#### SWE STORYCORPS INTERVIEWS

## Margo Bubb and Stacey DelVecchio Interview

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Society Of Women Engineers National Conference

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#### Margo Bubb and Stacey DelVecchio

Margo Bubb currently works in the procurement excellence area of Global Supply Network Division of Caterpillar Inc, where she has spent her entire career. With her sister, she also owns and operates Bubb Girls Inc., a bakery and bed and breakfast venture. Bubb received her B.S. in engineering mechanics and materials from Southern Illinois University. A Fellow of the Society of Women Engineers, she founded the SWE Central Illinois Section in 1992 and worked to build Caterpillar's support of its women engineers and of SWE.

Stacey DelVecchio is the additive manufacturing product manager in the Analytics and Innovation Division of Caterpillar Inc., where she has worked since 1989 after receiving a chemical engineering from the University of Cincinnati. A Fellow life member of the Society of Women Engineers, after joining SWE in 1994 she represented her employer on the Corporate Partnership Council and served the Society as the strategic planning committee chair, national treasurer, and as the Society's national president in FY14. During her tenure as SWE president, she secured a special assignment at Caterpillar to create and implement a worldwide engineering talent strategy. She has also served as the secretary of the American Association of

Engineering Societies' World Federation of Engineering
Organizations' women in engineering committee and advocates for
greater diversity in the Manufacturers Alliance for Productivity
and Innovation. The Manufacturing Institute recognized
Delvecchio's leadership by granting her its STEP Ahead Award in
2015.

During their 2008 SWE StoryCorps interview, Bubb and DelVecchio contemplated the divergent ways they became interested in engineering: Bubb initially had no interest in college and intended to become a hairdresser, whereas DelVecchio knew she would attend college and chose engineering because of her love of math. They also discussed how they became involved with SWE, including Bubb's founding of the Central Illinois Section and the turning point when DelVecchio realized that the only people to congratulate her on a deserved promotion were her friends from SWE. They also discuss Caterpillar's growing support for SWE and for its female employees.

Margo Bubb: Hello, my name is Margo Bubb. I'm 54, and today's date is November the 7<sup>th</sup>, 2008. I'm at the Society of Women Engineers National Conference in Baltimore, Maryland, speaking with my fellow SWE member and friend, Stacey DelVecchio.

is November 7<sup>th</sup>, 2008. And I am at the Society of Women
Engineers National Conference in Baltimore, Maryland. And
I'm speaking with my fellow SWE member and friend Margo
Bubb. So, Margo, since we're at the SWE conference, I
thought it'd be a good chance to ask you some stuff about
SWE.

MB: OK.

SD: And just kind of as a preface, I know that you were one of the driving forces behind chartering our section that we have in Central Illinois. And so that's kind of where I have a bunch of questions to ask you—that we've never talked about this so this will be interesting. [01:00] So, I'm going to go with some of the standard ones that were up here, but how did you first learn about SWE?

MB: I was active in the SWE section at my university, Southern Illinois University, and was very active, actually. When I

took my first job in engineering, I was working at a very small private company, and so I wasn't as active; I didn't join any—well, there were no local sections to join.

SD: And where was that first job?

MB: That was—started out in Galesburg, Illinois. It was called United Scanning Technologies. Then we moved to Peoria Airport. And then the company went out of business, and that's when I applied to Caterpillar and went to work there.

SD: Okay, so you first joined in college.

MB: Right.

SD: And then were you still a member as a professional?

MB: Not until I went to Caterpillar. There were a few members of SWE that were very active at Caterpillar, and we started talking about, you know, wouldn't it be nice to have a section here, since we were growing our numbers of women engineers at Caterpillar. [02:00]

SD: Okay, so that kind of leads into one of my questions. So, so that's why you decided, because you saw that there was a need with—we're going to have more women and, okay. So what

kind of challenges did you have with trying to do that?

MB: Well, we didn't really have a lot of sponsorship by our company at the time. We had to do a lot of things, I won't say on the sly, but we had to kind of make do with what we could do. We did a lot of stuff on our own personal time.

We'd make copies, maybe, on the sly (laughs). And we had to search for ways to contact companies, even see what companies were in our area. And then we had to contact all of the HR [human resources] people at all those facilities and have them send out the letter and try to get some information about how many women engineers they had on staff.

SD: Okay, so just a little—this is 2008 and that would've been in what year? [03:00]

MB: Nineteen eighty-nine, I believe.

SD: Okay, so that was pre-Internet and all that kind of stuff.
So how did you even find the list of companies and HR managers?

