An Interview with

LAUREL V. KALEDA

Conducted by Jeffrey R. Yost

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Abstract

In this interview with the 1994 Computer Society President Laurel Kaleda she briefly discusses early influences and interests (attending NSF Science Camp) and studying computing (and being there at the start of the formation of a department in Applied Mathematics and Computer Science) at Washington University. The bulk of the interview focuses on her career at IBM and volunteer leadership for the Computer Society. She discusses working as an engineer and manager at IBM in programming assurance, mainframe disk storage, and intellectual property at San Jose, Menlo Park, and Santa Teresa. Included with this is her becoming a PE and gender in moving through the corporate ranks. At the Computer Society she provided leadership in standards and as VP-Technical Activities. She elaborates on her early mentors in the CS, various opportunities, and her priorities and work in serving as the CS President—which includes discussing the technical activities, publications, conferences, outreach and international activities of the society. She also briefly discusses her work with the IEEE.

Yost: My name is Jeffrey Yost from the Charles Babbage Institute at the University of Minnesota, and I'm here to day with Laurel Kaleda, past president of the IEEE Computer Society. This is part of the Computer Society Oral History Series that the history committee of the Society is doing. Laurel, can you begin by giving me a little bit of biographical information, telling when and where you were born?

Kaleda: I was born a long time ago in 1944, near the city of Chicago and grew up there. My parents then moved out to the country, thinking it was a better environment. They also moved with more than 20 dogs that they were starting a breeding and boarding kennel. So we went out to the country where there was a lot of room and [I] went through high school there, Palos Park. And then I went to college at Washington University, St. Louis. And from there, into IBM.

Yost: Can you talk a little bit about your interests as a student, before going to college? What were you interested in?

Kaleda: I got very lucky, genetically I guess, in that I was an only child of a father who was a working engineer. And he was very helpful in handing me all sorts of opportunities, making sure I had the opportunities to exceed in math and science, and learn. He was a good part of a parents group that supported our advanced science programs at the high school, for example. Mother was also very intelligent, even though she'd essentially chosen to be a stay-at-home mom. So I have good grounding at that, and I was fortunate enough to go to an NSF science camp between my junior and senior years in high school. So at the age of 16, I got to go to Southern Illinois University and worked, not only with some of the first computers — besides, that's where the air conditioning was — and also a physics program that ran parallel to the computing one.

Yost: Were there many young women that were part of that group?

Kaleda: There was a good group. And as far as I remember, it was about 50/50.

Yost: Great. Can you tell me about your decision to go to Washington University?

Kaleda: Washington University came through with some funding, which was very helpful. My parents did not make a lot of money. And it was also relatively close. It's a four-hour train ride from Chicago to St. Louis. Even less by airplane, but airplane travel was not as easy in the mid-1960s as it is now. I applied to Rice, and was accepted. And I applied to what is now Lawrence University. Lawrence University seemed a little limiting, plus it was deadly cold in mid-winter; Rice was just way too far in Texas. So I took the middle ground and they were very happy to have me.

Yost: Did you know what you wanted to study from early in your time at Washington U, or did you experiment?

Kaleda: I thought I did. I came as a math/physics double major, somewhat because of the NSF program. Except Washington U's math program was highly theoretical, almost as theoretical as, I think it's Princeton on the East coast. From my father, I got a very pragmatic approach to things scientific, so there was a big mismatch there and early in my second semester of first year, I applied to change over to the school of engineering and luckily they took me. That put me on a much more straightforward path as far as my way of tackling problems versus the theoretical approach. And the physics department was only slightly less theoretical than the math department. I'd seen computers that summer with NSF. I'd actually done data entry, as boring as that is, for an elderly straightforward computer the summer between high school and college. So I kind of knew what they could do and saw a good future for it, and so [I] focused on that and then built the rest of my university career around that.

Yost: Do you recall what the first computer you used was?

Kaleda: I think it was the IBM 650; small, very long, very limited. [Laughs.] I also had the opportunity while I was in college, between junior and senior year, working as a summer intern for IBM up in Chicago. So that gave me more midrange and some entry level style computers, rather than what would become the mainframes.

Yost: So upon completing your bachelors of science at Wash U., did you look for a job first or did you immediately begin to do some graduate work then?

Kaleda: I actually started to do graduate work, and then there's a little story that comes before that. Six weeks before graduation, Dean McKelvey, who was a new dean at that time, said to six of us that he called into his office, you guys have taken every computer science course as we've added it to the curriculum and we think there's been enough that we should have a new department and we're creating one. But by the way, you guys will graduate with a new degree title, which was Applied Math and Computer Science. So we are the first six.

Yost: And what year did you graduate?

Kaleda: 1966, so in talking with others, apparently we were well ahead of the curve.

Yost: Yes. Stanford and Purdue lay claim to being the first two official programs in the early 1960s. but While many schools had some faculty doing what we now term computer science most schools did not have an official department until the early 1970s or later.

Kaleda: Right. So I consider myself fortunate in that.

Yost: Were there any faculty members that were particularly influential to you at Washington University?

