Oral History of Dan Fay

Interviewed by **Becky Monk** for the Microsoft Alumni Network

October 27, 2024

Preface

The following oral history is the result of a recorded interview with Dan Fay as conducted by Becky Monk on October 17, 2024, at Microsoft Studios in Redmond, Washington. This interview is part of the Microsoft Alumni Network's Microsoft Alumni Voices initiative. The goal of this project is to record the institutional history of Microsoft through the recollections of its former employees, so that the information may inform and inspire future generations.

Readers are asked to bear in mind that they are reading a transcript of the spoken word captured through video rather than written prose. The content reflects the recollections of the interviewee. The following transcript was edited by the Microsoft Alumni Network, which holds the copyright to this work.

Interview

Becky Monk: Dan, again, I'm super excited that we're doing this today and when we get started, I think the first thing is always just to let everybody know who you are and when the years you were at Microsoft. So if you can just introduce yourself.

Dan Fay: Yeah. Dan Fay started in Microsoft in October of 1992 and I've been there since until 2024 and was in various groups, mainly in Microsoft Research.

Becky Monk: Okay, well Dan, so tell me where you were born and where you grew up.

Dan Fay: Yeah, so I was born in Frankfurt, Germany. My parents worked for the U.S. government, so my dad was a principal for the military schools over there and so I grew up there until I was 18, lived in Germany, then came back to the US to go to school.

Becky Monk: Fantastic. So how did you decide to come back to the U.S. to go to school?

Dan Fay: So since we're all U.S. citizens and we're living over there, my parents always had this kind of planning on coming back to the U.S. to go to different schools. I was the youngest of five, so I ended up going to the U.S. Coast Guard Academy for a couple of years and then went to Northeastern and Boston where the rest of my family was kind of in that area.

Becky Monk: Got it. Okay. So when you were growing up in Germany and your dad was a principal, so it sounds like education was highly valued.

Dan Fay: Definitely, yeah.

Becky Monk: So what was it like growing up there as a son of a principal and with five siblings? What was that like growing up in Germany?

Dan Fay: So it was actually, really looking back, it was a neat experience because it's not one that everyone had, we're not in the military, but my dad worked for the government so we were by the bases. Our parents did a great job of taking us to different parts of Europe during the summers and

vacations. So we saw all of Europe and all the kind of highlights, but then also kind came back to the U.S. every other summer as well to visit family and friends. So it was a really, I don't know, for me it was normal just growing up there and just being part of the community there as well.

Becky Monk: Yeah. Now you were there before the wall came down.

Dan Fay: Yeah, in fact we lived in Berlin for five years when the wall was still up and we used to go, my parents were really again good about doing things and the arts and things, so they would take us to ballets and plays over in East Berlin. So we'd have to go through Checkpoint Charlie and come back through it and I remember times when we'd actually, you get pulled over to the side and these German police would really kind of check out the whole car to make sure we weren't bringing anyone back over. So it was definitely an interesting time.

Becky Monk: And I'm guessing you didn't know any different because growing up there, but how interesting to have lived through that?

Dan Fay: Yeah, it was pretty cool. We'd go skiing every once in a while, every some of the winters and so we had to take a train and there was a specific train you had to take from Berlin to get outside of East Germany and then you could go down to the mountain area, but it was really kind of regulated, let's put it that way.

Becky Monk: Yeah. Well you ended up back in the U.S. and you said you went to the Coast Guard Academy for a couple of years. Why the Coast Guard Academy?

Dan Fay: I think my parents or my dad especially thought it would be kind of neat for me to do and I ended up applying and getting in and at that time, Coast Guard Academy isn't like the other service academies where you had to get a recommendation from your senator. It was purely competition based. And so when I got accepted, I remember one of my counselors telling me, Hey, you'll kick yourself if you don't go. And so that kind of always stuck in the back of my mind. So I ended up going for a couple of years and then realizing, okay, it wasn't really for me, but it was a great experience.

Becky Monk: Fantastic. At both the Coast Guard Academy and at Northeastern you studied computer electrical engineering.

Dan Fay: Yeah, so I studied electrical engineering and that's actually kind of funny because at that time a lot of it was still based, you're doing things around circuits and other things, which I realized wasn't something I was totally enjoying either. And at one point thought about switching to civil engineering, but then when I ended up transferring to Northeastern University, there was a lot of work going on around let's say computer engineering and so it was more the ones and zeros, let's put it that way, more digital than some of the circuits part and made a lot more sense to me and it was something I enjoyed.

Becky Monk: What was it about the ones and the zeros, the computer side of things that really sparked your imagination and that you really enjoyed?

Dan Fay: It's a good question. I don't know, it just made more sense to me. I had, in high school we had access to a computer with old punch cards and tapes that we actually had to run through it, but it was something that fascinated me. It was kind of right at the beginning of a lot of the growth of the area and so I'm not even sure totally why it gravitated towards it, but it made a lot more sense and just was like, okay, this is something of interest.

Becky Monk: Got it. Well, and when you graduated you ended up at Digital, so and why did you end up at Digital Equipment Corp.?

