

Oral History of John Ludwig

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

August 8, 2024

Preface

The following oral history is the result of a recorded interview with John Ludwig as conducted by Becky Monk on August 8, 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: We'll do the hard part first. I just want you to tell me your name, the years you were at Microsoft, and what you did there.

John Ludwig: My name is John Ludwig, and I started at Microsoft in the summer of 1988, and I was there until late 1999. I started as an individual contributor in what was then the network business unit, and eventually moved over to the Windows group, and became vice president there, working on Windows 95 and that era of Windows products. After Windows, I worked on Internet Explorer, and then worked on MSN, and Hotmail, and some of our cloud services before I left.

Becky Monk: Fantastic. All right. I want to start at the very beginning. Where were you born?

John Ludwig: I was born in Mansfield, Ohio, but moved when I was two to Marion, Ohio, and that's where I really grew up.

Becky Monk: How did you end up wanting a career in computers?

John Ludwig: Well, I really wanted to have a career in engineering. I was a kid that grew up during the Apollo era, the Moon landing. That was the most exciting thing you could imagine, and I watched all that, and I was like, "Man, I want to work on those rocket things. That is so cool." And so, I initially kind of wanted to be like a aerospace engineer, although I didn't know what that really meant. And then I kind of meandered around that and ended up going into electrical engineering when I got to college, and then I was going to be an electrical engineer.

And my second year at college in electrical engineering, you had to take courses in electromagnetic-field theory, design of antennas, and incredibly complicated math. You had to take three terms of it. I did not like this course. My first term, I started out, I was a good student. I started out doing A work, but by the end of the term I was getting Cs on things, and so I skated out of that first term with a B in the course. Second term, I started out doing C work, and by the end of it I'm doing failing work. And I got a C-minus in that course, and now I'm sweating bullets. The third term is coming up and I'm just, "I cannot understand what this topic is." That's when I discovered at my school, at Ohio State, they had a computer-science option, where you could skip that third term and take a course in Boolean algebra instead, which was a godsend for me. So I switched to the computer-science option, got out of that third term, and started studying computers, and fell in love with them.

Becky Monk: What was it that made you fall in love?

John Ludwig: It was really the expressiveness of them. The fact that you could tell this machine to do anything, and you could create things with it. Of course, at that time it was pretty primitive, what you were creating on the screen, but it was under your control. It was a creative thing that was very appealing to me.

Becky Monk: I know a lot of people think... when they hear computer science, they think science, they think math, they think engineering. They don't think creativity. I've heard this several times, that it was the creativity that was exciting.

John Ludwig: Yeah. The creativity of the personal computer was exciting to me. I think Steve Jobs had that phrase, "The bicycle for the mind." The ability to really let your brain do stuff, and be a superpower for your brain, and express all kinds of things, and say things, and create things. Delivering that tool to people and making it easy for everybody to do that was pretty exciting.

Becky Monk: So you're at The Ohio State.

John Ludwig: That's right, The Ohio State University.

Becky Monk: And you're thinking about, "Okay, what do I do now with this degree that I'm getting?" How did you end up going from Ohio State to Microsoft?

John Ludwig: To get to Microsoft from Ohio State, first I went to graduate school in Pittsburgh at Carnegie Mellon, and I got my MBA and my master's in electrical engineering there. That positioned me well to work at a technology company, but I wasn't ready to leave the Midwest yet. So, I went to work in Cleveland for a consulting firm, because they were the smartest people that I met during the interview process, a company called Booz Allen and Hamilton. I worked there for four years, and super-smart people, but I was working on companies that made steel tubing, and auto parts, and

it didn't hit my heart right. And I was traveling like four days a week, and it was killing my wife.

So, after four years of doing that, I started looking around for jobs. Back in those days, we were still sending out letters, and responding to ads in print media. So, I started to letter campaign to all kinds of companies, and eventually got interviews with HP, and Apple, and Microsoft. And came out and met with Microsoft folks, and it was... I loved it here and loved what they were working on. It took me a little while to convince my wife to move from the Midwest to Seattle, but eventually we made that move.

Becky Monk: Okay. Put me in the room for that interview. Who interviewed you, and what was it during that interview process that made you say, "Yeah, Microsoft is the place"?