MB: We went through, I believe, the Better Business Bureau and other listings of just commercial organizations in different towns.

SD: And then did you send letters?

MB: Yes, we did mass mailings to all of these companies. We had a get-together or an introductory meeting where we were trying to get people to come. And we just slowly started getting more and more people to respond. Of course the majority of our membership came through Caterpillar, because that's where we had the easiest access to the information. And as people—more and more people were aware of us at Caterpillar, then they knew people outside, in other companies, and that was another way to kind of get the information out.

SD: So how did you—so we ended up becoming Central Illinois, which is like the band of Illinois south of I-80 in Chicago, or something. How did they end up deciding that range? [04:00]

MB: Well, when we decided we wanted to try to become a section, we talked to the Chicago Regional Section, and we were basically a subsection of them for a couple of years, until we could get all the information together. There are some forms that you have to fill out where you actually name your ZIP codes. So what we did is, we picked out the ZIP codes that we thought we would cover, that was within

driving distance for members. And then we spoke with the Chicago regional to see if they had any problems with that as far as releasing those ZIP codes to us. And then, with their help, we applied for a charter and we got that granted.

SD: Okay, Okay. So what kind of challenges did you have with that? I mean, just trying to contact all these people and—.

MB: We didn't—we didn't know how to do it, for one thing. And Chicago was quite busy with a lot of their activities going on. [05:00] I don't know if this was a time when they were having some low morale and low membership, or what, but it just—we were uninformed of how to do the process. It was also a challenge just to get the time to do it, because this was a lot of work and people were already busy. We tried to get people as high up in Caterpillar as possible, women engineers, so that they could help us.

**SD:** And so—so this is 1989. Were there many women?

MB: No, there were not.

SD: So what would you say—what was the highest level at that point that you could find?

MB: Oh, probably just a senior engineer.

SD: OK, and so that's just—nowadays it would just be somebody who's maybe been there six or seven years—.

MB: Yeah, a few more years than the rest of us, yeah.

SD: A few more years than all the newbies. (laughs) And I guess now we have two vice presidents that are SWE members, so it's, yeah, okay.

MB: That's right, yeah. It's been quite an evolution.

SD: Yeah, definitely, definitely. [06:00] Okay, so, so you talked before about how you didn't have much support from your company. I mean, was that just because there was the unknown and—

MB: Yes, there was the unknown. I don't think they realized the positives of having SWE as an affinity group, as they have now. And I remember the first national conference that Caterpillar was at. Caterpillar didn't actually go. We carried the booth, and we set up the booth, and we collected the resumes and took them back. And we did that for a few years, and it kind of grew each year. And we got Solar [Corporation] to come and participate with us one year. Then, after that, I think it was—I'm not sure—well, that's kind of where you come in.

SD: Yeah. Well, it was funny because I had—I was preparing a presentation for the women's affinity group at Caterpillar, and one of the bullets I wanted to talk about was how long Caterpillar's been involved with SWE. [07:00] And so I talked with Christine Troglio—who's been such a help for us with things like conference—and said, you know, "So, what do your records show? When did we start recruiting?" She was just like, "Oh, it was 2001," and she went through all this stuff. And I was like, okay, that's not true, because I know—I think you and I were on that initial thing where we had the little eight-foot table and we carried it there, you know—.

MB: We carried the-

SD: —picked out what clothes to wear, and all that kind of
 stuff. And you compare it now, where it is just—there's so
 much support—

MB: It's massive.

SD: It's just kind of funny. So I mean, I think that was probably '95 or '96.

MB: Yeah, I think so too.

- SD: And so yeah, it's just kind of—it's just kind of funny that—to see the change in support. And then to even see that she didn't even realize we've been doing it that long.
- MB: I know. Well, and I find it unusual, too, that now that corporate hiring is involved and they get this all together. [08:00] And I know before I left for Missouri, they were bringing this big entourage to conference, and, you know, I said, "Well, I'm going to conference, if you want me to help." "Well, why are you going?"
- MB: Yeah, well, because I'm a member, that's why I'm going.

  I've gone for, you know, 15 years or 18 years, and it's

  just really hard for them to understand what you get out of
  the Society other than recruiting.
- SD: So, so if we go back to just like even chartering the section, so how did you find—so you said when you started at Caterpillar there were other—a couple of other people that were really involved, so that was probably just by luck that you ran across those couple of people.
- MB: Right, well, I was in the CGT program, so there were 140-

some of us in the class that was hired in at that time, and there were several women in that group. And a lot of them were fresh out of college, so they were still—they had recently been active in SWE.

