Oral History of Kevin Bachus

Interviewed by **Michael J. Halvorson** for the Microsoft Alumni Network

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Preface

The following oral history is the result of a recorded interview with Kevin Bachus as conducted by Becky Monk on September 1, 2023, 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

Michael Halvorson: Hello, my name is Mike Halvorson and I am here with Kevin Bachus, who is going to talk to us today about his time at Microsoft. This is for the Microsoft Alumni Oral History Project, and we're very glad you're here. Thanks for coming, Kevin.

Kevin Bachus: Thanks for having me.

Michael Halvorson: Great. Well, can we start a little bit and talk a little bit about where you're from and where you went to school?

Kevin Bachus: Sure. So, I grew up in Wichita, Kansas. I was the oldest of four children, and I from a very young age, had an interest in technology. I built a computer out of a kit when I was 13 or so, and actually it ran both CP/M and also another operating system, and the best version of BASIC interpreter that it had was the Microsoft BASIC. In fact, I remember at one point very young hearing rumors among the local computer user group that this company, Microsoft, that had such a great product was in danger, maybe going out of business. We were going to lose this great piece of technology, and I'm not sure whatever happened to that company [smiles], but I hope whoever was in charge of it did well.

Michael Halvorson: No kidding. [laughs] So, how did you learn how to program in BASIC? What was that about?

Kevin Bachus: I was self-taught. I loved technology. I loved computers. I wrote applications, little games and things like that, from a fairly young age. I got onto online bulletin board systems, CompuServe, The Source, Prodigy, local dial-up things. Really enjoyed being able to interact with people who I hadn't met. In fact, there was one time when I got together with a group of people who I'd met through CompuServe, at, I think it was at Comdex. I was still fairly young, I think I was in college at the time, and experiencing the very strange experience of meeting people for the first time, who I knew extremely well. And so, I thought that just having access to this giant world of information and viewpoints and creativity and that sort of stuff was really compelling. When I graduated from high school, I had also in high school kind of had a dual approach of, I was

very interested in technology, but I was also interested in drama and music.

Because I was in a relatively small city, in my parents' little social network, everybody said, "Oh, well, Kevin's going to go into high-tech. He's going to go into high-tech when he goes to college." And being a rebellious teenager, I decided to go off to film school. So, I joined the film school at the University of Southern California. Had some amazing experiences there and really enjoyed learning a lot about story and character and a lot of both the technical, creative aspects of creating film and television episodes. But ultimately, I found that really the film industry was not for me. It was too personality driven. It was too unpredictable. I'd go meet with somebody, they'd say, "Well, you're clearly the best qualified person for this job, but we just like that guy better, so we're going to hire him instead." And so, I had an opportunity to turn my passion for technology and games into a profession and started my career in video game production.

Michael Halvorson: Fantastic. And so, where did you work? What did you do?

Kevin Bachus: So, after a brief stint working for a company called Ziff Davis Publishing, which was the publishers of *PC Magazine*, I went to work for a company that at the time was rebranding from the Software Toolworks, a company that actually built a lot of really cool programs for my little kit computer, including a recipe database that I remembered very fondly. I think they're very well known for the *Chessmaster* games. *Mavis Beacon Teaches Typing* was one of them. They also had a very, very large game

side of the business, and so I went to work for the Software Toolworks as they were rebranding to Mindscape. They're based in Northern California, so I moved from Los Angeles to San Francisco first to work for Ziff Davis and then to work for Mindscape.

Michael Halvorson: What year would that have been, Kevin?

Kevin Bachus: That was probably around 1992 or '93, I would say.

Michael Halvorson: Fantastic. And before we leave Ziff Davis, just for readers, *PC Magazine* was a huge deal back then.

Kevin Bachus: It was. It was amazing.

Michael Halvorson: In the early 1990s, the run rate of *PC Magazine* was 750,000 or a million copies a month. That was interesting!

Kevin Bachus: Yeah, *PC Magazine* and *Byte Magazine* were my regular go-tos, and so it was really great to be able to have an opportunity to go work with them. I actually started on a new controlled circulation publication, one that you had to qualify for the subscription, but if you did, then it was a free subscription and it was called *Corporate Computing*. It lasted for about a year, and it was really focused on this emerging idea, that crazy idea that you could bring personal computers into the office. And

so, I was a Labs editor. We had the interesting approach of having a dual creation of each of the cover stories where you would have a business journalist who talked about the business case of what we discussing, and a Labs editor, myself in many cases, creating all the lab testing and all the technical information that went along with that. I really enjoyed it. I learned a lot from that as well.

Michael Halvorson: And in the time before the Internet, these publications and these Labs that you're talking about, they would make or break the reputation of the companies that were selling software, right? I mean, that's-

Kevin Bachus: I was one of the first people to write a review of Windows NT.

Michael Halvorson: Yeah, yeah. Those would make or break the reputation of products, and so, product managers were always trying to get things in those magazines. Did you say that the company you worked on produced *Chessmaster* and some other games like that? Would that have been, they would've been sold on sort of floppy discs and eventually maybe CDs?

Kevin Bachus: Correct. Yeah. In fact, this was sort of in the transition between floppy discs and CDs. One of the businesses that Mindscape had created was taking PC games and adapting them to CD-ROM formats, adding more music and more graphics and that sort of thing. They produced, I remember CD-ROM versions of Lucas Arts games from George Lucas and his company, and very glorious multimedia presentations.

Michael Halvorson: And people would buy these games, Kevin, through mail order, or maybe direct at a retailer, but not really over the Internet yet, right?

Kevin Bachus: No, not at all. In fact, I mean, almost all the software that I purchased I would get at places like Egghead Software or Babbage's or Software Etc. These companies, with the exception of GameStop, really aren't around, not with us anymore. But yes, very much so. The retail business was the primary way that you would get access to that software at the time.

Michael Halvorson: Can you talk about the coming of the Internet in the mid-nineties, how you started to pay more attention to that? I realize you talked about CompuServe in the early nineties. You were experienced with that, but these graphical browsers were arriving, Netscape Navigator and others.

Kevin Bachus: Yeah. Well, I mean, as a technology enthusiast myself, I recognized the opportunity to use the Internet or to use dial-up modems to connect to services that would allow you to get access to information. And it really was, in a way, very similar to what we see today. Maybe a little bit less graphics intensive, but very much as a consumer, I sort of appreciated, I don't think that any of us really understood how the general population, the general public, would really gravitate towards it. It did seem a bit of the province of the technology folks and that sort of thing.

But one of the things that I had the opportunity to do at Mindscape was really work on the development of games for a wide variety of hardware platforms. One of the really cool things about Mindscape, which by the way was the first publicly traded video game publisher, the first one to go on a public market, and they were very astute about developing software really for everything. Very much like Microsoft in the earliest days where it wasn't so much about the hardware platform as it was focusing on the application that ran across all these different systems.

So, we developed games for everything from PCs and Macs to Omega, to PlayStation, Sega, Nintendo. We really did it all. In fact, the reason why I started interfacing very, very closely and frequently with Microsoft was that we had a very strong, very important PC part of our business, which at that time was obviously developing games for MS-DOS. But as Windows 95 came on the scene, I along with a few other people, recognized that ultimately really every PC, every MS-DOS PC was going to become a Windows PC, and that our customers were going to be expecting that their applications would be Windows applications.

And so, the more that I could learn and prepare our development teams to develop software specifically for Windows instead of MS-DOS, the more equipped we would be for this transformation. I ended up spending a tremendous amount of time with Microsoft, primarily the nascent DirectX group and the DirectX Evangelism group, really trying to understand not only what kind of technology would be available to us to be able to create what we wanted to create, but also potentially what sort of marketing programs we could

take advantage of and how we can align ourselves with the growth of Windows.

Michael Halvorson: Yeah. Well, as I understand it, DirectX sort of gets going right in that Windows 95 timeframe, right afterwards. Can you describe what the DirectX initiative was or who it was designed for?