John Ludwig: I interviewed with a bunch of people. I mean, I remember John Fine, who was in the languages group, and I remember Rob Glaser, who was in the network business unit. I forget who else I interviewed with at the time, maybe Richard McAniff in the network business unit, but these people were all bright. They were all excited about what they were doing, and the sheer amount of toys that they had in their jobs, the number of computers and things they were playing with, it was like, "Wow, that seems awesome." And so it seemed like a great place to come work. Yeah.

Becky Monk: Great. Your first day at Microsoft, 1988?

John Ludwig: Yes.

Becky Monk: You started as an engineer?

John Ludwig: I started as a program manager.

Becky Monk: Program manager, for what product?

John Ludwig: When I first started at Microsoft, I was a program manager in the network business unit. I had been given a choice of which groups to go into, the languages group or the network group, and I chose the network group because I knew the least about it. I figured, "If I'm making this big change in my career, I should go to maximize my learning." So, I went to the network business unit, and it was working on a product called LAN Manager that Microsoft was building at the time, and that had not yet shipped, and obviously had 0% market share, and was way behind in the market. It was a group that was really scrambling to try to figure out how to get in the market and how to have impact.

Becky Monk: Got it. What was it you were specifically working on there, and then what was your next move?

John Ludwig: The first thing I worked on was Microsoft at that time did not have an email product, and we wanted to do an email server. I ended up working on licensing some technology from a company in England that was the beginnings of what became Exchange. So, I was working on that email-server product. I was working on figuring out what features it should have, licensing this technology from this company in England, starting to get a product built around that. I worked on that for my first, I'm going to say year and a half or two years here. At the end of that time, Microsoft at the exec level decided to make some big changes in the network products and the organization, and that group got blown up. Part of it went to join what was the Windows NT team to do networking integrated with Windows NT. And then part of it, a very small part, went over to work for Brad Silverberg to put networking in the Windows 3.x, or Windows 95, products, and I went over to work for Brad on that.

Becky Monk: So Windows 95.

John Ludwig: Yes.

- Becky Monk: Tell me about what you were doing with Windows 95. Let's start there.
- John Ludwig: Yeah. Prior to Windows 95, we did a product called Windows for Workgroups 3.1, which was Windows 3.1 with networking added. So, you could connect multiple machines on a network, you could share printers, you could share files. That was the first thing we did, and we shipped that product, and it was a modest success. It was successful mostly not because of the networking features, but because we also had a faster file system in the product that just made your disk work faster. People bought it for that, so that was great. I mean, I'm glad people bought it for something. And then we rolled into the Windows 95 project, where we took responsibility for all the networking features of Windows 95. So again, that ability to share files, the ability to connect to NetWare servers, to Windows NT servers. The ability to send email, the ability to do dial-up networking, and connect to AOL, or MSN, or CompuServe. Anything that smelled or felt like connectivity, we did as part of the Windows 95 effort.
- Becky Monk: Great. So, okay, Windows 95 was a huge shift. For everybody who's watching this who wasn't around in 1995, why was this product a game changer?
- John Ludwig: Windows 95 was a game changer for a lot of reasons, but I think it really... Windows 3.1 had been great for getting the idea of a graphical interface into a lot of people's hands. And Windows 95's just dramatic level of polish above and beyond that, it was just a much better interface for the graphical interface, and it had this 32-bit program model, and really started to break free of some of the hardware limitations of early PCs. You no longer had that need to run DOS and then boot to Windows. You could go straight to Windows. You could have full, huge amounts of memory on the machine for the time. It really just was a product that just was so much better than the previous generation. Oh, my gosh, was it

marketed so well. As you may remember, it was an event. I mean, my gosh, it was... The whole industry rallied around it. Regular people rallied around it. There were parties around the world. It was just a great marketing effort that really just resonated with a bunch of people.

Becky Monk: When the release happened, or... Well, let's back up to before the release. When you guys were working on this, did you think it was going to be that moment when the world woke up and everyone was scrambling to get this?

John Ludwig: When we were working on Windows 95, I think we knew it was a great product. It was a great team, and the features were just all, I think, well-designed and right for the time. But I don't know that we ever knew it was going to be that exciting for people, but I don't know. A lot of things lined up all at once and it proved to be incredibly compelling. I guess another great feature about it, it was just the plug-and-play support before Windows 95, it was so painful to add hardware to your computer. I mean, you had to go mess around with IRQs, and DIP switches, and all this nonsense, and it was just incredibly painful. Windows 95 with plug-and-play started to make that dramatically easier to add printers, or sound cards, or graphic cards. It just made it so much better for people, and I don't know, it just all caught fire.