Dan Fay: Yeah, so one of the things that was really fascinating and was good about, especially at Northeastern, they have a co-op program. So you go work for to school for six months, work for six months at a company, come back and you go back and forth. And so one of the jobs I had was at Digital that I was doing my co-op with. And so it was kind of a need to be at that industry doing things at both the mini-computer era and I was working with the hardware folks at the time and so we were not only building machines but supporting them. It was just really kind of a neat, again, really interesting timeframe looking back on it.

Becky Monk: So this would've been in the late '80s, early '90s, and so maybe you can help put into context what the computer industry was like at that time.

Dan Fay: So at that time it was really still dominated by, I'll say a lot of them were mainframes, but then there was the rise of a lot of the mini-computers, so things like Digital Equipment, Apollo Computing, HP, there were a whole bunch of these smaller ones, especially around Boston around the 128

region and 495. There were a lot of these, I'll say not just startups, but companies that were built there. A lot of, I think the folks that come out of the Boston universities. And so there was Data General was there, trying to think what, there were a couple other kind of big ones that were around at the time. And so it was all about those many computers, but everything was being built on, you built your own hardware and your own operating system. So it was really still all new. In fact, one of the groups I was in also was around networking. And so we were building fiber optic repeaters to help with the networking. And that's the other thing, the networking was kind of just really taking off a lot more at that time too.

Becky Monk: Right. Those of us who were not in the tech industry had no idea what was coming.

Dan Fay: No, no. And it was interesting, I mean even looking back on it, and this is one of the things I always think about with these paradigm changes is that when you're at the beginning of it or in it, you don't really ever can anticipate what's going to happen five, 10 years down the line, 20. You just kind of see it happening and you're experiencing it, but it's really, it's more when you look back on it, you can see what an amazing, change it all by doing what all occurred, let's put it that way.

Becky Monk: Yeah. Well, and you've been on the frontline of so many of these and I'm excited to get to those. So after a few years at digital, you made your way to Microsoft. How did that come about because you would've been on the complete other side of the country.

Dan Fay: So this is one of those things where I guess with more happenstance or more what you want to do than totally planning it out. When my parents

were, after I graduated from high school, my parents moved from Germany to Japan and I went one time to see my parents in Japan. We flew through Seattle and ended up having a flight delay. So we stayed overnight in Seattle and I really kind of loved it just being in there for a day. So I always thought, oh, that'd be a great place to move to. And when I was graduating from Northeastern, I always thought it'd be a neat place to go and I always kind of kept my eye out. But as I was working for digital, and at the time this was one of the recessions that was going on was looking through that time, the Boston Globe and about six pages deep, there was this ad for Microsoft and I thought, oh, I could do this, why not? So I applied and after interviews and all that sort of stuff, ended up getting offered a position out there.

Becky Monk: Alright, so the interviews that seems to be everybody has an interview story. What was your interview gauntlet?

Dan Fay: I don't remember mine as much as I think some people remember theirs. Yeah, I just remember coming out for the meeting. It was in March and then I didn't get my offer letter until I think it was August. So it was one of those where it was waiting a while.

Becky Monk: So when they hired you, what role did they hire you for?

Dan Fay: So I was supposed to come in as a network support engineer. I think it was in the support group, so at that time product support, so PSS. But that kind of changed when I actually got there.

Becky Monk: I understand this is not unusual for Microsoft, but when you got there things had changed completely. So what was it that you actually ended up doing?

Dan Fay: Yeah, so it was kind of interesting. So I went to NEO [New Employee Orientation] and at the time again that you just had the paper form with the name of the person you were supposed to report to and that, so I did the NEO training and then after lunch went over to the building and this was at Bellevue Place and went and asked for the manager that I was supposed to report to and there were a whole bunch of calling around all this stuff and I was sitting out there in the lobby for a while trying to figure out what was going on and come to find out that there had been reorg. And the manager at the time was Libby Duncan, who I was supposed to report to, had moved to another job and they ended up putting me into Premier Support. So they were just starting up Premier Support kind of at the time and became a technical account manager in Premier Support and then supporting the Microsoft Mail product, which was again something I didn't know anything about.

Becky Monk: Well, I mean that seems like that's going to be a pattern for you. You're going to be jumping into all these things that you don't know anything about but quickly learn and become a master of. So what were those first few years at the company? I mean, what did you think when you landed at Microsoft and what was the culture? What were you thinking when you finally got through NEO and started?

Dan Fay: Yeah, it was really kind of fascinating because there was at the time of, again, a lot of, I'll say younger people, but also coming together in an area. Not everyone was obviously from the Seattle, Bellevue area, Redmond area, and so there was a lot of energy within not only the groups, but also

trying to figure out how to do some of the work. There was a lot feeling that, I think it's closest to a startup, even there was a 10- or 12,000 people that things were still dynamic, that you could propose something and actually get your manager or folks to prove it and you could go ahead and do it. It didn't feel very bureaucratic or anything like that. It was very, really kind of invigorating.

Becky Monk: I understand also your first day was another kind of momentous day for you because you met somebody very special.

