Chris Strahl [00:00:00]:
Hi and welcome to the Design Systems podcast. This podcast is about the place where design and development overlap. We talk with experts to get their point of view about trends in design code and how it relates to the world around us. As always, this podcast is brought to you by Knapsack. Check us out at Knapsack Cloud. If you want to get in touch with the show, ask some questions, or generally tell us what you think, go ahead and tweet us at the Dspod. We'd love to hear from you.

Chris Strahl [00:00:21]:
Hey, everybody, welcome to the Design Systems podcast. I'm your host, Chris Strahl. Today I'm here with Shawn. Chris. Shawn is the senior director of design at Adobe. He also manages the Adobe Spectrum design system. So excited to have you on. Saw your post about spectrum two and couldn't wait to talk.

Chris Strahl [00:00:35]:
So glad we're jamming.

Shawn Cheris [00:00:36]:
Great to be here. I'm excited.

Chris Strahl [00:00:38]:
Starting off, talk to me a little bit about spectrum. It's interesting to have you on because spectrum was one of the first things that I looked at when I was first getting into the world of design systems, and I think that's not altogether uncommon. Where those of us in 2016, 2017 that were first starting to get kind of familiar with this stuff, we were all looking for like, who's built this? And there was a blog post that I came across that was about spectrum, and it had a bunch of bubbles, and all those bubbles were like this massive Venn diagram kind of conflaguration of what is a design system. And it shaped a lot of my early thinking on this. So talk to me about where this all comes from.

Shawn Cheris [00:01:16]:
We started in 2013 at Adobe. I started at Adobe in 2008 working on the brand system. So iconography, like the actual logos for products, the brand architecture, splash screens, just sort of all the in product instantiations of brand. And then having managed that for a while, they handed me the icon team. They're like, oh yeah, icons in brand. That's kind of the same thing. Kind of, sort of. And the icon team is a really fascinating subject.

Shawn Cheris [00:01:46]:
I think we have one of the only dedicated icon teams maybe that I've heard of. And Adobe products have a tremendous amount of workflow icons. So just as an example, and sometimes when I give talks, I make people guess how many jelly beans are in the jar, but how many icons are in Photoshop. And I won't make you guess, but people tend to underestimate by a lot. I think there's close to 2000 now, like sort of base metaphors, and those are executed slightly different

for dark mode and light mode. Some metaphors don't translate back and forth quite as easily.

Chris Strahl [00:02:21]:
I would guess about a quarter of that, yeah.

Shawn Cheris [00:02:24]:
And I think there's 800 cursor states, something like that. It's pretty wild. And so that's just Photoshop. So across the whole ecosystem there's tens of thousands of icons. So I was managing the icon team and Adobe had acquired Macromedia right before I started. We were starting to acquire other companies. We're starting to build a lot of new product experiences. And the idea of design systems is not new.

Shawn Cheris [00:02:50]:
It went by different names in the past. The first efforts like I was aware of at Adobe and E were just called like UI library, UI consistency. Like hey, maybe these things should look the same if they come from one company. But I started trying to build a real effort and a brand around it and it was called spectrum, like right from the jump. And the joke is always that the spectrum.org in the beginning was just me and a deck like me at the top and then the deck right below me. It was slow going at first, a lot of just coalition building, really focusing on new products. And we laid quite a bit of ground before you saw the spectrum website, which I think a lot of people have looked at and referenced. We put a tremendous amount of investment in that website, but it's just kind of grown over time.

Shawn Cheris [00:03:37]:
And we've added content strategy as a practice. We've added a really significant engineering footprint and a prototyping team and that has grown quite a lot now. And I think we're doing a little bit of hiring right now. And when we're done and that all nets out, I think we'll be somewhere around 100 and 510 people between all those functions.

Chris Strahl [00:03:57]:
So when you talk about 100 people all working on a design system, what does that actually mean?

Shawn Cheris [00:04:01]:
That comes down to what you think the definition of a design system is, right? Like if you're talking about what I think people would traditionally refer to as a design system, that team is much smaller, perhaps 30, 35 people if you include the engineering footprint right now and the design teams. But having all these functions under one roof. We made the decision last year to just rename the entire organization spectrum. And I don't think this is that really far field a thought. But all those functions that I named brand, icons, illustration, motion, content, design, engineering, prototyping, these are all the functions that you need to really bring a design system to life. Now in a lot of companies those functions can be divvied up between different organizations, either horizontally or vertically, we're really starting to combine more and more of

those things. In fact, recently on the engineering front, we've taken over one of the main web implementations at Adobe, which is the spectrum web components implementation. We're now supporting that in house inside the design system team, and we're hiring about a dozen or so engineers to beef that up.

