CG GARAGE PODCAST #267 | ALEX NIJMEH HEAD OF WORKFLOW AT WALT DISNEY ANIMATION STUDIOS

From "The Day After Tomorrow" to the computing of the future: Disney's Alex Nijmeh tells Chris how his enthusiasm for VFX took him on some truly amazing adventures.

This week, Chris meets an old friend and former Digital Domain co-worker Alex Nijmeh — and this joyful podcast is a testament to how much fun they had together on movies such as *The Day After Tomorrow* and *I, Robot*. They reminisce about how unfeasibly tight deadlines pushed them to learn software and techniques, as well as the characters they met and funny antics they got up to at DD's studio.

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Chris Nichols	All right. Okay. So I should let people know that I believe your first day at Digital Domain and my first day was very close or if not the same day. Right?
Alex Nijmeh	May have been. I can't remember if one was before the other or we just kind of started at the same time.
Chris Nichols	Right. But to you and I, it was like our first time doing visual effects or any movie or anything like that. Right?
Alex Nijmeh	That's right.
Chris Nichols	So it was like we were reading off each other, like, what is it like to work? Are you okay? Stressful?
Alex Nijmeh	I had no idea what it was. I'd actually never even imagined what visual effects was. That's just something that Eric Hanson got me into.
Chris Nichols	He got me in too. It was a big deal. What led you there? Let's talk about that journey that took you to Digital Domain where you and I first met and then we can catch up.
Alex Nijmeh	Well, I was working at a startup company years ago, and I'd been at that startup company for, I think at that time, let's see, I started in '94, it was a robotics company first and became this real-time company that was developing a real-time highly physically based engine and they wanted to build content for it. And so that's where I first started.
Chris Nichols	In the '90s.
Alex Nijmeh	'94, yeah.
Chris Nichols	Wow. Okay.
Alex Nijmeh	Yeah. How I got there is, that's a whole-
Chris Nichols	Let's go there. Let's go there.
Alex Nijmeh	You want to go there?
Chris Nichols	Yeah, let's do it. Let's do it.

Alex Nijmeh	All right. I was in the restaurant business at that time. I was working with my brother and we'd been working together for like eight years in the restaurant business and it was just ... I've always been into drawing and art and stuff, but it's like I was trying to get into this world of just doing computer graphics. Though computer graphics was super new. I had just bought a 386 PC.
Chris Nichols	Yes. So we're talking like early '90s, late '80s, right?
Alex Nijmeh	Yeah. I think I had two megabytes of RAM in my machine at that time.
Chris Nichols	That's a lot.
Alex Nijmeh	Yeah. I was living the life. I purchased this book called POV-Ray.
Chris Nichols	Nice.
Alex Nijmeh	Persistence of Vision and it came with this five-and-a-quarter-inch floppy. And I was like, oh, that's cool. So I started reading it and popped in that disk and just kind of, it was a text-based-
Chris Nichols	Render.
Alex Nijmeh	Render, yeah.
Chris Nichols	It's a ray tracer.
Alex Nijmeh	Ray tracer. And so I-
Chris Nichols	I mean, ray tracing, think about that. That was crazy back then. Ray tracing was ... yeah.
Alex Nijmeh	Yeah. So I was really into mechanical drafting.
Chris Nichols	Oh, nice.
Alex Nijmeh	So I was like, oh, this is great. So I bought a bunch of graph paper and I just started graphing my ideas and then I would just start typing them in and coding it. And the first time I started using it, I created the sphere. It was a red sphere with a little bright highlight on there, blew me away. After I saw that ... My brother, I was living with my brother at the time, and he walks by it and it was almost midnight. He was like, "What are you doing?" I'm like, "Check this out."
Chris Nichols	I made a sphere.

Alex Nijmeh   Yeah. I go, "Check this out." And he goes, "It's a ball."

Chris Nichols   See that highlight? It's amazing.

Alex Nijmeh   I go, "I made that. That was a vacuum. It was nothing." And he goes, "You should go to bed." So anyway, I kept going with that, but during the day, I'm working at the restaurant. We'd been working there for years and I came across a book called Mastering 3D Studio back in the day. It was like two inches, two-and-a-half inches thick.

Chris Nichols   Got it, yeah.

Alex Nijmeh   And while I'm at the restaurant, I'm just reading this. I don't own it. I don't have 3D software. I only had that POV-Ray but I've just been reading this over and over.

Chris Nichols   So you're reading a book of software that you don't own.

Alex Nijmeh   Exactly. Welcome to my world. So I'm just reading it and reading it and people are-

Chris Nichols   Just like reading the manual to a Tesla and you don't own a Tesla.

Alex Nijmeh   That's how bad I wanted it, and I was living this book. And people would ask me all the time, what's that book? And nobody wants to hear like, "Oh, it's this 3D software." And they're like, "What's 3D?" So one day I'm at the restaurant and this Mercedes 500 SL pulls in and then an NSX pulls in right next to it. And this couple come in-

Chris Nichols   The old Honda NSX or-

Alex Nijmeh   Acura.

Chris Nichols   Acura, yes.

Alex Nijmeh   Yeah. Beautiful. So this couple come in and they're ordering and I'm at the register and the lady asks me, "Oh, who's reading that book?" And I go, "Oh, no, here we go again." I go, "I am." She goes, "Oh, do you know how to use that?" And I go, "Yeah." Why would I say no? I have this book. I go, "Yeah." And she hands me her card and she goes, "Oh, you want to come by and see what we're doing and this and that." I'm like, man, it's like for months I've been looking to find a job and I just couldn't find anything.

Chris Nichols   Yeah. There's someone who walks into your restaurant, comes in.

Alex Nijmeh   Yeah, she comes in and she sees this book. Right?

Chris Nichols	Right. I love this story. I've heard this, but I love it. I remember it now because it's been a long time, which ... yeah.
Alex Nijmeh	Yeah. So I go, "Yeah, sure. Yeah, that sounds great." So I get ready and I'm super nervous. I don't even know what to expect and I go to their office. And she introduces me to everybody and she walks around and there's one of the 3D modelers and he's working on this animation. And she goes, "Well, you know 3D studio." She goes, "Can you give him any advice?" And he goes, "Oh dude, I've been doing this thing for a week now I don't know what's happening," but she's-
Chris Nichols	You've never touched the software.
Alex Nijmeh	I've never, I don't even know what that looks like, what it looks like.
Chris Nichols	So you're going in there giving advice to someone who actually uses the software-
Alex Nijmeh	Who went to school, and so he's like, "I'm trying to do this animation." At that time they were doing this animation for a wafer robot. So it's this three-arm thing and the robot has this linkage, and it's moving in and out and it's got to do this ... and he goes, "But it's supposed to be very surgical and move abruptly. And this one looks like spaghetti noodles that's doing this floaty thing." And I go, "Oh, I think you need to go into your graph editor and you can just switch it from your spline curves, switch that over to linear curves." And he goes, "Well, where's the graph editor?" And I go, "Oh, you gotta pull this menu down."
Chris Nichols	You've never used the software.
Alex Nijmeh	I've never used it. I go, "You got to pull this menu down and then it's a sub menu under there and there it is. There's a graph editor." And it pops and I've never seen it.
Chris Nichols	And you're quietly like, "Wow, look at that."
Alex Nijmeh	I'm like, "Wow, that looks kind of complicated." And I go, "Well, there should be a switch here." And he's like, "Oh, well there's this thing that's like TCB or this and that here," and I'm like, "That's it. Switch to that, pick linear." And he does it and it worked. And he's like, "Oh my God, you fixed it." And right at that moment I had the job. It was like, that was it. I got one.
Chris Nichols	But you never used it. So that's amazing.