SD: In College. And so—and then you just found other women in
the area just by calling and these letters and stuff?
[09:00]

MB: Right. We'd send out emails, (inaudible) emails within

Caterpillar and set up meetings. We got volunteers to be

officers, and I—well, not really officers, but organizers,

I guess I would say. And then when we formalized it, we had

elections and I was elected president, charter president.

SD: I was going to say, so you were the first president. And you did that a couple of times, didn't you?

MB: Yeah, I was president for three or four years, I believe.

But when we started out, we had many committees working

together, and typically we would try to have our meetings,

like a Saturday morning brunch meeting at somebody's house,

and we'd get Trefzger's coffeecakes and coffee, and that's

when we'd have our planning sessions for the next six

months or year.

SD: OK. So as you were then president of this new section—and that was probably about when I became involved. I wasn't in with the whole chartering of it, but I was probably in on some of those first meetings. But how did you deal with, you know, trying to keep the group involved and keep volunteers coming after you went through this—this issue of chartering, which was a lot of work in itself? [10:00]

MB: Well, we tried to create events for our monthly meetings that were of interest to people, and we moved them around, because we had a certain number of members over in the Bloomington-Normal area. So we would go back and forth each month, one meeting in Peoria, one in—. Oh, we had a newsletter that we put out every month, and I was the editor of that for a long time, until somebody else could take it over. And we mailed out, I think, over 200 newsletters each month, and that was all manual, after hours at work.

SD: Yeah, we did that for years.

MB: Yes, we did.

SD: Because I think it wasn't that long ago that we actually stopped sending out the paper newsletter, but yeah.

MB: Right, right. And I think it was about that time when I was changing jobs and heading to Missouri as a transfer that I think really the section matured and really took off.

[11:00]

SD: So, so when did you move to Missouri?

MB: I moved to Missouri in 2000, October. And I think that's when you really started getting involved in being our spokesperson with Caterpillar. And I was going to ask you, how did you manage to get Caterpillar's attention to the point where they supported us?

SD: So, I'll tell you, it was—I wish I could take credit for it, but it was—you know, I had been involved in the section, but it was just more I would do little things here and there. It wasn't—and I had been president for one or two years and didn't do that great of a job. And then Caterpillar decided to become a Corporate Partnership Council member [of SWE], which—you know, I think it was at the time where Caterpillar said, Okay, affinity groups are going to help us out and everything, and decided to put a lot of financial support into SWE. And so with that, it just happened to be the year that I thought, Okay, I'm going to be president again. [12:00] Because I thought I

did a bad job the first time, so I was going to do it another time. (laughs).

And so because of that, the person who was in charge of this money for affinity groups called and said, "Would you like to represent us kind of as the engineer side? You know, I'm going to represent the HR or the recruiting side of it, and can you represent the engineers' side?" And so I got the chance to do that just—they just called because I had been president at that point in time. And it was great because then I got to see a lot more of what SWE's doing and could bring it back. And it—I think it was just, you know—I think it was just being in the right place at the right time and having all that kind of stuff, because times were changing, diversity was more important and had been for a while in the industry, and Caterpillar was now doing it. And so I was able to bring back some programs to Cat and get some support with it. I still just think there's so much more we could do with it.

MB: Right. We have so much—so many opportunities, I think, in our area.

SD: I know, I know. I mean, you just made the comment about,

Why are you coming to conference if you're not recruiting,

and I still feel like, Oh my gosh, there's so much, you know, I don't want to recruit, just because there's so many other things to do. [13:00]

MB: I know. There's so many sessions to go to that you can get so much information out of.

Right. I mean, and so, like one of the first things we did SD: in this Corporate Partnership Council, I helped create this Emerging Leader Award that we had. And then also there was a program that Caterpillar—not Caterpillar, SWE does with Smith College, where it's all for women engineers and kind of in their first year of management and so, I like—I thought, Well, this is really cool, we need to get some Caterpillar people there. And I just luckily was working for a guy that was supportive, and I said, you know, "Can you take this to our succession planning group and support it and pick some women to do that?" So he did that, so I was able just to get a few key people that would help push some programs, which I think helped with the name—helped make it be okay to talk about SWE at work, which was something we all struggled with. You know, to say, "I'm a member of the Society of Women Engineers," and be okay with that and not get the "We don't have a Society of Men Engineers" kind of response. You still get some of that a

little bit. [14:00]

MB: You still do, yeah. Well I know early on, to get funding for—to come to the conference, I would have to tell them, "You know, this would be a great activity to put on your EEO and equal opportunity activities that you have, and you could write this down." And that was one way that I was able to get funding for most every year that I came to conference.