Becky Monk: How did you celebrate when it finally was out the door? You said there were parties around the world. How did you and your team celebrate?

John Ludwig: Well, for our team, it was that release-to-manufacturing date where we spilled out of our building, which I forget what building we were in at that time, and kind of had a party on campus. I remember ending up in the fountains outside of... between the original campus and what, Building 6, 7, and 8 that were there, and we were opening champagne bottles in those fountains. At that time, they had metal bars in them down below the surface of the water that

you couldn't see, and I remember smashing my shins against them as we were wading through the fountains, but that was a fun day. It was exciting. We had a big party on campus, and it spilled into restaurants around, to people's homes, and that was the big celebration day, well in advance of the actual launch day where the parties were around the world.

Becky Monk: Mm-hmm. Microsoft really did, in those days, celebrate in big ways the releases, the ship dates. About the same time... and you were already working on connectivity. You were already working on, like you said, getting things hooked up so that the internet, the earliest bits of the internet that consumers were going to use would be integrated into Windows 95. What was it that excited you about the internet? Because that was going to become a big part of your career.

John Ludwig: Well, again, when I joined Microsoft, I joined that network business unit for the first job. I joined that because this notion of connecting people, letting me share things with people, and talk to people, and interact with people, that seemed to me to be a big part of what this wave of computers was about. It was great if you could do stuff by yourself, but oh, my gosh, if you could connect with other people, it was just so much better. I think even during the release of Windows 95 when we were all using CompuServe to connect to beta customers and talk to them, you could start to find communities online, and connect to kindred spirits online, and create friendships online with people that you never would've come into contact otherwise. That, to me, is very empowering, that ability to find your peeps online, and build those connections, and I just thought that was great.

So during the development of Windows 95, the internet really started to take off. I think Mosaic was incorporated and launched their first browser, and we were still in the midst of trying to get Windows 95 done. But we saw this coming, and we realized at that

point... Historically, in the past, when we shipped a product, we were all able to sit back, and relax, and take some time to get yourself re-centered, and then start on the next thing. But late in the project Windows 95, we realized, "Oh, God. We got a big thing we've got to go work on, because this is just moving faster than we realized." So, it was even before Windows 95 was done, we started our browser team, and we started adding the IP stack to Windows, and we started planning for all that internet support to make all that happen. It was hard, because we didn't get some of that downtime we thought we were going to have, but it was exciting, because it was a great wave of connectivity, and cool new things happening that we wanted to be a part of.

Becky Monk: Got it. Now tell me if I'm wrong, but it sounds like things were happening in different groups, and to get ready for the internet, but it wasn't really a huge company strategy yet at that time. I understand you were one of the big champions, if I'm characterizing that right. What was the state of internet throughout the company, and then who did you have to convince?

John Ludwig: A great thing about Microsoft back in those days is we did have a lot of autonomy. Someone once described the company as it wasn't a battleship, it was a fleet of little speedboats. And a couple people would see that there was a new thing happening, and they'd turn their speedboat that way. And then a few more would turn, then all of a sudden, 500 speedboats were heading that way, and eventually the company would make it a formal plan. So, we were in that stage in early '95 of the speedboats starting to turn. There were people in the Windows group, the Windows 95 group that were realizing, "Oh, my gosh, we need to have a browser. We need to be able to view this internet thing. We need to get that done." And so a small number of us started to chase that, and Brad Silverberg was very supportive.

It's not like we were doing this in secret. I mean, Paul Maritz knew, I think Steve and Bill knew, but it wasn't a big thing yet, but we were spending some time on it. I think in the Windows NT group, they knew they had to get stuff done, and they were working on the server side. I think in the apps groups. I know the Word group in particular, they were building browsing support and authoring support into Word. There were lots of things going on, and people talking about it, and sharing, and demoing stuff, and so there was a lot of organic movement. It was a bunch of those speedboats all starting to turn. That was in probably early '95 when the speedboats were all starting to head that way. By mid-'95, there were so many people starting to think that way that it was, "Okay, we need to actually start to corral all this and figure out what the heck we're doing as a company."

Becky Monk: Got it. Okay, so what was The Internet Tidal Wave memo?