Kevin Bachus: Sure. I mean, Windows in its earliest days, Windows 3, Windows 3.1, Windows 95, was really a very, very different approach to interacting with applications than I think most PC customers were used to. It was very graphically rich and it was very user-friendly. But from a development standpoint, the cost of those advances was in terms of performance because there were thick layers of translation that the operating system imposed between the application and the hardware that made it difficult to do really high performance graphic intensive applications like games. So, in the game industry that had really only recently started transitioning from game consoles where you programmed in assembly to using compilers, the idea that you had to send all of your graphical interface calls through this big, thick, slow, plodding piece of overhead was challenging.

What the DirectX team, and DirectX really came up as part of Windows 95, what the DirectX team did was to say, "Look, we're going to create a high-performance set of APIs, programming interfaces, that developers of applications that needed a direct channel side by side with the operating system to speak directly to the graphics card, directly to the sound card, directly to the input devices, could have that. Could bypass, essentially, in a very controlled fashion, the operating system, and be able to

do that." And so, there were a number of technologies, DirectDraw, which was a 2D graphics interface, ultimately Direct3D. DirectSound, which is exactly what it sounds like. These sorts of things were a family of programming interfaces that all started with the word Direct to really underscore the fact that you were talking directly to the hardware. And so, because of that, the family became known as DirectX.

More importantly, however, because of the tremendous appetite for these technologies by the game industry, the DirectX team and the evangelism team and the developer relations group in particular became Microsoft's face to the game industry. Even though Microsoft had its own large and growing game publishing business, the Entertainment Business Unit, led by Ed Fries, when Bill or Steve or somebody had a question about what was Activision up to or how did Electronic Arts think about this, they wouldn't call Ed because Ed was the competitor to these companies. They would call the DirectX team and the DirectX team would talk to us. And ultimately, as I joined the company, I served that role as well.

Michael Halvorson: That's fantastic. What other platforms were popular at that time for doing something similar? Was DirectX competing with, I guess other operating system tool vendors or application services that were doing the same work?

Kevin Bachus: Not really. I mean, DirectX was a part of Windows. At first, it was a set of libraries that were installed separately and ultimately got rolled into the distribution. But if you wanted to make a high-performance multimedia application on Windows, it was

really your only choice because the alternative wasn't another tool or another kind of third-party application. It was the native Windows applications, which really imposed too much overhead for what a lot of people wanted to do. Obviously, as a standard-bearer for the platform, DirectX and Windows competed with everything else that was out there, game consoles, the Macintosh, Omega, other systems, but on Windows itself, really, that was sort of it.

Michael Halvorson: Right. And game developers also, if you were to summarize what it was like for game developers in the mid-nineties without tools like Unity or some of these game engines, what was the development environment like for those people developing games?

Kevin Bachus: Well, I think that developers at that time really took a lot of pride in their tool sets and their ability to create these applications from scratch, but there was a tremendous amount of effort and time that went into kind of the basic fundamental infrastructure that's shared by all games. I mean the rise of the kinds of game engines that you talked about a moment ago, Unity, Unreal, those sorts of things, came about because there was a realization, much like the realization about operating systems themselves, that I don't really need to develop the basic 80% of the application that all applications share in common. What I really need to focus on is the gameplay and the experience, the graphics, the sound, the things that distinguish the experience and the things that my players will be able to appreciate more so than the things that have to be done.

To skip ahead a little bit, one of the analogies that we used when we started talking to game publishers about Xbox Live, the networking functions of Xbox, was that of an amusement park. Listen, we're building Walt Disney World and we're going to take care of the tunnels that go underneath. We're going to take care of the sewage. We're going to take care of the water supply, the electricity, we're going to take care of the roads, we're going to take care of the lighting, but you're going to build the rides. You're going to build Space Mountain, you're going to build the Haunted Mansion. That's what you're going to do. And I look at it as being somewhat similar. You have the hardware. I mean, no game developer's looking at building their own hardware for the most part, they're letting somebody else do that. On top of that, there are programming libraries or operating systems. On top of that, now you have game engines, and the game engines allow you to focus on the actual game itself rather than the fundamental libraries.

Michael Halvorson: Let's talk a little bit about how you got going at Microsoft. How did that role change for you as you came to the company?

Kevin Bachus: Well, like I said, in developing Windows applications for the launch of Windows 95 and beyond, I spent a tremendous amount of time talking to the DirectX team. In particular, Alex St. John, who was responsible for technical evangelism for DirectX. And one of the things that I kept harassing the team about was, you don't really treat Windows like a game platform the way that Sony or Sega or Nintendo do. They create all these amazing marketing programs because they know that games sell game consoles. And that if they want to sell a PlayStation, they need to have really great games because people go in and they say, "Hey, I saw this thing on television called *Ridge Racer*.

It looks like an amazing game. What do I need to buy to be able to play *Ridge Racer* in my house?" "Well, you need to buy a PlayStation," now they have a sale of a PlayStation unit.

Microsoft didn't really do that. Microsoft to some extent, kind of took the game industry for granted in certain ways. And so, Alex said, "Well, you're so smart, you come figure it out." And so, I came to work as a group product manager for the DirectX technologies in the developer relations group, working for a guy named Kevin Dallas. I had five bosses in my first five months. The Microsoft stock was on a tear, and everybody seemed like they were retiring. So, my boss retired, [and] I ended up reporting to his boss. He then retired, so I ended up reporting to his boss, and they had me report to somebody else for a little while. And then, ultimately, I ended up reporting to a guy named Ted Hase, who was the head of evangelism for DirectX. We kind of consolidated the marketing of DirectX with the evangelism of DirectX into one team.

Michael Halvorson: So, that's June 1997, basically. You came in '97, '98, [right]?

Kevin Bachus: Yeah. And to my surprise and disappointment, within I think a week or so of my joining there, Alex ended up getting fired. That certainly changed the whole direction of DirectX and sort of how things were going to evolve. At the same time, the technology was becoming more mature. It became subsumed into Windows, and ultimately with the bifurcation of Windows into Consumer Windows and Enterprise Windows, became kind of a stalwart part of the Consumer Windows roadmap. So, that changed things a lot as well.

Michael Halvorson: Now, there was a DirectX developers toolkit, right? SDK basically. Was that something that your group also produced?

Kevin Bachus: That was something that was produced, at that time, inside the Consumer Windows division. There was a full-fledged, very, very talented and pretty well sized group run by a guy named Jay Torborg and his group program manager, a guy named Mark Kenworthy, who were actually in the operating system group and had responsibility for developing not only the runtime that became part of the operating system, but also all the development tools and documentation, that sort of stuff. Our responsibility was really interfacing with the game industry to inform them about the new features, to try to evangelize the use of those features, to market the use of those features, to try to create more stickiness to the platform so that we would become developers' first choice, and we would ensure a constant supply of the best possible games for Windows.

Michael Halvorson: So, some of those features, Kevin, might've been like audio features or graphics features or maybe joystick or some sort of device features. Could you talk about those a little bit?

Kevin Bachus: Sure. One of the things that I immediately fell into the fire on was that we were starting to see the emergence of 3D hardware acceleration for graphics, where if you're doing a 3D game like *Castle Wolfenstein* or *Doom* or *Quake*, it was all done in software initially. And then we started to see specialized processors that would accelerate that, some of which used

industry standards like OpenGL, some of which used their own proprietary interfaces that were developed by the card manufacturers. We saw that as a potential threat to Windows, because Windows was really- One of the main values of Windows was that you could create hardware abstraction, and if you were writing directly to a chip sent from a company like 3dfx or a chip sent from a company like ATI, that could be problematic. Direct3D, which was based on technology that Microsoft acquired, was a standard that we were pushing, but it was very controversial.