Shawn Cheris [00:05:09]:
And so I'm really excited about that. I think having the actual implementation as part of the design system team is going to give us a lot more velocity and control and the ability to really add the polish and all that that we want and also make sure that the engineering aspect of it, which is of course, the most important aspect of design systems, is actually building the thing. That stuff will be in our, its cadences and rhythms will be in sync with the design team. And the intent is for there to be no lag whatsoever. When we release any kind of update, it'll be synchronous across both the design side of it and the implementation side, and I'm really excited to be building that out.

Chris Strahl [00:05:51]:
That's interesting, right? This idea of the promised land where it's all this stuff under one roof, and the things that you talked about I think are really interesting, right. Because we at Knapsack, we talk a lot about how the design systems that see the most adoption and are the most successful are the ones that are most affiliated with brand. And the idea about how do you think about a brand system within a design system? A year ago, that was broadly a pretty foreign concept to even really large enterprises. And I think that as you then get into the idea of content, right, there's people that have this notional idea of what content looks like for a design system or what prototyping looks like for a design system, but they don't really have a practice that is actually doing that right now. And I think that what you're talking about, about saying all these things exist together to create this cohesive experience for what the process of taking something that is conceptual and intentional and actually turning into something that's real and tangible and experienced by a user, all of them have a part to play. And that unification probably is going to give you all a lot of efficiency and drive, a lot of not just speed, but like really good product. And I think that that's all what this is in service of. Right? Is that really good product idea?

Shawn Cheris [00:07:04]:
Yeah. Just to look back a little bit, I find it interesting. I'm not as connected to the community as I would like to be always, but the idea that that's a foreign idea even recently is kind of interesting to me. I mean, obviously I came at it from a place of brand, and especially when Adobe, like many companies, moved from selling boxes with software in them to SaaS models and subscription. For users who are asking year after year to keep paying, like the brand is their experience, right? The logo is not the brand, the marketing isn't the brand. That doesn't seem like a terribly modern idea to me. And if you look at companies that are really successful in this idea, like Google's one of the old school ones. It's funny to think of Google as being old school, but when you see Google marketing, often it features elements of the user experience, like the search bar as the entry point into an advertisement.

Shawn Cheris [00:08:05]:
Right? Like the experience is the brand. And we did this really mindfully with spectrum too, like making sure the brand colors and the design system colors are the same and making sure that basic shapes and primitives and those sorts of things are aligned. So there's that sort of natural glide path between marketing context and in product context. But to me, the user experience has always been much more a function of brand than anything else. Maybe that's just because that's where I started and I kind of come at it from that viewpoint, but they seem inextricably linked to me, and to think otherwise seems pretty tough actually to do.

Chris Strahl [00:08:41]:
Yeah, I think you'd be amazed at the prevailing thought that a design system is this thing that serves the ability to more rapidly create product that would otherwise still exist. There is some part of it that is like, okay, is this a shortcut? Is this a vitamin or a painkiller as the old adage goes, right? And I think that there's a lot of organizations that still think of this very much as like a vitamin, right? Like this is something that is going to help me better, faster, stronger kind of idea, where the reality is there is a lot of pain in the expression of brand and digital products, and you can really tell where a design system is brand aligned and where it isn't in the expression of what the content of that design system looks like first and foremost, but then ultimately the products that are created. But when you think about the idea of a world class brand with a world class design system, you can see that expression. Take Airbnb, for example. Another really early entrant into the design systems mean, I'm not to say that they're free of problems there, but at the same time, when you look at that brand expression and the way that they think about design, it's everywhere. Everywhere. And if you think about that in terms of some large legacy, I don't know, insurance company or financial services provider or something like that, it feels a lot more separate where the brand is actually something that is very distinct and independent of that digital experience.

Shawn Cheris [00:10:09]:
That's a great point. During my sort of rounds promoting spectrum two at Adobe, I had this deck that's like, spectrum was created in 2013. Let's remind ourselves what the world looked like in 2013. It's in the article that you were talking about. But it was like, when you look at what Apple looked like and what Airbnb looked like in 2013, it's really instructive of what a sea change there's been in the sort of quality of digital experience. And particularly as it aligns to brand, it's really interesting. Apple was still in its aqua phase. Everything was all wet looking very skumorphic.

Shawn Cheris [00:10:49]:
It was early mean. You know, that's a whole other topic. Like, people are always down on skimorphism, but it's like, well, it's a new platform with a new vernacular, and these things evolve.

Chris Strahl [00:11:01]:

No, it's super funny, right? I think design systems and working in this space has made me so much more aware of trends. Like sitting in my living room with my wife last night, and we were sitting there looking around and my wife's like, I think we need to paint a wall pink because we have these gray walls that were very in vogue, like ten years ago when we bought this house. And then I was like, well, then we have to change the ceiling fan, and then we have to change the couch, and then we have to change everything else around. And by the time we were done with it, we're like, yeah, I mean, we're basically redesigning our house, and not necessarily from the ground up, but the idea was all the design decisions that we made in 2014 when we bought this house aren't really relevant. It all feels and looks dated now. And she's like, is this how when you go into somebody's house that is like 40 years your senior, you're like, how did things ever get to be like this? And you realize that when they bought all those furnishings, it was all cool, and now it's just been 30 years and people haven't thought about a refresh.