Dan Fay: So not that I knew it at the time, but so on the first day, again during the new employee hiring station, and I think it was in Building 21 after the video and all the paper signing that we had to do, you lined up to get your badge and I remember this person in front of me, so this woman in front of me and let her go ahead of me and about, I don't know, four or five months later I ended up, actually, we ended up in the same group and project support, and so I met my future wife there. So our badges were always one number apart, which was really kind of unique.

Becky Monk: I think so many people met their spouse at Microsoft. I think that's a fun story. So you were in Premier Support supporting Microsoft Mail for a while. What was your next gig?

Dan Fay: Yeah, so I did that for a few years and then there was a position that opened up in this group called Developer Relations Group, which was something that I was always really interested in to be a technical evangelist. And at that time they were looking for a technical evangelist for MAPI was the Microsoft Mail API that they were developing. So I went over and ended up being the MAPI technical evangelist for a number of years.

Becky Monk: What is it for everybody who doesn't know? What does a technical evangelist do?

Dan Fay: Yeah, a technical evangelist within, especially at that time in the developer relations group, was responsible for bringing out the details and what we wanted the developers to engage in at different ISVs or anywhere to program to the APIs that we had. So in this case for the messaging API, but it really was about working with developers in the community and getting them to trust us and also to see why they would want to adopt our APIs At that time, there were a lot of different platforms that they could build for, and so we obviously wanted everyone to write for Windows, and so we were doing that. We'd also bring them in for, we used to a developer relations group. We used to have these system design reviews where they would go through what the kind of internals of the OS would be so that people could actually understand how they could contribute to it.

Becky Monk: What was your favorite part about doing this work?

Dan Fay: Part of it was meeting all the different folks in the community and talking to different ISVs and giving them the opportunity or presenting them and maybe selling them on the idea of why they wanted to do something with us and why they wanted to hook in this case in Messaging and then later Exchange why they wanted to adopt that and presenting them the case and then seeing them be successful. And so it was a lot of giving talks, presenting the technology, working with the different ISVs, bringing them into campus even to learn more about it, more about the details for the program managers from the different teams. It was also about that potential bringing out, I always keep thinking about something that Bill Gates said, which was there's the magic of software, and so you were

bringing them that idea of, “Hey, here's this thing, you just write to it and you get this benefit.” And so it benefited them and us.

Becky Monk: Really opening their eyes to the possibilities. You also worked, and I might be skipping ahead a little bit, but you also worked on Windows 95?

Dan Fay: Yeah, so part of this, we were morphing within the developer relations group. One of the things we ended up doing was working on Windows 95 in general, evangelizing it and bringing that out to the different ISVs and trying to get them on board. It was one of the first times we had done a kind of lighthouse project where we were targeting specific companies, especially the top ones and the different domains to get them to adopt and to write for Windows 95 before it released.

Becky Monk: That must have been, again, one of those moments where did you understand what Windows 95 was going to do in the world?

Dan Fay: No, no, it wasn't really until the launch and seeing this almost craze around Windows 95 that occurred at that time that it wasn't until then you kind of realized what a big deal it was, because before that it was just, okay, you're writing to another platform, getting people to adopt it. You didn't realize how big a deal Windows 95 was really going to be when people were lining up and buying it from the store, buying their copies. It was one of those iconic kind of moments.

Becky Monk: Was it a head scratcher? Was it sort of like why?

Dan Fay: Yeah, it was, especially when you heard about people buying it that didn't even have a computer, but it was also just still at that time where as a company, we had that motto of a computer on every desk, and one of the things that always struck me was, okay, what are people going to do with it? And so we understood from the business side, but not as much from the personal side, even though we were shipping more products there, the biggest one, and the one I always remember was in fact what I was playing was Microsoft Golf Pack at the time. So it was kind of almost the gaming portion was a big deal.

Becky Monk: Yeah, I mean I think that's how a lot of us started learning how to use the computer or the games. And so yeah, Windows 95 was the one that made me go, "Oh, this computer is going to help me."

Dan Fay: Yeah.

Becky Monk: Okay. In '98, you ended up joining Microsoft Research. How did that come about?

Dan Fay: So one of the folks that I had worked with in the developer relations group, this guy Todd Needham, who had known for a number of years, ended up having, going over to Research as part of this, they were setting up this university relations team. And so he ran across me one day and asked me if I was interested, and that's kind of how it happened. So I ended up moving over to Research in the university relations group and was also lined up with another guy. I knew Dave Ladd, who I started at PSS with as well. And so it was kind of me. There was people I knew and it was

again, a nice group and it was essentially kind of bringing evangelism to the universities and to researchers. And so it was kind of a similar kind of work, but working with the universities and the researchers on what their problems were and how our technology might be able to help and what research we had that could help them out as well.

Becky Monk: Why was this kind of a real pivotal moment for Microsoft? Because I feel like this really opened a lot of doors.