SD: Right. And I still—you know, I look at it and I think one of the things that's difficult—well, first of all, it's hard for people to ask for funding. But the other thing that I think is unfortunate is that I really don't think the men have something like this to go to. And so when you try to compare it on a professional development and working on leadership or working with people or dealing with technical issues, there's nothing akin to it for men specifically. You know, there's a lot of things out there that it's dominated by men for engineers, but nothing really like a SWE conference. And so it's hard to relate to your boss—who's probably going to be a man—and say, "Hey, I want you to spend a thousand dollars"—or whatever it is—"to send me here." [15:00] Yeah, there's just not a

comparison of anything.

MB: You're right. I found it very refreshing. I recently got a new supervisor. And we were doing my annual review and writing up the paperwork, and I said something about, you know, I wanted to request money to go to conference. And he said, "Well, I don't see it here on your review, your PDP. I want you to include that in your PDP, any activities." So it was good to hear that, because before it was, "Why do you have this on here?" You know? (laughs)

SD: Or have him actually prompt you for it, not even—because I've always put it on. Well, for the past, probably like since 2000 or something—like you talked about, I put it on there just—and nobody said, "Take it off." But I don't know. That's kind of interesting. That's good.

MB: Yeah, that was very promising. Well, I know one of the things the Central Illinois Section did was really start with a very impressive conference that they would put on.

[16:00] Were you one of the initiators of that conference?

**SD:** For the one that we just had this past year?

MB: Well, not for that so much. It's more the continuing education and the diversity conferences that you put on in

the early 2000s.

SD: So we'd had—we were always looking for these programs, you know, like you talked about, as far as something to draw people. And so for several years—it was probably maybe 2000 to 2003 or '04 or something—we would put on a diversity seminar. And the idea was, let's—you know, it was becoming more of an issue—not an issue, but a topic that there was interest in. And we thought, OK, if we can put this on, this is something that we could bring because this is the area that we kind of live in. And we wanted to bring something where there was a value not just from our little group of SWE people; we wanted something that was kind of a broader audience. And so, yeah, so we put it together, we got some of the people that had helped with the funding from the Caterpillar side. So we ended up bringing different audience in, I think, because they had different contacts. [17:00] And one of them was Dodie Gomer—I don't know how much you've worked with Dodie but she's just this fireball. And so, you know, she would bring all these ideas and she would say, "Oh, we need a really fancy fire!" So she would like put us in contact with the Caterpillar-

MB: Graphic arts.

- SD: —graphic arts people or something, you know, that they were way better than the engineers are. And then, you know, she called WEEK, which is the local—one of the local TV stations and got us on there to talk about the diversity seminar. Just kind of took it to a whole other level, because she was somebody we could connect with that wasn't an engineer and so brought really different skills with us. And so we did that for a couple of different years, and it was great, we got great publicity, usually had really great attendance, like a hundred people or something. And just stopped doing it because we had been doing it for a while and thought it was time to move on and pick a different topic.
- MB: Well, I think the regional meeting that you helped the Bradley [University] section within this year, earlier this year, was just fabulous. [18:00]
- SD: Yeah, so I mean, I don't know what you felt like, Margo, having seen it come so far. But actually to have this region conference of women engineers in Peoria. And so, you know, Region H is our midwestern region, so it's like eight states or something in the midwest, and we've never had a conference like that in Peoria. So it was just kind of cool to have all these women engineers in Peoria.

MB: I know, to pull it off. And it went so smoothly.

SD: Yeah, and so we were worried about it because Bradley's a small section and we thought, Oh man, you know, let's cross our fingers. We knew it was a big conference. And then they—and we thought, Oh, we're really going to have to help them. Because they just didn't have a lot of people. But we hardly helped them at all. I mean, we had a couple of sessions on the—from Central Illinois that we did, and we took care of getting speakers and all that kind of stuff.

But they did the whole—I mean, it was just amazing. And we were so proud of them. And to see all that come together and to know that just even their section, probably three years ago, was maybe only five or six people? And the quality of that conference—I mean, it was like a national conference. I mean, it was so professional. [19:00]

MB: I would compare it to a national conference back in the 1990s.

SD: Yes, right, right. I mean, this conference has come a long—the national conference has come a long way. But just, you know, they had a book that people got that was just very well done. it was so well organized and—.

MB: So professional.

SD: Oh, I mean, I was just so proud of them. So, you know, I was involved with it and helped get some of the funding and helped, you know, get some of the speakers and everything.
But boy, they just ran with it, and that was kind of—it's kind of neat.