John Ludwig: I don't remember the date that came out. Maybe you remember when The Internet Tidal Wave memo came out.

Becky Monk: Okay. Let's see. 1995, so yeah.

John Ludwig: Okay. I knew it came out in '95 sometime. I'm thinking like April, maybe. I don't know when it came out. But I think at that point there were a lot of people starting to realize, "We need to work on this internet thing." I'm sure Bill was reading all about it, and was collecting stuff, and so he, I think, formulated a lot of his ideas and pulled them together. There were a lot of memos and stuff going around about then, but I think that was maybe when the company also realized, "Oh, this is a thing that we all need to be working on." It was really great, because by mid-to-late '95, it was so easy to get everybody to work on the right stuff, because everybody's mind was now starting to think about this internet stuff. So people from all across the company pitched in and worked on things, and it was... the company was really good at shifting to that back in those days.

Becky Monk: I just had the opportunity to read the whole thing, and I was blown away by what Bill laid out in 1995, it's what's come to fruition today, but the foresight is just amazing. I love one of the sentences at the end. I'm going to find it here, because it's great, "I want to make it clear that our focus on the internet is critical to every part of our business. The internet is the most important single development to come along since the IBM PC was introduced in '81. It changes the rules. It's an incredible opportunity and an incredible challenge." Everything shifted at the company.

John Ludwig: Mm-hmm.

Becky Monk: What were those opportunities? What were those challenges that you were tasked with and that Microsoft was chasing?

John Ludwig: My role in that kind of internet shift, we were going to take on the job in the Windows 95 group of building that consumer browser to get on the internet. To compete with Mosaic, and to make it easy for a Windows customer to leap onto the internet, and start to view sites, and do things with them. We started with two people working on it in early '95, and we licensed a codebase, and by the end of '95, I don't know, we had like 700 people working on it.

There were a couple reasons why we were able to shift so many people so fast. Number one, going back to that speedboat analogy, that everybody read that memo. Everybody saw what was going on. People were motivated to start helping. Two, I think Bill gave out a strong message to the company saying, "This is really important and you need to go help on this," and so that was motivating. And then three was a gift we got from Marc Andreessen, who came out with this famous quote. He now denies he said it, but he said it, that they believe that they were going to render Windows into just being a poorly debugged set of device drivers. Because his view of the world is all the interesting applications were going to be on the internet running through the browser, and the rest of Windows didn't matter.

So you just told thousands of people here that their job didn't matter, and thousands of smart people that they were meaningless, and that was very motivating. I mean, when you needed to get help on some feature on internet work, you could just point to that quote and everybody would be like, "Yeah, I'm in. I'm helping," so it was pretty easy to get people to move. When you look at what we eventually shipped as a browser for Internet Explorer, for the Windows platform, we had help from all over the company. The languages team did a great job of doing all the language and scripting support in that. We had the tools rules team doing debugging. We had the server team doing the backend for it. We had, within the Windows team, the kernel team jumped on and did the Java virtual machine. We just had people that came in from everywhere to help make it happen and it was a really great time to be here. The amount of organic teamwork that happened, it was exciting, and empowering, and it felt really good.

Becky Monk: What did this do to change the world? Because now people had the internet, yeah, and that wasn't something that was just readily available to people before.

John Ludwig: Right. So the internet changed the world in a couple ways. Firstly, that thing I talked about before of, gosh, you could connect online, and find your peeps in some community, whether you were a model-railroader, or really interested in politics, or excited about poetry, or wanted to do drawing and anime, God, whatever it was, and wherever you were. You could be in some small town where there was no one with your interests anywhere, but you could find these communities online of hundreds of people that were super interested. I think that ability to connect with people and find your like-minded folks is just a huge thing. It's still powerful to this day. I mean, whatever site you're using, there's just such great ability to connect with people.

And then the other big thing was, it used to be to get a new software experience on your machine, you had to go get an installer, install software, and it was pain in their butt, and was finicky. And then if you change machines, you need to do it again. Installing and delivering a new software experience was hard, and it was a real impediment to adoption. And now all of a sudden I didn't... I just go to a site, and boom, there's the experience. I don't need to go install things. I don't need a disk. I just sign up at the site, and now I'm doing some accounting thing, or I'm doing some design thing, or I'm doing some travel booking, or all these things that you could just do without having to go off and install software. It just made it so much easier to try a bunch of things, and I don't think people today understand what a sea change that was for using computers.

