marry me?” and she said, “Yes.”

Grad: That’s a lovely story. You’re very different personalities.

Gentry: Yes. Oh, yes.

Grad: Probably makes it fun.

Gentry: Yes, well, that did help I guess.

Air Force Duty

Grad: All right, let me swing to your Air Force time. You went into the Air Force on July 12th on active duty in 1956.

Gentry: Right.

Grad: And where were you stationed, and what did you do?

Gentry: Well, I was in pilot training, and I was married now, so we spent the first maybe four months at Marana Air Base outside of Tucson, Arizona. This was primary flight training, and so that was our first experience with flying. It was in a single engine T34 and a T28. After that, because I had chosen open engine (???), I got a silver cup or bowl, claiming that I was the top man in the class in primary pilot training. Then I went to San Angelo (???), Texas, and I mention that because that’s how I got into multi-engine. You got to choose your assignment based on your class ranking, and so I didn’t really want to go fight a war, among other things, and I didn’t want to particularly fly fighter jets. They were new then, and in summer camp at the

air base outside of Phoenix, in my junior year, we were down in the flight line, and one of the sergeants there said, “You know, we never tell and the public never knows how many people, how many trainees, die learning how to fly jets.” And it’s true, you know, that’s not information that was publicized. Anyway, I went to multi-engine training at Goodfellow Air Force Base in San Angelo, Texas and the plane that we trained in there was the old B25. It was a neat plane. I really enjoyed that plane, and that lasted again, for a few months. Again, I don’t remember exactly how long it was, and then we got assigned to a specific duty. Mine was going to be to fly C118’s (???) for MATS, Military Air Transport Service, The training base for C118’s was in West Palm Beach, Florida and so we went and spent some time there learning how to fly them.

Grad: Was Grace with you during these travels?

Gentry: The whole time, yes. And in fact, my son had been born in July, 1957, one week before our first anniversary. So he was with us also. He was actually born in San Angelo, and then he was with us in West Palm Beach, too. Yes, when we’d been married three years we had moved five times, or something like that.

Grad: So then you had your final, your assignment was at...

Gentry: The MATS McGuire (???) Air Force Base in Wrightstown, New Jersey is an appendix to Fort Dix in New Jersey. The job was normally flying people to and from Europe.

Grad: So none of this that anything to do with computers or information technology, or any of those areas. You were a pilot for a number of years while you were in the Air Force. Did you consider staying in the air force?

Gentry: Yes, in fact I had a regular commission. Because of my grades and so forth when coming out of college, I was allowed to apply for regular commission. Grace was not happy with my being in the Air Force, and I was not happy being away from home as much as I was, because we’d take a three or four day trip once a week, or something like that. The combination of the two, plus I really kind of wanted to get back into physics helped me decide not to stay in the Air Force. But I had a couple of really neat flights, I might add, while I was in the Air Force. I went to Greenland a couple of times. That’s an impressive, very cold place. The first time I stepped out of the airplane it was 60 degrees below zero, and it was like being slammed up against a metal wall.

Grad: What was the name of the Air Force base there?

Gentry: Thule. Yes. There are some stories about that, but I’ll forget that. Another trip I really enjoyed was, I don’t know if you remember when Eisenhower was President, and he did

his South American trip. He was the first US President to do the circuit. Well, I was a copilot on a plane that took communications people down ahead of him, because at that time, he had to be able to hit the red button anywhere he was, you know, so we had to have the communication people there, so he could declare war if he needed to. That was a great trip. I had never been to the topics. I had never been to South America. It was really neat.

Grad: So in spite of some of those positive experiences, from a family standpoint, you had your second child, I gather in 1959?

Gentry: That's right, while we were at McGuire, Yes.

Grad: So that was sort of the trade off that you were making, plus the interest in going back into the physics field.

Gentry: Yes. I didn't go to school in physics to fly airplanes, really.

Grad: Well, some of the people become gung-ho with these kinds of things, and I was just wondering whether that had been a factor?

Gentry: No, I don't think you could call me gung-ho. In fact, they used to say about transport pilots, they used to say, "What is transport flying? Hours of boredom interrupted by moments of stark terror." It's like you're a high level truck driver.

Grad: But apparently your physical skills, your coordination, and so forth were excellent.

Gentry: Yes, yes.

Grad: And apparently your intellectual ability, the ability to learn and to perform very well at whatever you were being taught to do was very high. I gather that continued through this period of time.

Gentry: Yes. Oh, the other significant thing was, there was so much idle time in between flights, since we were only allowed to fly like 120 hours a month. So that's roughly four trips to Europe and back, I went and thought, "Yes, I should do something," and I went down and volunteered to work at the squadron when I was not out flying. That's when I was assigned as an assistant training officer; and the function of the training officer was to ensure that all members of the flight crew were up to date on their training, and this might be, you know, flight tests, it might be, you know, any type of training, and consequently, we kept a thick folder on every member of the flight crew, and we had to go through those folders, and ask, "Did he do

that?" "Yes, he did that." "Did he do that?" "No, he needs to do that." "When does he need to do this?" and that's when I thought back to that lecture in college, and where that guy came out and said, "Look, you can pick the right cards." And I thought, "Man, I would like to have that. That would really save a lot of time."

Grad: But you had no real exposure to use of punch card equipment, or anything like that prior to that point in time?

Gentry: No.

Grad: Okay. You then get discharged in 1960.

Going to Work for IBM

Gentry: Well, we came out to UC Berkeley for a couple of reasons. One, is they accepted me. Second, at that time, they were extremely highly rated in California, and throughout the US, and third, my wife's brother had just graduated from high school, he was 18, and he wanted to go to college, but they were kind of short on money and we said, "Well, if you can get in, we can both go to the same school, then you can live us," and so he did, and we all came out to California in 1960. I spent one semester in the graduate school of physics. I was not working and my father was sending us $500 a month as a loan, which bothered me. I was an adult; I had two kids and a wife.

Grad: But you had reconnected with him when you were a teenager.

Gentry: Oh, Yes. I loved him very much. It was an interesting experience that semester. For one, one of our professors was Donald Glaser, who was developed the bubble machine, the hydrogen bubble machine, and he liked to talk a lot about it; he told us how he did it, and all that, but he didn't teach us physics. He just talked about how he did things which was all right and very interesting, but the thing that really turned me off, at least to UC Berkeley was, I felt like the professors, or the department, or the school was a little bit sadistic. I went into one exam, we had a two hour exam, I don't know whether it was nuclear physics or whatever it was, and there were 20 questions on the exam. I finished only two, and I thought, "I might as well just throw it in and walk out of here." Yet I made a B+ since grades were on a curve. And I thought, "Oh, I don't need this?" I was still thinking, "Well, okay, maybe I could go ahead and get a teaching certificate, and teach," which is another thing that I thought I would like to do. But I was also reading about computers, and I had those three instances I mentioned where I thought, "Oh, man," and the only place that you could learn programming, as far as I was able to determine, was at a school called Automation Institute, and it was a private school, and they charged a bunch of money. Anyway, I called my dad, and I told him I was going to drop out of school, and that I wanted to get a job, and I think I would really like to go into computers

somehow, and there was this school, Automation Institute, and what do you think. And he said, "Oh, you should go to San Francisco, and talk to Gordon Lucky." Gordon Lucky was the district manager for IBM's San Francisco office; my father ended his career as vice-president of data processing at First National Bank in Dallas. And my father said, "Gordon was our IBM salesman when we got our 1401's. I'll call and tell him you're coming." So I went over to Gordon Lucky, they gave me an aptitude test, and hired me the next day.

Grad: I would expect on that Programmer Aptitude Test you would have done absolutely aced it.

Gentry: I guess.

Grad: So, that's how you got to IBM.

Gentry: That's how I got to IBM.

Grad: Now your father, you say, had been in data processing at the bank, in Dallas.

Gentry: He started out in the transit farm (???). He was never a programmer or operator, but he was vice-president and in charge of it.

Grad: That didn't give you any interest in data processing? I was wondering if there was any connection there.

Gentry: No, because that didn't even happen until after I had gotten into the Air Force.

Grad: You interviewed at IBM, took the PAT, and you started to work in the San Francisco branch office initially as a systems engineer, is that correct?

Gentry: Yes, as a systems engineer. I was trained on the accounting machines, and my first trip out the in the field, I really enjoyed it. The salesman was going over to, I think it was the Santa Fe Railroad; he was going to go over to their data processing center. They had just been sold a whole new set of accounting machines and this was month end closing time, and so he was going to go see how things were going. I was a brand new SE, right out of training, and he said to go with him, so we went out there and we walked in, and the salesman says, "Well, did you finish closing?" "Yes." "How did it come out?" "Oh, we were $500 off," and the salesman says, "Oh, my God. We got to figure it out, I can't understand why it happened," and the guy said, "Hey, don't worry about it. We haven't been this close in 15 years."

Grad: That's a great story. Now this is regular punch card equipment that you were talking about? So you learned how to prepare plug boards, and so forth.

Gentry: Yes. As a matter of fact, I taught punch card equipment for a while.

Grad: How long did you work as an SE, before you became an instructor?

Gentry: Well, that was probably my only SE project before I became an instructor.

IBM Education Center

Grad: Was this because of your training background? What brought you into that?

Gentry: Well, remember, I said that one of the things before I decided to quit college, was thinking, "Well, I'm getting a teaching certificate, or something." It seemed like a nice thing to do, and they were looking for people to help in the Education Center, and I felt like I could do that.

Grad: That's interesting, because my memory of IBM at that time was that in many cases, the SE's who were doing the training had already had two or three years of actual experience in doing applications before they had them do training sessions. Was that not true out here?

Gentry: Well, not for me, it wasn't.

Grad: You were in the data processing division which was the sales division?

Gentry: Right.

Grad: What was your work like -- did you train mostly IBM people? Were you training customer people?

Gentry: Mostly customer people.