Dan Fay: Part of it was there was a need for Microsoft and for Windows to actually get out there into the kind of research community and see it being used by not only the researchers but then their students as well. And so that was one of the things we were looking at and trying to figure out how to do. At the same time, there was a push from the, I'll say the industry at the time, mainly Intel on how do we get PCs into universities. And so there was a whole push with shipping PCs to universities, but they needed obviously the OS to run on it. So we had partnered with Intel to supply the OS to the universities. And so that was one of the pieces and how could those be used? And it was really also at that time, remember computing at that time was really only being used in a few areas. It wasn't being used like it is now across the board. And so there was a lot of opportunity to see not only how computing could be used, but how that could transform not only education, but also research in general and a lot of the different sciences.

Becky Monk: And would've been thinking that the universities would be among the first to adopt.

Dan Fay: Yeah, they were in say in computer science and some of those areas, but where they weren't as much. And one of the things I always looked at was

where could it be used a lot more? And we started realizing that it wasn't about as much the peer research of it though that was ongoing and we needed that for graphics and some of the other areas, but it was also in these areas like the sciences, engineering, places like that, that it could be used. And so there was always a kind of push to go, how do we ensure that this PC could be used as a technical workstation? And we were competing at the time with Sun, specifically around the technical workstations.

Becky Monk: Got it. What did you like the most about that interaction with the universities and doing this part of the job?

Dan Fay: Part of it was understanding what the researcher was trying to achieve, and so understanding their problems or what their challenges were and then trying to see, okay, where can we help? Do we have something or do we have one of our researchers that's working on something that they may not know about and it could be used in that area? And so I sometimes think of it, we had a tool and we were trying to figure out how it could be used maybe in different areas, and so was there something else that it could be used for instead of just what our researchers had designed it for. So we're always kind of looking for that opportunity as well as how can this help them do their science or the research much quicker? And then how could that benefit, again, us as a company. So always trying to look at it in multi directions or multi different angles to see how it could benefit everyone.

Becky Monk: You were really on the front line of seeing the new innovations coming out of the universities, but also coming out of Microsoft.

Dan Fay: And part of it was we were also on that line, like you said, the new innovations, but what was happening within universities and where that

was going, and then how could that be disruptive to us as well? And so I remember early on, Todd and I were doing things around the high-performance computing space, specifically around some of the network protocols and working with the folks in Supercomputing and other big conferences. And we didn't as a company, have a product in that space at the time, but we were working with universities to get them to implement Windows in this high performance computing or that time of Beowulf computing space and getting prove out that we could Windows could run in that area. Then later on, that ended up leading to a Windows HPC product that the company ended up putting out. And actually a lot of that, the HPC work is now some of the backbone of what's within Windows Azure as well, or Azure on the backend for the supercomputing portions.

Becky Monk: So there must have been a number of those types of things that you were able to help further and take or direct into products. Do you have a few of your favorites that you'd like to talk about?

Dan Fay: Yeah, I have a couple. And the part that's always interesting is not everything we did would always transfer into products, but it was always helping either rule in or maybe even rule out some areas. But one of them that we ended up doing was we worked on, we had a couple of our folks within research, Curtis Wong and Jonathan Fay, who's not related to me at all, but create this thing called Worldwide Telescope in conjunction with some of the other folks, Jim Gray and others, but actually, let me take a step back. And so Jim Gray and Tom Barkley had created this thing called TerraServer, which was the first real kind of mapping service, you could think of it as Google Maps or Bing Maps at the time, which they took data from the USGS as well as they got some from the Russian folks and end up creating a server where you could end up seeing all the images from a different machine from your client machine and be able to view those.

And that piece ended up going into what was called Worldwide Telescope at the time. And with Worldwide Telescope, we ended up creating a 3D

environment that allowed people to not only see all the images like the NASA hack and some of the other pieces, but then also images of the world and some of those. And so that ended up shipping out always as a beta product from Research. But one of the things we ended up being able to do was incorporate, we figured out how you could go from Excel directly and put your information. In this case, we started off with earthquakes, how you could plot those on the surface of the earth with the imaging there on the maps and be able to zoom in and zoom out of it, but make it much easier for folks to actually plot stuff within Excel and integrate that within this kind of visualization environment. And that ended up being productized and put into Excel, and that was shipping for Excel for a while as a 3D kind of charting environment. So there were some things like that that ended up happening at different levels, but it was always seeing where that neat kind of potential of where the use is and where it could actually be used at and how it would benefit folks.

Becky Monk: I feel like that's kind of the fun part. You're constantly creating, you're constantly innovating, and then it may or may not get used, but you're still constantly trying to think of the next big thing. The next new thing.

Dan Fay: Yeah, it's that, but it's also knowing what has been done. So things that might've been done a few years or five years earlier could sometimes be used again in the future because they found a technique for doing it that wasn't useful at the time, but then could be used later on. So yeah, there were a number of those kinds of things where you had to know about what was going on within Research or had been going on to also then see where it could be used or how it could be used within different solutions for folks.

Becky Monk: So something that just, there may not have been the right application for it yet, but that application comes along and you're like, “Hey, this thing we did five years ago, that would be perfect for this.”