Alex Nijmeh	And I was like, wow, I'm going to read this book some more. And it was just, that was my first step into that world. I interviewed with all the principals of the company and-
Chris Nichols	And this was a startup company and I believe that's where you met Eric Hanson.
Alex Nijmeh	Yes. In the year 2000, right around that time, and it was all because of *Fifth Element*. They're like, "Oh, we found this guy who worked on the city part of the *Fifth Element*."
Chris Nichols	They were doing ride stuff. Is that right?
Alex Nijmeh	Yeah. This company was doing motion platform, virtual environments and they built everything. We had a motion platform in the building. We engineered all the screens and everything, and it was a multiunit. So everybody talked together. Everybody was insane.
Chris Nichols	Okay. So it's basically like a little cab that you sat in and you were on a ride, right?
Alex Nijmeh	That's right. And it was a two-person pod.
Chris Nichols	And so they combined the CG part with the robotics part of it, right?
Alex Nijmeh	Yes. So it was hardware and software. The software engineers were doing all the physics behind it. At that time because it was a very small company, you were wearing a lot of different hats. So I'm doing modeling, I'm doing texturing, I'm doing animation, I'm doing concept design and I'm sitting next to the programmer and we're designing what the physics should be based on-
Chris Nichols	Right.
Alex Nijmeh	So it was pretty amazing actually getting that insight, working with all these different levels of technology. And in the beginning we were making everybody sick. We did not know what we were doing. But then after a while we really got it. So what happened is we got pretty far and now we wanted to step up our game. And at that point, that's where they found Eric Hanson. They're like, "Oh, there's this guy, an academy level artist to work on these films," and they loved the movie. That-
Chris Nichols	They loved *Fifth Element*.
Alex Nijmeh	They loved *Fifth Element*. That was like ... it was the best thing ever. So they brought Eric Hanson in, and at that time, that was my first

introduction to Eric and I loved him right from the get go. He came in and he's like ... we were using 3D Studio Max at the time. And he goes-

Chris Nichols   He's like, Maya and NURBS is what he wanted to do, everything.

Alex Nijmeh   He goes, "I need Maya." And so they bought a copy of Maya for him and I'm like, "I want Maya too." Because if this guy is going to be doing stuff, I want to be able to get the hand off. And so he got Maya into our small little studio and he started to teach us NURBS. And people were pulling their hair. They're like, what is NURBS? And it was kind of pretty interesting actually.

Chris Nichols   Yeah. He was still obsessed with NURBS. Obviously NURBS are not necessarily the future, but he was still holding onto them back then.

Alex Nijmeh   He was holding onto it and we were all working in polys and getting into a subD world. He's like, "NURBS dude. That's going to get you there." But we did a lot. He built an entire city out of NURBS.

Chris Nichols   Yeah. I know. That sounds painful to me, but that's cool. That's what Eric did. If that's your tool you worked on, that's cool.

Alex Nijmeh   Yeah. And I did get a lot of the handoff from him as well so we worked really close. Eric was such a ... he was a buddy. You could really like work close with him. He taught me a lot. I would say that Eric not only is he a great artist, but he's a good teacher.

Chris Nichols   He's a good teacher. He's a very good teacher.

Alex Nijmeh   Anyway, I really latched onto ... he was like a mentor, so I really latched on to learning from him and he really gave me a lot of skills. And then like a year later, the company ended up ... 9/11 had happened.

Chris Nichols   It was the .com crash that was happening too, right?

Alex Nijmeh   It was. It was not a great time. The company went to ... they called it hibernation, but they really, they shut it down. And at that point I had just gotten married, I just had my first kid. Baby, just had 'em, and no job. And my wife was going to school, so she wasn't really working. So I was like, "Ah, no." And we'd just bought a house. All in that one year we had done all of this stuff.

Chris Nichols   And this is up in the Bay Area, San Jose, right?

Alex Nijmeh   San Jose area. Right. We were in San Francisco and I bought a house in San Jose. So I was living in San Jose with no job. So I started trying to get freelance work. As I was doing that, Eric Hanson goes, "Hey, if you're

available, I've got some work if you want to help me do some architectural modeling." "Yeah, totally." So he started giving me a bunch of work and he actually fed me for that year. We were doing stuff for ... there was a TV pilot that was just starting up called *NYPD 2000* or something like that. And so we had to build a whole city. So he just started giving me concept drawings of buildings and stuff like that. And I just modeled it. I just modeled a ton of it and we just put this whole city together.

Building "The Day After Tomorrow"

Alex Nijmeh   And then I was just doing a bunch of other stuff with him as well. And right about that time he goes, "Hey, I'm back over at Digital Domain working on this movie, *The Day After Tomorrow*. We're doing all this architectural modeling." He goes, "You'd be perfect." And I'm like, "Ah, Hollywood? Movies?" I had no idea what to expect. And that was when he set up an interview for me to fly over and visit. We baptized my kid and I got on a plane and I flew and I interviewed and I interviewed with-

Chris Nichols   Andy Waisler.

Alex Nijmeh   Andy Waisler, Melanie. I think Eric was there as well.

Chris Nichols   And then I think, wasn't it ... what's his name? Proctor? No. What was the name? There was a manager. I had the same interview. I might've been right after you, very similar and it was great. It was great. So I think you and I were hired on the same day because Eric told me the same thing. He was like, I was working at Gensler and he goes, "I'm about to build all of New York for this movie called *The Day After Tomorrow*. We need people who know about architecture to bang out buildings." And then you and I were hired on that and we didn't know if we were good or not. That's the thing that I think was interesting.

Alex Nijmeh   I had no idea.

Chris Nichols   We had no idea. It's like well this is our first movie. We had no idea. So we constantly ... I know that I felt very insecure and I was like, am I doing a good job? I don't know if I'm doing a good job. I'm working for Digital Domain. Holy crap. I don't know what I'm doing. And then I'm like, ah, I don't know. It turns out that you and I were kicking ass.

Alex Nijmeh   We didn't know.

Chris Nichols	We didn't know. We were operating like three times faster than anyone else because we were so insecure and we were building like ... People were making one building every two or three days. We were like, three buildings a day.
Alex Nijmeh	We are rolling out blocks. It was so funny because we went through the same training. It was like we're going through all this training and I finally got back to my desk and, I can't remember who the coordinator was, he came over and gave me a green folder and goes, "Hey, do you think you'll have something to show by noon?" I go, "No."
Chris Nichols	I just got here.
Alex Nijmeh	I don't even know what I'm doing. But-
Chris Nichols	It was just for walkthroughs or something.
Alex Nijmeh	Or something. And then, Andy Waisler comes into the office and Eric Hanson is sitting right there and Melanie and Dan Fowler.
Chris Nichols	Dan Fowler, yeah.
Alex Nijmeh	Oh my God. Dan Fowler, I love him. Anyway-
Chris Nichols	He's a big virtual production guy now.
Alex Nijmeh	Is he really?
Chris Nichols	Yeah.
Alex Nijmeh	Oh man. I miss him.
Chris Nichols	I got to actually ... good reminder. I should get in touch with Dan and get him on the podcast. Anyway, go ahead. Keep going.
Alex Nijmeh	Andy Waisler walks in, right?
Chris Nichols	Who's an ex-architect.
Alex Nijmeh	Yes.
Chris Nichols	He's back to being an architect by the way.
Alex Nijmeh	Is he really?
Chris Nichols	Yeah.

Alex Nijmeh   Oh my God, this guy was amazing.

Chris Nichols   Yeah, he's great.

Alex Nijmeh   He walks over any hands this thing to Eric, and he goes, "Hey, I need to get the library modeled. Do you know anybody that can model that?" And I don't even know what he's talking about. I haven't even seen a script or anything. And-

Chris Nichols   Right. But it's the New York Public Library. It's a major part of the plot. It's a central part of the plot of the movie.