Shawn Cheris [00:11:53]:
Well, it's funny because you talk about that idea like it's relegated only to that area or to clothing or to architecture. And designers think that dieterams is just evergreen. And I think we don't readily admit as much as designers that there's an element of fashion to this and that there's no right. One final answer that we get to that's going to be permanent and evergreen and perfectly solved. One of my least favorite tropes in design. When anyone does a redesign of anything, what's the word they use? Modern. What does modern mean? Modern doesn't mean anything. Modern means just arbitrarily different than whatever just happened.

Shawn Cheris [00:12:32]:
And often a repeat of something that happened long ago. It's a wheel and it's always turning. And so there's always an element of fashion and evolution to this stuff. No matter how well you design something, no matter how perfect it is, it's going to be dated. And it'll be dated probably sooner than you think.

Chris Strahl [00:12:48]:
I wonder what my grandma would think of my rattan shoe cabinet I just bought. Anyway, I think that gets back to one of the things I wanted to chat about when I look at spectrum, and I think about my initial impression of spectrum, one of the things that has always stuck out to me is it feels very first principles when you look at it, and you even look at the preview page for Spectrum two, there's all the whiz bang modern animations of everything going on on the screen. And by the way, thank you for having a reduced motion toggle at the upper right. As somebody that really doesn't like a lot of motion in their web pages, but the idea of inclusive and acceptable, crafted with care, the future is built collectively. All these things that represent these foundational ideas of what this design system is all about. I think that's really good modeling for the intentions of what a system like this is designed to do. And when you think about the way that these intentions are reflected in spectrum, what's the first thing that comes to mind to you?

Shawn Cheris [00:13:47]:
Going back to the beginning of it? I think when it comes to design systems, what you're doing is

you're solving a problem. The problem is, first of all, should our stuff all look the same? That's a question. Should it act the same? Are there sub brands? What's the difference between those? But if you start from a base assumption of most design systems, which is like, we need consistency. Consistency, by the way, is an idea that designers think is just universally accepted as valuable, which it is not. Talk to any product manager and they'll probably tell you the exact opposite. Right? Every product wants to be different, wants to do its own thing. Designers like to innovate. People want to be creative.

Shawn Cheris [00:14:24]:
And to the degree that we do need to have consistency, it needs to have principles around it. Otherwise, it's just like your opinion, man, right? And especially when you're trying to get one off the ground where one isn't established, which I think nowadays it's more accepted, like, oh, yeah, we're building product. We need a design system. But that wasn't always the case. You had to sell it as a thing worth investing in at the expense of other things, including product agility in some cases. And so if you're going to do that, then I think you need to ground it in principles that explain why you're doing it and to help future collaborators understand how to add to it. Right. When we were starting with spectrum, it was like, well, what are our principles? What is Adobe software? Well, most of it is about users creating or viewing content.

Shawn Cheris [00:15:12]:
Okay, so content is king. Content should be a first class citizen. Well, if content is a first class citizen, then something needs to be de emphasized. And the thing that should be de emphasized is the user experience, the actual UI. And I think we overshot the mark a little bit. We were being very deed of rams about it, but our principle was like, okay, let's just keep taking stuff out until it breaks. Make it as minimal as possible, as flat as possible, as gray and invisible as possible, so that users can focus on the content at the time. Going back to the word modern, I'm throwing scare quotes up.

Shawn Cheris [00:15:50]:
It was modern to be flat, because going back to, like, apple and the aqua phase in 2013 was like drop shadows, sku, morphism, 3d iconography. Everything was like puffy or wet or both. And so we were trying to appeal to people who were designers by trade for the most part, or at least artistic people. And so we wanted it also from an aesthetic point of view, from a fashion standpoint, to be differentiated from other stuff in the market, and to be like very flat and minimal and professional and severe. That's one of the principles. But the other ones were just being helpful, being out of the way, being respectful of our users attention and time. And those principles help, again, future collaborators understand, sort of from a first principle standpoint, where we're coming from.

Chris Strahl [00:16:38]:
So when we dive into spectrum two, what is the most distinct difference between what had come before and what now exists within the new system? Because this is, and forgive me if I'm wrong on this, this is still in preview. It's something that is not fully necessarily out in the wild yet,

but it's something that is largely preparatory for this big change that's going to happen. What is the foundational thesis of that change?