Dan Fay: It was always kind of a challenge too. And I'll be honest, there's times when I always thought of it this way where there could be, we might have technology for a solution for an area, but sometimes I felt like there were one of two answers I would get from folks, which was that the problem I was bringing in them was either too hard and they couldn't find a solution or their solution really wasn't going to be 90% or above to make it into a paper that they could publish or it was too easy and they'd say, okay, we already have a paper published, but that paper wouldn't help the scientists do the work. So one of them I really remember was working with some scientists that were tracking bees, and one of the things they had to do was kind of track where the bees are and how many of them, and so they were having to do this by hand, and it was like, wait, we have some image analysis tools, it could be used for this.

And it was hard to get those married up because there wasn't a direct focus on it. And there was another one too around petals counting as the petals on a plant would change. So essentially cell division, there were grad students there measuring this stuff on computer screens, and so same kind of thing, could we get those more automated? But at the time, the company wasn't as focused on the sciences, and it was more just purely on, okay, how can we do stuff for pure computing and not solve some of these problems? And sometimes I looked that we were early on a lot of these challenges.

Becky Monk: Well, you were able to, I'm guessing this might lead us right to cloud computing and another paradigm shift that you were talking about, and this is where I feel like the academics and research really benefited.

Dan Fay: So a lot of the folks had actually, there were two parts when the cloud computing shift happened. One was that there had been work, and I'll say at National Labs and other areas of this thing called grid computing, which was how could they at National Labs share their machines between different research sites? And this was something that again, we had identified and I brought and presented internally to folks to say, “Hey, here's something we should be aware of. This is happening.” They're trying to figure out how to use this stuff across the internet and across these networks and share their material or their resources. And so this was kind of ongoing. This was a way to help solve some of the science problems that they were looking at. And then at the time when cloud computing was kind of coming up, it was a very similar thing to say, “Okay, hey, we have this asset.”

You could use it for your science or your research. The challenge had always been when they started looking at it was the cost because with academics and what you did was you bought a machine and you paid for all that and got up and running, but they didn't pay for anything else. They didn't pay for the electricity or some of those things. And so it was like a felt like a one-time sunk cost, whereas with cloud computing it was this ongoing cost. So there was a real hesitancy to why they should use it. And so one of the things we were looking at was also, hey, how could we get them to use it and how could they benefit from it and what could we learn as a company in this space as well from them and how to use it. So it was one of those things recognized early on that it was, “Hey, this is the new OS for the internet or for the web.”

And someone had sat down and actually penciled out a program that we called Azure for Research and ended up bringing this at the time to Satya, who's the head of Azure at the time, getting his approval for it and then moving forward and getting it kind of rolled out to different universities and researchers around the world. So we had a small team where we were doing everything. We were getting kind of courses together, samples up, we're going and delivering courses. We hired some folks to help us with some of the course delivery, and we were really trying to get that out over a couple year period to get some visibility and adoption of Azure. And that was mainly also because we kept seeing Amazon and AWS being used within academia and we didn't want to be left out because one of the things that I'd seen was because Microsoft wasn't involved with the high performance computing early on, and a lot of the Beowulf work, that whole area got dominated by Unix and all the biology tools got written on top of Unix on top of these Beowulf Clusters because it gave them something that they didn't have before.

And so my concern had always been, are we going to run into the same problem with the cloud? And so really kind of wanted to make sure that we weren't left out, especially in academia and making sure tools were written for Azure and not just for AWS.

Becky Monk: Yeah. So how were you able to pitch this in a way that you were able to get into the universities, into the research areas so that you were going head-to-head with AWS?

Dan Fay: Yeah, part of it was at the time we were able to get some free cycles from the company to allow our researchers to end up using it, the ones we were working with externally and giving them that and then helping them get up to speed help them. But we always ran into that transition of, okay,

what do we do long-term? Because we couldn't just keep funding them for their computations or using their virtual machines on Azure. So we were always trying to figure out how could this transition to something else, which has always been the challenge in working with academia in general. You end up having a lot of, you could spend a lot of money in those areas and not get a lot of return out it.

So a lot of it was actually working with them trying to show that, hey, there are solutions there and then this could help them. But also one of the things that research is really why research is hard to do on something like cloud is you end up doing a lot of experimentation. And so if you're doing a lot of experimentation, that drives up a lot of costs, but the cloud was really good at and is the ability to, once you have a solution, then to actually know exactly how much it would cost to run it. And so we were always trying to look for places that you could do a little of both where they could run it locally but then execute it on the cloud once they kind of knew what they wanted to run be a more fixed cost there.

Becky Monk: Got it. Got it.

Dan Fay: That was the first time actually that dealing with the cloud that really realized the economics of this was really going to hit everywhere that people had to take that into account of how much it was going to cost them to run. And in fact, one of the projects we had done with the Berkeley Water Center, Catharine van Ingen, one of our researchers had even figured out what the cost per, let's say a square mile was for them, for a scientist to run an experiment over that square mile of data. And so you could get down to that point where you actually had a fixed cost, where you knew how much it would be, which was really different.

Becky Monk: Did that help or hurt?