One of the leading developers of 3D games took a strong stance in favor of OpenGL, which was a standard, and it became a bit of a firefight at that point. It was something that I felt was fairly distracting to what we wanted to do. It ended up kind of pulling a lot of the attention of the gaming press and the game developers and even consumers themselves away from some of the more interesting things towards that fight. Everybody loves a good fight, especially when a company like Microsoft is involved. And so, that was certainly part of what we were trying to do, was to push the Direct3D API and to help develop that. But it was really driven in part by a combination of what we were hearing from game developers about what they wanted to have abstracted for them, they didn't have to deal with.

And also, some of the technologies that we were seeing emerging, conversations we were having with Microsoft Research or with other hardware manufacturers we spoke to very, very frequently about what their product roadmaps were, and trying to kind of meet in the middle and find something that would improve the quality of the experiences that you would have on Windows. Because we knew that the more

amazing games that we had on Windows, the more people would be likely to buy new PCs with new hardware, upgrade the latest version of Windows, buy new software, and thereby create a market for those games. That was sort of a big part of what we were trying to do.

Michael Halvorson: That's very interesting. So, was there any pushback within the Windows group about putting these features into, essentially into Windows? Because you said that eventually DirectX will kind of merge with Windows by the time we get to later versions. Was anyone protective about that within Windows? I can't really imagine that, but sometimes that would be a fight too. Was that an internal issue?

Kevin Bachus: Not really. I mean, I think that there was a belief that just like how some of the Microsoft runtime libraries that were part of the compiler environment ended up going in Windows, so you didn't have to go download them and install them separately, and you could maintain that through Windows Update, that sort of thing. I don't think that was controversial, what was slightly controversial was some of the roadmap. For instance, there was an extremely good implementation of OpenGL developed by Microsoft for Windows, and it was actually run under a graphics team by a guy named Otto Berkes, who was ultimately put in charge of the Direct3D graphics team, because the feeling was because there was internal dissent as there was external dissent, there was internal dissent over whether Microsoft should push forward with Direct3D or OpenGL or something else, or some combination. The idea of having, I believe the phrase was "smashing the coconuts together," would ensure that we would have the best possible solution for the platform for our developers, for the industry at large.

Michael Halvorson: So, is the next version of Windows, then Windows 98, was some of this resolved at that point, and so you could sort of-

Kevin Bachus: I think so. Yeah, I think it was. I do remember that one of the things that I was very proud of for Windows 98 was that a former Microsoft employee named Gabe Newell, who I knew from before I joined Microsoft, had gone out and created a company called Valve and was developing a game using the *Quake* engine called *Half-Life*. And Gabe was very excited about the potential of expanding the audience for his new game by providing a demo version that could be packed in with Windows 98. And I was very excited about what that could do for Windows 98. So, I brought that to the team, but because some of the somewhat violent content in the full retail version, not the version that we would've packed in with Windows, and that's the sort of thing the decision was made that wasn't a direction the company wanted to make. So, kind of reluctantly and disappointedly, we weren't able to move forward with that, but that's my biggest memory that I'll carry with me about Windows 98.

Michael Halvorson: Wow. So, to clarify, *Half-Life*, some version of *Half-Life* might've shipped with Windows 98 or the...

Kevin Bachus: Yes.

Michael Halvorson: Wow, that's too bad. I mean, that is a lost opportunity in a way because what a fantastic series of games. What are a few other vendors that started to work with DirectX and really became a showcase for that DirectX, using DirectX?

Kevin Bachus: I think every company for the most part, certainly in North America and Europe, had a portion of their game portfolio for PCs and for Windows. And consequently, they used DirectX as the technology that was in that. DirectX to a large extent became a placeholder in the industry for Windows itself. And like I said, when we interfaced with Activision or Ubisoft or companies like that, when they had questions about really anything to do with development of games for PCs for Windows, they were interfacing with the DirectX evangelism team. And that was sort of an important part of the charter.

Michael Halvorson: When did people within the DirectX group begin to think it might be intriguing to have a console? Kind of shifting here toward the discussion about Xbox, but how did that come together at least within the DirectX group?

Kevin Bachus: So, I think it has to be viewed against the background of the fact that Sony had entered the console business after it being essentially a two-horse race between Nintendo and Sega for the longest time, and had been remarkably successful with the original PlayStation. I mean, to the extent that they controlled this market that they had only just entered. And I think that it caught a lot of people by surprise. I remember my first meeting with Sony to be disclosed about the PlayStation, and that was the Walkman company. I mean, what's their background in

games? And the story is fascinating and lengthy about how they almost reluctantly fell backwards into that business, but it got a lot of people's attention in the game industry. It was legitimizing that a large company like that would create that, it expanded our audience and it was a significant move. So, of course many of us, most of us would muse about, well, is it possible somebody else might enter the marketplace?

But as you thought about who were the likely candidates, the one name that came up over and over was Microsoft, quickly followed by, but they'd never do it. I mean, they would never build, they're not a hardware company, they're not going to do that. And so, it was sort of always in the back of everybody's mind. Now, there were a number of us on the DirectX team and elsewhere in the company who were refugees from the game industry, myself, and many of the members of the team, people in the Entertainment Business Unit had come from places like Sony or Nintendo and were very familiar with that market. But I think that there was a strong belief that PCs and consoles were competitors. And I believe that all the way up to the top of the company, there was always a view that Microsoft controlled 50% of the market for video games.

My view and the view of most of the people in the game industry was that Microsoft controlled nearly a hundred percent of the computer video game market and 0% of the console video game market. And they were quite different. The same way that you could look at mobile games now as being similar in some respects, but different from console gaming or PC gaming. They occupied a different place in the home. The content was very different. If you looked at the bestselling games list, there were a couple games that went back and forth.

But for the most part, it was the difference between a one foot from the screen experience and a 10 foot from the screen experience, the console controller in your hand experience and the mouse and the keyboard in your hand experience. And those tended to lend themselves to very different types of experiences.

So, [in] the beginning of 1999, a lot of things started happening simultaneously that caused many people, myself included, to think about whether there might be an opening to try to convince management that some sort of play in a console-like space might be warranted. Sony announced that they were going to be producing the PlayStation 2 and made some rather aggressive comments about what they thought that was going to end up doing to the PC gaming market, relegating PCs, much as they were in Japan at the time, to more of a work device than kind of a multipurpose consumer and enterprise device. There was a massive explosion in performance at different price points. So, we started to see graphics performance in particular really take off, and the price of that performance really drop. We saw Microsoft itself, again, bifurcate Windows into an Enterprise Windows group and a Consumer Windows group.

And the Consumer Windows division was trying to figure out what their identity was going to be, who were they going to be developing for? Who was their target customer? And what kinds of platforms, what kinds of systems would be important? We saw questioning at the very top in an executive retreat in early 1999, wondering why Microsoft had always been relatively unsuccessful at a sub $500 price-point platform market. All those things kind of circulated at the same time.

That all sort of led back in our feeling, those of us on the DirectX team, those of us who are really thinking about what we might want to do, really kind of led back to the idea that, well, gee, maybe Microsoft should, if not develop its own console, at least lead and rally the industry to create a Windows-based console-like living room device. And it kind of culminated with a desire among the part of the executive team of the company to bring together everybody who touched games in one way or another to try to determine whether there needed to be a comprehensive strategy around games. And we shamelessly tried to co-opt that process [laughs] to further what we thought was clearly the right choice for the company, which was to do sort of what I had just described.

Michael Halvorson: Yeah, that's really interesting. Can you describe the different groups, like there's a CE group, right? And who are the different groups that were all kind of excited about this idea but had different proposals?

Kevin Bachus: Well, I remember a meeting in, it must've been probably March of '99 in Redwest A where we brought together everything from the Entertainment Business Unit who were developing Windows games to the Hardware group that were developing game controllers, keyboards, and other types of handheld controllers. We had representation from the Windows CE group. Now, Microsoft had made a deal with Sega. Sega brought out a much more powerful console called the Dreamcast shortly before the release of PlayStation 2, which unfortunately ended up being swamped by PlayStation 2, but it offered both native applications, which ended up being really the dominant way to develop games for Dreamcast, but also a version of Windows CE that could be used on the platform.