Grad: Was it mostly punch card stuff during that period of time?

Gentry: No, no. My first training was on punch card equipment, and then at least at the beginning, when I was in the Ed Center, I was teaching punch card, but I then was sent to, I think it was a three month computer programming course, down in San Jose. It may not have

been that long, but it seems like it was maybe three months, and that's when I got 1401 training. That's also when I heard one of the instructors talking about moonlighting as a contractor, and she was making $10 an hour, and I thought, "Oh, my God, she made more in a week then I am making in a month." And that's when IO thought, "Maybe some day I can do that."

Grad: And what language were you being taught then, do you remember?

Gentry: Assembler language.

Grad: You weren't taught FORTRAN or anything like that? That wasn't a 1401 specialty for sure.

Gentry: No, it was assembler and they may have taught us Autocoder at that time, but I don't think Autocoder was yet available.

Grad: Autocoder was developed about that time, though.

Gentry: It was close to that time, but I'm not sure it was during that particular class. I think maybe it came out a little bit later.

Grad: You then went back and taught1401 assembler to customers primarily?

Gentry: Right, to customers. It was a customer education center.

Grad: So you were trying to teach them how to write applications, basically.

Gentry: Yes, how to program.

Grad: Did you enjoy it? What was the experience like?

Gentry: Oh, I enjoyed it quite a bit. I was on my feet eight hours a day, but after three or four days, that wears off, and you feel okay about it. And I learned a lot because, if you're going to get up in front of 30 people, and tell them how to do something, you want to make sure you know how to do it, and so I did a lot of studying. I felt like I learned a lot of things very well. It was a good experience.

Grad: And you weren't anxious to go out and actually write applications yourself at that point in time?

Gentry: Not at that point in time. I was enjoying teaching, yes.

Grad: There seems to be a pattern there, in terms of your interest in teaching others.

Gentry: Yes.

Grad: Yet for someone who describes himself as shy, I would think that would have been somewhat difficult to be in front of these people, teaching them.

Gentry: Well, one of the great things I learned standing up in front of people and teaching them, was that it's perfectly legitimate and okay to say, "I don't know, but I'll find out." You can say, "I don't know the answer to that question; no one's ever asked me that question, but I'll find out for you." It takes a while to learn that.

Grad: We're not going to spend much more time here, but it's very interesting. So many of the people that I've come across, where we've done interviews, have very large egos, and someone asking them a question they don't know the answer to, they bluff their way through them, as I did as a consultant for a couple years.

Gentry: Well, I've probably done it also on occasion.

Grad: But I'm just wondering if that made you a particularly good teacher, because you didn't have a lot of ego involved in what you were teaching. Did you ever think about it that way?

Gentry: No, I haven't. I don't consider myself as having a big ego. My shyness makes me want to be able to answer the questions, and it took me a while to be okay with saying, "I don't know." In teaching I felt like I was giving to people. It's a contributory thing. If I can help you learn this and learn it well, and you can go out and make more money, great.

Grad: You said that you also taught the 1620 and then the 360; did you actually teach programming for both of those?

Gentry: Well, yes. I did programming for the 1620, and think I taught a class out at some oil company on the Sacramento Delta.

Grad: One of the notes that you gave me noted that something you did in your own time was to do a simulator of the 1401 on the 1620. Do you want to talk about that a bit?

Simulator for the 1401

Gentry: Yes. While I was in the Ed Center, I worked with Ken Swallow, who I think was also in the Ed Center, and we were good friends. Maybe he wasn't in the Ed Center, but at least I had met him in training or something, and what he wanted to do was go teach-- this is when colleges didn't really offer courses in data processing, but they were starting to. Some of the community colleges at night were giving programming classes. Any way, he wanted to teach, but the college only had a 1620, because IBM had this educational program, and a university or educational outfit could get a 1620 for virtually nothing. But the students really didn't want a scientific computer. They wanted to be able to go out in the commercial world and get a job programming 1401's. Ken asked me if I could write simulator, so that he could teach 1401 coding on the 1620, and so I did, and we called it the 141 (???) Simulator, because I think it was probably a subset of the total instruction set of the 1401; and it was fun doing it, but it was also nice that it got done. In fact, I have the course manual, which I would be happy to give to the Museum if they want it.

Grad: The answer is yes. Was that the first significant program that you'd ever written?

Gentry: Yes, it must have been.

Grad: All the time you were teaching, you weren't actually writing applications. You were writing sample stuff, and things for class.

Gentry: Right, so this was probably the first thing I'd ever written.

Grad: Was that paid for?

Gentry: No, no.

Grad: Had you done any moonlighting during this period of time at all?

Gentry: No.

Grad: Even though you were intrigued by the idea, you weren't doing it?

Gentry: I was intrigued by the money.

Grad: Of course. You had your third child by then.

Gentry: Yes.

Grad: Was your wife Grace working at that point in time, or did she take care of the children?

Gentry: When I married Grace she had finished her first year at college. Probably during part of this time, at least, she was going back to school, because it was always our intention that she would complete her college education, also. A lot of her time was taking care of the kids, but we did have babysitters come in so she could study for school, and so forth.

Grad: So you were the only breadwinner at that point in time.

Gentry: Yes, Yes.

Grad: You also mentioned in your notes that you did go for 360 training at Poughkeepsie. Were you teaching COBOL by that point in time? Do you remember?

Gentry: You know what? I'm not sure that I ever taught COBOL. I've taught 1401, I've taught Autocoder, I've taught FORTRAN.

Grad: Because, for commercial applications, by 1964 when the 360 was announced, COBOL was the primary language.

Gentry: Yes.

Grad: No recollection of that?

Gentry: No.

Grad: Any of the other languages, like PL/1?

Gentry: PL/1 we looked at and I may have taught one class on it, but nothing significant.

Grad: So your skills were in assembler language, primarily, that you had been teaching. Is that a fair statement?

Gentry: And Autocoder.

Grad: We're now at 1965.

Application Programming

Gentry: Well, at the end of 1965 or the beginning of 1966, I had decided, "Okay, I've learned all of this; I should go see if I can put it to some use in the real world." I knew how all the instructions worked, but I'd never been able to really go out and do anything with it, so I said to the manager of the Ed Center, "You know, I'd like to be transferred to the field so I can actually see some of the stuff I've been teaching work." So, I was transferred at that time to the GEM office in Oakland.

Grad: GEM is Government, Education and Medical?

Gentry: Maybe Medical, I don't know. We always just called it GEM.

Grad: You had been an SE for years at that point in time, five years, but as an instructor; you hadn't actually worked with customers on the application side. This must have been a big change for you.

Gentry: It was, and it was fun. I got assigned to Alameda County which had a processing center. The processing center manager at the time was Bill Millard, William H. Millard, who was later the owner of ComputerLand. Well, he was later at SYSDYN, and then IMSAI, and then ComputerLand. When I got there, there were probably, one, two, or three SE's assigned. Bill was a pusher, and he would push IBM as far as he could. He was paying a lot of money every month for the computer he had, and he felt like he deserved some additional support. He was also a visionary, and when I got there, one of the things that he wanted to do was to implement an online police system for Alameda County's Sheriff's Department, so that they could from various remote terminals key in and find out information that they might have on someone, R checks (???), license numbers, or whatever. So in addition to performing normal SE duties, which is keeping the systems running, I was allowed to get involved in the programming of this application. At the time they had a 7040. They didn't have any 1401's at the time. Assembler language is what we used on the 7040. There were actually two applications. One was the police information system, and the other was providing remote access to the social welfare files, and I think that one really started with remote terminals that were like typewriters. I forgot what they were called, 1050's or something like that. Then for the police system, they had come out with the CRT terminals, the 2260's. That's what we were using for that application. In any case, we had to define a number of types of transactions that we would expect them to want.

Grad: Now was this for the police information system, or the social welfare system, or both?

Gentry: It was both. We had define a certain set of transactions that they would probably all want to do, like look up somebody's name, or something like that, and so Bill or I picked out

one of these transactions, and said, “Let’s start with that one.” So I started coding it in assembler language for the 7040, and it was very interesting and very new type of stuff for me. It took me a while to do it, I don’t remember how long, but I spent some time doing it. If I were guessing, I’d say a couple weeks, and we installed it, and it worked. But then the question was, “Okay, now we have this next transaction. Let’s do that one.” And that is the point when I thought, “Oh, damn, I might have to spend two or three weeks on every one of these transactions, and it’s going to take me a year to do this.”

Grad: How many transactions were you talking about, primary transactions?

Concept of the Gentry Monitor

Gentry: Well, I don’t really know, but probably ten or something like that. So but we’re talking, if we take three weeks apiece, that’s 30 weeks, and the second iteration is not going to be that much fun. I’ve already gone through and figured out all the interesting things, so I was thinking, “I wonder if there is a way I can shorten this.” There’s a lot of commonality between the two transactions, but that doesn’t make it any easier. You still have to go through it and so I thought, “Well, maybe I can come up with a way,” and that’s when I decided that on my own, I would attempt that, because I had no idea whether it would really work, or not, and I didn’t feel like I could do it on IBM’s time, or the county’s time. So, I went home and talked with Grace, and said, “I would like to spend my evenings and weekends perfecting, improving what I think would speed up this whole operation of installing transactions. But I have to do it on my own time, because I don’t know if it’s going to work. I think it’ll work, but I’m not sure, and I can’t charge IBM or Alameda for my time, and of course it means that you’ve got to do more of the work around the house because I’m going to be busy.” And she agreed to it.

So I sat down, and I don’t remember how long it took me, maybe three to five weeks. But anyway, I came up with a scheme using an initial set assembler language macros, which were the only higher level type of thing you could do with assembler language, and when I felt like, “Yes, I’m sure it’ll work,” then I went to Bill Mallard. I said, “Look, Bill, I’ve figured out a way I think that we can speed up the whole process of creating and installing the new transactions,” and I briefly explained to him what I had done, and I said, “I would like permission to give it a try,” and he said, “Go with it,” and so I did, and it worked, and that’s what became ultimately called the Gentry Monitor

Grad: Let me back you up a couple steps. First, was there anybody at IBM who you were working with while you were doing this, either from a conceptual or programming standpoint?