Kaleda: The one I remember most — and that was possibly because he was probably the first faculty in what became the new department — was Dr. Bill Ball, William Ball. He taught probably at least a third of the new classes, mostly on the languages side, and compilers, and that information. And also I think it's Richard Cook. Again, we were such a small department with so few people that you tend to remember.

Yost: In the summer internship you had at IBM, can you talk a little bit more about what you did that summer?

Kaleda: It was an interesting program. I came into the insurance and finance, I believe. It was that sort of area of business office, and so I spent the summer working with systems engineers for the company. One of the major tasks was to get a little, small accounting machine installed in one of the big banks in the center of the city. I particularly remember being there very late one night — as in 2:00 or 3:00 in the morning — trying to get this thing installed so that the bank people could start trying to get the system in and use it the next morning. That was a long night. But a very interesting experience because it was an old traditional bank with a huge ceiling, first floor, and we were working on that big open floor to install this. So that was the major part. I really don't remember too much else, but they certainly had enough work to keep us busy.

Yost: So really putting the interns to work helping with installation.

Kaleda: Yes, IBM's pretty good about that.
[Laughter.]

Yost: And you did some work at, is it pronounced Sever [sev-ER] Institute?

Kaleda: SEE-ver Institute. That's the name of the graduate school for the school of engineering at Washington University. I have no idea why they did that, but what I did was as I graduated senior year, I had already been working with the computer and computer support group at the university to get a little extra spending money, doing 10

hours a week during the school year. And then I just went into full time support over the summer, and then 20 hours a week when I started my graduate work. And for that they paid me almost enough to live on. It was before graduate salaries got much better.

Yost: How long did you do that for?

Kaleda: I did that for three semesters, and somewhere as I started the third semester I said I don't want to live like this anymore. It was a little too much hand-to-mouth, a little worrisome, and so I went out looking for a job.

Yost: Can you tell me about that job search?

Kaleda: It was interesting. I knew a recruiter at the time so I was picking his brains for what the opportunities were, and finding out that at this point in time, things were limited. Even with my degree, even with good grades, and with direct practical experience, many companies wouldn't even talk to me because I was female. But I had worked with IBM, I guess I knew three, four of their local people because I was one of the people heavily involved with the then 360 that was on the floor that we used as our main system. I talked with them and it was probably through one or more of them that I pulled an interview, and pulled a job offer. But I also interviewed with McDonnell Douglas. I think I talked to Southwestern Bell. Either I talked to them or it was informal, but the said all they could offer me was a position as a manager of telephone operators, which I thought was a kind of a misuse of the talents that I did have. And I was really pushing to go to IBM, that's where I really wanted to go but I kept some back-ups in there. And I did get an offer from McDonnell as well for programming for some really neat projects that they had.

Yost: And what was your original position at IBM and then at what IBM location?

Kaleda: I started with IBM St. Louis. I think we were called St. Louis West. And I was what they called at the time a systems engineer, which was a fancy term for the software and systems side technical assistance to customers.

Yost: I've actually done some work on the history of IBM, so I know they started out in 1960 with that job classification.

Kaleda: Right. But by 1969, they decided they wanted to charge customers for the services, and I was actually working on the McDonnell Douglas account. McDonnell Douglas had — there were at least 22 and maybe 23 of us on the account — and McDonnell Douglas said we'll pay for four or five. So you've got this immediate 15, almost 20, people that you need to place someplace else.

Yost: At the end of the 1960s and into the 1970s, IBM, I believe, announced bundling in 1968 and then implemented it in the next couple of years.

Kaleda: It started in the summer of 1969. Someplace in my papers I have some of these announcements.

Yost: Was that pretty much a complete change with the systems engineers, in that all of their time was now billable?

Kaleda: Was supposed to be billable, yes. It was an interesting five, six months. I got several offers, but they were all for the East coast. I knew that's not where I wanted to go. They had sent us to San Jose — I don't know why — from St. Louis, for one of our early training sessions. I liked San Jose. My parents, at the time were living in Santa Barbara. So I waited until they offered me something in San Jose, and jumped at it, came out here.

Yost: What year was that? And what was the offer?

Kaleda: That was in 1970, and then I joined the staff in programming assurance, that was my kind of fortunate introduction into assurance. Had I come in any other way it might've been different.

Yost: Can you expand upon that specialization and that activity?

Kaleda: It's an interesting specialization in that assurance work is applicable to almost all, well, certainly all software. There's not much that you need to know about what the software is doing itself. In some ways, it's also fairly applicable to the hardware process as well. So you're able to shift careers a little bit, even within the field to a certain extent and I was able to do that. I went from working on mainframe almost systems oriented software, to very small machine software, the low end. [I] went up to Menlo Park after three years or so in San Jose. A group in Menlo Park was the small end machines, built for small businesses, small technical usage. I was there for eight years working on all sorts of different things, including one of the first PCs, and we got mock-ups of that to work with.

Yost: Was this also the mid-range series that started the System 3?

Kaleda: To me, System 3 was small end, but yes, they already were well along with System 3 when I came in. I saw the birth of the 38, the 36, the 32, certainly the 34. I saw some of the heartache about the 38 because we delivered over a year late from the announcement, like two years after the announcement instead of within a year. It was a major project. It was beautiful machinery and a really great system. But in a lot of ways, it broke a lot of ground. And so what? [Laughs.]