And so, Windows CE was there, the WebTV team, WebTV had recently been acquired by the company. The Windows Research, there was a graphics group within there that was developing a graphics reference standard called Talisman that was represented. And there were probably about four or five other groups that sort of intersected with either gamers or game companies or the game industry in some broader way. That sort of all came about to talk about, well, what should our approach be? Should there be a comprehensive unified approach to the game industry? What would that look like? What's the role of all these different disparate things that have kind of sprung up? And should they all be focused on one or two different approaches?

Michael Halvorson: What approach did the DirectX group that you were in, what approach did you have? How did you make your presentation or your pitch?

Kevin Bachus: Well, with sort of the more aggressive comments that were being made by Sony at the time, we were asked for Bill [Gates's] Think Week to prepare a Think Week piece out of the DirectX team talking about whether some of these claims that Sony had somehow developed advanced technology that went beyond anything that was possible in the PC world, whether that was a realistic and accurate statement. And if so, what conclusions should be drawn from that? And so, the team produced a very thoughtful, insightful thing that said, "Actually, no, based on what we know about the architecture technology in the PlayStation 2, we don't think that it is significantly advanced beyond what we're seeing from the chip manufacturers that are

focused on PC graphics hardware. This is where we see, this is what we understand about their performance, this is what we can tell you about what we know about our partner's plans."

And then, in a shameless plug, [laughs] sort of dropped in there: "By the way, if Microsoft ever wanted to build a game console or reference hardware design for a game console that our partners could build, now's probably the right time, and this is sort of what it might look like." It was really a technical piece. It really didn't kind of think about what the business model would be or what the publisher model would be or how that might work, but that was part of that packet for Bill. And then I became involved with the team and expanded that and mused a little bit about what that business might look like and what the implications might be for publishing and how software might work. And then again, as I said, very shamelessly went to that meeting and basically said, "I don't even know why we need to talk. We have the answer, bang, here it is on the table. Let's just build this."

We were so sure that this was the right way to go, that we just wanted to get everybody rallied behind that [proposal]. And that's sort of how we did that. We also ended up getting invited to conversations about what the consumer Windows division should do and what sort of platforms they should try to influence the industry to produce, what kind of hardware platforms they should influence. And we sort of, bang, we should have them do this. And so, every opportunity that we had to try to build traction and leverage existing workflows around this idea that we were just absolutely certain was the right thing for the company and for the industry. We were not

shy about going in and talking to people about our amazing idea.

Michael Halvorson: Ultimately it was going to be successful, of course. But what were the main pillars of that proposal then? What were the key features that you thought, oh, this is what we should do?

Kevin Bachus: Well, so the idea was that to the consumer, it would appear to be a game console. Which was, look- the thing that makes Windows such an amazing piece of technology is that it has enabled thousands and thousands of hardware manufacturers to create all sorts of different permutations of devices that can run thousands, maybe even millions of applications, and that they talk to each other and they work more or less relatively seamlessly. But the cost of doing that is that there's complexity associated with that. Complexity for the people that we're developing the operating system, complexity in some respects for the application developers, for the hardware manufacturers, and in many cases for the consumers themselves. We wanted to build something that would be dead simple. If you look at the way that a game console worked at the time, and still does to some extent, it's an appliance.

You plug it into your television set in your living room where you relax and you pop in a piece of software, and now you download the piece of software, and you start playing. You don't have to install device drivers and updates. You don't have to update the system components, or at least at that time, if you did it at all, it certainly wasn't obvious to the consumer. Everything was relatively self-contained. It was like putting a

DVD into a DVD player. That's how it operated. And we felt like we needed to in some form or fashion, cause to be created a device that worked like that with games. That would also, at the time, the idea was this would be a reference hardware design that we would get Dell or Mitsubishi or somebody like that to go create, to go compete with Sony themselves, and that we would get the software developers to develop a DirectX Windows application with maybe some metadata or maybe some little information that talked about how to configure it within the system.

But you basically slide that CD into the device and it magically knew what to do. You didn't have to install it and configure things and get things going and set up the joystick or configure the graphics, it just all sort of magically happened. All the settings were perfect and everything was good. And it turned out that when we did our first focus group, I remember a fairly soul crushing afternoon behind glass down in Tukwila [Washington] where we had people come in and the moderator said, "Imagine if Microsoft, the spreadsheet company, were to build a game console. What would it be like?" And there was laughter. The first response, "Oh, blue screen of death. Patches and updates and installing things and like this and that," and on and on. There was really a lot of frustration with the Windows gaming experience from a lot of consumers that really did not exist among console gamers because they were appliances.

Michael Halvorson: Yeah. Well, and Windows, we were still arriving. I mean, after Windows 95, it had become the dominant operating system on the PC, but it was arriving and there was all that memory of the slow Windows and booting slow. Did you have an idea of a kind of controller at that point, or would people operate this console

in a pretty simple way? That might even be the way you operated a PC?

Kevin Bachus: No, the idea was to use a handheld game controller. The SideWinder group in the Hardware division had actually been producing gamepads for a little while. In fact, to kind of bring this thing to life, we actually became close friends with Rick Thompson and Brett Schnapp and the team over there, and got them to use their fancy plastic molding equipment to create something that sort of looked like a game console. And we had that photographed with one of their really cool kind of futuristic looking things that you could rotate with buttons and that sort of stuff to really make it clear that we were going to try to create button mapping between this handheld controller and the PC, or sorry, the keyboard or mouse input, that a lot of games were expecting. Because many games at that time did support these optional kinds of accessories.

So, we were hopeful that we were going to really showcase that. Being on a television set 10 feet back, you didn't want to kind of hunch over a keyboard and a mouse. We thought that was going to really cause the same kinds of games that were popular on consoles to become popular on this device as well. And they were going to be controlled the same way that you controlled something sitting on your couch, leaning back 10 feet away from your television set.

Michael Halvorson: Yeah. That living room experience that you're talking about so eloquently here, it is really the future of gaming that you're

tapping into. Was that also the time of surround sound, the 7.1, or does that come later? I mean-

Kevin Bachus: It was starting to emerge. I mean, to jump forward a little bit, one of the things that we were really proud of was that we integrated a lot of advanced audio technology, 3D spatialization, real time 3D spatialization into Xbox. And we found that a lot of people probably didn't use it. Similarly, putting an Ethernet jack on the back of it, not many people had been playing games online. They didn't have Ethernet back behind their television set, but they thought perhaps sometime over the next three to five years that I own this game console, I will have surround sound audio, I will have Ethernet Internet gaming.

That will be a part of what I want to do, and I want a future-proofed piece of technology that takes advantage of that. So yes, we were starting to see it. Consumer adoption was still relatively niche, but we did want to position this as a technologically superior thing, even from the outset, even at the beginning before we really knew what this thing was going to be like. We knew that it needed to be able to do that. If you looked at the technology that was coming out of PC chip set manufacturers, that kind of functionality was already present.

Michael Halvorson: Okay, good. So, this meeting of the minds that you were telling me about in which you're pitching for these executives, is that the time you also did kind of a little home brew prototype of an Xbox unit?

Kevin Bachus: No, that came-

Michael Halvorson: That's a later meeting, isn't it?

Kevin Bachus: It came in fairly short order. So, we had this meeting, I was like, "Well, slow down guys. We're not quite there yet." But we continued to spend all of our free time, while still doing our day jobs, we spent all of our free time really refining this and talking to as many people as possible, Rick Rashid and the people in Microsoft Research and Craig Mundie, the whole, everybody we could talk to, we would talk to about our idea and get feedback and have them beat us up and that sort of thing. And ultimately, that led to a meeting with Bill. In fact, I remember my first email that I ever sent to Bill Gates, I remember very clearly. The team kind of huddled around my computer. We crafted something that kind of brought Bill up to speed on what we had been working on, shared with him a document, and sent it to him and he replied back and said, "This looks interesting. Keep me posted."