Shawn Cheris [00:17:03]:
Well, I mean, a lot has changed in design systems and user experiences in the last 1112 years now. And a lot has changed at Adobe. Adobe's main focus at the time when spectrum was being brought to life was creative pros. That's an audience that we still obviously serve and that's very important to us. But Adobe has expanded quite a bit. When I started, it was just after the macromedia merger, we had maybe a couple of dozen products and mostly were in the creative space. And then we acquired omniture and a bunch of other companies in the sort of digital marketing, analytics kind of space. And that's turned into what is now experience cloud.

Shawn Cheris [00:17:49]:
Acrobat became document cloud, which is a much larger set of offerings that has our biggest monthly active user base of all of our offerings, gets in the hundreds of millions. And then recently we've started expanding into other markets with Adobe Express. Obviously AI is an emerging thing, and so Adobe's audience is a lot different than it used to be. It's not just creative pros, it's a whole bunch of different kinds of people. And the hyper professional, hyper severe, brutalist kind of stuff that we were doing in 2013 that doesn't really appeal visually to some of the audiences that we're trying to reach. And so from a visual standpoint, that's kind of like the main underlying driver of some of the visual changes. But obviously under the hood, there's a lot of other stuff, a big focus on accessibility and equitable design. The reduce motion thing at the top of the page that you mentioned is part of that.

Shawn Cheris [00:18:49]:
Yeah, Adobe is just in a different place and the market's in a different place. And it's been ten years. It's a long time for a design system to stand, I think.

Chris Strahl [00:18:57]:
Yeah, I would say one of the longest in existence. Beyond the changes with spectrum too, what are the impetus of focus? Is it really about just bringing a design system from a point that was rooted in the past to a point that's rooted in the future? Or is it about fundamentally a change in design direction? And you talked about this new organization structure you're focused on. Oftentimes there is this law or statement that the systems that we create often mirror the organizational communication structures. Right. And so when we think about that inside of spectrum as well, is this now a reflection of the new way the organization works?

Shawn Cheris [00:19:37]:
We are really trying to change the model of how we work. I've been bringing in some new leadership, add a different kind of layer to it. Internally, we're collaborating a lot differently. And the goal is not to be trite, but the goal is to bring all those functions I mentioned before together into an organization that's greater than the sum of its parts. I don't think we've had a lot of challenges in collaborating within that or collaborating outside to design broadly or with Adobe,

but there's really a dot of benefits to velocity and cohesiveness when those things are all tightly knit together. And with Spectrum, too. I mean, we started from the beginning. The process in the beginning was we brought together 100 people, 120, something like that, from across the company, and we really went out of our way to make sure that we had representatives there, not only by, you know, designers, engineers, researchers, content people, et cetera, but also representing all the different business units and subunits and really trying to bring as many opinions together as possible.

Shawn Cheris [00:20:42]:
At Adobe, the marketing organization, the global marketing organization, and the design organization, again, going back to reflecting our structure, those are ladder up in the different sea level execs, and there can be friction that comes along with that kind of separation. So one of the things that we did early on was approach our colleagues in brand strategy and in the marketing organization and let them know, hey, this is what we're doing. You were saying? Oh, Spectrum two is in preview mode. Well, that's preview mode for you. But Preview mode at Adobe has been like the last year and a half. This internal publicity campaign like this is coming. Our goal was that no one should be surprised by the fact that it's coming or what it entails. And so early on, just as an example, partnering with our friends in the global marketing organization, making sure they knew what we were doing, that any rebrand efforts or refreshes that they were thinking about coordinated with us.

Shawn Cheris [00:21:38]:
Illustrations in marketing contexts like on Adobe.com, married well with illustrations and editorial style inside of our experiences, because more and more those experiences are blended. That's not really like a new idea.

Chris Strahl [00:21:51]:
Right.

Shawn Cheris [00:21:52]:
You have top of funnel into product. That should be a really smooth glide path.

Chris Strahl [00:21:58]:
Yeah, it should feel the same. Yeah.

Shawn Cheris [00:21:59]:
And because spectrum was developed at one point in time and some of these other things that came along afterwards, things were a little out of sync. And so, not to get too into the sausage making, but it was a real useful point of demarcation for us to be like, okay, across the whole company, we're hitting the reset button. If we're hitting the reset button a little bit, what does that look like, and what are the opportunities to make some of those transitions a little smoother and to make sure that at a foundational level, we're sharing concepts, we're sharing atomic elements and everything else that we can not that novel.

Chris Strahl [00:22:33]:
Well, it's a Trojan horse for a lot of organization change, right? I think that when you have buy in for, especially something with the breadth of scope that you're talking about with spectrum too, you have all of these existing experiences that still have, like you said, this sort of line of demarcation where there needs to be a function that I dot know. I hate to call it a forcing function because there's lots of kinds of forcing functions, but this opportunity to say opportunistically, like, hey, this is the future and this is the place where we should go and invest our time and our resources. And being able to do that as an organization wide initiative instead of within a product group is both strategic and also represents kind of a different way of working, I assume, for a lot of folks. And in that different way of working, I think it's incumbent upon spectrum to prove value, which you have the advantage of coming from a basis of ten years of that value showing up in product, but beyond just that proof of value to actually get people on board with changing the way that they're thinking. And do you feel like through the course of the past year and a half of really having this out there, starting to build this groundswell of support of it, have you really faced a lot of challenges or shortcomings to people getting on board and embracing this new way of working?