Becky Monk: Right. Instead of lining up around the block like concert tickets, right?

John Ludwig: Yeah. Yeah.

Becky Monk: For software at Egghead Software, you were now just clicking a button and-

John Ludwig: And there's some loss there, too, because I used to love to go to Egghead Software, or go to Computer City and see all the stuff, and it was all the marketing around that. That was great. I mean, I enjoyed those days, but that's gone now, right? Nobody does that anymore.

Becky Monk: What were you most proud of with the internet work that you did?

John Ludwig: Well, a couple of things. One is when we started that effort, Mosaic was on the market, Netscape, and we had 0% market share, and in the course of less than a year, we got to like 30% market share by climbing our way up out of that hole and building a great product. Internet Explorer 3.0 was a much better product than the Netscape

product that was out there. It was well-designed, well-architected, [inaudible 00:32:23] interface, had great features. And getting from zero to that, I think was a great accomplishment, and so I'm pretty proud of that. I'm also proud of just the internal work we did, where we went from two people working on this to like 700 contributing to that. And getting that to happen in semi-orderly fashion, and not having that blow up was, I think, a lot of work, and so I'm proud of that as well.

Becky Monk: Fantastic. What came after working on Explorer?

John Ludwig: So after Explorer 3.0, which was our really great first launch, I also... I worked some more on the client side of the internet, Internet Explorer 4.0, and some of the mail apps, and all the other... NetMeeting and all the other communications apps that existed. I worked on that for a while, but there was a lot of turmoil in the company about the primacy of the internet versus the primacy of Windows. There were debates, and squabbles, and infighting, and eventually the Windows 95, the personal-system team got blown up. Brad Silverberg moved on to something else and then left the company. A lot of that team folded in underneath Jim Allchin, and I went over and worked for Pete Higgins in my last role on the internet-service side. So, MSN, and the Hotmail acquisition, and the services that we were offering people. That was my last big role at the company.

Becky Monk: That was a big shift as well for Microsoft.

John Ludwig: That was. The growth of that whole MSN organization and offering all those services was a whole new thing for the company. It was... had some fits and starts, but some things succeeded very well there. But it was definitely a different culture and organization than what I'd worked with earlier in my career.

Becky Monk: Yeah. When you were there, what were some of the services that you were offering? Because it's totally different today.

John Ludwig: When I first joined the MSN group, first of all, back in those days, you still had to... most people still were dialing up to the internet. So, a big service they offered was a dial-up subscription, so you could dial up, and connect to the internet, and do your thing. That was a big offering that MSN had. There was the portal, like that landing page, and that was a big thing at the time, where do you first land when you get on the internet, and what are the things you see on that page? That was a big deal because it had a lot of commercial consequences. If you landed on a page that had some travel-booking options, you were likely to use those. You weren't likely to go search out those someplace else. So that landing page, that portal had a lot of business value, so that was something that MSN offered.

They offered a bunch of services behind that. I think Expedia started inside Microsoft before it spun out. There was a car-purchasing site that started there. There was entertainment news. There was local news. There was all kinds of stuff underneath that portal page and there were a lot of groups doing that. And then during my time there, we purchased Hotmail, and so email as a... free online email became a big part of the product offer as well. Yeah, those were probably the main things.

Becky Monk: I feel like so many of our alumni still have their Hotmail account.

John Ludwig: I do not have a Hotmail account anymore. That Hotmail domain, I don't know, it never felt that professional to me. It wasn't one I wanted to keep on using, so I don't have a Hotmail account. Maybe I do still have one. I don't know. I haven't logged in in a thousand years.

Becky Monk: Oh, all right. When we look at your career in total, your Microsoft career in total, what are you most proud of?

John Ludwig: Well, when I look at my career in total, I am really proud of the great work around Windows 95, in making that a connected

product so that you could share things, connect to people, talk to people. I think that was a big deal. And also, as part of that, we made it really easy for Windows 95 to sit on corporate networks and be adopted by corporations with all the networking support we did. So I feel really good about what we did in the Windows 95 time frame, and the team we built. And I guess I'm super proud of the team we built, because we had a great, great team of people. I spent a lot of time as a manager just finding and hiring people.