Alex Nijmeh   I don't even know what the movie is about. He goes, "Oh yeah, Alex can model that." And he goes, "Well, how long do you think it'll take?" And Eric goes, "I don't know." He looks at me and he goes, "What do you think? A week?" And they go, "I'm just going to trust anything that Eric says right now because-

Chris Nichols   Because he's sure.

Alex Nijmeh   Yeah. And I go-

Chris Nichols   Listen, you're talking about a guy who basically said, I know 3D Studio and I've never actually seen the program. So yes, I would imagine you said, "Sure."

Alex Nijmeh   Yeah, it's exactly what I said. I said, "Sure." So he goes, "Okay." So then he gives it to me-

Chris Nichols   How much Maya experience did you have at this point? I guess enough through Eric. Right?

Alex Nijmeh   My Maya experience was only through Eric and then from all the side projects that we had worked together. That's where I had done all my-

Chris Nichols   Were you still doing stuff in NURBS or did you move to polys at this point?

Alex Nijmeh   I was doing polys.

Chris Nichols   Okay, good. All right.

Alex Nijmeh   When Eric left NURBS, I went away. But NURBS was an interesting thing. I did enjoy it and I'm glad I know it.

Chris Nichols   Just so that people know, literally Eric would model buildings with NURBS and if people know anything about this, they would just be like, what?

Alex Nijmeh   Even at DD.

Chris Nichols   Even at DD.

Alex Nijmeh   He was doing some stuff like that. So they hand me this folder, and then they give me the script.

Chris Nichols   Oh, right. You had to read a script, yeah.

Alex Nijmeh   And I read the script and I go-

Chris Nichols   It's the first time you've read a script, right?

Alex Nijmeh   It's the first time I've read a script and there was a lot of stuff happening around that library.

Chris Nichols   Yeah, it's a central part of the movie.

Alex Nijmeh   Anxiety just started coming. I'm like, holy crap. And I look over at Eric and I go, "Did we agree on a week?" And he goes, "You can do it, you can do it." I go, "Okay." And then all of a sudden all these folders start ... I mean, not folders, all these photos-

Chris Nichols   Yeah, photo reference.

Alex Nijmeh   Photo references start coming in. Aerial shots, they had flown over in New York and they were just like-

Chris Nichols   Wilkoff did a bunch of those things.

Alex Nijmeh   Wilkoff, yeah, that's right. And I'm like, "Oh my God. Okay." So I started modeling it, but I started modeling it in modular pieces, I just attacked pieces and I built everything together and Charles Abou Aad comes over. This is my first introduction to Charles. I'm working on the model. I'm so focused and all of a sudden his face lines up and almost cheek to cheek with me. And he goes, "You better model the shit out of that. That's like the hero building." And I go, "Oh my God." So there's no pressure. And we got it done. We got it done. I think it was just over ... it was under two weeks. We had got it done and it got to the point where they brought legal in. And then so legal comes in and they start looking at it. They go, "That's too close."

Chris Nichols   Oh, right. Because it couldn't look exactly like the library.

Alex Nijmeh   It didn't actually have complete, like they-

Chris Nichols	They didn't get all permission, and they didn't even call it the New York library. They called it something else.
Alex Nijmeh	Manhattan library.
Chris Nichols	Yeah, it's pretty close, but not, yeah.
Alex Nijmeh	Yeah. So they're like, we need to change that and like, "Oh man, I'm glad I modeled everything in modules." So I need some changes and I replaced the lions with other things and-
Chris Nichols	Ostriches or something.
Alex Nijmeh	That's what I wanted. So anyway, we got through approvals and we got it all done. And then right around that time, Esdras, you remember Esdras?
Chris Nichols	Yeah, of course.
Alex Nijmeh	He comes to me and he goes, "We need to build roof equipment." I'm like, "What?" So they developed this thing called the-
Chris Nichols	The roof kits.
Alex Nijmeh	Roof bot.
Chris Nichols	Roof bot. That's right. Yup. Because basically there's so many aerial shots in New York and then, we had all these buildings, but all these buildings have got this mechanical crap on top of them.
Alex Nijmeh	That's right.
Chris Nichols	So air conditionings, water towers, ladders-
Alex Nijmeh	AC units, everything.
Chris Nichols	AC units, random shacks, barrels, whatever. And so you created a system of just dumping all this stuff onto that.
Alex Nijmeh	Yeah. So we created these trays, these roof trays that fit the different arrangements of building tops. And then I just started creating like, here's some straight pipes, quarter pipes-
Chris Nichols	Yeah, I remember that.
Alex Nijmeh	... all this stuff. And even to the point where it had the things that secure all the piping and the doors and the ACs. And so we created this whole kit.

And so I grabbed some of those kits and I started putting them on the library to fit the library. And then at right around that time, I think Karen Goulekas came in and they're like, "Hey, we need to set up a turntable on your library and take that," that was my very first daily session. And I was like, I don't even know how to make an animation or-

Chris Nichols	Render. Well, you knew how to render, but you just didn't know how to go through the pipeline, right? To get it on the farm and all that stuff. Yep.
Alex Nijmeh	I had no idea. And I think Cody helped me with that.
Chris Nichols	Right. Cody Harrington.
Alex Nijmeh	Mm-hmm (affirmative).
Chris Nichols	Right.
Alex Nijmeh	I roomed with him before I started at DD. He showed me how to do that and we kicked it off and we submitted it and I was sitting in there, and Karen's got a presence, right? And so we're sitting there and my turntable comes up and it starts turning. It goes around and it's like a fly through. Cody was like, "No, we've got to make this thing dynamic, man. Let's not just do a turntable. Let's start with the camera here and let's fly around." So he just wanted to have all this fun with it. So we did it and we show it and it's like, oh, cool. I'm like, "Oh, that looks really cool." Silent, nothing. I'm like, ah. Then she goes, "Who modeled that?" I'm like, "Oh my God, I did." She goes, "Okay, it's great. You bought yourself another week." I'm like, "Oh my God, this is what it's going to be like every week."
Chris Nichols	Oh my God, yeah.
Alex Nijmeh	I think what I really appreciate about that place is, there's such a support group there. It is such a team environment, but at the same time, I felt like I was learning stuff every single day.
Chris Nichols	I remember, and it was one of my first couple of weeks there and it was a similar experience to what you just talked about, and I forgot what I was doing. I think it was something ... I might've been-
Alex Nijmeh	Is it the Capital Building?
Chris Nichols	No, I think it might've been-
Alex Nijmeh	Or Tower Records? No?
Chris Nichols	It might have been Tower Records or it might've been the Hollywood sign or something. It was funny because I modeled the crap out of that

Hollywood sign. It was just such a small part of the movie. I had every rivet, every wrinkle, and every corrugated piece of metal. It was so ridiculous.

Alex Nijmeh   Oh, I remember this.

Chris Nichols   But the Hollywood sign is really simple to model. So I did it in like two days. I had a budget of a week to do it, so I pretty much did it in like a half a day. And then I spent the next day and a half just going to town on it. Anyways, Andy Waisler said, "Well, let's do this." And I said, "I don't know how to do that." And he goes, "Neither do I, but between the two of us, we'll figure it out." And I was like, "Oh, okay." So I felt like it was on that insecurity, but then he was like, "Man, don't worry about it. We'll figure it out." So yeah, it was a really great support group for sure. And it was great. It was a lot of fun. And it was also very casual too, right?

Alex Nijmeh   Super casual. I felt like I was in college. Right?

Chris Nichols   Definitely.