Gentry: No.

Grad: When you were working on the police information system, were any of the other SE's involved with you in working on that?

Gentry: Yes, because the transaction processing system consists of the application portion, but it also consisted of the communication portion, and the communication portion was based on IBM's basic top processing access method, BTAM. And there was another SE, Mits Tamura (???).

Gentry: Basically, he would do the BTAM, and make that generalized, so that it would be easy to bring a terminal on and take it off, etcetera, and I would do the application development portion, and we would interface the two, so it would all work together.

Grad: The terminology that today might be used is that one is sort of the system structure, systems tools, and the other is the business logic, or the application logic, that kind of thing?

Gentry: Sure.

Grad: But you were doing this in assembler, though? You were not using any higher level language for the application logic.

Gentry: Correct. There was no higher level language for the 7040, although there may have been a FORTRAN.

Grad: The 7040 was a scientific machine, wasn't it? It was a follow up to the 704, right?

Gentry: Right.

Grad: But I think the difference was between use of vacuum tubes in the 704, and the use of transistors, I believe, in the 7040 series.

Gentry: The 7040 was a little 7090, I guess.

Grad: Yes, it was a pricing point, if I remember correctly, to get it down there. So why would they have a scientific machine at Alameda County?

Gentry: Let's see. I think that they had gotten it, I guess before the 360 ever came out. But they had it when I came out there.

Grad: Because they didn't have any significant scientific applications, or technical applications, I wouldn't think. So here you are, on your own. You've never really done any significant programming before.

Gentry: No.

Grad: And you have the idea of this generalized structure, because of the commonality that you're seeing among the different types of transactions.

Gentry: Right.

Implementing the Gentry Monitor

Grad: Describe a little bit about the Gentry Monitor. What were some of the things that you did, some of the insights, some of the ways you did it? Can you remember that?

Gentry: Well, let's talk about commonalities. All transactions have to access input from the terminal. All transactions have to access the database, some record, somewhere. Now, this transaction might have to access that one, this transaction may access a different database, but they both access databases, and they both have to eventually write something back to the terminal, respond to the terminal, like adding a record to the database. The only difference between one transaction and another is what the record looks like, where the database is located, and the similarities are infinite other than that. So the idea was that the macro would create all the similarity coding, and in the macro itself you would say, like, GEN ADD, which meant add a record to the database; and GEN stood for Generated, although a lot of people thought it stood for Gentry, so GEN ADD, and then the perimeters might be the name of the database, the location of the record, maybe the length of the record. Something like that, and that's all you'd have to write, instead of writing, "Move this record to here, move this record to there, write the database, check the error, blah, blah, blah, blah."

Grad: Were you building in the file maintenance functions as well, such as purging files, cleaning up files or anything like that, or were they strictly transactions.

Gentry: No, this was strictly transactions.

Grad: So it was a transaction processing system.

Gentry: Yes.

Grad: At least the application logic to go with the transaction processing system.

Gentry: Right.

Grad: And you wrote this with 7040 assembler.

Gentry: Right.

Grad: Do you remember any of the other things that you felt were especially creative, or unusual, when you built this? Had you written macro applications before?

Gentry: No. I mean, you know, I had probably touched on them as an instructor, but not significantly. I mean, macros were interesting, but they're not necessary in order to program. No, I guess that I'm just lazy.

Grad: Talk to me about Bill Millard. He was the Alameda County DP manager at that point. Do you know anything about his background prior to that? He had not been at IBM, is that a correct statement to your knowledge?

Gentry: He had not. In fact, he had, I believe, worked for Household Finance before he became a data processing manager.

Grad: Do you remember any of the names of your managers at that point in time, in San Francisco? Was there was any significant IBM impact on you, other than that it provided you the opportunity to work with this particular application. Is that a correct statement?

Gentry: Well, no, that's not quite true. I mean, IBM impacted me a great deal.

Grad: I'm saying, as far as this specific creation of this product is concerned. Was there any particular person who was pushing you, helping you, making it happen?

Gentry: No.

Grad: So it was something that just came through your own head.

Gentry: Yes.

Grad: That's very exciting. It really is. Okay, now you got it built, it's running, and now what do you do with it?

Gentry: Oh, then the 360 came out.

Grad: Before you had built the rest of the application for the 7040?

Gentry: No, no. They were all built on the 7040 and it was running beautifully.

Grad: So you took the tool you had built, and used it to write those transaction?

Gentry: Absolutely.

Grad: And the system ran.

Gentry: Right.

Grad: That was the point I was trying to make sure-- so it was actually put to use...

Gentry: On the 7040.

Grad: Was it at that time distributed or made available to any other branches or any other places in IBM?

Gentry: Not at that particular time, I think, because, as you mentioned, this was on a 7040. There weren't a whole lot of places that had 7040's for commercial work.

Grad: That would not have been a machine you'd do much transaction processing on.

Converting the Gentry Monitor for the S/360

Gentry: Right. Now, Bill was a visionary. He really was, and I feel like he knew who to trust and who not to, in effect, and he certainly gave me a lot of latitude. Bill eventually quit as data processing manager for Alameda County and then he joined IBM as a salesman. And as an IBM salesman, for a year, he sold San Francisco a whole set of computers.

Grad: This is San Francisco government?

Gentry: Yes.

Grad: City government.

Gentry: Yes, and then he left IBM and became head processing manager in San Francisco.

Grad: In one of the other interviews that we've done, was of someone who worked for Bill Millard in San Francisco.

Gentry: Really?

Grad: And as a matter of fact, it was one of the things that influenced him in terms of where he went. The man is Seymour Rubinstein.

Gentry: Oh, Yes, I know Seymour.

Grad: Well, Seymour worked for Bill. One of the wonderful things during this period was that so many of these pieces tie together and the people's lives intertwine in various ways. Before you go ahead, did you, while you were still working at IBM, did you actually work on an implementation of the Gentry Monitor for the 360.

Gentry: Yes.

Grad: What was the context of that?

Gentry: That's what I was going to mention. When the 360 came out, and Alameda County purchased their first 360, I don't know whether I did the conversion in San Jose, or I did the conversion in San Francisco. I know that I spent some time with the San Jose data processing division.

Grad: You're talking about the branch down there?

Gentry: No, the county. And I don't remember whether I did the conversion there, to the 360, and implemented it, or whether I did it at Alameda County, and moved it to San Jose. At any rate, I did do the conversion and rewrote the Gentry Monitor for the 360.

Grad: Again, you did this using macros, using the 360 assembler as your base language.

Gentry: Yes. And so we got it, and we installed it on the 360 there, and I remember a day of high anxiety at Alameda County, when they flipped the switch off on the 7040 and flipped it on on the 360, and you know, they had kind of put it off, and put it off, and, "Is it really going to work? Or are we going to lose half of our data? Are we going to lose everything?" But they did switch over, and we celebrated that day.

Grad: That must have been exciting.

Gentry: It was.

Grad: Did you have any way of checking out the new version of the Gentry Monitor on the 360, versus the old one on the 7040? For example, you had created a macro language, in which you could describe these various transactions.

Gentry: Right.

Grad: Did that same macro language hold up when you were switching over to the 360, or did you have to create a new macro language?

Gentry: No, as far as I can recall, it was in essence the same. But it was not quite identical. It was not just a matter of moving the cards over. No, it took a rewrite.

Grad: It did take a rewrite.

Gentry: And testing. Yes.

Grad: And so the language you would use to write these transactions was a different language from the one you would have written those transactions you used in the 7040 Gentry Monitor?

Gentry: Yes.

Grad: But functionally it was equivalent?

Gentry: Functionally the same and the macro was the same. It was just the underlying code for the macro would have to be different.

Grad: Okay, so you've done this now, you did it for Alameda, and you were using the same tools now for San Francisco and San Jose. Was this partly because of Bill Millard, or was this just your own way of doing things? Was he encouraging you to do it, asking you to do it?

Gentry: For the 360?

Grad: Not just for the 360, but to use it for other applications?

Gentry: Oh, yes, he was in San Francisco by then, and he wanted it.

Grad: Was he the driver?

Gentry: Yes, he was the driver. San Jose was probably driven out of the office, and people had known about the Gentry Monitor in the Oakland office. They were eager to have it installed.

FASTER as a Type II Program

Grad: At what point does this become known within IBM, and at what point do they start to say, "Hey, can we use this elsewhere rather than just having you use it"?

Gentry: Well, I guess that was about it, after it had proved successful on the 360 in Alameda and San Francisco, and we had some kind of conference, an SE conference, or a sales conference, or whatever, and I had to get up and make a little presentation on the Monitor, and I really wasn't aware of any movement after that. I was doing my thing.

Grad: So you had done it, and that was it.

Gentry: Yes.

Grad: You mentioned that at some point there, it looks like about 1967 or 1968; IBM then takes the Gentry Monitor and announces it as a Type II program.

Gentry: Called FASTER.

Grad: Filing And Source Data Entry Techniques for Easier Retrieval.

Gentry: Right.

Grad: That's a brilliant acronym.

Gentry: I didn't make it up.

Grad: And there was apparently a number of other SE's who then got involved.

Gentry: Yes. Von Vandenberg (???) was the manager of the effort, and there were probably four or five of us.

Grad: This was when IBM was still giving away programs. There was no charge for these.

Gentry: That's correct.

Grad: The Type II programs were supported programs, but were not from the Systems Divisions; they came out of and were supported by the Data Processing Division.

Gentry: That's right.

Grad: Type III's were field produced. So your program had graduated to a level that was a little unusual. Things didn't move up from the field to Type II very easily.

Gentry: Right. Well, eventually I was told, and now I've forgotten who told me that, but eventually I was told they installed FASTER in over 400 installations.