Dan Fay: It helped, but it still wasn't, until you get to that point, you end up having to get to almost a factory. I kind of think of it as it's got to be something that just runs almost on its own, but a lot of times research is still tweaking things. So once you get to the point where a standardized procedure comes out of how to maybe clean the data and validate it and do everything else at that point, then it becomes very really good. And that's where it made a lot of sense. But you have to get the community to agree on that standard,

Becky Monk: Then it starts to become really cost effective. How were you able to help drive some of the big scientific research that's going on out there? How do you fit into that and how does Microsoft fit into that?

Dan Fay: Yeah, so one of the things that also happened at the time was the company ended up hiring this guy Tony Hey, who was out of the U.K.. He was head of the e-science program in the U.K.. And so Tony came over and we started this thing called, it was initially called technical computing initiative, and it was outside of research and we started working with scientists to get them to go down these paths to really utilize our technology. And so part of it was working with the community on those areas, but Tony had a lot of connections into the science communities. And so we were able to then work with the scientists and the different researchers and talk to them about where we could help and where our research could help. And we started at that time, we ended up having postdocs that would help our researchers work on the problems that the scientists had. And so it was kind of this mutual benefit type thing where

our researchers ended up having somebody that could help them work on this problem and they could continue to do their same work and it would benefit the scientists at the university.

Becky Monk: How did you get involved with the White House?

Dan Fay: So as one of the other things in going around doing a lot of these talks within the science community, I ended up talking a lot to folks from not only Department of Energy, but also the EPA and other organizations and in fact, and also the USDA. And so as one of those pieces got invited to participate in this, I think it was near the beginning of Barack Obama's time as president, they were rolling out how could we engage companies with some of the different initiatives that they were looking at? And one of them was around climate, around the climate initiative. And so we ended up as a company signing on being part of it, and we ended up creating not only doing the press release, but also going to D.C. doing a workshop there with the folks at the White House doing some meetings there, and then also working with the USDA on a program to have some university researchers utilize Azure to actually do some of the computations for that program. And it was a competition and then they were awarded that. So it was kind of again, that you're being there at the right time and talking to the right people and end up having things come about together

Becky Monk: That had to be a fun thing to do that had really kind of not a normal path that you would've been doing.

Dan Fay: No, and also it's kind of like learning to work with the government because they work at a different pace than we do, and also having to get agreements signed from their lawyers and our lawyers, which isn't always the easiest.

Becky Monk: Is there one particular thing or a couple of particular things during this period of your career with Microsoft that you were especially proud of during the cloud computing?

Dan Fay: A couple. There's a lot of things I think back on that I really enjoyed and were particularly satisfying for what we were doing. One example was with the worldwide telescope work, ended up working with the folks out of Johns Hopkins who run the Space Telescope Consortium, and they're the folks that have the Hubble data. And as we were having a discussion and talking about it, there came about a plan to actually have us using Worldwide Telescope and then the Space Telescope folks at Hopkins and Northrop Grumman because they were doing this building this thing called the James Webb Telescope, which is now actually had been launched and actually is sending back images, but they had their full mock-up prototype and we ended up bringing all three groups down and with NASA down to South by Southwest in Austin with a big kind of pavilion and we were showing off Worldwide Telescope, and then they had the, so it was kind of like two telescopes.

We had worldwide Telescope and then we had the mockup for the James Webb Space telescope out on the field as well. And we were actually using, in fact, our big wall that we set up for Worldwide Telescope to actually bring in real interviews, real-time interviews from the clean room where they were building the actual telescope. So there were things like that that we did. And then another one that came about, again along those lines was we got asked to do a demo at one of the TED conferences up in Vancouver. So we ended up having a large-scale display, a big wall display showing off for wide telescope, but we also partnered with some other folks at MIT to show off neurons so we could go from these really small neurons to kind of the universe and we could scale in between it. So it was really before a lot of the VR type stuff got big, but it was a really neat way to show how you could move between these different imaging systems.

Becky Monk: Yeah, wow. I am blown away by all of the stuff that you guys do that you came up with. I know that now the outside world is all excited about AI, but that was something that was going on a long, long time ago and that's been integrated into things. Talk to me about your work with AI and Microsoft Research's work with AI back in the day all through today.

Dan Fay: Yeah, so one of the things that was really neat within Research was meeting some of the different researchers that had come from either their industry or from universities, and there were two of them that came in at one time. So Eric Horvitz now the chief scientist at Microsoft and David Heckerman, and they were doing a lot on machine learning at the time, and some of the stuff that they ended up using was kind of an early cursor to a lot of what's in AI now. One of the things people will know from Eric is Clippy. So he built the backend system or the system out of Research, and then the office folks changed it and made it Clippy and a little bit more, and the Letter Wizard, they did a little too much with it, but it was that type of stuff where it started early and then kept moving and you kept seeing them using some of the Bayesian networks and some of the other technologies as early machine learning pieces in there. And that just kind of kept marching along slowly in the different areas from Book to voice and some of the other areas until this last big change came about. So there's clips from one of the conferences a number of years ago where Rick was actually showing Rick Rashid was showing off doing live translation. I believe it was in Skype language translation of his speech at the time, and that was even before the generative vibe pieces that are out now.