That became currency. That was an email that we shared with the rest of the entire company when we said, "Hey, Bill is kind of keeping an eye on this." "Oh, Bill's keeping..." I mean, that opened a lot of doors for us. That led to a series of meetings to talk about what we wanted to do, to talk about building an actual team around this. Because again, this was like, this is our night job. We would do our day job and then we would go get together in a little conference room in Building 9 with little

bucket of Jelly Bellies that we would eat while talking about different aspects of this and brainstorming that. Ultimately, at some point we had to build an actual team. We had to start spending some money, we had to travel, we had to start meeting with independent software vendors and with hardware vendors and that sort of thing.

We had a couple of meetings with Bill and with Steve, and kind of talked to them about what we wanted to do. Bill at that time was not Old Testament Bill, throwing things around the room, this was a New Testament Bill, with monogramed shirts, and he would lean back and listen and say, "Well, I like sort of what you're saying and here's some things I don't like and let's get together again." And then everybody would huddle up and do "Bill interpretation." "Well, when he said that, did he mean don't do the other thing? Or did he mean do both of those?"

So, there were a series of meetings where we would get beat up on something, the next time we'd come back and we'd do a demo. "Oh, PCs can't go instant on." Oh, look at this. Here's an instant on PC. Where you basically fire it up and within seconds it's playing Tomb Raider. "Oh, PCs, you have to install software." Well, here's something that recognizes these applications. In fact, so arrogant were we that there was actually a PlayStation 1 emulation piece of software called Bleem! that was developed by some guys out of San Diego we became friends with that, we went into our demo and said, "By the way, PlayStation 2 has backwards compatibility with PlayStation 1, so do we." So, we showed off a bunch of different ideas, some of which made it into the product, some of which Microsoft Legal said, "No way."

But we sort of went through and kind of took the hits. Well, what is the bill of materials likely to be on this? What's the business model likely to be? What does this translate to in terms of investment of the company, in terms of revenue? That sort of thing. And so, that sort of happened over a series of meetings throughout the Summer and maybe even to early Fall of [1999]. And then kind of culminated with a meeting in early 2000, about a month before we intended to put Bill Gates on stage at the Game Developers conference to tell the world that we were building a game console.

Michael Halvorson: Yeah, that's right. And so that's when the final demo and everything came together in which the other groups just couldn't, your project was basically selected over any other alternative internally, right?

Kevin Bachus: Yeah. It became known as the Valentine's Day Massacre because it took place on Valentine's Day in 2000. Again, about a month before the Game Developers conference, which was a forcing function. What were we going to say? Were we going to go tell people we're building this or not? And at that point, really, I think the options were do this or don't do anything. And in fact, I was in a meeting once with Bill where he said, "Look, seems to me that if we want to be in the consumer business, then we need a device like this. If it's not this, we need something like this. If not, then we should just sell off the Game division, sell off the Hardware group, get rid of all of that, and just double down and be another, like a better Oracle. Just focus on Enterprise markets." And I think that he really viewed that some sort of device in the living room was necessary to having a fully formed comprehensive consumer strategy that you developed your own games for, you developed your own

hardware peripherals for, you developed all these online services for.

And I think that was at that point, I believe, was the decision, are we doing this or are we not doing this? Not, are we going left or right, but are we going at all? And I believe at that point, we had already committed that Bill would appear for the first time at the Game Developer's Conference, but was he just going to be talking about all the great things we were doing for the PC or was he going to be doing what had become the industry's worst kept secret and telling people that we were getting into the game console business?

Michael Halvorson: So, the answer of course is yes, they agreed to do the project and to support it. And at that point, this Xbox team, or what will become the Xbox team is formed. And so, it's a pretty small group at that point, but you're in that. Can you describe that? How does the early team get going?

Kevin Bachus: Well, sometime in early fall of 1919-

Michael Halvorson: In 1999.

Kevin Bachus: 1999, yeah. 1999, it just doesn't sound as mellifluous as 1919. So, around September or so of 1999, we left our day jobs. Two of us in the early team, left our day jobs and became part of a group, an exploratory group that was led by a guy named Rick

Thompson who was a reluctant leader. Rick had an amazing business doing hardware, keyboards, mice, SideWinder gaming controllers, that sort of thing. Very predictable, really well run. But he had a lot of really good thinking about it. And he was sort of drafted by Steve to go run this group. And so, he pulled us together along with people like Don Coyner, who was in a marketing role at Microsoft after having been at Nintendo. Jennifer Booth, who'd been on the PlayStation team at Sony, was in the company. She joined the team.

We kind of raided the hardware group for engineers and to the point that they had to put a stop to that. And we're trying to figure out, well, okay, what is this thing really? It became clear to us fairly quickly, a few things. Number one, we weren't going to get anybody on board. I remember a group went down to visit with Michael Dell to convince him to build one of these reference consoles, similar to what the company 3DO had done. They basically created a design for a game console, although they didn't want to call it a game console. They want to call it a multimedia device. And then they got Matsushita and they got with their Panasonic brand, some other people to build these consumer devices that would run 3DO software. And we tried to get people to do that.

Michael Dell told the team, "Look, every time that Sony reduces the price of PlayStation, their stock price goes up. Because they know that they're going to make more money on the software. Every time that I reduce my price, my stock price goes down. And so, I'm not interested in doing this." So, if you look at the way that console business works, consoles themselves were sold at a loss, right? They were subsidized. So, it would cost you $500 to make a PlayStation. You would sell for $300 because

you would sell a certain percentage of your own software at a pretty high margin. You would take a license fee for every single piece of software that's developed from the third party. So, you had a piece, imagine getting a piece of every single Windows application that was ever sold. That's kind of the way the console business worked. You would sell your own accessories, controllers, and memory cards and that sort of thing. And so, that's kind of how that business worked.

And if you bifurcated that and you had the hardware manufacturers and the software platform holder like us, then it didn't really work. So, ultimately, much to everybody's chagrin and Steve Ballmer's ire, we realized that we reluctantly had to build the hardware itself, at least at first. And so that changed the complexion of what we were doing. We also realized that if we were doing that, then we probably needed to have a closed platform rather than an open platform. Instead of saying, "Hey, listen, you want to make an Xbox game? Just build a PC game." That was our message at first. Make a PC game and then maybe have a little text file in the route that explained how to set it up and that sort of stuff, the settings, that sort of thing. Couldn't do that. Had to have a controlled platform.

That also, however, allowed us to do things like allowing you to really write straight down to the metal to get more performance out of it, to do things that our software vendors were telling us that they wanted to be able to do. So, that all happened throughout that as we refined that and more people on the team, J Allard, Cam Ferroni joined, started putting together the system software group. Todd Holmdahl and the hardware team started coming up with what the hardware was going to look like, worked with a company called Flextronics

that was going to be our contract manufacturer, that was going to take and build what was essentially a very, very specialized PC. Intel processor, Nvidia graphics chip, hard drive, PC Southbridge, like all the stuff that you would expect to see in a PC, but a couple of special things were added to it and things taken out that weren't necessary. That kind of happened throughout from September [1999] to March [2000] when we were really in full swing and announced this at the Game Developers Conference, and were kind of out in the open.

Michael Halvorson: And in terms of the operating system, you're going to have Windows, but eventually it's going to be a real scaled down version of Windows, which will include your DirectX stuff.

Kevin Bachus: That's correct. Yeah. So, if you look at it, I mean, Windows is itself essentially collection of libraries. There's stuff that causes Windows itself and the graphical interface to come up so that you can launch applications. But when an application starts running, it's communicating with Windows and with the hardware and taking advantage of stuff through a collection of programming libraries. Well, why couldn't you slim it down to the stuff that you really- You don't need all this graphical stuff. You don't need the interface. You don't need all this stuff that's there to make Lotus 1-2-3 from 1993 operate. You can slim it down to the programming interfaces that are used by the application and sort of the things that are necessary so that you can use these amazing mature development tools and profilers and compilers and all this stuff that's been developed over years and years.