Yost: And in helping customers with smaller businesses with these systems, were services also billed separately rather than bundled?

Kaleda: No, with the smaller systems, usually installation and some assistance was built into the package. By then, I was fully into assurance, which is much more of the development side of the house, and the only reason I saw customers in those years was to find out what customers were doing with the machines, what little interaction they would let us have at that point in time.

Yost: Assurance in recent years has very much been tied to security. Was security an issue at that time?

Kaleda: Not specifically, but certainly putting in good code that was — we knew how to hack it [laughs] because we knew how it went in — but with the small machines it wasn't as much of a worry. Things weren't as interconnected the way they are today. It was rare that you even had a big System 38 connected into anything else, and those would've been very specific in their connections. So you were worried about somebody getting in and fooling around with the code, and having to know where it is, and how it was structured. Now that I think about it, we probably didn't worry anywhere near as much but it was becoming a big thing with the big mainframes. I went from Menlo — then Menlo Palo Alto — I went from there to Santa Teresa, which is IBM's home of a lot of the languages, and also the databases, and went to their assurance department. So I went from low range, mid-range, to mainframe.

Yost: Is that where Edgar Codd was?

Kaleda: Well, Edgar Codd was more up in research, what we call up on the hill.

Yost: Okay.

Kaleda: So research lab was somewhat separate, but the people who really produce and maintain, and love and nurture the code for the compilers and for the databases were at Santa Teresa. So once they created System R and some of the rest, then it got shifted off to a production facility, which was Santa Teresa.

Yost: You mention that in searching for a job after you left school, that your gender played a role in a number of companies not considering you. Can you talk a bit about the environment for a woman engineer in the late 1960s and then in 1970s at IBM?

Kaleda: Yes, and maybe I ought to back up. I was the only female in my graduating class from the school of engineering. We're getting into that because I'm preparing to go back for my 50th reunion. I didn't have much problem in college, university, but one thing I didn't know until five, 10 years later was that one of the senior faculty had stepped in and intervened for me and told his colleague to behave himself. I remember that with a fondness, and probably glad I didn't know it was happening at the time. I knew this was sort of harassment, but not in a way that it was something I couldn't deal with. I'd been in a male environment almost all of my life and career. The job search was sort of a shock at the time, finding out companies wouldn't even interview me because I was female. And what would happen if we sent out a female IT person with her manager, who is probably going to be a male, and they went on an overnight trip? I said, okay, fine. [Laughs.] Anyway, so there was some problems. I found out through actions and through retrospection that I had at least one manager in that early couple of years who didn't believe females belonged in the field for IBM. That was clear from the language and clear from the behavior; also told me flat out when I did my exit interview before I moved to California. So okay, but you couldn't raise a fuss at that time, it wasn't productive and nobody would've benefitted. I don't know if you could even raise that much of a fuss at this time. I mean, I've seen the lady out here in one of the big companies, and it's very hard to prove. It's a lot of he said, she said. We just find ways around it. My major tackling of the problem actually came a little after I was out here, probably while I was down in Santa Teresa and I acquired a professional engineer's license. I now can legally put P.E. behind my name. It gives instant credibility to a short, blonde female, especially to guys who haven't got one, who are elderly and gray-haired and don't think they should talk to these females.

Yost: I'm actually doing a book on the history of the computer services industry and so obviously, IBM is a significant part of that. One thing I ran across was getting back in the mid-1930s, so the punch card tabulation days, Watson Sr. started a school in 1935 called the System Services and that I think in the early 1960s I came across something that said that over 500 women had graduated over the years.

Kaleda: They had never been gender fanatics that way; they've always been very open. There have been people who hide their likes and dislikes, but generally within IBM there are ways around things.

Yost: My sense was that in the field services side, it was a bit more open than on the sales side by the 1960s.

Kaleda: Yes, very much so. Where the women were was mostly on the engineering service side, much more so than on the sales side. Although the training school, the first instance that you go through, is — I can't even remember how long it was — but it is a mixture of sales and systems people because they all want you to get grounded in certain company things and company procedures. And some of that had to be with how do you handle harassment. So it was an interesting thing, and it was good training. I guess I've been protected coming through university, I had a lot of friends and they were mostly male.

Yost: So you kind of took things up through the early days, to the mid-1970s. Can you talk about how your work evolved for IBM in the later 1970s and the first half of the 1980s?