Grad: Wow!

Gentry: So it made some money for IBM.

Grad: Of course, since it was being given away then, they made money in terms of?

Gentry: The amount of hardware sold.

Grad: And of course at this point, doing systems engineering work was not being charged to the customers. They were paid separately, that was part of IBM's bundled support for their hardware products.

Gentry: Yes.

Grad: But it wasn't your effort any longer at that point. Did you assist the team in putting it out as a Type II? You were part of the effort to do that?

Gentry: Oh, yes.

Grad: And you say you received an IBM Outstanding Contribution Award for your work on the Gentry Monitor.

Gentry: Right, which made the down payment on the house that I'm still living in.

Grad: Oh, really? Do you remember how much money that was?

Gentry: $10,000.

Grad: That was a very significant amount of money then. Congratulations, that's terrific. Did you use FASTER on other applications after that, or did you go in other directions while you were still at IBM?

Gentry: I didn't use it on any other applications at IBM.

Grad: You didn't become the promoter, or the pusher, or anything like that?

Gentry: No. No.

Grad: Did you continue to work as an SE after that point in time?

Working for SYSDYN

Gentry: Well, it was shortly after that time that I left IBM.

Grad: And what motivated you to leave?

Gentry: Bill Millard started a company, and he wanted me to come join him, and he had been my mentor, if you will. He was the guy that gave me the opportunity to do all that I had done, in effect. He then started a company called Systems Dynamics. SYSDYN was its acronym and Bill wanted me to join in because he formed the company basically to sell FASTER; he wanted me to come over there, because obviously, I was the author of FASTER, and I could maintain it. And furthermore, I enhanced it while I was there, by making it multi-threading.

Grad: So when you went to SYSDYN, you took the IBM Type II program?

Gentry: I think.

Grad: And you enhanced it by making it multi-thread.

Gentry: Yes, and 1969 was probably the worst time in the last half of the century to start a new company. Remember there was a real recession. That was the recession in which

professional people, even doctors couldn't get jobs. We had a friend of ours, who got a Ph.D. in linguistics, and he couldn't get a job at any college in the country.

Grad: Well, that I think is very significant. We've had an interview at a workshop here on the genealogy of professional services companies. We had it a couple months ago. All the people who had started companies, or who were involved, said that the 1969 to 1972 period was a real critical period of time.

Gentry: Yes.

Grad: It got rid of a lot of companies that had come into existence at that time.

Gentry: Absolutely, absolutely.

Grad: There was very little new work being done. It was, economically, a very dreadful time. This was a heck of a time for Bill to start a company.

Gentry: Yes, and I learned a lot about venture capitalists, and I'm not crazy about venture capitalists.

Grad: So you left the security of IBM after all these years.

Gentry: Yes.

Grad: And go joined Bill Millard at System Dynamics. Where were they located? Were they in the Bay area?

Gentry: Yes, they were in Oakland.

Grad: And where did Bill get his money from to start the company?

Gentry: From venture capitalists.

Grad: There was some VC money available in the late 1960s, but that dried up the 1970s according to what I've told by other people.

Gentry: It's my understanding, yes.

Grad: Yes, but he was able to get some capital from the VCs. Talk about what he was going to do and what you did at SYSDYN, would you?

Gentry: Well, again, basically what I did was to maintain and improve FASTER which was a Type II program at that time. Bill was the salesman as well as the President Bill was a very likable guy, very outgoing, with vision, and a very good salesman. So he was trying to sell the product in a number of places.

Grad: This is 1969?

Gentry: Yes.

Grad: Had IBM unbundled software yet at that point in time? It was June 1969 when IBM announced unbundling for software. They were giving away FASTER in its original version as a Type II program. So he was trying to sell an enhanced version; he was trying to get people to buy FASTER?

Gentry: Well yes, basically.

Grad: Was he also trying to get people to buy applications using FASTER?

Gentry: Well, probably applications also. But the first thing was to sell this way of implementing applications. And one of the primary prospects that he was working with was the FBI, which was about to put on their nationwide NCIC. And it never came to a whole lot unfortunately. The last year that SYSDYN was in business, and this is why I don't much care for venture capitalists, the venture capitalists forced Bill to spend 100% of his time trying to sell this little company instead of spending his time trying to make the company profitable, and he was the main salesman for the company. I mean I couldn't believe it. Anyway, venture capitalists play by their own set of rules, but most people don't know what these rules are, but I have an idea what the rules are now.

Grad: Let's talk about your technical work. Were you working primarily on FASTER, or were you working on the use of FASTER?

Gentry: No, primarily on the further development of FASTER. I made a few sales calls on potential customers, to explain and demonstrate the system and so forth.

Grad: But you weren't writing applications using the tool.

Gentry: Not to my memory, no.

Grad: So you were working as a systems programmer improving the tool itself?

Gentry: Yes, yes.

Grad: Do you remember at that time what FASTER was competing with? Were there competing tools out there, were there other products out there either from IBM or elsewhere that you were competing with?

Gentry: Well, IBM CICS was pretty competitive.

Grad: So CICS was considered a competitive tool basically.

Gentry: Yes, primarily.

Grad: My memory is that the primary tool for writing applications on the CICS was CICS COBOL?

Gentry: Yes.

Grad: CICS didn't really have its own database structure if I remember correctly. Do you remember that or not?

Gentry: No, I'm pretty sure it did not.

Grad: It would hook into something like IMS or something like that for the database. Is that your recollection as well?

Gentry: Yes, yes.

Grad: FASTER didn't do the whole communications thing, is that a correct statement? Was it doing the transaction application itself?

Gentry: Yes. I'm sure that we were still using BTAM as a front-end communication system; I know we didn't write a communication module.

Grad: So you had in effect a language that you could use with a BTAM file management capability.

Gentry: I believe that to be the case.

Grad: But you stayed fairly narrow then on FASTER itself, you didn't go beyond that in terms of the communications side or other things?

Gentry: No, no. Our goal was to sell and install this product.

Grad: Did it make many sales? Do you remember?

Gentry: I think we may have made one sale in Seattle. I don't remember any other sales.

Grad: So it was a pretty thin revenue stream.

Gentry: Yes.

Grad: Was SYSDYN doing professional services work during that period of time as well? Was he selling professional services, programming work?

Gentry: Oh, yes. In fact I think I was on a contract in San Francisco at one point during there because when SYSDYN went out of business I continued on that project.

Grad: Were you involved with Bill in the business planning or anything else of that sort or were you pretty much a technical person?

Gentry: Technical but it was a small company, and I was secretary of the corporation. So I was aware of some of the stuff that was going on.

Grad: You mentioned that you spent five weeks in Paris. What was that about?

Gentry: Well, Bill had received a contract or at least interest from CAP which was a large French software house. And they had had someone, Alex Haefner, who had come over and spent some time with us in Oakland, kind of getting an idea of what the system was about. And CAP wanted someone, me really, I guess, to come over there and describe to them how the thing worked, maybe document it so that they could actually work on a similar system themselves or modify that system.

Grad: And CAP was a professional services company and a software products company; I think they were both.

Gentry: Yes. And Bill said, "Do you want to go?" And I said, "Only if I can take my family." So all five of us went to Paris for five weeks and we lived in an apartment house, out of

the tourist area. It was interesting, the elevator worked very funnily. Sometimes the door would open, sometimes it wouldn't. They had garbage chutes in the apartments, and one day ours clogged up for some reason. So Grace went downstairs to the maitre-d or whatever, the desk clerk if you will in American, and tried to explain that la porte de la garbage doesn't work. Well, her French isn't great and his English was virtually non-existent, so they tried this back and forth for a while. And finally, there was a gentleman came up and said, "I have spent several years in Chicago, and speak English pretty well. What are you trying to tell him?" So Grace explained to him, "Please tell him that the garbage chute is blocked up and stuff won't go down." And he said, "Garbage is not a French word, what is the word? What is the word?" And they looked through dictionaries and they couldn't find it. It turns out that its refuse. So anyway, he explained to the desk clerk that the refuse chute was blocked up and the desk clerk said, "Ah madam, you must be brave. You must have your children bring the garbage downstairs."

Grad: So what did you actually do? Were you teaching them, were you working with them and doing a French version? What were you doing there?

Gentry: Actually, I guess I was designing for them, explaining how it worked, why it worked. I remember drawing flow charts for them on how to build such a system.

Grad: Now I may be wrong, but the CAP you're mentioning was not the same company that we call CAP Gemini.

Gentry: Well, I'm not familiar with CAP Gemini. I think they were just plain CAP.

Grad: They were the largest professional services company in France by the late 1970s, 1980s. You came back to the US and then and shortly after that?

Gentry: SYSDYN closed its doors.

Grad: So, you're out of a job.

Working as an Independent Contractor

Gentry: Well, I was out a job but not really because I continued my contracting with San Francisco, picking up where SYSDYN had left off.

Grad: Did you do this as an individual or for another company?

Gentry: As an independent contractor. And it was the development of an online citation system so that a police officer could, if he's going to write out a citation, the citation would go

into the system but he could also check to see if this particular driver had any outstanding citations, whatever. And one of my helpers on the project who helped to code the project called one day and said, “I’m in jail. Can you come bail me out?” He had been caught by the system that he had helped to design; he had three or four traffic warrants, so we had to go bail him out.

Grad: That’s a great story. He got hoisted on his own petard.

Gentry: And I might add that no Gentry will ever be caught in that citation system.

Grad: You made sure of it. Talk to me about building an application where you’re using FASTER to build the application.

Gentry: I mean I’m sure I was, but I can’t say so with 100 percent certainty.

Grad: Were there other languages you were using by that point in time in building applications? Do you remember using COBOL or any other languages?

Gentry: I don’t think I got in to COBOL until later.

Grad: What you’re describing to me is really a systems programmer type mentality and a systems programmer view.

Gentry: I suppose, yes.