These programming interfaces that people are already very familiar with, [developers] don't have to learn [them] from scratch the way that you do when a new console comes up. Can you do that and just deliver that as a set of libraries that actually go with the game on the disc? And that's exactly what we did. And we were able to actually attract some amazing talent onto the team because, candidly, a lot of the engineers in the company were frustrated with a lot of the challenges they had to deal with to keep this amazing collection of applications that span years and years, maybe even decade or more, keep those running when what they want to do is to make the smoothest, slickest, fastest, neatest piece of technology that they possibly could. And this was that opportunity.

Michael Halvorson: And so, in terms of the direction of DirectX, did you continue to identify- I mean, I'm looking to see the thread about DirectX, does that continue to live on in the Xbox plan that a lot of the same routines, same plans, same libraries as you've described?

Kevin Bachus: Yeah, and there were definitely growing pains when it was decided that there would be that kind of bifurcation. Because instead of just delivering DirectX and delivering Windows and maybe doing a special version like embedded Windows or Windows CE, like an offshoot, like a branch, this is going to fork to some extent. Once that was the case, there was a fair amount of tension over how that was going to operate. But again, the message to the game development community was crystal clear. Your investment in Windows application development technologies and tools, your understanding of Windows programming interfaces including, and most particularly, the DirectX programming interfaces that are part of Windows, those are valuable investments and should be continued

because that is how you will get onto this new living room platform that we're going to be putting hundreds of millions of dollars in marketing behind.

The message was, the Windows APIs including and featuring DirectX, were the way to get to this platform. In this case, they were libraries, linkable libraries that went along with the game itself. But that was sort of the way that things work. And the reason why that was important was because we went out to the development community and said, "Look, Sony has your wallet, but we want your heart. [Halvorson laughs] We want to go to you and say, 'Look, they're huge and they've been very, very successful and they have a lot of customers. We're going to get a lot of customers too, but it's going to be such a pleasure to develop applications.'"

Sony's out saying, "Listen, if you're not smart enough to figure out how to use our super complicated hardware, maybe you shouldn't be making PlayStation applications." We were saying, "Hey, look, we don't want you spending time thinking about all this low-level nonsense. We want you focused on the graphics, the audio, the gameplay, the networking, the things that the consumer sees. We want you to focus on the stuff that goes on screen, and we're going to handle all the other stuff using the best technology in the world, the Windows APIs, the Windows development tools." That was the message to them, and it worked amazingly well.

Michael Halvorson: Right, and you're leaning into Microsoft's long track record with developers, right?

Kevin Bachus: Exactly.

Michael Halvorson: Providing tools to developers, loving developers. That's really good. Hey, did some people from Office come by and say, "Hey, can we run Excel on this thing?"

Kevin Bachus: [laughs] So, funny that you asked that. We actually did have a number of people that joined the team from across the company who said, "I've always been a gamer. I've always loved games." That's generally been a mixed bag in my experience because to be honest, I really consider myself to be a gamer, but I would consider myself to be someone who's deeply in love with the game industry and game development and the experience that we deliver to gamers. But many of those individuals are extremely talented and had skills that translated onto the team. When it came to the feature set, we did have a number of executives who were concerned about how we would compete with Sony in particular, and they had looked at how dominant that company had become, and they wanted to know what our approach was. Now in the PC world, it's all about features. Features, features, features.

There's this term I wasn't familiar with when I came to Microsoft called “the Silver Bullet,” which is what is the thing that you're going to put on the package that is going to destroy the competition? Lotus 1-2-3 has this feature, but we have this feature and this is the one that you want. So, forget about that. You need Excel. And that's just not the way that console gamers

think about it. Again, they think about the game, they think about the experience. "Oh, I saw this thing called *Grand Theft Auto* on television last night. I want to play *Grand Theft Auto*. How do I do that? Oh, I have to buy a PlayStation? Okay, I'll buy a PlayStation." They're not in the market for a game console.

It's not like a PC, where it's like, I have a PC. I use it for a bunch of stuff. It's a little bit slow, it's a little bit clunky. My kids spilled orange juice on it. I got to go buy a new one. So, what's the best performance, price, feature? That sort of stuff. That's how that works. Okay, so here's feature, feature, feature, feature, feature, and here's the price. That's how the PC world works. Console is entirely driven by the gaming experience and what the games are, what the content is, but we'd have people come in and they go, "Okay, so we hear that you're spending billions of the company's money on this ridiculous idea. Tell us what it is that you guys are doing."

And I would say, "Okay, well, it's going to be high performance, amazing development tools, well understood, mature APIs, all this sort of stuff. We're going to have the best game." "Okay, but how are you going to compete with Sony?" "Well, we're going to have the best games, the best looking, the best sounding, the best playing games. The games are going to be superior to theirs." "No, no, no, no, no. You've got games. They've got games. Everybody's got games.

That's a wash. Will it run Internet Explorer? [Halvorson laughs] Will it do photo editing?" And we'd be like, "No, people don't want that. That's not what they're interested. They're really aggressively telling us they're not doing that." So, we even did more focus groups where we went in and we said to people,

"Hey, Microsoft is building a game console." [Bachus changes his voice to be focus group:] “Ha ha, ha ha.” [in normal voice] "Okay, we got all that out of the way. Just imagine that it's a really good game console. What would it have?"

Then they would say three things. One, "Bill Gates," by name, "Bill Gates is the richest man in the world. He's going to make sure there's games for this. Because I bought this console or that console, and they went out of business a year later and there were no games for it, and that was terrible. But he'll make sure there are games." Number two, "Microsoft, they have their fingers in all this technology. In fact, the Justice Department is after them. They know technology. It's going to be technology, advanced technology," which is why the Xbox had to be demonstrably superior to PlayStation 2. In fact, our original plan, misguided as it was, was, "Hey, maybe we can come to market the same time as PlayStation 2 in the Fall of 2000," instead of 2001 like we did.

It was Bill who said, "Listen, if there was such a thing as a benchmark for consoles, you probably win it, but not by enough that anybody would actually notice it. If you're entering a market, you have to be demonstrably superior. So, you need to wait for a year for the technology to improve even more at the same price point." But technology, number two. Number three, "I hear about the Internet. I'm told that it's a big deal. I don't really do online gaming, but having some sort of online thing, Microsoft knows that they're all about that. So, it'll probably have that and that's good." Okay. So, then we'd say, "Well, what features would it have?" "Well, obviously it has to have really great games." "Okay, that's cool. It's going to have

the best games ever." "Right, great." "Number two, what else?" "Does it play DVDs?"

They'd say, "Oh, that'd be cool because we have a DVD player in the living room, but my mom doesn't let me have that in my bedroom. This would go in my..." They're thinking about where in the house they put, "I'm going to put this console in the bedroom so I can watch DVD movies, free DVD player in my game console. Cool, great. Like that. What else?" "Browse the web." Bam. Record screech. People are like, that's the defining line at the time between what is a game console and what is a PC? Now they're rethinking it. "Okay, so is this really a junior PC? I mean, it is Microsoft, so maybe I'm thinking that it's a junior PC." And they were like, "No, no, no, I don't want that." And then they were not interested.

And, "Oh, did I say web browser? Oh, silly me. What if it had a thing where you could go, where you could get previews of future games and tips and tricks?" I'm describing a web browser, right? But a specialized one that's focused on that experience. I thought, "Oh, oh, that's interesting. Yeah, yeah, yeah. Videos of games and tips and tricks. Yeah, that'd be really cool." So, we got them back. It was very clear that whenever we stepped over the line and talked about productivity or that sort of stuff, not interested. Not only not interested, but actively, aggressively, not interested.