MB: Yeah, it's been wonderful to see. I'm so proud that

Caterpillar is now a platinum sponsor, and also a CPC [SWE

Corporate Partnership Council] member.

SD: Yeah. And so I don't know—you made the comment you've been coming to national conferences for however many years. And I know in some of the early years there was just a couple of things that I thought it'd be really cool to see, and one of them was that I wanted to see a Caterpillar employee win a national award. [20:00] And so, so we actually had the first national award recipient a couple of years ago. We had one this year. And so it's just really cool to know that you work at a company that's got one of these great people. And then the other thing was that I wanted to come to a national conference and I wanted to meet a Caterpillar employee that I didn't know. And so last year I did speed mentoring, and I don't know if you have done that but—so

you kind of go and you sit down and you get—it's kind of like speed dating, where you get 10 minutes with somebody and then they ring the bell—.

MB: I saw that session this year.

SD: And so I actually did that, and I had somebody come up to my table that was a Caterpillar employee that I didn't know. And it was somebody from Aurora, Illinois, and they were here and they saw I was one of the speed mentor people. And I was like, Oh, wow, this is, you know, one of the things I always wanted to happen—where we would get to the point where SWE was just a little bit bigger than where we could know everybody within Caterpillar. And I thought, Well that—you know, we still have a long way to go, but I thought that was really cool. I liked that. [21:00]

MB: I appreciate all your help trying to get us recognized within Caterpillar.

SD: Yeah, so it's—and I think one of the things we've tried to do is just, you know, talk about why—you know, what's the value that SWE brings.

MB: That's right.

SD: As opposed to just, yeah, it's a good thing. You know, just talk more about specifics of why—.

MB: From a personal standpoint, I wanted to find out why you chose to go into engineering and what was your—I guess your driver.

SD: Yeah, so, I had—my dad had his own business, and had like three years of college and never got his college degree.

And my mom actually had her degree, and so it was a little bit unusual because my mom was educated and my dad always regretted not finishing his degree. And so their big thing—so I've got an older sister and two younger brothers.

And my parents' big thing was always, "You kids will go to college. We're not saying you have to graduate, but everybody will go to college." And I was just, you know, I loved math and science and always knew that, and so my dad was just—I mean, both of my parents were really kind of, you know, "You can do anything." Supportive. "You've got a lot of talents. You know, God's given you a lot. You're smart," and all that kind of stuff. [22:00]

From what I saw, and I've always been accused of being kind of naïve—but from what I saw they treated all of us equally and kind of, "Hey, you go for it. You're good at this, just

go for it." And so they knew I was good in math and science, but my dad—so he owned a business, and it was a nursery, so, you know he didn't have an engineering degree or anything. But he put me in touch with some people. He had a lot of contacts in the community and, you know, had me shadow somebody and, you know, just—. I think it was just kind of the support from him, and it wasn't so—I mean, I never felt like as if this was a weird thing to do for a woman. Just never occurred to me.

And it was to the point where—so I did that. So I went into engineering. It was just kind of, Hey, you know, it's a good fit for what I'm good at academically. And then my parents were just like, "Yeah, you know, you've got the grades, let's go for it." [23:00] And so, did that. Went to college, and just still didn't think this was like a weird thing to do.

Because you have—I've met a lot of people in SWE, where people have been in SWE since college and real young. And I still was like, well, you know—. I didn't join SWE, and even got out of school and started and still—started working and didn't join SWE. And it wasn't until I'd been working a couple of years where I was like, OK, there's a

little bit of a need for support. (laughs) So, because I think part of it was because I'd been so supported as a child that I was just blind to the fact that some people might not—

MB: Accept you?

SD: Yeah, or treat me the same way that my parents had, as far as both being supportive. Because, you know, you hear some things where a woman—like their fathers might treat them differently. Like, you know, "Oh, you want to get married and you want to do this or this or that." And yeah, I mean, I never had that. It was kind of, "Yeah, just go for it. Go do what you're good at."

MB: Well, that's wonderful.

SD: Yeah, it was good. [24:00]

MB: What is your definition of success as a woman engineer?

SD: Hmm, so I have this—there's this little poem, I think it's by Emerson, and I don't have it memorized. But I almost—but it's not really gender-specific. I mean, it's kind of—it's more internal. And so, you know, just to feel like I've personally accomplished something. I want to have—I'm not

one of these people that's a people pleaser. And sometimes that gets me in trouble because I don't necessarily care (laughs) what people think, and so—

MB: (laughs) You go, girl.