I remember one guy we hired that I'm still close friends with, and we wanted to hire him. He was a small competitor. We reached out to him. I built a relationship with him. He needed an offer to come that broke all of our rules here, and we had to get it done, and no one else in the room, and so I agreed to do it. And then I had to go to Bill's office and say, "I'm sorry, but we offered this guy this. I know that that breaks all the rules, but I need you to approve it." And he looked, and he was quiet for a minute, and then he said, "This is exactly the kind of person we want to hire. Good job." I was sweating bullets, because I thought, "Oh, my God. I'm in trouble now," but at that time in the company, that was kind of the way the company worked. You had a lot of individual autonomy, and as long as you were keeping the company's goals in mind, and working towards that end, you were probably going to be fine. So I'm really proud of the team we built.

Becky Monk: Fantastic. I mean, Microsoft is still going, obviously, but 50 years in, what do you think the biggest accomplishment is for Microsoft or what Microsoft's legacy would be?

John Ludwig: Microsoft's legacy. I do think this... people remember the company for the PC wave. Before PCs, to get to use computers was basically nearly impossible, or you had to go through some priesthood of people, and delivering this tool to everyone, I think that's a big deal. That's probably the most important thing the company might be remembered for, because so much has followed from that. I'm sure

over time maybe people's memory of the company will become something else, but I don't know. I think that was a pretty huge impact.

Becky Monk: So the PC explosion, right? And that innovation, the internet innovation, seems like we're on a new wave again of innovation. I mean, there were tons in-between, but those seem to be the big pops from the outside looking in. What do you think of what's going on today in the industry and where Microsoft is?

John Ludwig: Today in the industry, this whole AI wave that's bursting on us. I think Microsoft is doing an amazing job at riding that and being incredibly relevant to people. If you want to use AI in your job today, you look at what Microsoft has done, and some of what they've done is amazing. You look at GitHub Copilot, that is the easiest way for you to get an AI assistant with your code. It's just super simple. You look at the other work that Microsoft is doing to integrate all of this Copilot idea into the rest of the application space, I think that's going to be super valuable to people. It's going to make it really easy to use this AI stuff. Rather than having to go off and use some separate AI app, it's just going to be in the thing you were using anyway.

So I think Microsoft is doing a great job at riding that wave and being really relevant. I do think it's a huge wave. We're moving from us having to tell computers every little last thing to do, to now some agent on the computer kind of taking on some of that load, and thinking on our behalf for us, and doing a lot more of that stuff. To me, that's what computers should do. They should do a lot of that grunt work for us, and make our life easier, and save us time. So I think this is a super-big wave that's going to impact everything. I'm pretty bullish on it.

Becky Monk: When you think back to your many years at the company, what are some quintessential Microsoft moments for you? Were there

moments that you just think, "Oh, my gosh. That exemplifies the way we worked and the way teams were made"?

John Ludwig:

Some quintessential Microsoft moments. One I remember, and I don't remember what event this was at, but Chris Peters, who was in the applications group, was speaking, and someone was asking him why he was... He was already at that point, kind of a wealthy person, probably from Microsoft stock, and why he was doing his job, and why he was still working hard at it. And his answer was, "Well, look, we don't do this for the money. We do it for the sport." I think there was a lightheartedness about what we were doing at the time. People were excited about computers, and wanted them to move ahead, and wanted to do better than the competitors. It wasn't about making a bunch of money. It was about having impact and making these things better for the world. I always liked that quote from Chris. It resonated with me.

I think, also, there were just so many moments in the Windows 95 era, just reviews with Bill that could be really intense, and sometimes really direct, but the team would respond well. I remember one review with Bill where it was early on in Windows 95, and we were reviewing the work on plug-and-play, which made it easy to add hardware to your computer. This was early on, and we probably hadn't thought about the problem very well yet. And we were presenting to Bill, and it wasn't a very good design, and Bill looked at all of us and said, "I think we need some smarter people on this," and then the meeting was over.

So we all left there thinking, "Oh, man. That's bad." After about an hour, the team rallied, and it was like, "Yeah, he's kind of right. That was not great work" And so we had a review the following month with Bill, which went much better, because the team really rethought what they were doing. I think at that time in the company, there was a lot of direct feedback and communication about the quality of your work, but it was never... it was motivating.

I think we all valued the openness and were willing to rise to those challenges.

Becky Monk: That seems to be a common theme, direct but spot-on, and ready to retool, and keep going.

John Ludwig: Yeah.