Alex Nijmeh   I do remember, now that you bring up signs, you worked on this one sign and I can't remember, it was ... who was it? It was the-

Chris Nichols   It was Angelique.

Alex Nijmeh   Yeah.

Chris Nichols   But the story is that we didn't have the rights to do it yet. We were going to get it, they didn't have it. So it was a building with a billboard on top where the billboard gets blown off by a tornado and kills the reporter. I modeled the building and I modeled the billboard. So as a joke we made, we put something on the billboard and we found one of those, took a picture, because I was taking photo reference of billboards. We took a picture of billboards and one of them was like, "Injured at work accidentally? Call 1800 lawyer." Or something like that. So I took that and then we Photoshopped out the lawyer and put my face on top of the lawyer just because it was goofy. And so, for a long time during dailies, the reporter was getting hit by my face going, "Injured at work?"

Alex Nijmeh   So funny.

Chris Nichols   So stupid.

Alex Nijmeh   It was so awesome. Yeah, it was good.

Chris Nichols   It eventually got replaced with Angelique. But anyway, it was pretty funny.

Alex Nijmeh   Yeah, we had a lot of things like that. One of the other interesting things was, at some point Roland Emmerich was like, there's a shot where the tidal wave comes right toward the library. It's just coming down and it's going to crash in. And he decided, let's remove this building from the footage and let's put a building in construction there. That would be nice. It's like, okay. So I'm doing it and I'm modeling this building and he goes, "Oh, I want it to be completely under construction, the top eight floors and the below, I want some structure." So I was like, I'm building this thing and of course Eric was our architect as well. And Eric goes, and I'm building it and it's got some glass and I'm trying to make it look all real. And he goes, "Space frames. We need to put space frames in there to support those big ones." And I don't even know what that stuff is and he's teaching me. He was like, "Can you send me all this reference?" I'm like, "Man, you're just putting more work on me."

Chris Nichols   Thanks a lot. I had this thing nailed. Roland is expecting it tomorrow and now you're telling me how to build my building.

Alex Nijmeh   But it looked really good.

Chris Nichols   It did, it did. I remember that. Yeah.

Alex Nijmeh   And it was so cool because this is where I was starting to learn things about physics. So it's like, well, how do I make things look super disorganized? And so I started building I-beams and letting physics drop and they land where they land and so we had a lot of fun. At the end of the day, he didn't even really get to see much of it.

Chris Nichols   Yeah. I remember building that Hollywood sign and then Mel was looking at me and he was like, "All right, now, get up from your desk. Walk back about 15 feet. Now, that's about how you're going to look at it in this movie." I was like, "Oh crap." I had it so modeled, so modeled. And I remember I went into the Capitol records building, Jens Zalzala, because he was a Houdini artist, he said, "Okay, I need you to remodel me some gold records that are flying out of the Capitol Records building." And it was like, it was so much fun. There was a lot of random stuff in that movie. You don't realize how much fun we had.

Alex Nijmeh   It was so good.

Lighting, Nuke and "I, Robot"

Chris Nichols   So much fun. So then you and I moved on to *I, Robot*, which was also a lot of fun.

Alex Nijmeh   Yes.

Chris Nichols   So you and I were there for the first three movies because I did *Day After Tomorrow*, *I, Robot* and then *Stealth*. We were on those for all three of those, right?

Alex Nijmeh   Yup. And *I, Robot* actually was the first time I went into lighting.

Chris Nichols   Yeah. Me too. Even though that's what I really wanted to do.

Alex Nijmeh   Oh yeah, I remember you were-

Chris Nichols   Andy Waisler was actually instrumental at pushing me to go into lighting because that's what I ... I liked modeling, but lighting was really my passion.

Alex Nijmeh   Yeah. I could tell. And so it was like, I've done very simple compositing in Combustion or something, but it's nothing that I couldn't have actually done in Photoshop. It was A over B in some ...

Chris Nichols   Yeah.

Alex Nijmeh   But then I remember, it was the first time I actually got my hands on Nuke and Eric Hanson was like, "Well, this is how you use it." And he gave me a 15-minute quick course and then I'm like, "Okay, I think I get it," and I start creating this graph. I'm putting stuff together.

Chris Nichols   But in those days, Nuke was ... when you opened up Nuke, it was just a blank slate and you started to drop nodes into it.

Alex Nijmeh   Super simple.

Chris Nichols   There was nothing, there was no viewport or anything else. It was just like, yup, we just dropped nodes and then you can open up a viewport after that.

Alex Nijmeh   That's right.

Chris Nichols	It was very different.
Alex Nijmeh	It was so simple.
Chris Nichols	Yeah. I kind of like it.
Alex Nijmeh	Yeah, I did too. I-
Chris Nichols	When I open Nuke now, I actually turn it back to that mode.
Alex Nijmeh	Oh, do you really?
Chris Nichols	Yeah. Because well, I'm nostalgic. It's probably like Eric and his NURBS, you know.
Alex Nijmeh	Yeah.
Chris Nichols	Anyway, go ahead. Go ahead.
Alex Nijmeh	So it was like, I just started to put a structure together and I was trying to piece something together just as I'm learning it. And Rob Nederhorst walked by and Rob goes, "Oh, that looks pretty cool." And Eric Hanson goes, "Dude, he just learned Nuke 15 minutes ago," because like, my charts are super organized. And he goes, "Look at that layout." I'm like, "Oh, okay, cool." But I did not know the rules of compositing at all. There's so many things that I learned in compositing that I knew how to A over B and very simple things. But it was a crash course because now we're working on a film, that's what I'm going to be doing. It was amazing. Every day for me it was like going to school.
Chris Nichols	Yeah. I remember my friend Daniel Buck when he was learning Nuke, he was like, "What the hell?" And he's a very, very good compositer now. But I would look into scripts like, why do you have three unclean multiplies in a row?
Alex Nijmeh	Because I want to make sure-
Chris Nichols	Because I want to really erode that edge. Really, really erode that edge. And like, "It doesn't work that way." You use an erode. Anyway yeah, that was awesome. *I, Robot* was a lot of fun.
Alex Nijmeh	That was a blast.
Chris Nichols	Yeah. It was a great show. It was a great show to work on.
Alex Nijmeh	That's where they moved us into the stage. Right?

Chris Nichols   Yeah. That was the first time we moved to the stage. The stage had first
                       been opened for *Peter Pan*.

Alex Nijmeh   Oh yes. Right.

Chris Nichols   So Hanzi was there and Ricardo. Remember Ricardo?

Alex Nijmeh   Lynn Basas. Was she there too?

Chris Nichols   Yeah, she was there. They all came from the *Peter Pan* team. And so then
                       we basically took over as the *I, Robot* team. And that was literally just
                       coming right off of *The Day After Tomorrow* into *I, Robot* and it was great.
                       It was a lot of fun. Steve Preeg, Andy Jones, Erik Nash was the VFX
                       supervisor-

Alex Nijmeh   Oh, he was great.

Chris Nichols   And he was really great. And Jonathan Egstad was doing that.

Alex Nijmeh   I sat right next to his office. Well, originally I wasn't, but then later I did sit
                       next to him. It was amazing having ... you know who else? Steve Hewitt
                       was ... oh no.

Chris Nichols   John Hewitt.

Alex Nijmeh   John Hewitt, sorry. John Hewitt was doing-

Chris Nichols   He's been on this podcast.

Alex Nijmeh   Okay. He was doing the shader work on the metals.

Chris Nichols   Yeah, the metals and the translucent plastic stuff and all that. And this
                       was before ray tracing also. We should note that.

Alex Nijmeh   Oh, yes. Chris Harvey was like a magician. He did a lot there.

Chris Nichols   Yeah.