Kaleda: In the mid-1970s, I was doing assurance work. I was not quite sure where the first instance came in, but because I was doing assurance and they were developing this new standard called P730. Somebody brought my attention to it or I saw it in a magazine, and I started to get involved. But to become really involved I had to become a Computer Society member. Unfortunately, to go back, I'd been an ACM member in the university because that's what they had as far as institutions. It's still pretty much that way that there's very little penetration of Computer Society into the universities, especially the big engineering departments. But in any case, this was standardization work, right down my alley and what I'd been practicing, by that time, more than 10 years on a practical basis. So I jumped into it, met a few people who encouraged me to go further, and that ended up getting my next job for me because IBM has a standards authority in every division. [He]

was very ill at that point in time and a good friend of mine who was a good friend of his suggested I talk to his manager about assuming the job. That's how I got into the standards authority position, plus [I] got more involved in Computer Society work. There was a little bit of contention because IBM didn't quite approve the software engineering standards that were coming through. I was more of a wild duck than they wanted to live with, so my job kind of evolved away from standards. I did that for three, four years both internal to the company plus heavily involved in the Computer Society. Then [I] got more into systems work, systems design, systems specification, and evolved from that as I was getting more involved in IEEE Computer Society work. Pretty much, things were getting interesting at IBM at that point because we were now getting into the late 1980s, early 1990s [and] things are not going well for IBM. This is the last place you want to be, spending a lot of your time outside the company, but I was really enjoying systems work at that time. Sort of as an evolution from standards, I started doing things with the other divisions that were local. As well as with the mainframe division out of Poughkeepsie, [I] was very, very privileged to work with a couple of IBM Fellows. One of the things we were doing was trying to develop some new hardware instructions that would enable our disk and tape and other systems, and some of the database systems to work better with the mainframe hardware and software. That's when I found out how little change they accepted to that system. As of the late 1990s, I think they had changed two instructions. But as a result, I got to work very closely with some of the Poughkeepsie folks, the people who guarded the mainframe systems so zealously, who made it what it is, and worked with them. That evolved into then representing our division to the mainframe as we went through the zSeries process, which thank goodness — and you can't see my crossed fingers on the audiotape — Lou Gerstner came in, in that time frame. He had some very big decisions to make, one of which was the multimillion dollar expense to finish the development of the zSeries. Overall, we went probably four or five years on that project before we actually delivered the systems and the machine. And they were wonderful. It was wonderful, and there were multiple divisions involved. It was another big bet. And at the time we were competing with Hitachi and probably Fujitsu. We just blew them out of the water with that because it was a much more capable, much more

universal system — and faster — and more secure. By then we really were worried about security.

Yost: So part of that transition was building up the services business, but there was still commitment to the hardware side.

Kaleda: Yes, the standards stuff was both hardware and software because I was working in the division that, depending on the month and the year, had the software lab tied tightly into it — or didn't — had all of the operational software through the disk and tape systems tightly tied at the hip, as well as some humongous disk and tape systems that we produced. So you had to deal with all of it. One of the biggest problems that they dumped on the table was that the German standards wanted to set forward a regulation on how much sound could be produced in an operating computing room to protect the technicians. Well the problem is that if you want to reduce the sound from something that has a lot of rotating mechanical pieces you put foam in to deaden it. The problem is that that then raises the temperature internally, so you have to add more fans which create more noise, and it's never ending. But we worked through it and we managed to get a standard that we could live with as a company, that I think a lot of other companies sort of breathed a sigh of relief because I think we did the heavy lifting. We, IBM did the heavy lifting on that one for all of German IT. But again, it was a great experience, a kind growing experience.

Yost: In 2000, you became a senior marketing manager, so you're increasingly taking on additional managerial responsibilities?

Kaleda: [Big sigh.] Actually, the senior titles, even though it says marketing manager, it's essentially an individual contributor. And then I was a senior engineer before that. They were roughly comparable. I was sort of doing the same thing, they just changed the title. But I had done two stints in management and found out that I much prefer to be a collegial worker rather than have to deal with management side things. So no, it was much more a collegial thing even though it says marketing manager. I did manage several

things. I managed the introduction of a new corporate process, with the intent of trying to keep it out of the engineers' and the programmers' way but keep them in compliance with the requirements of the process. You're nodding your head so I think you understand it's not as easy as it sounds.

Yost: Right.

Kaleda: Because of some of the changes that had happened in IBM, I ended up going from the systems job focused toward mainframe disk storage to the IP, Intellectual Property. So for two years, it was a good place to be while I was doing a lot of Computer Society things. It was interesting because — we'll go back and forth about whether this is publishable — at the time, IBM had no clue as to what it owned in the way of software patents that were tightly tied to storage and databases, that sort of thing. When I finally got through with this 18-month effort just to find a lot of these patents, because nobody'd ever organized them. We were within two years, at the end of life on one of the original relational database patents, which if they wanted to pursue it would've;. But it was severe, I mean. And this was beyond hidden gem, it was a startling find in that portfolio. They had a fair number of interesting things but IBM doesn't like to be litigious. The only time they get litigious is when they're fighting off the federal government.

Yost: So even the dismissal of, was it in 1982, of the DOJ case?

Kaleda: Oh, the thing that had been there for 15 years, at that point?

Yost: Yes.

Kaleda: Yes.

Yost: So that culture of not wanting to litigate because it might spawn more litigation against IBM continued.