Grad: You’re looking at an application but you’re looking at in terms of its structure and its form rather as writing an application; you do that only because you’re using your own tool. Am I wrong in that?

Gentry: Well, I always called them applications. But, yes, people have asked me why haven’t I done this or done that, and my answer is that I have always in my professional career been a problem-solver, but I do not look for problems. Somebody has to bring a problem to me, and then my job is to solve that problem, and that’s what I did with FASTER.

Grad: That was a systems solution to an application problem. But you did do applications as well using the tools and other tools.

Gentry: Oh, yes, yes.

Grad: Was this full-time work for you, from 1972 to 1974?

Gentry: Yes.

Grad: And so you were an independent contractor getting paid by San Francisco City and County. Was that the only application or did you do others besides the traffic citation system?

Gentry: That's the only one I can remember.

Grad: What was Grace doing in the late 1960s and early 1970s, do you remember? She had graduated from college by that point in time?

Gentry: She finished two years at UC somewhere toward the end of 1964 I think, so that gave her three years of college. She was initially majoring in social sciences. She has always been concerned about other people, et cetera. But after going through some of the classes she said I don't like this. Did you read Calcut Parsons (???)? He's impossible. He's the only man I know who writes a sentence four pages long. Anyway, but she did seem to like math and statistics. And at the time I said, "Well Grace, you know, if you really are interested in statistics, I think that you ought to learn about computers because statistics will be determined by computers in the future. We're not going to sit down and do that." And so I got a copy of a PAT test and gave it to her and she did fine on it. Then she went to Alameda County and did something for their budgeting system. And then she got a job at UC Statewide, and did some programming for their UC Press. When she had gone to Alameda County to take the exams to try to get a job there, that same day they were giving management internship exams for the Federal Government, and she was there so she said, "Well, I'll take it." She took it, passed it, and got a job with the Social Security Agency in their management internship program which was designed to get talented people into the system, move them up quickly in terms of the pay scale and position. And so she worked for Social Security at the Berkeley Office for almost two years, and then she went to Bank of America and worked in their auditing department.

Grad: So she was having a professional career during this period of time, the late 1960s?

Gentry: Yes, early 1970s.

Grad: When you were working as an independent consultant in 1972 to 1974, she was at Bank of America during that time, so she didn't have her own separate business or anything like that at that point?

Gentry: No, she was an employee.

Grad: So both of you were working professionals. Your children were still pretty young, teenagers probably at that point pretty much.

Gentry: Yes, well, our son was almost graduated from high school. He was 17-years old

Grad: Anything else you remember from that period? You were working for just one client; you didn't go out to try and find other clients or anything like that. You were busy with the one client making a living doing that kind of work?

Gentry: Yes.

Grad: And satisfied with it.

Gentry: Yes, it was nice.

Grad: What I'm trying to dig a little bit with you, you did this creative work, you have a definite way of looking at things, looking at it from a structural standpoint, yet you don't have the entrepreneurial spirit that I see with some of these other people who want to go out and change the world.

Gentry: Yes.

Grad: But if a problem comes to you, you solve it.

Gentry: I'm a problem solver; I don't go looking for problems.

Grad: Is that an accurate picture do you think?

Gentry: Yes, Yes.

Grad: You have some very different characteristics than some of the other people we've interviewed who seem to have this urgency, this drive to go out and change the world on their own.

Gentry: That's not my character.

Grad: Interesting. Okay. Now, this project comes to a close, what happens next?

Starting Gentry Inc.

Gentry: Yes, it's coming to a close and this is the beginning of the big part, forming our own company. What happened was that a friend of mine, whom I met in Alameda County when I was first there, was employed there; his name is Ron Forsey. He had left Alameda County some years before, done several different jobs, and was then hired at Alameda County because they were putting in a new payroll system. Counties have a pretty complex payroll situation as do universities, horribly complex. But at any rate, when he got over there, he realized that he needed some additional staff and the County, for obvious reasons, did not want to hire new employees because they would only be needed for the period of this particular installation. So he wanted to look at outside contractors to get the staff, but the County also had a policy that they would not contract with independent contractors. I'm not sure why, but whatever liability existed they didn't want to deal with it. They would only contract with corporations. Anyway, Ron called and he explained this to me. He said, "So Dick, why don't you form a company, find us some good people, and we'll use them." And that's when Gentry Inc. became a company and we incorporated. We found there were a number of people, mostly women who very good programmers. This was back in the time before women were anywhere near equal in job opportunities. And so they couldn't necessarily get good jobs somewhere else but they were very good. And so I think we placed four of them there as contractors; they were paid ten dollars an hour. We got twelve dollars an hour from the County. They did a great job, and so Gentry Inc. was on its way.

Grad: Were these basically full-time assignments or part-time assignments.

Gentry: Full-time.

Grad: Where they on site?

Gentry: They were on site.

Grad: And Gentry in effect charged a twenty percent mark-up above what you were paying them.

Gentry: Yes.

Grad: But you were also getting paid for your own time. Were you involved in that project as well?

Gentry: No, part of that time I was still in San Francisco.

Grad: So you were still there on the San Francisco project. Did Grace stop her job and do this full-time? I'm trying to get the transition here.

Gentry: Not immediately. But shortly after we started the company and after the job in San Francisco was finished, we got a call from CES, Computer Election Systems; they were the company that put out the first punch card election system during the war.

Grad: What is an election system?

Gentry: Oh, you go vote by punching holes in an IBM card, and then it gets counted and it's all automatic, and that's the company that did it. And the reason we got called by them is because their VP of Finance was a guy that I had known for a long time, an ex-IBM'er too as a matter of fact, and they wanted to basically to branch out. They had been focused on elections type work, and they wanted to see if they could broaden their business base. They wanted to sell applications, sell services, whatever. So they asked if I would come over and do some work for them, and I think the first thing I did really was for this VP of Finance was I wrote a really simple minded spreadsheet for him, there weren't any spreadsheets at the time, and he wanted to be able to project stuff. But then they got two large contracts. One of them was with the Alameda County GSA, General Services Administration, who wanted a purchasing and accounts payable system installed. And CES wanted us to subcontract and do the work because they didn't really have a clue, and they wanted a fixed price, and we gave them a fixed price. That was a big mistake. So I went to work at Alameda County GSA. Unfortunately the machine they had was a 1620, which was not a commercial machine, it had only FORTRAN on it, and the operating system only allowed one partition. That ended up being a killer. I worked well, at first we had three people on it but eventually we couldn't pay the other two people, so I worked fourteen hours a day, seven days a week for a year. That includes holidays, Christmas, et cetera. At that time I told Grace you've got to take over the company because I've got to spend all my time over here and if you don't, then we just need to file for bankruptcy. So that's when she took over the company. She was the salesman anyway; I'm not a salesman.

Grad: What were the roles that you played and that Grace played when you started Gentry Inc.?

Gentry: Well, I was the President and she was the salesman, but our first job was sold; we formed the company because the first job existed. And so this was kind of like the second job. And then when she took over as President, that's when she started trying to do cold calling and selling.

Grad: You hadn't been doing that before?

Gentry: No, I don't do that. People can give you negative feedback on cold calls.

Grad: Even on warm calls they can give you negative feedback. So you were really an implementer, a doer rather than a manager or a salesperson.

Gentry: Yes, never a salesperson. I felt like I could manage a company perhaps. I had managed projects, et cetera. But Grace and I do not work well together, and it became pretty clear fairly early on that one of us would have to step away, and I stepped away because I could bring in money by going out and working.

Grad: Let me step you back there. The original concept was that you would find people if there were jobs to be done, and you would market them through the company and take some kind of a mark up on their services. And that you could find other people for more work.

Gentry: Right.

Grad: And did you see that as a business proposition early on or just simply a way of selling your services primarily?

Gentry: No, as a business proposition.

Grad: Now your services obviously were not what you earned for the company because there was no mark up.

Gentry: Right.

Grad: But you did see it as a business proposition.

Gentry: Oh, yes.

Grad: Did you ever put together a business plan or anything of that sort at that time?

Gentry: No, and we actually ran the business for a year and a half off our kitchen table.

Grad: Did you go out recruiting people? Did you go out to look for people? What did you do?

Gentry: We did go out and look for people. Grace found a lot of people. We kept files of potential contractors.

Grad: I'm trying to understand what your role was during that period of time other than being a doer.

Gentry: Primarily being a doer.

Grad: Did you help conceptualize the business?

Gentry: Oh I think so. We talked over policies and stuff like that.

Grad: Were there major differences in your views of what the business should be or how it should be run?

Gentry: Sufficiently so that we realized that we couldn't work together.

Grad: Was this simply a personality issue?

Gentry: That's probably what it is.

Grad: Sometimes it's also issues about what's to be done.

Gentry: Oh no, I don't think it was that. It was more personality. She can be very opinionated as to how things should be done.

Grad: And you're not?

Gentry: Well, I am too. So it just became clear that I could do best by going out and doing things and bringing money in.

Grad: That did not make you unhappy?

Gentry: No, not particularly. I enjoy programming.

Grad: Well again, this is that back to ego issue, it wasn't important to you that it be your company?

Gentry: No.

Grad: And be your vision particularly?

Gentry: No.

Grad: That's interesting. It's such an interesting difference because so many of the people we've interviewed have been entrepreneurs, intent on creating their own businesses.

Gentry: Well that's why Bill Millard, after SYSDYN wanted to form another company but Seymour Rubinstein and I didn't join him because of his ego, he wanted it to be his company.

Grad: Bill Millard.

Gentry: Yes. He would make the decisions, he would run the company.

Grad: And that was a no-no for you?

Gentry: Yes.

Grad: But it was not a no-no for Seymour because he did join Imsai at some point.

Gentry: Later. He joined Imsai later. Yes, this was a company in between, he wanted to form a company in between and we actually did some contract work for him. I don't recall him having a company at the time, or at least certainly not an incorporated company, but we did contract work for the Los Angeles Police Department.