Alex Nijmeh   But that show actually was a huge step. We did a lot on that show.

Chris Nichols   Yeah. We did. Because you and I were put into positions of leadership
                       very quickly, even though this was our first movie. Right?

Alex Nijmeh   Yeah.

Chris Nichols	Or our second movie technically, and it was kind of a big deal for us. And that was mainly because DD made those opportunities happen back then, and you didn't have to sit there and wait for 15 years of ranking up to get there. You could like, "No, no, no, let's see how he does." And I think that's exactly because you and I were like, ah. We were going to just go really fast and so it was like, these guys are really ambitious, really ambitious. Really what it was is just low self esteem.
Alex Nijmeh	It was insecurity, right?
Chris Nichols	It was insecurity.
Alex Nijmeh	It's like we were strapped in with insecurity.
Chris Nichols	Yeah. Well, obviously that's changed a lot through the years, but ... okay. So after *Stealth*, I don't want to get too much into this *Stealth* because that show was quite a show. But Rob Cohen was hilarious. A lot of fun to work for, because he was really good.
Alex Nijmeh	He had some of the best one liners too.
Chris Nichols	Oh my gosh. Yeah. We were just talking about how he used to ... Brad Herman, he used to call him Hermimy.
Alex Nijmeh	Hermimy, which I'm sure Brad loved.
Chris Nichols	I'm sure he loved. Well, come on. The director keeps calling you out on his show. It's got to be a lot of fun. That was a lot of fun. But you ended up going to Disney.
Alex Nijmeh	Yeah.
Chris Nichols	So that was your first big step. So now you had really gotten a good, solid grounding at Digital Domain. You'd gotten some experience obviously in different departments and different levels of leadership. And so Disney, how did that actually happen?
Alex Nijmeh	Right about that time there was an opportunity where Disney was looking for artists. And so I was interested but talking back and forth with Digital Domain, I was just trying to look for ... I wanted to get into more of a staff position.
Chris Nichols	Yeah. We were still technically freelance, right.
Alex Nijmeh	We were still freelancing. And back and forth, just couldn't get that to land. So I went ahead and said, okay, I'm just going to go ahead and

interview over at Disney. And it was interesting because as I was trying to set up a reel to show to Disney, I was going through somebody that was making reels that does a lot of reels for Disney and I'd cut my own reel and it had lighting, it had modeling, it had some texture work. I had all kinds of stuff. And then they were like, oh no, you need to pare it to one thing. Because I think at that time a lot of studios weren't looking for generalists.

Chris Nichols   Yeah. Generalist was a bad word back then.

Alex Nijmeh   Right. And so they wanted to be able to place you.

Chris Nichols   Yeah. For recruiters looking at it as like, I don't know where to place this person. Is he a modeler, is he a texturer, lighting? Yeah.

Alex Nijmeh   Yup. So I chose lighting. So I put in for lighting and I ended up getting it after ... it took a while. It took probably almost a month before I got hired. But then when I did, it was right at the end of *Chicken Little*, I was hired for *Meet the Robinsons*. It was really interesting because being live action, we work with plates and you can match to a plate and you have an idea that you're done when you lose your shot. So in this world, it's like everything is built. You're the camera, you're the floor, you're the wall, you're the character, you're everything, there's no plate. So it was a little different. I had to wrap my head around a whole different concept of working.

Alex Nijmeh   But at the same time I had all these ideas moving from what I've learned from Digital Domain, but then you go from one kind of pipeline and workflow and you go into another workflow, nothing always quite fits. So I had to reset myself. I got to think about how we're doing it here now. So I put some of those things away and I just learned that pipeline and started working early on. And it didn't take a long time. What ended up happening, we had three, at that time they were called sequence leads, which are basically like supervisors, lighting supervisors. And I was a lighter, but I did take on a lot. I worked for one lighting supervisor who really gave me a lot of responsibility. He let me do like, "Oh, you define the look for this and do the ..." and so we connected really well.

Chris Nichols   Nice.

Alex Nijmeh   And then from that he actually asked if I could be his lead lighter under him. I was like, that's awesome. So from that I started working under the role where I'm checking in with his team, making sure everybody got what they needed as well as ... I mean, I'm still doing my own shots, but I'm also helping everybody else. And not too long after that they promoted me to a supervisor. And then I felt like I went through three roles on that one show.

Chris Nichols   Oh, seriously. So this was all on the same show?

Alex Nijmeh	This is all on the same show.
Chris Nichols	This is all on *Meet the Robinsons*.
Alex Nijmeh	Yeah.
Chris Nichols	Wow.

Disney acquires Pixar

Alex Nijmeh	So that was a huge kick for me because I got my name and the big card, pop up on the film and it's like, wow, that's really awesome. And then so that was interesting. That was during *Meet the Robinsons* when we acquired Pixar. Disney took Pixar over and that's when we got to meet Ed and John. But that was my experience with *Meet the Robinsons* and from there, I got to work on *Bolt* right after that.
Chris Nichols	Oh, I love *Bolt*.
Alex Nijmeh	Yeah. So I got to work as a lighting supervisor on *Bolt*. And *Bolt* was really interesting. It was a whole different look. This was what was really cool about Disney is like, okay, so we had this one movie that we just wrapped up on and we're going to do another movie-
Chris Nichols	That's going to look completely different.
Alex Nijmeh	Completely different. New technology. We're going to make things look more hand painted, but 3D and it's like, wow, how do you do that? And that's where you really get that respect.
Chris Nichols	That's awesome.
Alex Nijmeh	Technology really is like, it's amazing.
Chris Nichols	Okay. *Bolt* was a great show. I loved that show. If that was happening during your ... so when did *Tangled* come? Was that shortly after ... were you on *Tangled*?
Alex Nijmeh	No. Right around the middle of *Bolt* I had to leave. I had some family stuff that I had to deal with up North. I had to deal with some family things. So I left and I stuck around LA for almost a year before moving up North. And

then when I did get up North, I was asked if I could help the startup company that I worked for early on-

Chris Nichols   The original one, yeah.

Alex Nijmeh   Yeah. They were trying to fire back up-

Chris Nichols   Oh, interesting.

Alex Nijmeh   ... and they were saying, "Hey, could you consult? Are you interested in consulting or doing some stuff?" And I go, "Yeah, okay, yeah, maybe I'll do that." So I started helping out and then eventually I just started working back with them again.

Chris Nichols   I didn't know that. Okay.

Alex Nijmeh   Yeah. So we did that from 2008 to 2012. That was really interesting because I did get to bring a lot of ... like I've learned a lot after going to DD and going to Disney. It's like my skills have gotten a lot better than before. So they at some point they just let me run the department.

Chris Nichols   Interesting.

Alex Nijmeh   And I was involved with making interfaces for users because they were trying to do this online thing. So they were like, okay, we need to get this out there so people can build in these worlds.

Chris Nichols   So were they going back at making their ride stuff or it's completely-

Alex Nijmeh   No, they wanted to make a virtual like ... at that time what was big was *Second Life*. Remember *Second Life*?

Chris Nichols   Yeah.

Alex Nijmeh   So they wanted to do something that was going to be light years ahead of that. They wanted real physics in it. That's the one thing they never dropped was the fidelity, the high-fidelity physics.

Chris Nichols   Interesting. Okay.