Kaleda: And at the time, the companies that we'd be most likely to go talk to with our patent portfolio were Oracle — Oracle says I'll see you in court, was their standard reaction at the time. I think it still is, pretty much. EMC is the same way. So the biggest players were all litigious and wanting to back it up. So I spent about two years doing that and decided, [since] I was close to when I could retire, I went around looking for the next job. And that's when I went into the marketing manager's job, and my fair way of characterizing it is that it was the fun part of marketing. It was what do our customers want? What are our competitors doing and delivering? And what can we deliver within time and budget? It's an interesting jigsaw puzzle and it's fun, at least that part of it is very much fun. I'd been building a systems approach expertise over time or experience, so I kind of fell into it, fell into a good group — I still see some of those people today. It was a good collegial, I guess is the best word for it, because while we were in one building, in very close quarters — I called it the rabbit warren — you could stick your head out your office door, shout your question, and you'd get an answer, or you'd have a discussion group form, informally in the hall. But it was that sort of thing.

Yost: In trying to learn more about customers and their needs, were you a regular attendee of IBM SHARE?

Kaleda: We didn't go to SHARE. What we did do, and one of my major responsibilities was to set up specific customer councils. I was lucky enough to be part of the mainframe customer councils that they had set up as we went through the Z development process. When you're putting that much into a system you want to know that the ultimate customers want what you're developing. So I had seen that work very well, I found out who was doing the work or some of it similar in the storage side, and sort of got myself into that and ended up running it for the last couple of years. We ran two councils a year for the European customers, and two a year for our mostly Americans. In fact, we expanded the last couple of years and had a customer from South America onboard. It was fun.

Yost: Can you take a step back chronologically, and shift over to the Computer Society? You mentioned that it was in the second half of the 1970s that you got involved with the standards.

Kaleda: More involved, yes.

Yost: Were there any —

Kaleda: Actually no, that was 1980s. I have to take that back. 1982 is when I went to Santa Teresa, pardon me.

Yost: Early 1980s.

Kaleda: Early 1980s, yes, mid-1980s.

Yost: Were there any individuals in the Computer Society that you considered to be helpful and playing mentoring roles to you?

Kaleda: Yes, very much so. Starting on the standards side, one of the perks of that was getting to know the people who were running things. One of them, who is long gone, was Fletcher Buckley, who was one of the people who helped start the 730 group on software quality assurance. And the other one that I met through my increasing involvement was Helen Wood, who became more than a mentor. She is a very good friend. We see each other less now but we used to do a yearly skiing trip together, but she's finally stopped skiing. We still send notes occasionally, and they have an open invitation to come out here; we have an open invitation to see them in D.C. And then she very much was a mentor to me, coming through the organizational structure, and helping to deal with some conundrums with IBM.

Yost: So in doing standards work, volunteer work for the Computer Society, you're coming from IBM, obviously there's individuals involved from different companies as well as probably academics.

Kaleda: Right.

Yost: And standards can have a real influence in how these corporations did. Can you talk a bit about how that was managed?

Kaleda: IBM has its own process for dealing with it. Basically once I got to a certain level, and even though I was dealing with standards inside the company, they were not encouraging of my continuing on as an active volunteer, especially in quality assurance standards. That was fine, we dealt with it. But the biggest conundrum that we had to deal with and that Helen helped with, was that I was supposed to become — and we had told the people in White Plains, I mean they'd known about it, I'd written them a letter about it giving them months of forward notice — that I was likely to be brought forward as the new vice president for standards for Computer Society. At which point they waited until the week of the February meeting, the first meeting of the year when all of this was going to be solidified, and said, 'No you can't.' At which point you deal with this and Helen was supposed to become vice president for technical activities, so what we did — and it was literally, as I remember it, the day of the first TAB meeting of that year — we changed hats. Helen had been VP for standards and that was one of the ways that I had been closely associated with her, and she had been, I'm sure, one of my proponents to take over her position, following her in. And so here I was, I'd never been active in technical activities, other than the standards part, which is tied to each one of the technical committees. It was a huge room, and even then there were 25-30 technical committees. And you come in and they don't know you from Adam. You introduce yourself. You take the agenda that Helen had structured, and you run a meeting. [Laughs.] But it worked and I knew some of the committees — five, six, seven of them — fairly well because of their work in standards. Microprocessor was one, some of the others. And by the way, that's also how I knew the company stakes in the standards

process. Not so much in the QA standards, but certainly on the technical side. Apple versus the world on connection standards, for example. Fireware versus whatever. Anyway, so that was one of my interesting events coming through the ranks, but I did well. We came and we had some very productive meetings with the technical activities board. I stayed in there for another year. We don't have these directories, or I don't have one before 1994 so some of that history I don't remember exactly. But somewhere in there, in 1992, I ran for president and lost. I think what I did was take the treasurers position for that year to keep me in that executive committee, keep me on the board, and then ran again and was successful. But it was the technical activities board, which was not always smooth sailing either. Sometimes there are some interesting activities, and corralling 30-some people in a room and getting work done is a challenge in and of itself.

Yost: With TAB, are things that stand out to you as the greatest accomplishments in those two years, as well as what was most challenging?

Kaleda: I wish I had a clearer memory of some of these things. I remember standing up in the room, relinquishing the gavel to somebody, or the chair to somebody, and speaking passionately about something. And if it was that contentious, it was probably something about financial approaches or ways that we wanted the TCs to deal with their finances. What part was going to come to the Computer Society; what part was going to be theirs to play with to develop new stuff. But I can't exactly remember it. All I remember is that it was a very emotional meeting — to me, anyway — but whatever it was, we pushed it through and it was approved. And everybody was happy about it [laughs], which was to me a little bit of a shock but maybe taught me a little bit more about when I was involved, that I could persuade.