Becky Monk: He was talking about that in China. In Chinese, yeah. Yeah, I guess Mandarin.

Dan Fay: That was really, really amazing to see that happen and that really kind of foreshadowed what could happen.

Becky Monk: Were those the things that really sparked your imagination or fueled your love for staying with the company for as long as you have? Or what was it that really made you want to stay for 30-plus years at the company?

Dan Fay: It really was. It was a lot of that, the potential for the technology and the really being limited by only maybe the imagination of everyone involved. One of the things I realized over the years was that Microsoft has a brilliant company, a lot of really great developers, technologists, and others, but one thing you end up needing to actually have some of these really interesting breakthroughs is you need to have the creative folks that also can imagine how these technologies could be used and talking to people about potential solutions. And so that's where I always found the real, I don't say the magic and why stage was because talking to these scientists in these different domains and seeing how we could couple software or even hardware technologies with what they were doing and was there something new that could come out of that or would it change how they were doing their work?

And for me, it's always been not about the task automation as much as about what's the potential for something brand new coming about, and I think that's what we're seeing right now within the AI field with the AI being there. The initial part is all been about more task automation and how do we make things do it on your behalf or do it quicker, and really the potential is kind of the next part, which will be how does it really help us as individuals and our intelligence and our work rather than just doing it on our behalf? So that's the reason why I always really stayed. There was always something new coming about and there's that potential of how you could be used.

Becky Monk: When you think about Microsoft and you think about all it has achieved, what do you think people will remember most about the company?

Dan Fay: Let's see. I think there's a couple of things they'll be remembered for. One is just Windows and Office. It's this funny thing where at least folks in the maybe my age group and others, that's what's kind really known for. And one of the things I tried to also do was when I'd go give talks at universities and talk to students was to let them know that Microsoft was also more than just a software company that we hired electrical engineers, we hire people in other areas. We have all these other technologies and hardware as well as needing folks to understand the social kind of business between people as well as how they might interact. And so trying to open up their eyes, but I really do, at least initially, I think right now it's still remembered for being Windows and Office and kind of the PC. I think we'll end up seeing the next 20 years we'll see a change and maybe it'll be more about the AI portion.

Becky Monk: Yeah. What do you think is the most important thing that come out of the company if that's what's remembered for, but what do you think will be the most important thing that actually has come out of the company?

Dan Fay: So the way I think about it is I'm talking to a friend of ours who ran his own small business. One of the things he told me was without Microsoft, he wouldn't have been able to run and have his own small business where he could handle at that time, even faxes and keeping track of inventory as well as pay and stuff coming in and out, that by having the PC there and having all these apps built on top of it enabled him to actually run that business. And to me that was one of the, I think I always thought was one of the key things that we enabled as a company was we enabled these new forms of businesses to happen. You didn't need to have a huge

company to actually do something you wanted to do. Yeah, I think that's one of them. I see there'll be some other things. We'll be remembered for both good and bad. I think everything from things like Bob to Clippy, to zoom to some of those on maybe more the negative end, but I think then there's all these other pieces that enable people to do work.

Becky Monk: What do you hope people remember most about what you did at Microsoft?

Dan Fay: For me it's more that I always did the right thing for the company instead of for maybe my career. So it's more about what was the best thing we could do for the company and then I could work with people, anyone inside and outside the company you always wanted to be because I was always interacting with folks externally to the company. You always wanted to make sure you're presenting a good face for the company. Yeah, for me it's more about that and then I was somebody anyone could work with inside the company.

Becky Monk: Love that. Was there anything that surprised you along the way by working within Microsoft?

Dan Fay: Well, I think more of it ends up, it's more when you look back when I first started, you could name all the vice presidents inside the company. Now it'd be tough to name them within a division, so that's one of the things that's kind of surprised me, not only how big the company's gotten, but all the different industries that we're involved in.

The one that really I think surprised me the most, looking back on it again, was when Satya came on, his culture changed or pushed to have the culture change

within the company that it really did make a big difference. It kind of felt like we were in a really bureaucratic system and a lot of the work he did in changing that really helped and that maybe it shouldn't have surprised me, but sometimes it's hard for companies to change, and that really did surprise me. The other one that really again surprised me looking back is that the company was and has been able to survive all these different paradigm shifts. If you look back in the history of a lot of industries, it's really hard for companies to navigate to jump over one paradigm shift, let alone, I think we're at three at least now, and that really has made a testament to the company not just sitting on the golden gooses, but also looking forward and investing in not only research, but other pieces looking forward.

Becky Monk: Yeah, I feel like you've had that unique experience of being there over that 30 years to see the leadership change, to see the growth, to see those paradigm shifts, and you're right, that is a really unique position. The companies do survive as long as this one does, and by changing and adapting. When you look back on your time at Microsoft, do you remember any fun stories about culture or celebrations or things that just make, look, you've got a little smile. I can tell there's some good stuff there.