SD: —yeah, I can come across the wrong way because of that. But I mean, I do care what, like my boss thinks. I mean, that is important to me, if my boss thinks that I'm doing a good job and supports me in what I'm doing. I mean, that is a measure of success, because then I feel like that kind of unleashes me to do a lot because I know that he's there behind me. [25:00] So, so I want that internal, Yeah, I'm doing a good job. I want my boss, my husband, you know, to feel like I'm doing the right thing.

And then just, I think, to be happy with what I'm doing. So I've been promoted and I've been recognized at Cat, and so that's nice. But I'd like to think that even if that hadn't happened, as long as I was happy with what I was doing, it's kind of—you know, the heck with everybody else if I'm still at the same level I was when I started, as long as I like what I'm doing and feel like I've accomplished what I'm doing. I think that's the important part. But the Emerson thing is something like, you know, to have a garden

patch and to make a difference in a child's life and to know the difference between true friends and not. And you know, some of that stuff where it's more about kind of the bigger picture than just engineering.

MB: Oh, great. How did you first learn about SWE?

SD: From you guys. (laughs)

MB: Did we strong-arm you into joining? [26:00]

SD: Well, no. So, you know, Beth Mack was one of the ones that helped you in those early days. I don't know if she was involved in college or not, but—

MB: I don't remember.

SD: —but I know that she joined ranks with you.

MB: She was very active, yeah.

SD: Yeah. And I had started like two weeks after Beth. And so Beth and I were in the same division and all that kind of stuff. And so we're both chemical engineers, and so it, you know, just kind of being friends with her and seeing that, I think. I thought, Well, you know, that's good. Just kind of listening to her. You know, at that point in your life you're kind of trying to figure out what you want to be

involved with, where there's all these opportunities, and so she was—.

MB: Yeah, I know, especially within Cat there's really—at that time there was a lot of activity in SAE [Society of Automotive Engineers] because there was such a strong organization locally. And I think we actually worked with them and I know I participated in their local SAE conference, and I actually brought in women from Society of Women Engineers to put on a session. [27:00] So we got—Jane Daniels, actually, came from—she was at Purdue at the time, and she was part of the presentation. So it kind of gave us a little exposure within SAE, too.

SD: Well, SAE was the one that we worked with on the diversity seminar that we did, as well. And actually, so we still do an annual thing with SAE. And it's kind of interesting because they're still a very big group compared to SWE, and they still have a lot more funds because of that. But they do see us as being more the group to come to because we know how to run some of these—you know, it's not somebody about the mechanics of how a bicycle runs or something. And so they do see us as really knowing how to pull that off.

Which is nice to hear that, because I think we do, but then

I tend to be kind of biased.

MB: Well, I think we really make a connection with kids, too.

SD: Yeah, yeah, definitely. So, how did you end up choosing engineering, just in general?

MB: Well, it was a long road. [28:00] In high school—I'm 10 years older than you, so I think I was right on the back edge of the baby boomers. And I came from a very small high school. So my goal in high school was to become a hairdresser. I was never going go to college. I just couldn't fathom why anybody would want to go to college.

SD: (laughs) I couldn't fathom why anybody wouldn't go to
 college.

MB: (laughs) You know, just different backgrounds.

SD: Yeah, exactly.

MB: You know, my dad was a carpenter, a self-employed carpenter. My mom stayed at home—she had five kids—until we got a little older. And we just didn't have any exposure to that. My brother went to college, my older brother, and he was studying physics. He was going to be a teacher. So, you know, we had the math and science gene. I think we all had pretty good skills in that. But I just, I couldn't see

any reason, you know, to do that because everybody else was either a teacher or a nurse or a secretary or a hairdresser.

So I needed to earn some money so I could pay for my schooling. [29:00] So I went to work as a file clerk, and eventually I was a bookkeeper, and then eventually—I was in a farm co-op, and eventually I ended up being the administrative assistant to the president of the co-op. And the coop got bought out, and instead of offering me a job as a facility manager—where I should have been, because I had the knowledge—they were going to offer me a bookkeeper's job in one of the little [grain] elevators someplace. I said, Well, you know, I don't see myself going back down like that. And my brother at the time was a counselor at a high school. He says, "Well, you know, there's this program with Caterpillar and Spoon River College where you go to school for a semester and then you work a semester at the foundry in Mapleton."

So I went and applied for that, and I was accepted into the program. And it was a two-year degree. It was machine design technology. So I got to learn all about mechanisms, and I learned how to draft on the drawing board, and, you know, all the basic math. [30:00] And instead of doing

English composition you did technical writing. And then, just as I was graduating and ready to take a second— or third-shift foreman job at the foundry—that was 1970—no, 1983. No, 1981. And if you remember in the '80s, what happened to Caterpillar? Well, we were the first ones to be laid off, the people that were supposed to come in. And I spoke to my physics instructor and my boyfriend at the time worked at the school, and they both thought that I would be capable of going on and becoming an engineer.