Yost: In running for president, what were the most important things you wanted to accomplish and what platform did you run on, so to speak?

Kaleda: I wanted to see more presence on the Comp Sci side of universities, because we really didn't have a presence there. It still doesn't have a presence there, it just is irksome.

And that perhaps brings me to the next era of this thing which is contention with the IEEE. One of the more negative parts of my year as president was just an evolving sense of how much the IEEE didn't appreciate what we were bringing to the organization, and was brought in. We were a huge organization. We were at least a third of their structure at the time. And by the way, we couldn't have done it without Michael Elliott, and two people who are still there, or more than that, because I found out **Vi Doan [?]** and Anne Marie Kelly were very much a part of those years.

Yost: I had the pleasure of interviewing, obviously retired now, H. True Seaborn.

Kaleda: H. True Seaborn, yes. True Seaborn keeping that whole publication thing running effectively and efficiently. And I did not know Angela Burgess as well, because she was sort of up and coming as I was finishing out my service. But certainly I knew of her, and knew the role she was playing. But no, Michael Elliott, Dr. Elliott, was just phenomenal to me as an example of what you could do if you were really dedicated to an organization and a terrific planner, as far as trying to cross all the T's and dot and the I's, do the forward planning. Between he and Bruce Shriver, I'm sure that's where the genesis of what do you call it? The strategic plan process that they adopted; I think that started in the early 1990s. And so that process was already there. So as far as a platform, I saw things were going well, wanted to continue them, wanted to get more industry involved, wanted to get more exposure on the campus side were the two big things I would've liked to have done.

Yost: So the way that Computer Society is structured, you're incoming president for year, then you're president, and past president.

Kaleda: Right.

Yost: James Aylor preceded you, and Ron Hoelzeman followed you. Can you talk about working with those two individuals?

Kaleda: They're both great guys, they really are. They're talented scientifically, and in their careers, but they're also really good people, both of them. So that working with the three of us went very, very smoothly. I would've hated to have tried to do the job without either of them. I know other people who have not had supportive bookends. So because things were running pretty well, because we were being very successful, there was a lot of work to be done. Both of them were in academia. Ron's from Pitt, I think, and at the time Jim was at UVA and I think that now he is at Vanderbilt. So yes, we do keep track of what's happening. And Barry Johnson, who followed than a couple years later, is also at UVA. There's just a bunch of very good people, and generally the executive committee is fairly close and it's again my word is collegial. If somebody's upset about something you know about it, but then you work through to deal with any problems. Just get it done.

Yost: Are there things that stand out either with conferences or pubs during your time of leadership?

Kaleda: I'm pretty sure we started one or two more publications. At that point in time, we kind of look at the totality. I mean we already had 20 or so; to add another two? Okay, fine, if you've got enough authors, if you've got a pipeline, if it works, that's fine. Conferences, some of them were so successful — and continue to be successful — that working that fine line between trying to keep them as a contributor within your organization versus heading out maybe on their own, which some of them could have done; trying to keep that, and keep them as the core around which you added other conferences, or as the fields changed or emerged. One of the best perks as president was getting to go to the HPC conference every year, or Supercomputing, SC, mainly because I was tightly tied to mainframe by now, which normally as part of my job at IBM — no, it's not directly part of who you are or what you're doing. But because we usually had a meeting close to it, or somehow tied, I usually got to go, and attend, and hear some of the speakers, and run the floor, see what was happening. That was a good part of that and Supercomputing continued to grow and has done well. I've been reading notes from this year's just last week.

Yost: In the mid-1990s, membership was still on the upswing.

Kaleda: We were still on the upswing, we were going toward 100,000; we went over 100,000 shortly after I was president, so that was all good. I think one of the things the Society doesn't do as well, but this is from a lot of experience and a lot of years, is it doesn't get its message out about all the things it is and does. The tremendous contributions. I looked at a list of standards in one of these two newer directories and I'm saying holy cow! Unreal. The huge number of conferences now, and to have receded in membership says we're not getting the message out as to what the Society is and the things it can offer. I'm not sure how I would structure that, but that you're more into industry because that's where people are going. And we're still going to need computer science people no matter what, because all these things have computers, our phones, our watches, some people have eye glasses.

Yost: The shift to people accessing pubs electronically, and not being as tied to the subscriptions, individual subscriptions, did that in your opinion impact membership?