Dan Fay: Yeah, it's one of the things I was thinking back about, which is one of the things I really loved about the company and hasn't really happened in the last number of years, which was there was always this fun portion to the company. So I remember the first company meeting I went to and I think it was Frank, ed was giving the treasury the financial report, and he got up on stage and he was in this buffed out Superman kind of outfit because the financial report kind of dry and boring at the time. And so it was this really kind of fun part, and there was a lot of those where the videos that Bill used to do about, there were ones around the internet, some of these other things. I still remember there was a video that Brian Valentine did to the song “Tools of War” or something, and he goes dancing through it just

like they did in the original video. And so there are a lot of these kind of fun ones that the execs would do and have out there, plus the ones that would kind of take aim at maybe the competitors and some of those. And that's the thing, I miss some of those.

Also, I was there the last year, we had the company holiday party at the Seattle Convention Center, and that was really neat. You had a whole bunch of different rooms with different themes going on. It took over the whole convention center, and that was really anything. And so kind of losing that as well as the company meeting every year where you brought everyone together and you had kind of the trade show piece around it as well. There was a lot of those. I think that kind of miss out. And then the other one is the summer picnic that used to go on out at North Bend, and that was always a fun experience, either flight volleyball or having the food or watching the polo or doing some of the other activities that were going on there.

Then of course everyone would remember. A couple other things this are coming to mind really quickly, which are, every project started with a new T-shirt, so you ended up getting a T-shirt before as the project got going. So that was one, and then at the end of it, where either the ship parties or some of those, and those were always a lot of fun as well.

Becky Monk: What do you think all of these things, the videos, the parties, the T-shirts, the ship gifts, what do you think how all of that played into the success of the company?

Dan Fay: Yeah, I think part of it was that the culture around it was about that, okay, work hard, have fun, and it was about really, you'd kind of get, I don't want

to say rewarded, but it was this, you worked hard and you also had fun doing it. It wasn't all about working hard to your bone, keeping your finger out of the bone or the nose to the grindstone. It was really about doing it, but also enjoying it as well.

Becky Monk: One of the things that a lot of people have talked about was the Giving Campaign, and I'm just wondering if you have any reflections about the Giving Campaign and Microsoft's social impact work?

Dan Fay: The Giving Campaign when I got to the company really impressed me that the company would do that and really made it such a big push on it. And so it was something that, especially as a young company and we were doing so well, I think it always helped people understand, Hey, we need to give back as a company and as employees. And that the fact that the company was investing so much in doing it was really a testament to why it was important and knowing that it came from, I think from Bill and especially the influence his mom had on him.

Becky Monk: What was done at the company and what was encouraged at the company. Did that play in any way, shape or form into what you and your wife now do or not?

Dan Fay: You mean from the Giving Campaign or from?

Becky Monk: Yeah.

Dan Fay: Yeah. I mean, oh man. So one of the things with the Giving Campaign is that I've done it since I've started the company and just made sure kept doing it as we went along and always knowing that there, that it was going to something that was worthwhile, but also that when emergencies came up that you could donate and the company would also match it as well as match your time for doing work. So volunteering it like the food bank and some of the other things that we would do, it definitely is a neat kind of thing to see the company would help with that.

Becky Monk: Fantastic. I know we're getting close to the end of our time, but I just wondered, are there other things? Thirty-two years is a lot of time and we only hit on high points. Were there other things that you really think we should hit on and talk about that we haven't talked about yet?

Dan Fay: There's always stuff that keep popping up in my head, but no, I don't think there's anything that we didn't cover. I think the other, well, I guess the other one that I always think about now too is the transformation of the company, even the campus that it'll be interesting to see with the completion of the new campus. We lost some of those things that even they tried to put them into the new campus—Lake Bill and some of the other ones and their traditions around shipping products. And I think that's one of the things that is a little different nowadays is you don't have the product release that real end of the release. Everything is a continual release, and so you don't end up really having those momentous times it seems, where you would just be walking across campus and you would see one of the groups because they shipped something out, either taking the plunge in Lake Bill or celebrating or having their team or group party.

Becky Monk: Right. I know Brad Silverberg was telling us about the big pressing of the gold discs for Windows 95 up in Woodville, and that doesn't happen because we don't have discs anymore.

Dan Fay: Exactly. Or the floppies that we originally were shipping. Yeah.

Becky Monk: Are there lessons that you would share with people who are getting into the industry today that you would want people to think about as they're embarking on a career in the technology world?

Dan Fay: I think for me, the biggest thing is for folks when they're out, whatever career they're in within the technology area is always to keep your eyes open and looking forward and listening to people. So you end up finding how maybe changes are happening by talking to customers, or in my case, like scientists or others, and hearing where things are going. And sometimes you might hear it just once, but if you start hearing it a number of times, you start picking up on it and start keeping track of it. I think that's one of the things that I noticed is that to keep track of some of these things as they change as quickly as they do, part of it is having those discussions with people and always keeping your ear to the ground, I guess, for where things are going. And I think within a company, the biggest thing is to ensure you're doing the right thing. Again, it's easy to get caught up in the politics or some of those other things within companies, but really it's really important to always sure you're doing the right thing that you can live with, have your integrity at the end of the day.

Becky Monk: That's fantastic advice. Fantastic advice. I think that's all that I have for you. Thank you.