Becky Monk: I want to just ask a little bit about... Microsoft has a great reputation when it comes to technology, obviously. Microsoft also has a good reputation in terms of social impact and philanthropy. I just wondered, for you, did the Giving Campaign, or Giving Month enhance your experience at Microsoft, or was that just something that was like... just kind of over to the side and wasn't really a big thing for you?

John Ludwig: For social impact, I have to say that the Microsoft Giving Campaign never penetrated my brain. I knew nothing about it and it just wasn't relevant to me. However, I do remember my first week at Microsoft, and moving here from Ohio, which... a little more conservative part of the world. I remember picking up that MicroNews the first week there, and I'm bringing it home, and my wife and I are looking at it, and paging through it. And we get to the last page, and there's an article about the meeting that week for the LGBT group at Microsoft. I don't know if people used the words LGBT at that time, or if it was just the lesbian-gay group, or whatever.

My wife and I look at that, and like, "Huh. I don't think any company in Ohio would ever be talking about that group meeting, and here they're just free and open about it, and it's like no big deal." It was like, "Huh," the weight that lifted from us. We were like, "This place, very accepting. Nobody gives a crap about what kind of life you want or who you are. It doesn't matter. Don't worry about that stuff. It's all good." That kind of attitude felt great to us, and probably is what kept us out here on the West Coast and at Microsoft. So, while I

didn't know much about the Giving Campaign, I do have great appreciation for how tolerant, and open, and just nonjudgmental the place was, and I think that that always felt great.

Becky Monk: I'm a Midwesterner, too, so it's like a big shift, but amazing.

John Ludwig: Yeah, no, it was a huge shift, and it just felt great. Once you experience, you're like, "Oh, how did I ever not live this way? How did I ever tolerate any other kind of behavior? This is the way it should be."

Becky Monk: I know I've covered almost everything I wanted to check in with you on, but I know we went fast through a multi-year career. What are some things that you want to make sure that people know about projects you worked on, or things that you accomplished, or that the company accomplished?

John Ludwig: I don't know. I just had a great time here, and when the company was really humming, and was... It was really great to be working with a bunch of like-minded people. The teams were great. There are people that I am still in contact with daily, weekly from that time in the company, who are lifelong friends. And it was an incredibly special time in the industry, and I don't think any of us realized how special it was until later in our life. A few years ago we had the Windows 95 reunion party, and that was an amazing party. It was great to see all those people, and just a number of really innovative, smart, nice people who worked on that project. It was a really fun time.

Becky Monk: Tell us about that party. You took over Benaroya Hall, right?

John Ludwig: Yes. It was in the Benaroya Hall kind of entrance area, and those multi-layered... at Benaroya Hall. That's where the Windows 95 reunion party was.

Becky Monk: Fantastic. How many people did you guys have there?

- John Ludwig: There were hundreds, and hundreds, and hundreds. I don't know what the total number was. I think David D'Souza was one of the primary organizers and Brad was there. I forget who all else made an appearance, but it was super fun. I saw people there who live in Europe now, who came back for the party, and it was great to see them. It was just really fun. I think everybody had such a good feeling about that project, and the impact it had, and the success it had, and so it was fun to connect with them.
- Nancy: That was wonderful. John, you did a really great job marrying the questions and including them in your answers. I have very few notes. There's only, actually, two questions I am hoping that we could do pickups for, and one is when... Becky Monk, you were discussing the Windows 95 release, and you asked how the team, or how you celebrated, and you went straight into this great story about going into the fountain. If you could set that question up again, just so we have a full picture of that you're having a celebration, and a party, et cetera.
- Becky Monk: I'm not a technical person, but when I did read some of Bill's memos, I was just... I'm just constantly blown away by the things that were projecting what would come. Right? Just that Bill or someone would write a memo and say something was going to happen and it happened.
- John Ludwig: Well, it turns out Bill is a smart guy, and there were a lot of smart people at the company back then, and I think a lot of people who... I always felt, when I was with the company, like, "It's my job in the moment, whatever I'm working on, to be the CEO of the company, because there's no one else here. I got to figure out what to do here, and I got to figure out to do what's best for the company. I'm the CEO in this moment, and I got to take responsibility for it." And I think there were a lot of people like that who all individually understood they needed to take responsibility, to do the right thing

for the company, and were smart enough to figure out, "Hey, well, this should be the right thing for the company."