Kaleda: Not sure whether it did because the people who live and die with the technical papers, Computer Society went into digital subscription pretty early on, relatively I think led the way. In some ways, led the Institute and tried to manage it so they didn't lose. I mean if they gained a digital subscription it was relatively priced so they get the same revenue to support activities, so don't know if that was totally it. I would say a lot of it's the disappearance from the broader scene. I haven't been to supercomputing in a long time, at this point, so I don't know how much of a presence CS has there, and how visible it is. I know they're still listed as one of the co-sponsors, same thing with digital automation. Digital automation? DAC, I know it more by its letters, these days, by the acronym than by the name. They're continuing to move along, and that's another extraordinarily huge conference. But I think it's just that the message is not getting out. Things happened in 2000 and the next couple of years, as it went on the Institute forced Dr. Elliott out of his position. He was a very strong lynchpin and I think there has not been someone new with that emphasis and that amount of glue in planning, to help with

such an enormous enterprise. And I think to some degree it's fallen apart because that glue is not there. When you have somebody who puts in an 80-hour work week, and is so good at organizational structure and planning and getting the best out of all the volunteers, helping them to do their jobs, that person is to be missed.

Yost: From talking to people, I understand there was kind of a morale problem after that.

Kaleda: Oh, I'm sure there was. I'm sure there was. I couldn't have done my job; the EXCOM (Executive Committee) couldn't have done their job without Michael. Yes, we had a strategic plan, but the glue that keeps — at the time I was president or soon after, we went over 100 employees within the Society. So it's a small business with a large revenue, it was clear to me from my year as president, in which I sat on the IEEE technical activities board, that Computer Society was not appreciated for what it was bringing to the table. It was generally leading in electronic pubs, it was leading in these very large conferences . . .

Yost: Standards.

Kaleda: . . . standards, and you name it. And it wasn't appreciated. I hate to be negative on that but they were very negative in some ways to me.

Yost: During your time as president, did you interact very much with the ACM and obviously there's some competition between the two organizations?

Kaleda: There's some competition between the two organizations, but I first came in when Gwen Bell was ending her term, she was mostly located on the East coast at that point in time, so no, there was not that much. Seems to me that one of the gals that I worked with at Santa Teresa became their next president so we talked a little bit, but there really wasn't much formal interchange at all. Could have been, but I don't think they wanted to talk merger; we didn't want to talk merger. I don't think. No, I doubt it. So it was kind of like you talk to them when you have these big joint meetings like

Supercomputing, or you make sure you have the right volunteers and staff on those committees.

Yost: There was partnership with the CS accreditation.

Kaleda: Very much so, that was much more collegial. Those people talked fairly constantly. That was not an area that I coming through the industry side [was involved in]. I mean Ron and Jim could speak much better to that than I could, and I'm sure were involved in those. At least Ron was, I don't know whether Jim was. We had at least one face-to-face though with their executive director, who was ex-IBM, who I had known because of his standards role. So again, my memory of that is very faint. I just know we had a meeting. It was interesting but I don't think too much came out of it. Some action items, probably, with regard to joint conferences, especially the big ones.

Yost: Are there other things you recall from your time as incoming president, president, and past president you'd like to discuss?

Kaleda: Maybe it was because things were so demanding at that time. By the way, I have an article, if you'd like to keep it. It's from IBM San Jose, after I had just won the election. They publicized it and gave me a good article. I remember a lot of things happening, but things that should have happened, we had a strategic plan in place that we were trying to make happen. I had the joy of going out and seeing the Tokyo office, getting to know the staff there; and also we visited with the Brussels office, as well. Collegial meetings with the IEEE in London, much more formal than we are, but that was good. I happened to have met their incoming president as we were both guests of Shanghai University of Technology, in their guest house, and so we went touring together. That resulted in an invitation to come and speak there, to join them at their end of year meeting, which is more of a party than an end of year meeting.

Yost: Were there any strategies to boost international membership at that time?

Kaleda: Yes. And certainly the Tokyo office was part of that, getting a service capability much closer to members there. Same thing with the office in Brussels. Again getting somebody who could at least speak several of the languages and could support questions, and help get people involved. We did have several meetings with the state professional IT society of China , but it took several more years for a formal agreement with that group to be signed. [It] still hasn't happened, but getting recognition of computer sciences and programs outside of engineering, by the IEEE. Mine happened to be within engineering, so that was not a problem for me, but the IEEE has this [attitude], if it's not in engineering, especially if it's not in electrical engineering, it's not in our I-set. So that was a big push, and it's pushing a noodle on that one. So there were a lot of efforts that way. And that's sort of another way of going after these people that sit outside or within the ACM normal sphere of influence.

Yost: And in addition to, obviously computer science, and also people at management schools, and people at information schools.

Kaleda: Right, and as we grew in some areas like virtualization, one of the joys of being president is finding out what's happening in some of those areas. But just as the growth of computing has just gone spider web-like through everything, the newest part of that is Big Data. It's everywhere, and it's everybody's focus. And yet we do have a presence there, Big Data, whatever it's officially called, but there's not a lot getting out besides the journals and the newsletters of IEEE. As far as CS, I don't see a CS presence at technical meetings that are not CS meetings, and tying things together. They could do that.

Yost: You've shown me the IBM San Jose publication on that you were chosen to be president of the Computer Society. Obviously it's a huge time commitment. Was the corporation supportive in giving you release time?