That's why there was singular focus on, it's all about the games. It's about having the best-looking games, the best-playing games, the best-known games. Like, the games, the games, the

games, the games. And that's where having games like *Halo*, that was really almost more of a platform showcase than a first-person shooter.

I mean, its function was, and it didn't kind of matter what it was. There had been very little experience of first-person shooters being successful on consoles, but as a platform showcase like *Mist* was on the Macintosh, that sort of thing really kind of sold that. Because remember, this was a number two, it's going to have some sort of advanced technology because Microsoft knows that the technology's going to be great. *Halo* was the game that I showed my PlayStation idiot buddies to show them how stupid they were for buying a PlayStation, how smart I was for buying my Xbox. And so, that's why that single-minded focus on games is so important and continues to a large point to this day.

Michael Halvorson: Right. I've heard a lot of people say, you can't overestimate the importance of *Halo* in that first launch. Yeah.

Kevin Bachus: Yes.

Michael Halvorson: Now let's talk about what you did, because formerly with DirectX, you're talking to a lot of third-party developers about what's cool about that technology. Is that one of the roles you took up with the new Xbox group? Did you start to talk to these developers?

Kevin Bachus: Yeah, but not at first. So, I joined Microsoft in the DirectX group as kind of a games keeper turned poacher. I came from the game industry. My entire career, I was one of the first generation of people who hadn't come to the game industry from the toy industry or something else. That was all that I really knew. And so, I could speak that language and I could empathize, and I had that experience. But I wasn't a programmer, I wasn't an engineer.

As we started to put the original idea of Xbox together, when there were only four of us, I was thinking a lot about the business model and the way that things would work with the game industry and how we get software developed and that sort of thing. But a funny thing happens when you go from being a startup inside of a big company with four people to a functioning mature organization with actual marketing people and actual salespeople and actual engineers, for a little while we were a little adrift because we didn't have the Microsoft gravitas of having been part of this big success. We were, again, refugees from the game industry.

But for a short period of time, I became a hardware planner, and I was the one that decided that we were going to have four controller ports on the front. I was the one that decided that instead of having component video, and also HDMI, and also these, that we would have one connector that would have different, different leads that would be able to be mixed and matched into different cable types, did a bunch of that kind of stuff. But ultimately, the majority of the time that I spent on the project as an existing mature project was building out that third-party organization, going out initially to all the major game publishers and the larger, more important game

developers and convincing them not only that we were going to do this, but that it was going to be successful and that they should invest, in many cases, significant amount of their own money developing games with the proposition that this could be successful, that they would sell a lot of copies of that piece of software instead of just doing it for PlayStation.

That was not easy at first. We went out, we did a worldwide tour, we had meetings in the East Coast of the US, the Midwest, the West Coast, Japan, and Europe. We had dozens and dozens of meetings, to the point that I started changing up what I was saying and saying things like, "As I was saying earlier today," to people that weren't there earlier, but I just felt weird to say the same thing over and over. But we said that, and there was a lot of skepticism. A lot of people said, "Hey, Microsoft honestly doesn't have the best track record when it comes to this sort of thing. They have a tendency to stick their toe in the water and decide, you know what? That's not working out. And then canceling the project, leaving the rest of us high and dry, which is fine for you guys. I mean, whatever you would write off on this Xbox project is a rounding error. It's couch cushion money, but for us, it could be very, very damaging."

So, there were questions that they asked to understand, well, how is this going to be successful? And how invested were you? Having Bill Gates on stage, Bill personally on stage at the Game Developers Conference was a non-negotiable thing for these guys. They wanted us to see, we were actually putting our butts on the line. We were putting the guy, the face of the company, on stage. That's how important this was. They wanted to see that Robbie Bach who ran the Games Division, was stepping away from all of his other stuff and just focusing on the Xbox

business, including the first-party game development, and not sort of piecemealing it, being able to retreat back into MSN or retail sales or the other things that were in that print productivity. That was very, very important.

Developing the policies was critical. So, how is this going to work? Okay, now we've decided that we're going to be charging a license fee. Is it going to be more or less than Sony? Sony had a bad reputation for cutting sweetheart deals with some publishers and not others. Were we going to do that? Are we going to hold steadfast that we were going to have one price for everybody no matter how important they were, no matter how badly we wanted them on the platform? How was it going to work in terms of managing the platform of titles? Sony, Nintendo, and Sega, you would go to them and say, if I want to make a Windows game, I just start programming. If I want to make a Nintendo game, I would have to go to Nintendo, pitch them my idea. They would have to approve me as a third party to spend my own money to make this game. I would have to get their permission to do that. And so, were we going to do that, and how is that going to work?

Who was going to be on the approval team and how are we going to deal with that sort of thing? When the game was done and it had to be manufactured using copy protection so that it couldn't be pirated and that we got our license fee, so that we counted this so that the publishers themselves can go manufacture this, how is that going to work? Who's going to press the discs? How are we going to test it to make sure that it was stable, that it didn't crash? Because a crash of a third-party game reflected badly on us.

So, we had to develop all of that, and then how do we make sure that we provided them the support? I wasn't personally responsible for the technical support of those developers. I was responsible for the business side, but it was hand in hand. Those were two sides of the same coin. We were providing business support, we were providing all of that sort of support and oversight to our partners at the same time that the development support organization was answering the technical questions and getting the development tools and that sort of thing.

Michael Halvorson: So, the team is growing, but you're still in Redwest or somewhere on the main Microsoft campus, is that right?

Kevin Bachus: No, once the thing was a go, they found a space. They wanted everybody consolidated. They wanted the games group there, the Entertainment Business Unit, including-

Michael Halvorson: All the hardware. This is the Millennium move? Yeah.

Kevin Bachus: Yeah. So, we moved over to Millennium and we were in, I believe, Millennium D, I believe. And I believe that EBU was in Millennium E, I think. But yeah, they basically took us all out of Redwest. And by the way, everywhere else that we were, because there were people that were on main campus and a lot of people in Redwest and sort of moved us all out to Millennium, which actually was helpful to some respect because

again, there was tremendous skepticism about Microsoft as a company, a business-oriented company, the spreadsheet company, a company with a lot of crashes, and that sort of thing. There's a lot of great goodness that came from the Microsoft brand, a lot of it, but there's negatives that went with that.

So, kind of saying, "Hey, these guys are in one place, they're thinking about this project. They're focused on that." If you look at the original branding, including the startup screen, when you switch it on, it said, "Xbox by Microsoft." And so, we had that Microsoft standing behind it, the world's largest company, the world's richest man, like all this technology and power and resources and that kind of stuff. That was there, but it was really Xbox. It was something fun. It was for consumers, it was exciting, it was new, it was different, and that was very intentional.

Michael Halvorson: I agree. Speak a little bit about the culture of the Xbox Group over in Millennium. We've talked a lot about the strategy of this product, which has been really powerful. In addition to that, what was the culture like? And you had worked at other places and things, but how would you describe that?

Kevin Bachus: I think, look, there was a mantra that it takes a fun team to build a fun product. And so, there was a lot of focus on work-life balance and long, long, long hours, a lot of hard work, but trying to make it fun and trying to understand, we were doing something momentous that nobody really gets a chance to do. We were very aware of that. I was probably a little naive about

this. I never had a doubt that this thing would happen. From the very first PowerPoint, I don't know why. I mean, in hindsight, there's no way that this thing should have happened, but I always felt like it was going to happen and it was going to be successful. Never had any doubt about that, but we were working pretty hard. But we were trying to convey an atmosphere of fun. We were trying to have a fun experience.

We're trying to have a different kind of more casual, more excited, more sort of bigger personality. And one that really, I would say, if I had to narrow it down to one thing, mirrored the culture of our partners in the game industry, that would've been much more like what they would've seen in their own facilities with action figures on the desks and people skateboarding in the lobby. And I remember at one point everybody went out and bought motorcycles. They learned to ride motorcycles in the parking lot and that sort of thing. Arguably, at some point, I think we kind of took it a little bit too far. Only in that, I mean that it seemed like there were times when we were forcing ourselves to look how crazy we are. Look how outrageous we are. Look how much fun we're having. I think that there was occasionally a tendency to fake it till you make it in terms of the culture.