Grad: From what you've described and what I've heard, Bill Millard was the quintessential entrepreneur.

Gentry: Yes. He felt like he knew best. And in a lot of ways he did.

Grad: Back to Gentry Inc. Grace had stopped working now and was running the company?

Gentry: Right. And this is 1975 or 1976.

Grad: And you're bringing in enough income, but you're saying there's this threat of bankruptcy because of that fixed price contract.

Gentry: Because I'm working free, I'm not bringing any money in.

Grad: So the company is surviving only to the extent that she can find other assignments for other people.

Gentry: That's right.

Using Independent Contractors

Grad: Did they become employees of Gentry Inc. or were you simply providing them? How did you handle that?

Gentry: We were providing independent contractors.

Grad: Explain that model just a little bit.

Gentry: Well, an independent contractor is a person who is in business for himself. He's not employed by anyone, he doesn't get benefits from anybody else, et cetera, et cetera, but he is in business for himself so he gets certain advantages of being in business.

Grad: Okay. Now, let me be more precise because this was definitely a different model from the other professional services companies, and again Grace will cover much of this but I want to get your view. With Ron Forsey and the initial four people that you provided, they wouldn't hire independent contractors.

Gentry: Correct.

Grad: So they hired Gentry Inc to get the job done.

Gentry: I basically subcontracted the work to the independent contractors.

Grad: You subcontracted with these people and you brokered them to this other place but they were not your employees.

Gentry: No, but we were basically the contractor. And that's the way we liked to work, and that's the way everybody that started a company like ours initially liked to work. And somewhere along, I don't know a few years later, there was this law past with ADAPSO.

Grad: ADAPSO was the name of the trade association.

Gentry: And with IBM. And they got Congress to pass this 1706 law which basically outlawed independent contractors. And that's when NACCB was formed, the National Association of Computer Consultant Businesses. The law was putting our company out of business because we used contractors, and that's when we had to change, and so did the other companies like ours had to change and actually hire people as employees of our company, although they might be temporary employees. But that made us responsible for their taxes and social security, et cetera, et cetera.

Grad: Again, I think Grace will cover it, but I think you were sued at one point by the State of California or there was investigation as to the classification for not collecting FICA, at least that's the story that I've been told anyway, but I'll leave that to Grace.

Gentry: I think they wanted to audit us at one time or something, but that went away.

Grad: I've had a different story but we'll go there later.

Gentry: Okay.

Grad: So you worked a very lengthy period of time on this project for the Alameda County GSA and you finally got it done.

Gentry: One comment, there was a plus from that year of work, and I'll tell you why. I used to smoke two packs of cigarettes a day. During that year, I felt I was totally out of control with my life. I had no control. All I could do was go to work every day, spend 14 hours and then go home and fall into bed. And at one point, close to the end of that year, I was sitting there at work and I was thinking I really don't have any control over my life. The only thing I can control right now is whether or not I'll light up my next cigarette. And I quit cold turkey. And it worked.

Grad: So there was some benefit.

Gentry: That's the only thing.

Grad: That sounds like a very dreadful period of time for you.

Gentry: Well it wasn't fun, that's for sure. I wasn't making any money; I wasn't spending Christmas with kids. Yes, it was a bad time.

Grad: And you didn't have enough money coming in from other projects to pay people to do this work for you.

Gentry: Oh, correct, correct.

Grad: The only way you could carry it out was that you worked for free.

Gentry: Right, Yes.

Grad: Boy, that's tough. This was done on a scientific computer being used for commercial applications, wasn't it?

Gentry: Yes, Yes.

Grad: So you don't have the systems support or the systems tools that one would normally have to do this kind of work.

Gentry: Right, right. So I had basically to do some more system work to solve the problems.

Grad: Did you create tools, systems tools?

Gentry: Yes, Yes, I had to.

Grad: What kind of things, do you remember?

Gentry: Well, I don't really remember. I had to basically set it up so that it would handle more than one partition of programming, but I don't remember any other specifics.

Grad: But again, you looked at it again from a structural standpoint rather than just writing code.

Gentry: Yes, Yes.

Grad: You mentioned a couple of other projects with CES.

Gentry: Oh, yes, the Jury Management System was a fun project and interesting.

Grad: But you didn't do that on a fixed price basis.

Gentry: No.

Grad: Did you ever bid another fixed price outfit?

Gentry: No. First, last, and never again.

Grad: That's a comment made by many of the other professional services companies.

Gentry: Absolutely. I learned not too long after we started the company that if I estimated a job time-wise and then I doubled it, I might be close to the actual time involved.

Grad: Even though it was your own time?

Gentry: Yes.

Grad: Because I've heard other people complain that when they're using other people they don't perform as efficiently as they themselves. They know what they could do, but they don't know how well others will perform.

Gentry: Yes and then there's the day that the power goes down, there's the day that they have to use the computer for something else and you can't use it. There are just a lot of little factors that you can't control. Plus anybody who programs is an optimist anyway

Using non-IBM Computers

Grad: Tell me a little bit about the Jury Management System.

Gentry: Well that was fine; it was developed on a Data General computer. Basically it used some database for randomly choosing jurors. In California it would be the DMV database. I suspect it was the same, either that or the property owners' database. And the idea was that if they had a trial coming up they could enter the information, and the system would go out and randomly select a jury panel and call them in, and then keep track of their service, et cetera, et cetera. So it was an interesting project.

Grad: You've been using other systems, not the standard IBM mainframes. You were using the HP 1000, and you were using the Data General.

Gentry: Yes.

Grad: Was there any particular reason for that, or is that just the way it happened?

Gentry: That was kind of just the way it happened. Our company, Gentry Inc., at one time developed our own software. We got involved with customers who were using the HP 3000, and so we became more or less HP oriented. Yes.

Grad: So the things that were standard in the mainframe industry, the standard tools like CICS, IMS, all the other database programs, you were really off in another dimension working with these other manufacturers.

Gentry: Right.

Working as a Programmer

Grad: Let's finish up a little bit here. You speak also of some work you were doing with Data Design Associates. Can you describe that?

Gentry: No. After I left CES, Grace basically arranged this contract with Data Designs in San Jose, so for a year I commuted from Berkeley to San Jose. You know, I can't really remember exactly what I was doing there. I have two programs at home that I wrote down there, and I've been looking at them, and I can't figure out what the hell they do. That's not quite true. I can't figure out exactly how they do it, but it was to develop a scheme for vendor purchasing, and accounts payable, but it was to allow remote access via a terminal, and it was to allow, or create a system that they could take to this company, and based upon their requirements, very quickly implement these applications, and they might even have different terminals, okay. Over at this company, they might have a different system, a different set of files, or requirements, but they wanted to be able to implement this system.

Grad: Would you call this a skeleton type system, where in effect you have a framework or a skeleton that could then be used and modified?

Gentry: Yes. You could define within the system the properties of the terminal, whatever terminal you wanted; you tell it what the carriage return is, you tell it all of the controls, and you could also define screens, and you could say, "On this screen I need these fields, they should be in this location," and then the program would effectively, when it starts running say, "Oh, screen number one? We'll get all the specs for screen number one. What kind of terminal is it on? Oh, it's that kind of a terminal," and get all the control codes, and it would send out the first message to the terminal, and then it would know what to expect back in terms of which field, what the values of the field should be, etcetera, so that was the idea.

Grad: And you were implementing this program for them to be able to sell.

Gentry: Yes.

Grad: So they wanted this kind of tool. There were a number of these things being done at that time for different machines. My background would be more the IBM mainframe framework.

Gentry: Well, this was also IBM. And in fact it was coded in COBOL. So I did get a nickel off of it.

Grad: I bet you did. You seemed to have a career where effectively you work with one client on multiple things for quite a period of time, and then with another client.

Gentry: Yes.

Grad: Rather than, as many professional services people have done, they go from company to company to company. You tended to have relatively long assignments.

Gentry: Yes.

Grad: That says two things to me. One, your work must be very good when you work for these companies, because otherwise they'd get rid of you.

Gentry: And I don't give them any trouble.

Grad: That's another part. I think the nature of your personality is such that you get along well with these people, I would think.

Gentry: Yes.

Grad: They would respect you, and they feel they're getting good value for their money, is what it sounds like.

Gentry: And my last contract was 15 years.

Grad: Yes, that's lovely. I'm going to get to that, but there's a pattern there prior to that last contract.

Gentry: And every one of my contracts was a hand shake.

Grad: No fancy contracts? These were basically time and materials projects so you were being paid an hourly rate?

Gentry: Yes.

Grad: Did you keep changing your hourly rate as time went on? When inflation hit, and so forth?

Gentry: Slightly. I think the most I ever charged was $50 an hour.

Grad: You're kidding me.

Gentry: No.

Grad: So $400 a day, basically, was the maximum you ever charged.

Gentry: Yes, that was on my last contract. But being a contractor is so neat. You're not involved in company politics, which is fantastic; these people get together and they argue and fight, and you're just sitting there doing your code.

Grad: And that was satisfying to you.

Gentry: Very.

Grad: You found the applications of the projects that you had to work on kept you interested and happy.

Gentry: Yes. What's so great about programming to me is, one, it's very interesting, and it obviously takes a certain talent to do it right, but there is a completion date. It's like you start and you see it work, and then you start the next one, and you see it work. It's not like running a company, for example where you don't know from one day to the next, if it is going to fall apart.

Grad: Was part of it also that you didn't have any financial responsibility? You got your work done, got paid for your work. Whenever you get into marketing, when you were doing products, at Gentry you were investing money, you were taking some risk. You don't know if it's going to make money or lose money, right?

Gentry: No. That didn't bother me, really.

Grad: So the risk aspect was not your concern?

Gentry: No. No.

Progress at Gentry Inc.

Grad: What was going on with Gentry Inc. during this period? Were you involved with it, or was it basically Grace's company?