Shawn Cheris [00:23:54]:
Not really. I mean, as you say, we're just starting on execution this year. We have a small handful, like half a dozen sort of lighthouse customers that we're implementing with one of the things that was most valuable the first time around with spectrum was having those lighthouse customers and putting stuff in front of real users, getting feedback. We don't tend to have a lot of full time research on the design system team because it's a really hard thing to sort of research in the abstract. Mostly our learnings come from closer to the metal, like on the ground. Direct user feedback in experiences and we prototype things sometimes and put them in front of users. But even a really great prototype has limits, I think, in terms of someone can't just sit there and use it for a day and then come back and give you feedback. So our beta users and the products that we put out first, like in beta, have traditionally been some of the most valuable.

Shawn Cheris [00:24:47]:
So to answer your question, you're asking, oh, is there a lot of pushback? Well, not really, because we spent a year and a half socializing the idea that this is the thing that's coming. And most product groups haven't had to really pay much of a price. As always with design systems, the best place to invest is emerging product because it's the cheapest.

Chris Strahl [00:25:04]:
Right. It's got to change anyway.

Shawn Cheris [00:25:05]:
Yeah. It's got to be something. It might as well be the thing that we want it to be. But also I'll say when we started this process, the way that design was structured to itself, like internally, and then the way that design was structured at the company was markedly different than how we're

structured today. All of UX design at Adobe Ladders up into one vp, that's my boss, Eric Snowden, and then he reports up into Scott Belsky, who's in charge of design and M A and future strategy, and that's it. And he reports up into our CEO, and I can't believe I'm rattling on about corporate structure.

Chris Strahl [00:25:49]:
Hey, I opened the Conway's law conversations. Yeah, yeah.

Shawn Cheris [00:25:52]:
If we're talking Conway's law, then this is the way that we've always wanted to be structured, and it provides us a great deal of air cover and support. My boss has been great. Scott is a fantastic advocate of design, and the culture at the company has changed a lot. And so it's not quite hand in glove, but certainly it wasn't like the first time around where it felt like we were suggesting this new thing that everyone had to get their head around and there's no investment in it. And it's very much with the grain of where the company is going and intentionally designed to be just like with first principles on spectrum one. Spectrum two is aligned with where Adobe is going today. And so I made probably 50 or 60 presentations last year to product vps around the company, sort of doing my publicity tour. And it opens with, why are we doing this now? And in no uncertain terms defines the difference in the market and Adobe's position and what we're trying to accomplish then versus now.

Shawn Cheris [00:26:52]:
And there's really no controversy about that. So really comes down to what if those are the problems that we're solving, then this is our suggestion on how to solve the problem.

Chris Strahl [00:27:01]:
That's fascinating. It gives me so much hope for so many of the people that are mid like first systems implementation. They're in that place where they're begging and scrounging for resources. And I think that it is interesting to hear about what does this look like the second time around? Right. Because like every technology, it comes in waves and in cycles right. And so your market is waves and your company is buying in cycles. And so when a company is looking at like what is that next wave? I want to catch lots of people for the first time in the past three, four years have invested in design systems. And it's not all roses, right? Like these things are hard and very often they're underresourced and they're misunderstood.

Chris Strahl [00:27:41]:
And there's challenges associated with implementation and adoption, and organizations inevitably do it wrong in many, many cases, and they make mistakes and there's a lot of learning that has to happen there. And it's great to hear somebody that is on, ostensibly the second time around, the second major cycle of a design system and feeling the difference in that process. It's stark, I think, from what many of our listeners are experiencing personally today.

Shawn Cheris [00:28:09]:
Yeah, well, give me a run at it again. I'm sure I'll kick the football this time. Here's the good news. It's a hard problem to solve, which is why we all have jobs. If it were easy or solved, then this wouldn't be a space of innovation and it wouldn't be the jobs that we have. I love my job and I'm glad that it's a hard problem to solve. And I like iterating on products and projects more than I enjoy doing stuff that is net new, something I realized about myself a long time ago. In brand, we used to call it the bonsai tree of brand.

Shawn Cheris [00:28:41]:
You're just trimming and pruning and adjusting and very slowly turning it into the thing. Everyone likes to publish the big thing and be like, oh, here's how we did it. And here's the new logo and some lines drawn around the logo to show the Fibonacci sequence or whatever. And it's like, I don't know, the joy of it is getting to look back and improve year over year and optimize. I really enjoy that part of it.