Kaleda: They were, with a little bit of a caveat. It was like you can take half time off to work with the Society as long as you get your work done here. So it was like half time of 80-hour weeks. But they were supportive. There were times when you had to take whole

weeks off because of meeting weeks, and IEEE meetings, and there was a fair amount of travel. I got the support of the division in writing, from the general manager of the division, which was fortunate because 1992, 1993, and 1994 were the unkindest years of all for IBM. And had I not had it in writing, I might well have been out of a job. Although it doesn't look good for IBM to say we just fired the head of the largest professional organization in our area of expertise. But I'm not sure how much of a storm that would've created. But no, they were very good and made sure I had a position from which I could be extensively absent with traveling, and made it possible. So I do credit the company with a lot of support. And also they do a technical honors colloquium every year, which is a three-day meeting during which the people with extraordinary patents get honored, both with recognition in front of a crowd of peers, as well as with money, with checks. And they also honor people who've contributed professionally as well. And so I was invited to go to that.

Yost: Some past CS presidents have gone on to do service for the IEEE and some haven't. You are one that did. In 1997-98 you were on the executive committee and division director, on the board of directors. Can you tell me about your decision to take on that volunteer role and elaborate on that experience?

Kaleda: It was a continuation on from being a member of technical activities board, as president of the Society. I mean you work with them regularly at the IEEE meetings, and I just wanted to pursue getting a better working relationship between the Institute and the Society. We all wanted that. But it was clear from my interaction with people that we were more perceived as a threat because of our success, and because of everything we managed to do. Plus we had this whole organization that was outside Piscataway, outside the direct control orb of their organization. And there was never an instance that I'm aware of where we weren't cooperative, contributing members but there was always this feeling that we were a threat so it was a couple of interesting years as a division director. My most interesting experience though came as head of the audit committee when I had to take a motion to the board of the IEEE that the board was in violation of its own rules and regs, the constitution and bylaws, in particular on deficit spending. One thing that

had been instilled in me as part of CS ExCom and the board of the Computer Society was you planned for things. If things go negative because of the economy or whatever, you control to what you have, absolutely. IEEE wasn't doing that and through some of my work on various committees — I was on their financial committee — you couldn't read their budget; it's not readable. It was several hundred pages thick and like IT was in there four different times, so what's the total budget for IT? There were special projects, these were things that I sort of understood and knew what to look for, but they were bound and determined that they were going to spend money.

Yost: And did they have a line of credit, is that how they were deficit spending?

Kaleda: No, they had a huge endowment that they were working off of, but that's not what that endowment was for, and the constitution and bylaws were very specific about running a current positive balance sheet, and they weren't. But at that point, it got very nasty in a number of ways. The president at that time tried to scare me, make me cower and not do what I thought was right. I may be a little too black and white that way, but there were a lot of things happening and they were all geared to exert more control on the Society without there ever having been a reason to have more control on the Society. And because of that, because I didn't want to go with the then ruling coalition, I essentially got forced out, or let myself be forced out because it was no longer productive. I wish I had been on their ExCom when they went after Michael Elliott. I don't know what I could have done to have stopped it.

Yost: Were there some past Computer Society leaders that were on the committee, to help make the case?

Kaleda: No, Tom Cain was still active; he's still pretty active. Ron Hoelzeman was still around but not actively at the ExCom and the board level. And I think we could all see the handwriting on the wall but there just wasn't much you could do about it. The control had been all put in place, and after Dr. Elliott left the organization, I don't know how soon after that the Institute chose to change its executive director, but they finally did. I

have no knowledge of that. They've actually had two or three. But I got burnt so badly trying to defend some of these processes.

Yost: I asked you about gender in your work career at IBM. Can you talk about the environment within the Computer Society in terms of creating leadership opportunities for women?

Kaleda: The Computer Society does a really good job of it. I've never noticed anything that was gender specific when a candidate for anything was ever discussed. It's always on what can they do, how can they do it? Process and results and experience. There seems to be a good set of role models and mentors in place, and I'm sure some of them have been male rather than females, to the females. For a while there it seemed like we had a female president every four years, because I was four years after Helen, and then I think it's Doris Carver four years after me, but then in two years we had Guylaine. There are a lot of good females in the roles. Some of it may be that a lot of them are more from industry than from academia, and being from industry makes it hard to get the time commitment, certainly especially if you have family or other obligations. I was lucky that way and didn't. And [I] had a husband who liked to travel.

Yost: Before we conclude, are there topics I haven't brought up that you'd like to discuss?

Kaleda: Not really. I mentioned the strategic plan. I didn't realize that we'd done one in 1994. This is probably mostly Bruce Shriver's work, which was substantial.
It mean it was pretty much with direct line items of to do's and things to be done, talk about a road map to follow for my year so that made it in some ways easy. My experiences within the Society have been uniformly a collegial working environment, and where ideas are respected, and support is there, and never had any instances that I know of, of discouragement, which is wonderful. That's one of the reasons why I had so much problems with the Institute, which is much more of an old boys' network, and to some degree who you knew. And they have not all that many people from industry involved.

It’s fairly academically centered and focused. But the opportunities it gave me to travel, to meet people, to see what the industry was doing, see what the field was doing, tremendous. All became parts [of who I am]. Very much appreciated the opportunity.

Yost: Thank you so much for taking the time to do this interview.

Kaleda: My pleasure.