Alex Nijmeh   So they wanted to create an experience that felt real and wanted it to look good. But at the same time they still needed to get funding. It was a real competitive space, *Second Life* was kind of dominating it. So we did start to build some things and got it out for people to beta test. It never really made it out in public. It was all like beta testing. It was really great. But the only problem was funding. We couldn't get the funding. Then after that, I think we were getting ready to shut those doors again and I got an email

from Disney saying, "Hey, we're going to start *Frozen* if you're interested in coming back." I'm like-

Chris Nichols	The first one?
Alex Nijmeh	Yeah. The first one. And I go, "Yeah, sure. Okay." But my poor wife, I'm moving her from here to there and here.
Chris Nichols	And you have two kids now.
Alex Nijmeh	Three, I have three boys.
Chris Nichols	Three kids. Oh my God. Jesus. Okay.
Alex Nijmeh	Yeah. So we're all over the place. And then we moved back-
Chris Nichols	How old is your oldest son now? He's gotta be-
Alex Nijmeh	Oh, he's 17.
Chris Nichols	Oh my gosh. Jesus, we've known each other for a long time, because he was an infant when we met.
Alex Nijmeh	That's right. It's a funny story. I took him to Disney back on *Meet the Robinsons*. I think he was five at that time. And at that time, me and the VFX supervisor were doing 2K checks to make sure the final frame was clean. And we're sitting there looking at it, checking it out, and then he looks over at the effects. Looks over and tells Tyler, he goes, "Tyler, come over." We're looking at two shots. He goes, "Which shot do you like better?" And he goes, "I like that one." He goes, "Yeah, me too." Because one had some issues with it. He just wanted to see. So he picks it and Tyler was so thrilled. He's like, "Oh my God, I actually did something." So on the drive home, we're driving, it's almost like nine o'clock at night actually, and we're driving home and he's in the backseat in the infant chair. And he goes, "Dad?" "Yes." "Are we going to work tomorrow?"
Chris Nichols	Oh, nice. Yeah. "I want to be part of that experience."
Alex Nijmeh	Yeah. So that was awesome.
Chris Nichols	Yeah. That's cool. That's really cool. My son goes to work every now and then with my wife, because he'll be sick or there's a day off school or whatever. And my wife sits in a big Flame bay, so he has plenty of space to hang out and do whatever he's doing. But he gets bored. So I remember at one point, my wife's sitting there, she's in a Flame bay, she's working, she's doing her thing. He was like, "Ah, whatever," he's on his computer or his Switch or something, and then after a while he was like, "Ah, boring."

So he just kind of wanders outside in the hallway. And so my wife is not really paying attention but she hears him talking to someone for a long time, out in the hallway. So she goes out to see what he's doing. And apparently he was talking to Christopher Guest.

Alex Nijmeh   That's awesome.

Chris Nichols   He had no idea who Christopher Guest is. This was during the *Pokémon Go* days. And so he's like, "Hey," because when Guest sees this kid, this young kid outside he's like, "What are you doing out here? Are you looking for *Pokémon* or something?" And then he was like, "No." But then he's like, "but did you hear about what happened in New York?" So it's my son. And so he starts having this long conversation about Pokémon with Christopher Guest and he's like, "Ah, oh." And my wife was like, "Oh my God, I'm so sorry." And he goes, "No, that's fine."

Alex Nijmeh   How old is your son?

Chris Nichols   Now he's 10. He was probably about six or seven.

Alex Nijmeh   Oh wow. Okay.

Chris Nichols   Yeah. He had no idea what he was doing.

Alex Nijmeh   But you have two kids, right?

Chris Nichols   I have two kids. Yeah, I have two kids. But I think it's fun when they get to see stuff and be part of it a little bit. It's weird. My kids don't necessarily have an interest in anything I'm doing. That's fine. They're kind of interested a little bit. My wife does similar stuff and so she was working on a ... I'm not going to name the movie, but she was working on a big movie where she was just doing some quick cleanup, Flame cleanup. That happens like last minute. "Oh my God, we missed this one thing." And so she's got to fix it before it goes out to DCP. So she's working on stuff and then the frame comes up where it's very obvious what this movie is. And my son was in a room and she goes, "Do not say a word. Don't tell anyone at school, don't do anything. Don't say anything about what you just saw. This is a family secret so we take this to the grave." He's like, "What about when the movie comes out?" "Well, when the movie comes out, you can say, but don't say anything else."

Alex Nijmeh   That's hilarious. My kids are so different. My oldest 17, Tyler, he's a software engineer. He writes.

Chris Nichols   Oh really?

Alex Nijmeh	Oh yeah. Actually, he likes to buy Android phones. We bought him this $200 phone and he rewrote the kernel because he wanted it to be faster and more efficient. And he rewrote it, because it's Linux basically, and he sent it back and the company's like, that's amazing. 40% improvement in speed, but he's really into that. And then my youngest, completely the opposite. He's 11 and he's pulling green screens. He's doing his own music.
Chris Nichols	Interesting.
Alex Nijmeh	He's doing nonlinear editing. He's like Premiere Pro, he's teaching himself After Effects. He's totally the other spectrum.
Chris Nichols	Interesting.
Alex Nijmeh	And then Ethan is right in the middle and he's so sharp with it, but we don't know what he's ... we're like, he's going to be like a lawyer or something because he's just so quick, but he doesn't know what he wants to do yet. So it ranges.
Chris Nichols	Yeah, it's interesting. I remember Tyler, it was so fun. I can't imagine seeing him as a grownup now. It's going to be amazing.
Alex Nijmeh	He's as tall as you.
Chris Nichols	I bet. I guess that's so cool. That's so cool. All right, so you end up back at Disney, you're working on *Frozen*. Can you say what you were doing on *Frozen*?
Alex Nijmeh	Oh yeah, I was a lighting on *Frozen*. Lighting on *Frozen* and that was amazing. At that point, the dynamic, Disney has always been pretty amazing as a group, as a team. But on *Frozen*, it was an ambitious film. There was a lot there, but you never felt it. It just was like a super fun film to work on.
Chris Nichols	Nice.
Alex Nijmeh	So you just got a bunch of stuff done and you didn't realize you got a bunch of stuff done because you're having a good time. So it was one of those.
Chris Nichols	Yeah. That's cool. But you've stuck there ever since. You've worked on several things.
Alex Nijmeh	Oh yeah, I have. I worked on *Frozen* and then I went on to be a lighting supervisor on *Zootopia*.

Chris Nichols   Oh, I love *Zootopia*.

Alex Nijmeh   Actually, *Zootopia* was really interesting because we're always doing research on everything we do. And so at that time, we're figuring out how we are going to light fur. So we went through this whole investigation on fur and we rewrote the hair shader to work with it. But what was cool about fur was, okay, we're going to make these animals. So I started thinking, well you know what, maybe just to help out with the R&D, I actually took a swatch of a pelt of fur of a fox they had and I started counting like-

Chris Nichols   No you didn't.

Alex Nijmeh   Yes I did a two-by-three millimeter swatch-

Chris Nichols   To see how many hairs are in there?

Alex Nijmeh   Yeah. And then I recorded like-

Chris Nichols   This information is online. You didn't need to count the furs.

Alex Nijmeh   Come on now. We counted them.

Chris Nichols   Yeah, I bet you did.

Alex Nijmeh   So we counted them. But then we also identified within that swatch how many were like-

Chris Nichols   The long furs and the short furs.

Alex Nijmeh   The long ones and the short furs. So we counted that.

Chris Nichols   The densest fur ... I do know this information, I don't know why. The densest fur is actually chinchillas. No, no. Sea otters.

Alex Nijmeh   Otters do have-

Chris Nichols   Sea otters do have such dense fur that they don't actually get wet. Their fur gets wet but their actual skin never gets wet.

Alex Nijmeh   That's interesting. We went through the whole reconstruction. I actually modeled fur, with the core and everything, and I tried to put all the displacement, I sculpted it just so as we shined light through it, we wanted to see how it behaved and we then tried to rebuild that in Maya and tried to replicate it. It was so fun. These are the kinds of things that I really loved to do there.