Chris Strahl [00:29:03]:
That's great. I love the idea of the bonsai tree. One of the things that you said just sort of sparked a know talking about all of us having jobs, right? Like there's this know trepidation about AI and the experiences that we create with AI. And I think that one of the things that you see with Adobe is things like Firefly and the deep commitment to having something that represents AI in this space. I've spent a lot of time talking to folks at anthropic and folks at Google about what experiences for AI look like because I'm honestly personally fascinated by this topic and so when you think about what a design system for AI looks like, and I want to hold that as distinct from an AI enabled design system, which is also an interesting topic when we think about what we're using a design system for to create experiences that are ultimately our interactions with AI. That has to be a part of what you all are doing with spectrum, because presumably you're supporting the Firefly ecosystem as well. What specific decisions go into something that represents such an emerging field of technology? How do you sit there and say, like, look, there's all these experiences that haven't been created yet that I have to prepare a design system for. How do you go about thinking about that problem?

Shawn Cheris [00:30:16]:
I mean, it's probably not the most exciting answer, but to me that's not really a design system problem in that way. Design system, I think, tends to operate best when it's sort of a trailing indicator versus tip of the spear, like creating new patterns, right? Especially with AI. It's really interesting. I mean, obviously with a design system. Oh yeah, here's the top 20 web controls that you need to make most software ever, right? Your checkboxes and your inputs and a drop down and a slider and radio button and that sort of thing. But then that's like at the UI level, at the UX level. And with design generally, what it is is a language, right? It's a vernacular that people understand. And I always think back, like, when there's been new, like, I remember taking film classes in college and learning about the first films, right? When they first had film cameras that could capture motion.

Shawn Cheris [00:31:14]:
There's no vernacular, there's no language to it. Nobody knew quite what to do with it. And so a lot of the first films, they would just set the camera up on a tripod and basically just perform a play in front of it. Right?

Chris Strahl [00:31:24]:
Here's the theater in front of a camera, right?

Shawn Cheris [00:31:26]:
It's a theater in front of a camera. Oh, we have actors. We'll tell a story. Great. Now the camera can capture what the audience would see if they were sitting in the crowd. And we could yada, yada, yada a little bit. But if you fast forward, imagine teleporting someone from say the 1920s to today and then having them watch an action movie, fast and furious and beyond the fact that there's cars or technology, whatever, just the speed of it, like how it's cut and the sort of onboarding. It takes a human brain over a lifetime to develop an understanding of that language and what the film was trying to tell you.

Shawn Cheris [00:32:00]:
I think is an interesting parallel to design. And so when you ask about something like generative AI or chat assistants, or how to interface with a like, right now, the conventions know chatbots. It's conversational because that's a thing that people understand, right? It's the same reason why Apple went schemorphic when they introduced the iPhone. They're like, oh, there's going to be a bunch of people using this that have never used a computer before. Maybe we should give them metaphors and language and vernacular that they can get their head around. And so right now it's chatbots and sort of conversational UI and things that we're used to. But I think it'll be really interesting to see what develops over time as the AI gets more powerful and as people get more used to interfacing with it. Maybe natural language is the way, maybe it's something else.

Shawn Cheris [00:32:44]:
But as a design system team, I think the best thing we can do is to partner with the people making new experiences, learn from the user research and the experiments that they're doing. And then once we know that we have something that is a winning model that works for the audience that we're trying to reach, that's the point at which we codify it and sort of figure out what its rules are and make sure that it's available for the next team that comes along that needs to leverage something like that.

Chris Strahl [00:33:09]:
I love that answer. I think that it's a great vision for how you think about the creation of new experience. And by the way, I took my, at the time, five year old son to across the spiderverse, and it blew his mind. He had no idea that something could be like that. They don't get a lot of screen time at home. And so when he sat there and watched a fully animated film that had the pacing and the structure and the editing of something like that, I don't think he blinked for 2

hours. And seeing that sort of frame of reference shift, I have felt like that in the face of AI in multiple instances in the past year.

Shawn Cheris [00:33:41]:
Yeah, I think that's an appropriate human response.

Chris Strahl [00:33:44]:
Speaking about then the generative AI side of it, before the show, we were talking a lot about some of the foundational ideas of how we create with design systems. And Gen AI came up as know, hey, is the future of the world taking Figma files and turning them into react? Or is it something different? And I wanted to explore this with you for a second, because I thought it was a really interesting start to the conversation. One of the things that we talked about was, funny enough, an early Adobe product, dreamweaver, and how the idea that we wanted to create visually as a way of writing code. And I think that you had a really kind of nuanced expression of this that I thought was really interesting, where you were talking about the idea of some of the challenges associated with taking something that is a visual medium and trying to make sense of it in a coded environment.