But by and large, look, we were absolutely convinced in the rightness of what we were doing. We believed that it was something that would be good for gamers, for game developers, for game publishers, and for Microsoft. And that it was something that was going to really be something very, very special and potentially could change the way that our competitors looked at things. Remember I told you that Sony had been very arrogant about their complex hardware, and in

subsequent generations, they were much more focused on developer support and on mature tool sets and on providing things that allowed people to focus on the experience. And so, I think in that respect, it was an unquestionable success in terms of the way that games are developed now. But I think that the culture reflected a desire to be somewhat different from what the expectation was of Microsoft.

Michael Halvorson: At Microsoft during those years, there was tremendous competition. How important do you think it was to have a really strong competitor like PlayStation or Nintendo for the Xbox initiative? I mean, how important was that?

Kevin Bachus: It wouldn't exist without it. I think it is overly simplistic to say that Xbox came about as a reaction to PlayStation. I don't think that Microsoft does anything simply because a competitor does it. But it definitely got the attention of everybody in the company, and it was something that you could rally around in a way that more ambiguous objectives didn't have that kind of impact. So, I think that having a strong competitor, having a mountain to climb, without that, it wouldn't have happened. I think that Microsoft would have continued to go forward, would have done certain things in a certain way and would've approached that market, but it would've done in a very different way.

Michael Halvorson: A couple of summary questions here, but one would be looking at the launch of the Xbox, the original Xbox, looking at how well it was received, how did it feel to have that finally come out and to see the reaction of people?

Kevin Bachus: It was weird. [Halvorson laughs] It was weird because for the better part of, I don't know, two or three years, this had been this top-secret project that we were working away at and the fact that suddenly it was everywhere, that everybody knew about it, that they all talked about it, was just like... We had, oh, yeah, yeah, a hundred million dollars in marketing. The fact that I went to the launch of Xbox in Tokyo and places that I had been to over the last four or five years that were full of PlayStation and Nintendo and Sega, now had Xbox part of that, something that I had worked on, it's not really a feeling that I can describe. It's a weird thing. It's seeing that your child has become President of the United States or something like that.

I mean, logically, rationally it makes sense. I mean, it's a big deal and spend a lot of marketing, it makes sense. But it's just, you spend your time working away in secret on something for so long, that's just your little project that you and other people are working on. It's a different feeling. And I think that's why also, conversely, I don't think that a lot of people who experience technology like Windows or Xbox or Office understand that there are people behind that. They're individual people who have small group meetings with other people. They see Microsoft, this gigantic multi-billion-dollar, multinational corporation is doing these things. And I think that they lose sight of the very, very small, close-knit people interaction that makes those things happen.

Michael Halvorson: Kevin, you were part of a really big expansion or pivot about what Microsoft really did. If you think about that time and compare it to now, Microsoft is thought of as an entertainment

company, right? How do you reflect on that change? Do you think that was something that had really, really expanded what Microsoft could do, added depth to the company?

Kevin Bachus: Well, my history with Microsoft goes back to the earliest days, and I never really viewed Microsoft as a business company, as an enterprise company. I viewed that that original idea of a computer on every desk and in every home was laudable. And if you think about what people do in the home, one of the key things that they do with their computing technology, whether it's a PC or whether it's a game console, is to play games and to be entertained and to watch videos and that sort of thing. I mean, a console from the very beginning has just been a very specialized computer. I mean, it's got a central processor, it's got a graphics chip, it's got audio. I mean, it's got all that stuff that you have. It's just designed and deployed in a very specific way to do very specific things. Whereas a PC is designed in a much more broad, general way to do a wider variety of different things.

So, I don't know. I mean, part of me thinks that Microsoft would've gotten there on their own with or without Xbox to some extent, potentially developing software for other platforms. But I think if you look at even Apple, what they've done with Apple TV and making television shows and movies and that sort of stuff, there is an understanding that software is software. And software can be applications, but software can also be television shows and things where you interact with an experience as a consumer that is brought to you by a device. So, I think it's great. I'm glad that I could be part of it. I went to Microsoft because I wanted to do something bigger, and there are only a handful of companies on this planet that can really

swing for the fences and impact people's lives in that kind of way. And I was really, really lucky to be part of one of those projects at one of those companies.

Michael Halvorson: What did you learn at Microsoft that made a lasting impression on you?

Kevin Bachus: I think what I learned at Microsoft was that it's about the people more than anything. For a long time, I was motivated by the project. I never was really motivated by compensation or I mean, I always naively just trusted that that would work out. But I was really motivated by projects and by that sort of stuff and doing really cool stuff. And what I learned was that I made relationships that continued to this day with people that I worked with 25 years ago. And I have tried really hard in each step along the way to think more about who I'd be working with than certainly what I would be making, but also what I would be working on or what the company was. Because I think that if you have a great team of people that are really passionate and focused and smart and have a vision, then they can accomplish things that you can only dream of. And that started with my experience at Microsoft.

Michael Halvorson: Kevin, what have you done since Microsoft?

Kevin Bachus: What haven't I done? So, after leaving Microsoft, I really wanted to get a very broad range of experience. So, mostly in the consumer video game business. Started or ran a bunch of venture backed businesses, starting with the industry's first

production company for video games. If you think about the film industry, they have studios and they have film crews, but in the middle, you have these production companies. The game industry didn't really have that. So, we started one and then did a few other things along those lines, moving more progressively towards social media, social networking. But became very frustrated because I was moving myself intentionally away from games and the game industry, my friends, and that sort of thing. So, about 10 years ago, I had the opportunity to join a company called Dave and Buster's, which is a leader in the out of home gaming market.

They have 145 locations across North America that combine a modern version of what I guess the classic arcade would be, but really modern, really cool stuff. And also, full service restaurant and a really, really neat bar scene as well, under one roof. And so, I was able to help grow the company from about 60 locations to 145 where I left at exactly 10 years. I stayed there nine years, 365 days. And I'm now the first ever chief product officer for one of the leaders in destination-based entertainment, running all kinds of entertainment concepts within resort hotels, amusement parks, casinos, that sort of thing. I'm really excited because when I grew up playing video games, I was on a couch with my friends, 10 feet away from a screen, and we had a very physical, competitive experience. That experience has migrated to these entertainment centers, and it's a part of experience that I think augments what people do at home.

Everybody that comes into our facilities, they all have game consoles, they all have mobile devices, they all kind of play games in all these different ways. When we first left Microsoft

and we're raising money for our first company, everybody that I met said, "Well, I'm not really a gamer, but I do understand what you do." And we would say, "Oh, so you don't play *Brick Breaker* on your Blackberry?" "Oh, well I do that." "Well, you never played *Tetris*?" "Well, yeah, but that's not really a game." Now everybody identifies as a gamer. I think that's amazing because what play has done for, I think, all of our lives is something that has enriched what we've done. One of the things that we tried very hard to do with Xbox was to try to differentiate ourselves from other game platforms by saying that Nintendo would say that games are play, and Sony would say that games are entertainment.

But we would say that games could ascribe to the level of art. We wanted to create a platform that you didn't have to spend all of your time learning so that not only could you create something that entertained your players, but actually rose to the level of art. And if you look at what's happened in the last 25 years and the way that society has started to look at games, the fact that there are games that are viewed as art, I think, is largely ascribable to Xbox and what the team did to put that platform together.

Michael Halvorson: Well, Kevin, I want to thank you for your time. I think we'll close with that. And we're very grateful that you were able to give us this information. It's been very fascinating. Thank you so much.

Kevin Bachus: My pleasure. It was great meeting you and best of luck with the project.

Michael Halvorson: Thank you.