Gentry: It was Grace's company. I've forgotten exactly when, but I installed a system in the company I was working for with at some point using 80 computers, and then in 1995, I left my contract and went back full time with the Gentry as a systems administrator; but, no, she ran the company.

Grad: Did you end up debating the directions of the company? Did you feel as an investor, you were a board member there, but were you trying to help direct the company, or were you basically just doing your thing?

Gentry: No, we discussed it, and I had opinions. For instance, we dropped out of providing, or doing our own software. That's a tough business, okay. We didn't do any more fixed price contracts. We agreed totally on that. So, in that sense, I was involved in helping decide policy. We had a reputation of being one of the most honest companies, and that was very important to both of us. It's just that business based on lies is just not worth it. It really isn't.

Grad: So the business ethics, the business morality is very important to you.

Gentry: It was very important to us. Yes.

Grad: That was to both of you. It's not an area you disagreed on.

Gentry: No disagreement.

Grad: Okay, getting into the software products, did you create those software products?

Gentry: No.

Grad: Were you involved in them, in terms of checking them out or determining which ones to do?

Gentry: No, we created one product, which was a report writing language, called PAL, which was reasonably successful. It was written by a contractor of ours. We also sold and installed an accounting system, and we worked using that set of software, we'd go and install it. We were a Value Added Reseller for HP, primarily.

Grad: You were getting references from HP?

Gentry: Yes.

Grad: And they were giving you leads, and so forth. But you didn't really end up doing it yourself? You personally, were doing other things.

Gentry: Yes.

MJB Coffee and Hills Brothers

Grad: Okay, let's bring this to a close here. So you're saying in about 1980, early 1981, Gentry picked up a contract with what was then MJB Coffee.

Gentry: Yes. They had had SRI do a study and a plan for a new system for sales, purchasing, inventory, the whole bit, okay? And so now they wanted it installed, and so they brought us in, and over a period of several years, we managed to do the job, although not quite like I had planned it.

Grad: Was it you alone, or with other people?

Gentry: We had three other people from Gentry.

Grad: And you were the project manager for that?

Gentry: Yes. Yes.

Grad: Go ahead.

Gentry: It worked very well. They had some peculiar concerns and requirements; they were like other companies. They wanted to meet their quotas, and so forth. They would log sales-- they would get a customer to say, "Yes, I'll buy a million pounds of coffee," full well knowing that after the end of the year, that order would be cancelled. Yes, but anyway, that kind of stuff had to be handled in this system. It was an interesting system.

Grad: Where were they located?

Gentry: They were located in San Francisco.

Grad: So you were working there physically?

Gentry: Yes, Yes.

Grad: And this was an HP 3000 customer.

Gentry: Yes, Yes, and that was COBOL mostly.

Grad: So you continued to work with them after they were sold to another company?

Gentry: They were bought by Hills Brothers Coffee. MJB was a privately owned company. I've forgotten their last names, but anyway, those were their initials, MJB. And they were bought by Hills Brothers which had just recently before that been itself purchased by Nestle, and because they wanted to maintain the two brands, MJB and Hills Brothers, they wanted to also bring the HP 3000 over, because they couldn't just automatically throw everything into a pot; besides we were doing things a little differently from them, and so forth. So when they brought the HP 3000 over, then they brought the people necessary to maintain that system. I was one of them.

Grad: So you had three or four people?

Gentry: Not at that point; it had been installed and it was running, so we didn't have a development team there any more. There were probably just a couple of us there.

Grad: So you were maintaining the system. Did you build new applications, or new systems?

Gentry: Not on that HP 3000. I did end up eventually writing new programs for the IBM computers, which is what Hills Brothers had. I don't remember what the applications were right now, but they were just application programs.

Grad: But that continued to be Gentry contracts over a long period of time with Nestles to do applications work.

Gentry: Yes.

Grad: Did that contract expand to include many other people from Gentry, or was that pretty much just you?

Gentry: Pretty much me. I think we had one or two others at some point in time, but they didn't last the whole period.

Grad: Was this primarily just doing applications work, or were you building new system tools or systems products?

Gentry: Just applications.

Grad: In 1995, did you terminate, or did they terminate the contract?

Gentry: I terminated it.

Selling Gentry Inc.

Grad: Why? What's happened?

Gentry: Well, in 1995, we were realizing that we were getting close to retirement age. It was a good year for mergers and acquisitions, and we wanted to sell our company, and get enough money to retire. So one of the goals was for me to go back there, again, as a systems administrator, and help to get everything squared away so that it would look good to a potential buyer, and that's what I did, and we eventually sold it in 1998.

Grad: Again, we'll cover that later. How did that work, the three years you were working as a systems administrator?

Gentry: It was fine. She ran the company; I just kept the systems running.

Grad: So you kept the thing operational, and she still did the selling, and the assignments of people, and all these other kinds of things.

Gentry: Absolutely, Yes.

Grad: By that point you were back to being a pure professional services company.

Gentry: Yes.

Grad: No more product development.

Gentry: That's right.

Grad: And then you were sold. She'll give the details, I assume on that, if she wishes to.

Gentry: Yes.

Life after Gentry Inc.

Grad: So what have you done since you've retired?

Gentry: Well, I had two goals when I retired. Goal number one was to catch up on all the new programming languages, so I wouldn't feel like a dinosaur, and goal number two, was I always enjoyed woodworking, so I wanted to get back to spending my time doing some woodworking. I've been retired now since 1998. That's almost eight years. I have done neither.

Grad: Oh, really?

Gentry: We do a fair amount of traveling every year. I am scanning and digitizing 45 years worth of pictures that I've taken.

Grad: These are personal photographs.

Gentry: Yes, because my goal is to create a set of DVD's for each of the children, so they don't argue over who gets the pictures. That's going kind of slowly right now, too. I still spend a lot of time on the computers.

Grad: Doing what?

Gentry: We have two laptops at home, we have a mail server, we've got a desktop, always updating the computer software, blah, blah, blah. And just like the power went out yesterday, and last night my wireless printer wasn't working, so I'm going to spend a day getting it to work again, you know. It's that kind of thing. We have a vacation house up in Trinity County.

Grad: Where's that?

Gentry: Right off Trinity Lake, go to Redding, take a left and go 40 miles. We probably spend four or five weeks up there a year. Not much more than that.

Grad: Much foreign travel?

Gentry: Yes, quite a bit. We've taken bike trips through the (???) Valley, three times. The first one was through southern Italy, in the spur of the boot, which was a fabulous bike trip. We've taken two barge biking trips out of Amsterdam. We spent five weeks in Paris, way back when which got us very interested in this, so every year we spend probably five or six weeks

traveling some place. We like cruises. Last spring we took a cruise from Fort Lauderdale to Amsterdam. It was a 14 day transatlantic trip.

Grad: That's a slow one.

Gentry: Yes, Yes. We stopped in Spain and Belgium, and Paris. We ended up in Amsterdam; we walked off the ship, turned around and got back on the ship, and spent 12 days going through all the Baltic capitals.

Grad: It's supposed to be exciting.

Gentry: Beautiful. Yes. Well, we did it because Grace is always taking polls, talking to people and saying, "What's your favorite trip? What's your favorite cruise?" and she said all but one always said the Baltic Sea.

Grad: We've had a number of our friends who've gone there, and just found that just magnificent; they went to Riga, and to the other places there.

Gentry: Yes, we went to Oslo, Stockholm, Helsinki, St. Petersburg, Tallinn, Copenhagen and Amsterdam.

Grad: Wow.

Gentry: And there's a family in St. Petersburg that we're friends with. In fact about three years ago, we spent 12 days over there, and there's a story about how we got there via our daughter-in-law's father; he goes back and forth and he knows these people, and he arranged it for us. It was the trip of a lifetime. It really was and St. Petersburg is one of the most beautiful cities I've ever seen, and I used to think Paris was it. Paris still is, but St. Petersburg is a beautiful, beautiful city.

Grad: I spent a few days there when I was with IBM, going to Russia, trying to discuss computer stuff, and I stayed in a hotel just along the River Neva, and they had a mammoth grand piano in my living room. I couldn't play the piano. I wished I could, but they also had a camera taking pictures the whole time, so that was a mixed bag of that up there.

Gentry: Yes. Yes.

Grad: You gave me some notes. I'm going to include those about some of the things you've summarized, as what you believed to be key things that you observed.

Gentry: Okay.

Grad: If you want to add something else in terms of what some of your thinking is about the industry, about how it's changed or developed, that would be fine to add here now.

Gentry: I have this 1401 manual that was used to teach that class with. And I also have a FASTER manual. Are they of value here?

Grad: The answer to your first question is, yes, we would. We'd like to have support material for our oral histories. How much else do you have that you've kept about the kinds of things did, and the major things you worked on?

Gentry: Very little. Very, very little.

Grad: I'm thinking more about you. You have been a person who's been a programmer for an entire career, once you got out of the Air Force, and finished with the IBM education. But you did not have the desire to start a company on your own, or to build something big, but just to do good programming work over all that period of time, which you've done for a number of different companies.

Gentry: Yes.

Grad: And it's a nice counterpoint to the entrepreneurs' interviews that we've had, or to Bob Patrick, for example, who was a consultant working at a very high level for a number of organizations, where it was important to him to change the world.

Gentry: Yes.

Grad: And that has not been one of your goals, just to get things done, and do good things.

Gentry: Not per se. I think I've invented a little bit, and made the world a little bit better, but that was not the primary goal, I guess.

Grad: The difference in ego drive seems to be a major thing, and it's not good or bad, it's just part of your character.

Gentry: Yes. Yes.

Grad: And I gather you were happy with this career.

Gentry: I enjoyed it very much.

Grad: Thank you very much for your time, Richard.

Gentry: You're very welcome.

[Richard Gentry also provided a summary of his background and experiences prior to the Interview. This summary has been attached below]

Richard Gentry Summary of Experiences

Born April 12, 1935, in Dallas Texas.