Shawn Cheris [00:34:32]:
Yeah, I mean, I remember coding up my first web pages in notepad and thinking, oh, man, I wish there was, like, a tool for this. And then, man, it's back in the 90s, so I don't quite remember the order of operations, but there were a lot of attempts at it, front page and go live and Dreamweaver.

Chris Strahl [00:34:52]:
I mean, even those early site builders, like geocities and stuff like that.

Shawn Cheris [00:34:56]:
Yeah. And I think people, when they create, they want to use visual tools. When they see a web page or an app, like, it's presented to a user, it's a visual thing. And so it's very natural to think, oh, well, what I really want to be able to do is draw pictures of software and then have some magic broom come in and change that from a picture into software. It's really interesting if you think about other mediums. Like, I always think about architecture as, like an analog for building software. An architect would never draw a picture of a house and be like, there it is. That's the house.

Shawn Cheris [00:35:33]:
Now, somebody can run this through a machine that turns it into a house or a building. If you are an architect and you're designing buildings or houses, not only do you have to be bothered with the sort of mechanical aspects of how the building is constructed, but also all of the other factors that go into it, like where is it being built and what problem is it trying to solve, and how's it all go together, and what's the order of operations? And as a designer that's old enough to have worked on books, it's the same thing for books, right? You need to know how a book is

constructed and how signatures work and how the colors are going to work and how creep and all these other things work. And you have to be bothered to understand the nature of how a book is constructed. And yet with software, I think because we can draw high fidelity pictures of software, and it's presented on the same two dimensional surface on which the final product will be consumed, there's sort of this uncanny valley where it's like, oh, yeah, if only we could design this magic transmortifier. That takes my drawing and turns it into code, and it just seems like a fundamentally flawed model to me. And I'm happy to be proven wrong, but it sure seems like we've been working on this for 30 years and no one's really cracked it. But maybe if you're listening, what the problem is missing is you, and you'll be the one to solve it. And I wish you luck.

Shawn Cheris [00:36:48]:
Let me know.

Chris Strahl [00:36:49]:
Yeah. Somebody else that really loved Kaplan, Hobbes and the transmigrair box growing up, one of the things that I've always seen with it is like, where I've seen AI be really effective at solving problems is when you take something that we already know how to do and you make it faster, or you throw a bunch of data at it that would be bigger than what a human can hold in their head. And maybe there is a way to do a data solve on this, but I also have never seen something that has been truly like, go make this picture of a thing into a thing, work at any form of scale that has not been innately brittle or innately been making compromises that would really matter in the context of a production experience. And I think that that is the challenge that I see in front of us with Gen AI is like there is this idea, this competing interest, right? Where there's this one set that is all like, let's take Figma and figure out how to run it through magic box and make react that works perfect in our context, or the other side of it, which is let's figure out how we can get closer to the medium that something is destined for and understand that either there's a translation step that needs to take place there, or we need to start to think about how we make code easier to work with.

Shawn Cheris [00:38:10]:
Yeah, I mean, you're talking about composers and the idea of turning pictures into code, like the two different ways of approaching it. And at the end of the day, if you're using what is ostensibly drawing software to make a user experience that will have to be coded, it's always going to bear the mark of the tool. It'll always be influenced by the tool that it was created in, and vice versa. Right? Like the constraints in a built environment in an implementation are what they are, and the constraints in a drawing tool are what they are, and those constraints aren't compatible. But that doesn't mean that there aren't efficiencies to gain. One of the things I have thought about a lot is it seems to me that most software ever made, and probably ever to be made essentially boils down to forms and tables, Adobe aside or anybody that's building creative tooling or a Nike mini site or something that stands apart. I mean, I'm talking like 95% of all software is forms and tables. You are adding objects of different kinds, you are modifying their properties, you're associating them with each other, you're deleting them, you're running reports that are filtered

and ordered in a certain way.

Shawn Cheris [00:39:26]:
That's pretty much most of it. And so to me, the idea that designers sit around drawing pictures of forms and then once they've drawn the picture of the form, the oh, how's this going to look on iOS? How's this going to look on Android? How does it work with all the different breakpoints? That seems like a lot of wasted energy to me. You were talking about Google in the context of AI. I found the demo that they did a couple months back for Gemini really interesting, where instead of just being a conversational UI as you're asking it to do things, it's surfacing conditional UI. That, to put it in the terms I was just talking about, are defined by the object that you're trying to modify. Right? Oh, does it need text input? That's a text box. Is it a binary? That's a switch. Is it a multi select? Right.

Shawn Cheris [00:40:16]:
What are the properties in the database? You can just surface a form just in time based on the object or property inspector or whatever terminology you want to use. And it seems like we cloud use the same thing in the context of a tool like Figma or some tool yet to be made. Where, oh, you were adding a form to add object person. Well, it has first name, last name. We can just generate all the form fields. In that case, then you're sort of semantically mapping it. And design systems, people tend to get wrapped up in like, oh, the value of this thing is making everything look the same or making that thing look like the thing that I designed, when really the way it looks, its presentation is one of the least important things about it. The most important thing is that there's a semantic mapping between the thing that you're drawing in the drawing tool and the thing that's being implemented in real life that is durable and mappable and makes sense.