SD: So you were getting some encouragement, then.

MB: I was. And so I stayed in school. I was used to being poor.

(laughs)

SD: Yeah, which is important.

MB: I got my pre-engineering degree at Spoon River College and then I transferred to Southern Illinois University. And my first year I got a transfer scholarship, so I didn't have to pay for that. So that worked out good. [31:00] And they also gave me a job in the department as a secretary, since I had so many years of secretarial skills behind me. And I finally got my bachelor's degree at age 31.

SD: That's cool.

MB: And as I said, I worked for a small company that went out of business initially, and then I put in my application at Caterpillar and was hired in through the college graduate trainee program, the CGT program.

SD: Which was what—we met there as well, yeah.

MB: That's right, yeah.

SD: But I know you more through SWE than through that, but all right. Because there's just kind of—I chuckled a little when you were talking about learning drafting, because I remember—. So, I started—I took a drafting class in '82, which would have been when I was a freshman in college.

And, you know, you had all the different pencils and the lines had to be different widths. If it was—you know, like to do dimensions or to do lettering—

MB: A hidden line versus a direct object line.

SD: I mean, and it sounds so simple, because you'd like draw a box and there wasn't much to it, but then, you know, you'd get a C on your drawing because the lines weren't the right width or something. [32:00] And I chuckle because I'm sure that they don't do that anymore because they do it all on the computer.

MB: It's all on the computer. I was lucky. They had just taken out the course for slide rule in the pre-engineering (inaudible). We didn't have to use a slide rule, we could use a calculator.

SD: That's good. Yeah, I mean, really, just 10 years difference and just to listen to the—I mean, you would have, I think, had you had your parents pulling behind you like mine, there would have been no question. That's kind of—it's almost scary sometimes, the effect that they can have, because—

MB: And my parents were very supportive—

**SD:** Right, right, not—

MB: —and they supported me every way. They still, my mother—my dad's passed away—but my mother still doesn't know what an engineer does. But she knows that I am one. And they're very proud.

SD: Because it was—I talked about, you know, not joining SWE until later. And I'd been at Cat—I don't know what it was, just a year or two—and I had joined just because my friends were in it and it did sound interesting. But I got

promoted, one of my earlier promotions, and nobody congratulated me except for one or two of my friends.

[33:00] I think it was actually except for the people that were in SWE. And that was kind of the turning point for me that, you know, there was a perception that I got promoted because I was a woman and—yeah. I mean, not one person that I worked with said anything. And so that was just kind of, Okay, there's still something going on. So I needed a little support. And, I mean, with your SWE friends, even though they're still in the mix with me as far as, you know, being co-workers and everything in the same company—but there's just a heck of a lot more support there. That's been good.

- MB: Yeah, it's been quite a change. The fact that you used to have to, you know, kind of say, "SWE," under your breath.

  "I'm doing some work for a group," you know. And now you can say it with pride and be recognized for it.
- SD: Well, and just even—I talked about how it's so cool this year because we have somebody who's getting recognized as a national award. [34:00] And so one of the things—I went ahead and I said, "Well, you know what? What can we do for them that's kind of special?" And so I thought, Well, I'll

collect cards to say congratulations. And so I started with their boss, and I just send their little bio and what their award was. And I'd send it to their boss's boss. And I kept walking up and I got to the vice president, and I was like, Okay. And so then I walked up to the group president and then I was like, Well, you know, why should I stop here? I'll just send one to Jim Owens, who is our CEO. And I thought, Well, you know, when else am I going to have a chance to send an email to our CEO about a Society of Women Engineers something? And so I did, I sent it to him, and he actually did do a handwritten card for her and sent it to her. And I just think that's so cool that, first of all, he'd take the time, and then the fact that it's something for SWE, for a woman engineer, so that's kind of—we've come quite a way.

MB: Well, thanks, you, for telling me all about your background

SD: Oh, you too.

MB: —and it's been very interesting to hear about your family.

SD: Yes, it has. A lot of things I didn't know. Okay.

MB: Yeah, thanks.

SD: Thank you.

Recording Technician: Earlier you mentioned the importance of mentoring, so I was wondering if you all could tell us who was a standout mentor for you all on this road to engineering.

SD: So, it's one of the things that's hard with a mentor as a woman engineer, especially several years ago, because you naturally think your mentor should be another woman. And Margo, you mentioned that there weren't people that were really—

MB: It was my brother as a counselor.