Chris Nichols   I remember at DD, you used to do a lot of where it's like, I've got this weird idea of this ... I remember the dome light that we did together, I'm not going to mention what we called it, but it was hilarious.

Alex Nijmeh   But that became my nickname.

Chris Nichols   Yes it did, it became your nickname. I think Mel called you that for a long time.

Alex Nijmeh   Yes. It was all based on, as I was explaining, I was drawing it on the white board. And I didn't realize it until she said it and I go, oh yeah.

Chris Nichols   Yeah. Sorry, that's going to have to remain an inside joke.

Alex Nijmeh   That is not leaving this podcast.

Chris Nichols   But yeah, it was really fun. But yeah, you used to love to experiment. That's why I can totally imagine you counting fox furs.

Alex Nijmeh   I wanted to do more, but they were like, that's enough.

Chris Nichols   That's enough. "But we only know this two-millimeter sample!" It was like, that's good enough.

Alex Nijmeh   I know. And also after *Zootopia*, I got to work on ... they rewrote their whole volume system. So I got to help investigate that kind of workflow where we-

Chris Nichols   So volume rendering and stuff like that.

Alex Nijmeh   Yeah. So we wanted to be able to render clouds.

Chris Nichols   Right. This wasn't with Hyperion yet, was it?

Alex Nijmeh   Yes.

Chris Nichols   It was with Hyperion.

Alex Nijmeh   Yes. And what we did is, I ended up sculpting a cloud based on some photo ref and actually that cloud is now available for everybody to download.

Chris Nichols   Oh, it's the open source cloud that's from *Moana*?

Alex Nijmeh   Yeah.

Chris Nichols	Oh, there you go. So that's your cloud?
Alex Nijmeh	Yeah. So I sculpted that-
Chris Nichols	There you go guys, if you're rendering that cloud from *Moana*, this is Alex's cloud. Nice. It's a famous piece of open source data. That's great.
Alex Nijmeh	Yeah. So we really, we based on that investigation, they rewrote that whole volume system. I mean, it looks amazing.

Alex's role at Disney

Chris Nichols	Yeah. That's really cool. That's really cool. Okay. So you are now doing sort of a little more upper level stuff at Disney these days, right?
Alex Nijmeh	Yes.
Chris Nichols	I know you can't necessarily talk too much in detail, but can you give a broad idea of what you're doing a little bit?
Alex Nijmeh	Yeah, it's basically a ... what we're doing is, there's a small group of us, it's like four of us that are looking to the next four or five years. And even further, but it's more about how we want to work in the future, how we want to optimize our workflow to be able to handle things like feature size films, but at the same time be able to handle all this different other content that we're doing, but to do it in a way that's effective and efficient. And so that's how we're looking at it. We're looking at the new technologies and just thinking about, what does it mean for us to work in the future?
Chris Nichols	Well, that sounds very much like something you'd be very, very good at. And that's fun. I mean, you're basically not doing show production that much anymore, I'm assuming.
Alex Nijmeh	No, I'm still very involved with it, because I-
Chris Nichols	Yeah. Because you have to practice what you preach in a sense, right?
Alex Nijmeh	Exactly, yes.

Chris Nichols   Okay. Well that's really cool. Do you have any ideas about how things are going to change in the future? What would you tell people like, "Hey, watch out for this stuff. This is going to change the way you can look at..."

Alex Nijmeh   Well, just in general like-

Chris Nichols   Yeah, sure.

Alex Nijmeh   ... things in the future? I feel like in the future just in general, not really necessarily anything to do with Disney because we're not talking about this, but I do see at some point in the future, I think virtual computers are going to be a real thing because I just see the amount of resources and space, and it just takes a lot to sustain that.

Chris Nichols   So you really believe that like the 5G and edge computing and cloud computing is like-

Alex Nijmeh   I think at some point in the future, I can see those things being ... there's always the issue of security and things like that that happened, but-

Chris Nichols   Yeah, but they're pretty secure these days.

Alex Nijmeh   Yeah. But I always follow up on that and always read that. I think it's very interesting. But I could definitely see benefits in it.

Chris Nichols   That's interesting. I agree. I'm glad you said that because I agree. I think there is going to be a future where basically you order up the computer you need for the moment. I'm not going to sit there and have a very expensive computer that spends most of its time not doing anything. So ordering up that computer and doing that would be a very interesting thing as well.

Alex Nijmeh   Yeah. And this last SIGGRAPH-

Chris Nichols   Yeah, where I ran into.

Alex Nijmeh   They were talking a lot about that. And it makes a lot of sense. There's still people who are really apprehensive about it, but just hearing what they're talking about, I just think about how much air conditioning that you have to have in your physical space and just thinking about, well, like you just said right now, it's like, oh, I could have any software I want plugged into these machines and I don't have to maintain it.

Chris Nichols   Well, you pay as you go.

Alex Nijmeh   You pay as you go. That's the beauty. It's like, you don't own it.

Chris Nichols | Yeah, exactly. I agree. I agree. All right, well, I know it's hard for you to talk about some of this stuff. Obviously you're at the cutting edge of stuff going on at Disney, which is awesome and I'm very happy and proud of you honestly because it's been ... you and I, I'm just remembering back to those early days where you and I were trying to figure this shit out.

Alex Nijmeh | Those are some of my fondest memories actually. I think that's what you remember the most. It's like, that's when we were figuring stuff out.

Chris Nichols | Yeah. It was a lot of fun. So I'm really glad you were able to come on and we're able to talk about some of this stuff and give people an insight. Because it was, it was the early days of us being at the company and I think you and I were like, I don't know. Are we doing a good job? And having that insecurity I think really propelled us in a lot of ways.

Alex Nijmeh | It did. Actually my first trip to LA to interview, I don't know what your experience was, because I'd never been to LA before. And I was thinking, "Oh man, palm trees and it's just going to be like Beverly Hills everywhere."

Chris Nichols | It's really rinky dinky.

Alex Nijmeh | I'm driving and I've got my Thomas Guide and I pulled down the street and I drive by and there's this building and it's barbwire everywhere and there's broken windows. It's gray. And I'm like, oh, it must be like a ... really, I thought it was a juvenile hall or prison or facility. So I drive around the block like three times and my third time going around the block, I'm like, where is this place? Stanley, this big, strong guy walks out and puts his hand out and tells me to stop. And I go, "Yeah," and he goes, "Are you looking for Digital Domain?" I go, "Yeah." And he goes, "It's here. This is it." And I go, "Oh my God, what am I doing?"

Chris Nichols | I know. I remember another story that this was when we were working at DD and we were there, we were walking back from lunch and we were right by DD when it was like you said, it just looked like a war zone. But we liked it that way.

Alex Nijmeh | Yeah, it was good.

Chris Nichols | And so there was a homeless guy walking down with a ... you said he had a shopping cart with his entire house inside of it. And he's looking at you, I believe you said it was at you. And he says, "What is this place?" He goes, "This is Digital Domain. It's a visual effects facility to make big movies and stuff." And then he looks at it and he goes, "What a dump." And this homeless guy walking by, like, what a dump.

Alex Nijmeh | I know. He actually started walking faster.

Chris Nichols   Yeah. I think my first experience when I interviewed there, because I knew where it was because I lived in Los Angeles and I walked in there and my interview was with Andy Waisler and Mel. And Mel did not want to hire me. And-

Alex Nijmeh   Really?

Chris Nichols   Yes. And it wasn't until after-

Alex Nijmeh   She loved you.