Shawn Cheris [00:41:08]:
So it seems like you can just use it in reverse. And all those permutations I mentioned, that seems like a great job for an AI based solution. Like, I doubt designers want to spend their entire lives nudging form fields around in figma. That doesn't seem like a good use of their time. I've never met a designer that ran out of important things to do, and I've never met an organization or a leader that said, oh, I have enough design capacity and I don't need any more.

Chris Strahl [00:41:33]:
I love the idea of creating a distinct, specific mapping between a design element and that element and its implementation. And I'm intentionally not necessarily using the word code there because I think there's lots of different kinds of implementations, and having that dot be something that's curated by humans. I think that maybe initial linkage is done by a human, but then everything else from there is like these objects are one and the same, and they're perhaps visually distinct from each other, but the data models and mappings between them are contractual and they exist in perpetuity. And I love that idea of thinking about the future, because that opens up a lot of possibilities, both in the terms of efficiency and speed, but also in the terms of what you can do visually, because now, all of a sudden, you've decoupled the way the thing looks from what the thing is. And we went through this in the land of content management

systems, where for a very long time, the content that you put inside of a CMS also controlled how that content was displayed. And it wasn't until we decided that we wanted to decouple those different things that we really got a lot of freedom over how you create content and then how you actually make that content do what you want it to do in a particular context. And I see the same thing present in design systems, where we have this innate idea that the component we design has a strong visual element associated with it. And I don't think that that's necessarily true.

Chris Strahl [00:43:00]:
And I think, in fact, it is a hindrance to our ability to really make awesome experiences with design systems.

Shawn Cheris [00:43:06]:
Yeah. And I mean, I'll point out too, that this idea of separating structure from presentation is one that I invented in 1996 when I created CSS. Obviously, I'm being silly, but around the.

Chris Strahl [00:43:23]:
Time that Al Gore gave us the Internet.

Shawn Cheris [00:43:25]:
Right. It's funny, because on one hand, it's like I feel like you're complimenting me on having this groundbreaking idea that the way we design should mirror the way that web experiences have been structured. For almost 30 years, my background was.

Chris Strahl [00:43:39]:
Desktop application development, right? And so I spent a bunch of time as an engineer writing in c sharp and stuff like that. And so I fundamentally get it. The fact that when I started touching the web for the first time, I was playing around in PHP. And I was like, this is, wow. Like rudimentary, right to the point where the idea of object oriented was something that was just catching on when I was starting to experiment very heavily in Internet and websites. And that had been a thing inside of the application development space for 2030 years at that point, the time that it took for us to really iterate through this medium into architectures and structures that have existed for decades, it's an evolution. What's exciting is that it is happening and we're standing this precipice of understanding that these things are better off decoupled. These things are better off separating the visual elements from the structural elements.

Chris Strahl [00:44:32]:
It's an exciting time to be working.

Shawn Cheris [00:44:34]:
I think experienced designers got stuck for a while in a state of arrested development, and I blame flash.

Chris Strahl [00:44:43]:
Okay. I love that.

Shawn Cheris [00:44:45]:
Yeah. I mean, for those of us that are old enough, the whole, like this web page requires Flash and is best experienced at 1024 by 768 resolution. Because I've designed this perfect little black box that I'm going to give to you, which goes completely at odds with the whole nature of what the web was supposed to be. I'm being facetious. Like, Flash was awesome and brought us a lot of joy and good experiences, but it certainly delayed a whole generation of web designers from having to grapple with the nature of the medium.

Chris Strahl [00:45:17]:
That's such a wonderful take on that. Somebody that spent a lot of time building flash websites.

Shawn Cheris [00:45:24]:
Yeah, me too. And stuff in director. I got real good at lingo and action script in the 90s.

Chris Strahl [00:45:31]:
Well, Shawn, this has been super fun. Thank you so much for being on the show. Really excited to see spectrum two coming to fruition. Best luck with the coming months of implementation and I look forward to having you back at some point.

Shawn Cheris [00:45:44]:
Yeah, be my pleasure. Thanks for the conversation.

Chris Strahl [00:45:47]:
This has been the design Systems podcast. I'm your host, Chris Straw. A great day, everyone.

Chris Strahl [00:45:51]:
That's all for today. This has been another episode of the Design Systems podcast. Thanks for listening. If you have any questions or a topic you'd like to know more about, find us on Twitter at the Dspod. We'd love to hear from you with show ideas, recommendations, questions or comments. As always, this pod is brought to you by napsack. You can check us out at knapsack Cloud. Have a great day.