SD: And I had—I've had a couple of bosses. There was one in particular that I worked for for a lot of years, and he was very good as far as being supportive and—you know, when SWE might not have been as well known, still kind of saying,

"Okay, well, let's do this." I mean, we didn't make a big flash about it, but supported me there. And I'd gone—so there's a couple of different managers I had earlier on that I still go back to and connect up with because they can give me some advice and kind of help me. [36:00] Like one of them had said, you know, "You and your husband are going to have to come with grips as far as whose career

you're following." You know, just kind of that when you're younger you don't think you're going to have to do that.

MB: I guess I really haven't thought of that, as far as a mentor. Within the company I think it's been all of the SWE people that I've worked with.

SD: Kind of peer-to-peer, yeah.

MB: More like that.

RT: Can you tell us more about your first promotion and not being congratulated? Like you mentioned that it showed you that maybe something wasn't quite right with women engineers being in the field? How'd that make you feel, though?

SD: So, I mentioned before a little bit about me kind of being naïve, and so there were probably other signs along the way that I just didn't pick up on because I can be kind of clueless to that kind of stuff. So at that point in time it was before things were—we didn't have, you know, like email blasts going out. [37:00] And a lot of times—not a lot of times, promotions were printed out on a little intracompany memo and posted on the bulletin board. And so, you know, people read it. I mean, it wasn't like as if no one

saw it. But just, for some reason I was clued in to the fact that nobody did congratulate me. And it just made me feel like, Okay, what's different? What's wrong? Because, I mean, I thought I deserved it. You know, you always have some of that kind of questioning things about, Oh, you know, why did I get promoted? But it wasn't like as if I was doing bad work. I mean, I felt like that was okay. So I thought, Well, I deserved it as much as anybody else. So yeah, it just made me feel like, okay, something's not quite right here. It's unfortunate.

- RT: What made you think it was because you were a woman, or what made you think that other people thought it was because you were a woman?
- SD: So, I can't think of—I couldn't think of any other reason that I was different. I mean, I don't think, you know, my work itself wasn't necessarily any different, and my age was about the same, and my degree was the same as everybody else's, and so I—I mean, that was like the only think that I could think of that was different. And I know a lot of times it's easy to gravitate to the fact if something doesn't go your way that, Oh, it's because I'm a woman. So sometimes I think we have to catch ourselves that it's not necessarily just always because you're a woman. But that

one, it just seemed there was nothing else that was different, so I—yeah. Hopefully—well, I don't know, I guess I still could have been (inaudible) but I didn't think so.

RT: And I guess one last question. Could you all tell us a little bit more about Caterpillar? Because you've been mentioning it a lot in conjunction with SWE, and you mentioned something about, you know, what happened in the '80s. So what happened in the '80s with Caterpillar?

MB: Okay, well, Caterpillar is the world's leading manufacturer of heavy equipment and diesel engines. [39:00] And it's—how many years old are we now?

**SD:** Going on 80?

MB: Yeah, more than 75 years old, I know. The world headquarters are located in Peoria, Illinois. And they have a lot of large manufacturing facilities in the Illinois area. We also have manufacturing facilities all over the world at this point in time. But it's a large company right now, where you have about 110,000 people employed by Caterpillar, and that does not include all the dealers and all the support and supplier organizations that are around with us. And what were some of the other—oh, back in the

'80s there was a worldwide downturn in the economy. And Caterpillar at that time, in the Peoria area we had, oh, probably 20,000 people employed in that area at the time. And because there was such a downturn, they laid off probably over 50 percent of the hourly workers. [40:00] I don't know that we ever laid off any of the professionals or management, but they may have gotten downgraded back out into the shops.

So it was kind of the dark times for Caterpillar. And, but it was the beginning of a big improvement within Caterpillar because that's when we decided, Hey, maybe we ought to diversify. And it was, I think, about that time that Cat Finance was started. Cat Logistics was more developed as a separate business. We just diversified our product, we made some acquisitions to extend our product lines, I know, on the engine side of it and the generator side.

SD: And we became a more efficient company.

MB: We did. We went through Plant With a Future, and we call it PWAFT, inside Caterpillar. And we spent billions of dollars upgrading our equipment and our infrastructure within Caterpillar. [41:00] The buildings have been there a long time, and the equipment had been there almost as long as

well. We see all these nice archive pictures of making these bulldozers before World War II, and it looks pretty antiquated the way they have to do it compared to what we do now. We have a pretty good archive of our history.

SD: Thank you.

END OF INTERVIEW