Chris Nichols   I know. And it was until after we wrapped on *The Day After Tomorrow* that Andy Waisler said, we were having beers at the Firehouse, and we were like, "yay, now Mel and I are hugging and everything. Everything is great." And Andy says, "You know Mel didn't want to hire you." And she's like, "Shut up." And he's like, "Yup, she said you didn't have enough experience. I was like, 'Let's give him a chance. Let's give him a chance. He's an architect. Maybe he can figure out how to do the buildings.'" And so she goes, "Yeah," it was pretty funny.

Alex Nijmeh   She was wicked good.

Chris Nichols   She was really good.

Alex Nijmeh   She was.

Chris Nichols   Yeah. She's great. I think she's going back every now and then to DD as a modeling supervisor there again.

Alex Nijmeh   Oh, really?

Chris Nichols   Yeah, she took a lot of time off. You remember Josh, her husband?

Alex Nijmeh   Josh Scherr.

Chris Nichols   He's at Naughty Dog. Josh Scherr. Yeah. He's a big director at Naughty Dog.

Alex Nijmeh   Is he still there?

Chris Nichols   Yeah, he directed *Uncharted 4* and I think he's directing *Last Of Us* too.

Alex Nijmeh   Wow.

Chris Nichols   Yeah, he's a big shot at Naughty Dog.

Alex Nijmeh	Yeah, he's been there a long time.
Chris Nichols	Yeah. And he's been on his podcast too. He's great. I love him. Really cool guy.
Alex Nijmeh	Okay. Do you remember Alan? I don't remember his last name. He wrote Voxel.
Chris Nichols	Oh, crap. Alan. Yeah, he wrote Voxel B, which was called Voxel Bitch.
Alex Nijmeh	That's right, yeah.
Chris Nichols	But, Alan, I can't remember his last name. I don't know what he's up to.
Alex Nijmeh	I don't know. But I-
Chris Nichols	I think he moved back to Canada. He's Canadian originally.
Alex Nijmeh	Yeah. I heard a story where he did really well because he wrote a fish tank screensaver.
Chris Nichols	Yes he did. Yeah, he decided he was going to retire by writing a fish tank screensaver and sell it in-
Alex Nijmeh	Kapler.
Chris Nichols	Alan Kapler. Thank you. Yes, there you go. There you go.
Alex Nijmeh	He was, I thought was one of the most ... he was so funny, charismatic. He's the young guy, right?
Chris Nichols	Yeah.
Alex Nijmeh	He was a young guy who was smart as hell.
Chris Nichols	I remember it was Cody Harrington and I and Allen would go boogie boarding at lunch.
Alex Nijmeh	Oh, how fun. Oh, that's right. Yeah, you guys did have your wetsuits.
Chris Nichols	Yeah. We didn't even have wetsuits. We were just crazy. Basically just a swimsuit and it was cold too. And I remember what we'd do is, because I would just have my swimsuit on and a towel and a boogie board and were like walking out of Digital Domain and I would have like $20 and I had one pocket in my swimsuit and I would just keep it in my swimsuit and go swimming. And then we'd get a burrito and I'd use my wet $20 bill to pay

for my burrito. And the people hated me. It was like, "What is this!?" But then you walk back into work ... think about it guys. You have a job where you go back to work in a swimsuit.

Alex Nijmeh   I know everybody had a surfboard.

Chris Nichols   Yeah. It was like a frat house. It was really, it was like a frat house. Yeah. It was great.

Alex Nijmeh   Yeah. There were some really talented people. I'm trying to remember his name. I think he was Scottish.

Chris Nichols   Oh, Rory McLeish.

Alex Nijmeh   Yes. Rory, and I remember where we're sitting in stage doing *I, Robot*. It was late at night. We were all working probably overtime and he just pulled out his electric guitar.

Chris Nichols   Oh, he's such a good guitarist.

Alex Nijmeh   Oh my God. It was like having Van Halen in there. It was amazing. There was some super wicked talented people.

Chris Nichols   He and I were on *Stealth* together. He was on my team on *Stealth* or might have been *I, Robot*. He had a very thick Scottish accent.

Alex Nijmeh   Yes.

Chris Nichols   He would say, "Chris, could you come over here and check up the specular in my shot?" It's like, your specular on your shot, yes, I'll be right there.

Alex Nijmeh   That's awesome.

Chris Nichols   Yeah, he's a great guy. I love Rory. Love Rory. I still am friends with him on Facebook. He's back in Scotland.

Alex Nijmeh   Is he?

Chris Nichols   Yeah.

Alex Nijmeh   And just to call out a couple, *I, Robot*, I remember you and I had two super challenging sequences. If I remember, I might have it wrong. You had an HQ sequence, right?

Chris Nichols   A headquarters sequence. Yeah. Where all the robots were invading the door. Yes.

Alex Nijmeh   That's right, and they all busted in. And then I had the factory floor sequence.

Chris Nichols   Oh right. The factory floor, the FF sequence.

Alex Nijmeh   The FF sequence. And I remember that we had a lot of work ahead of us on those, but on the factory floor, we had to render 1,001 robots. So Esdras came up with this idea.

Chris Nichols   Turned out 1,001 didn't look like enough robots.

Alex Nijmeh   I know they wanted more.

Chris Nichols   So we said it was 1,001, but really it was like 3000.

Alex Nijmeh   Yeah. And so we couldn't render it, we just couldn't hear it. And so Esdras was like, "Let's do a pan and tile in Nuke," and this is where you really respect Nuke where they have their 3D engine. So what we had to do is we had to take groups of robots, and start placing them under different positions from the camera. But so I had like 20 groups of robots I had to render just to get their angles so I can use the pan. And I remember when we tried to kick those off, the studio said, "Nobody works Saturday, we need the farm. RenderMan." We could not render all of those at one time. So we had to batch them in these groups and it took the weekend.

Chris Nichols   Just took over the whole farm.

Alex Nijmeh   Yeah.

Chris Nichols   Yeah. That happens. I had my last shot on a *Ghost Rider*. They decided to turn on ray tracing because it was the only way it's going to look correct. And this was back in RenderMan early days when that was an extremely expensive thing. It took one week to render my shot.

Alex Nijmeh   Wow.

Chris Nichols   I mean, they didn't put everything on it, but they're like, this is how much we can allocate for the shot in terms of ... and it was my last shot I had to work on, so I basically sat on a desk and did nothing. Just looked at the farm all day long.

Alex Nijmeh   Why was it so heavy? What made it?

Chris Nichols   It was the ray tracing. Basically it was the transformation of the bike. It was the first time he puts his hand on a bike and it transforms into the *Ghost Rider* bike, but it had to look very shiny and chromey and so

reflection inclusion wasn't working. They had to do real ray tracing. And so that's what happened.

Alex Nijmeh	Brute force. Yup.
Chris Nichols	Yeah. And so I think it was something like 20 hours a frame at the time. It was something stupid. But I mean, nowadays it's like, yeah.
Alex Nijmeh	You remember like on *The Day After Tomorrow* where they had that big helicopter shot over the city?
Chris Nichols	Yeah.
Alex Nijmeh	And they tried to render occlusion on the buildings. RenderMan just couldn't do it at that time. So that's where that light ray came in when we were working, right?
Chris Nichols	Yeah, I remember, the dome. Yeah.
Alex Nijmeh	Yeah. And we just did all the shadow maps.
Chris Nichols	Yup. All right, dude. It's been well over an hour. We've had a great time reminiscing about some of the good stuff.
Alex Nijmeh	Oh my gosh, really?
Chris Nichols	Yeah. But I really appreciate you coming by and getting people to hear some of the cool stuff that's going on at Disney. And let us know if there's anything you guys want to promote or anything. I'd love to hear about it, but it's awesome having you, man.
Alex Nijmeh	Well, it was great seeing you and thank you for having me.
Chris Nichols	Yeah, thank you.
Alex Nijmeh	Yeah.