Attended public schools in Dallas.

Graduated in January 1952 from Woodrow Wilson High School as class Salutatorian.

Worked as a mailroom clerk until September of 1952.

Attended Texas A&M College from September 1952 until June 1956.
- Majored in Physics.
- Was a member of the Air Force ROTC.
- Graduated in June 1956 with a reserve commission as a Second Lieutenant in the US Air Force.

Married Grace on July 11,1956.
- First child born 1957.
- Second child born 1959.
- Third child born 1962.

Served as a pilot in the Air Force from July 1956 thru August 1960.
- Primary flight training at Marana Air Base outside of Tucson, Arizona
- Multi-engine training at Goodfellow Air Force Base in San Angelo, Texas
- C-118 (DC-6) training at West Palm Beach Air Base in West Palm Beach, Florida
- Duty assignment with MATS at McGuire Air Force Base in Wrightstown, New Jersey

Attended University of California at Berkeley Graduate School in Physics for one semester, Fall Semester 1960.

Three events in my life aroused my interest in computers:

1. During my early years at Texas A&M, in an English course which required each student to prepare an oral report describing how to perform some task, one of the students described a manual sorting and selection system using punched cards and a skewer like needle which could be inserted into the desired punches for selecting a particular set of cards. It was intriguing and obviously made a lot of sense.

2. During my senior year at Texas A&M our physics professor took our class on a field trip to the Atlantic Refining Company offices in Houston where we were shown their IBM 704 computing facility. Again, extremely interesting and very intriguing in terms of its current and potential uses.

3. During my Air Force service at McGuire AFB, when I was not actually on a trip, I volunteered to perform some office duties. I was assigned to work as an assistant training officer which meant that I had to keep track of when and what type of training each of the squadron's

pilots and/or navigators had accomplished and to make certain that they were scheduled for new training classes on a timely basis. We kept training folders on each of man containing certificates of training completion. These had to be manually reviewed constantly to make certain that all training requirements had been met and that any new requirements had been scheduled. Needless to say, it didn't take long for me to wish I at least had the manual punch card system described above, or better yet, a computer. But a computer was out of the question at that time for my little job.

I Joined IBM in the spring of 1961 at the San Francisco Branch Office. I Served as an SE for 2 or three months, then joined the Education Center (also part of the San Francisco office) where I served as an instructor, first as an instructor of the "pre-computer" accounting machines, and then as an instructor for the 1401, 1620, and, ultimately, the 360 computers. One of the things I did – on my own time – during this period was to help write a 1401 simulator for the 1620. I did this for a friend of mine who had gotten a job teaching programming at one of the community colleges. IBM at that time had a program that provided an inexpensive (relatively) 1620 to educational institutions; but 1401's were not part of that program. But the students taking programming were interested in learning 1401 programming in order to obtain jobs in the business world. Attended the initial training for the 360 in Poughkeepsie in order to return and provide classes to the branch offices.

In late 1965 or early 1966, I transferred from the San Francisco Ed Center to the Oakland, California GEM office. I felt that I wanted to put what I had learned at the Ed Center to some useful purpose in the real world. I was assigned as an SE to the Alameda County Data Processing Center in Oakland, California. The Data Processing Manager was William H. Millard. At the time that I was assigned, Alameda County was operating with an IBM 7040. While my primary function there was to provide SE support for the IBM systems and software installed there, I was subsequently also allowed to become involved in the development of new application software envisioned by the DP Manager. The two applications in which I was involved were both online applications, a relatively new and exciting concept in commercial application development. The first of these was to allow online access to the County's social welfare data bases. The terminals used were the available typewriter like devices. The second application was to provide an online police information system for the County. The terminals in this case were to be the new crt type terminals.

The systems were to consist of a number of types of online transactions, e.g.queries, updates, etc. After tediously coding the first of these applications using assembler language for the 7040, I realized that I would have to restart the tedious process for each of the subsequent transactions. I also realized that there would be significant commonality in the functions of each transaction, and that there should be someway of generalizing these functions to reduce the amount of redundant and tedious programming. At the time, the best, if not only way, of providing a shorthand for similar coding was through the use of assembly language macros. To insure that this would be a valid approach, I told Grace that I thought that I had an idea that, if it worked, would considerably reduce the time necessary to code new transactions for an online system; but that to prove the validity of the process, I would have to spend my own time at home, evenings and weekends, validating the process because I could not devote work time to attempting an untried and quite possibly impossible process. Grace agreed to support me in this effort and made certain that I could devote the time required. Eventually, I convinced myself that defining a set of macros that would significantly reduce the amount of time necessary to implement new online transactions would work; so I went to Bill and explained the idea and concept to him. Always a visionary, Bill realized the value of the idea and had enough

confidence in me to give me the permission to devote my time to the development of the system.

This is the system that became known in certain circles as “The Gentry Monitor.” The original version was developed for the IBM 7040. When Alameda added the new IBM 360, I converted “The Gentry Monitor” to the IBM 360. The Gentry Monitor allowed for the processing of transactions but did not actually perform the communication functions for transmission to and from the remote terminal devices. Transmission was handled by IBM’s BTAM (Basic Teleprocessing Access Method). Another SE, Mitz Tamura, was assigned the task of generalizing BTAM programs that would interface seamlessly with The Gentry Monitor.

In 1967 or 1968, IBM decided to make “The Gentry Monitor” a type 2, field developed program, one available to IBM customers but not officially supported by the IBM systems group. To this end, a group of about 5 SE’s, including myself, and headed by Van Vandenberg was created to smooth the edges of The Gentry Monitor, and document the program for release as a type 2 program. The system was then given the name, “Filing and Source Data Entry Techniques for Easier Retrieval” or “FASTER.” I received an IBM “Outstanding Contribution Award” for my work on The Gentry Monitor and FASTER.

In 1969, I left IBM to accept Bill Millard’s invitation to join his new company, System Dynamics, Inc., or SYSDYN, that he had created. Its purpose was to sell and install systems using FASTER and/or SYSDYN’s improvements to FASTER. The primary improvement that I was involved in was to create a multi-threading capability for the system. Additionally, during my time with SYSDYN, I (along with my family) spent five weeks in Paris consulting with CAP, the leading software company in France. The main purpose was to describe and document the methodology and implementation requirements of such a system as FASTER to allow them to develop their version of such a system.

In 1972, SYSDYN closed its doors. From mid 1972, when SYSDYN closed its doors, until early 1974, I continued as an independent contractor at San Francisco City and County to complete a Traffic Citation System that SYSDYN had begun.

In February of 1974, Grace and I started our own company (initially, “Richard E. Gentry, Inc”, later just “Gentry, Inc.”). It is interesting as to how we justified starting it: A friend of ours whom I had met when I was an SE at Alameda County had returned to Alameda County after a brief lapse in his employment at the County. He was rehired and returned to manage the development of a new payroll system for the County. He soon realized that he would need additional personnel to complete the project, but the County was reluctant to hire new employees that would only be required for the duration of the project. That meant that our friend would have to go outside of the County to obtain personnel that could be used on temporary basis only for the length of the payroll project. The County at that time had a policy that precluded using independent contractors but would allow contracting with a corporation for the additional personnel. At any rate, our friend called and suggested that we create a corporation that would allow him to acquire the personnel that he needed through our company. So, we formed Gentry, Inc., and the rest is history.

One of Gentry’s first contracts, other than that of providing personnel for Alameda’s payroll development, was a contract with Computer Election Systems, a number of whose officers I had know for a time, who had several projects that they were interested in having Gentry (and me) involved in. Basically, they were:

1. To write a simple and limited spread sheet type of program for the VP of Finance.

2. They wanted Gentry to subcontract to them for the development and installation of a purchasing system for Alameda County General Services Administration. Unfortunately, Gentry agreed to a fixed price contract (our first, only and last fixed price contract) for the job. I ended up spending a year, 14/7, including holidays. It was during this period that Grace took over the Presidency of Gentry, Inc. If she hadn't been able to take over the management of Gentry, we would have had to file for bankruptcy. The purchasing system was to be developed on an HP 1000 which, unfortunately, was their scientific (not commercial) computer. It had only Fortran as a programming language and only a single partition of memory. So the job was a little more difficult that we initially imagined; but it got done.

3. They contracted with Maricopa County in Arizona to develop a Jury Management system. It was to be developed on a Data General computer using COBOL as the development language. Gentry provided up to 3 people, including myself, to develop the system. Computer Election Systems was to retain title to the system with the idea of being able to market it to other court systems. The system was developed successfully, installed in Maricopa County, sold (I think) to a couple of other court systems, and then the software itself was sold so that CES could continue its focus on election systems.

In early 1979, I began a year long contract with Data Design Associates who were located in the San Jose, California, area.

In late 1980 or early 1981, Gentry obtained a contract from the MJB Coffee company to develop and implement order entry, inventory, and accounting systems. The systems were developed on an HP 3000 using COBOL as the programming language. Gentry provided 3 or 4 of the implementers. I acted as the project team manager.

In or around 1984, MJB Coffee was purchased by Hill Brothers Coffee which had just previously been purchased by Nestle. The two offices were combined into the Hills Brothers offices. The HP 3000 from MJB was transferred to Hills Brothers and maintained for a number of years because of the complexity of the systems and the effort that would be involved in moving the applications to the Hills Brothers IBM system. I and other members of the MJB staff were also continued by Hills Brothers in order to maintain the HP 3000 systems. I remained on contract at Hills Brothers until 1995. Eventually, MJB Coffee systems were integrated into the IBM system, and the HP 3000 was terminated. I spent the rest of my time there programming various applications. Eventually, after 1995, the Hills Brothers data processing department was merged into Nestlé's DP department in Southern California.

In 1995, I terminated my contract with Hills Brothers and returned to Gentry's office to act as Systems Administrator until Gentry was sold in July of 1998. Grace continued as President of the Company until February of 2000.