So I don't know. A lot of people were pulling the same oars in a very organic fashion, and it just made it really easy to get things done. It was pretty clear, when you'd have a debate with somebody, it was easy to agree on goals, "We both agree we're trying to do this, right?" "Yes." "All right." Then once you agree on goals, it's a lot easier to resolve differences and figure out the right path.

Becky Monk: That was something that we heard across the people who've come in so far, and it's been, there was clear direction. Everybody was swimming toward the PC on every desk, in every home kind of a construct. And even on individual projects, that was very clear, and it feels like... Maybe I'm putting words in everybody's mouth, but it feels like that was a big part of the success.

John Ludwig: We did all have the sense of all working together and pulling on the same oars at the time. I do have to give a big tip of the hat to Bill, to Steve, the executives who gave everybody options packages when they joined, and those option packages really helped to align us all. I remember my first month when I joined the company, one month in, the Microsoft Word team announced a slip in their schedule, and the stock dropped a huge amount. All of a sudden, my options package was underwater for the next year. I was making no money. But it was very motivating, because when the Word team showed up and said, "Hey, we need some help. We're having trouble printing to network printers," everybody in the network business unit stopped and said, "Okay, let's help these guys, because it turns out that their success is our success, and vice versa. It's obvious that we should help them, because they have a massive impact on our own personal success."

I think we all shared in the same success, and I think the dominant part of our personal compensation was how the overall company did. So it was easy to get people aligned on, "Let's make our apps all great," or, "Let's make this transition to Windows 95 really great," or, "Let's all get this internet thing going well," because we all shared in that success. And I'll contrast, I saw some companies later in my career, I ended up through acquisition in one where employees didn't have stock options, and the primary way you got better compensation was to climb the ladder and grab a bigger salary for yourself. Boy, that creates terrible behavior internally, because it pits people against each other, and it feels like a zero-sum game, and people aren't all pulling on the same oars. People are basically trying to build their own little empires.

You really didn't have that at Microsoft at the time. We all felt like we're on the same team and communications were super open, right? If you had a problem, and you needed to talk to somebody across campus in the applications group or [inaudible] you just walked over there and talked to them. If you needed to talk to Mike Maples, who ran the group, you walked over and talked to Mike. If you needed to talk to Bill, you walked over and talked to Bill. You might have to wait a little bit, but it was really open, and an emphasis on doing the right thing for the company. I think that that is easier to achieve when the company is a certain size. As it gets larger, and larger, and larger, that's inevitably really hard to do. So it was just a great time to be at the company.

Becky Monk: Yeah. I mean, I hadn't really thought about it that way. Early on, that was a huge motivator.

John Ludwig: Yeah. Early on, we all shared in our same results. I had great working relationships with people in the applications group, in the Windows NT group, because we all... It was easy to pencil out, "Oh, I need those guys to succeed, because otherwise, my stock isn't worth very much." So it was really easy to work across group at the time.

- Becky Monk: I can see that. So, the team wants me to try a few questions again...what was The Internet Tidal Wave memo?
- John Ludwig: The Internet Tidal Wave memo was a memo that Bill brought out sometime in '95, to really communicate to the company the importance of this internet wave. There were a lot of us that were already starting to move that way and were already working on various things for the internet, but the memo kind of brought it to the whole company's attention, and made it really easy to get everybody working and helping out on the internet transition at that point.
- Becky Monk: Let me also circle back to the Windows 95 celebration. When Windows 95 released, how did your team celebrate?
- John Ludwig: When Windows 95 released to manufacturing, which was in August of '95, I believe, the team had a huge organic celebration right on campus. We spilled out of the building. We had beer, and champagne, and outside, and eventually, we spilled out over a lot of the campus. I remember being in the fountains between the original campus and Buildings 6, 7, and 8, and we were shooting off champagne bottles in the fountains, and all having water battles. I remember Brad Silverberg in the fountains, and I remember bashing my legs against the metal constructs hidden in the fountains. That was quite painful, but we spilled out and celebrated all over campus, and then rolled into local restaurants for dinner, and ended up in people's houses that night around the campus celebrating.
- Becky Monk: Fantastic. I think I've got everything I need. I hope that wasn't too painful.
- John Ludwig: No, that was great. Yeah, it was awesome.
- Becky Monk: I appreciate you taking the time.

John Ludwig:

Yeah, yeah. Happy to do it.