Podcast Name: Article 19, Episode 6 – Software Engineering with A11y

[00:00:00]

Voiceover:

Expression is one of the most powerful tools we have. A voice, a pen, a keyboard. The real change which must give to people throughout the world their human rights, must come about in the hearts of people. We must want our fellow human beings to have rights and freedoms which give them dignity. Article 19 is the voice in the room.

Marty:

Hello, and welcome to Article 19, my name is Marty Malloy, chief of staff and Catalyst at Tamman, and I am the host for our conversation today. Joining us is Bill Danburry, senior lead software engineer for Tamman. Bill has 25 years' experience in coding and has made it a full-time profession for himself since 2009. The most important thing to know about Bill though is he always keeps users at the forefront of his work, which is why he is so great to work with, especially around accessible and reusable code. Fake fact about Bill, he's been the captain of several international ships, so we're really excited to have him here. Let me also bring in my co-host as always, miss Amanda Roper, program manager of Tamman's accessibility initiatives. Hi Amanda.

Amanda:

Hello Marty.

Marty:

And we are joined again by the head honcho, Michael Mangos, CEO, and co-founder of Tamman. Hey Mike.

Michael:

Hey Marty, and welcome Bill.

Marty:

So, before we begin, I'd like to set the stage for our listeners, that this conversation is born from a decision at Tamman to state clearly and plainly that access to information is a human and right. The developers and designers at Tamman work hard to make sure that no matter what use constraint a user may have, be it due to a temporary, situational, or permanent condition or disability, they will be able to access the information designed and built by Tamman. This podcast is a call for others to join in a bigger conversation with us. We work to build the inclusive web. To do that, we need all of us working together and learning together. Thank you for listening. Let's get this conversation started. Let me bring in Bill officially, as well as Amanda and Mike. Hi there friends, how are you all doing today?

Michael:

Doing great, feeling good, and excited to have this next podcast going.

Marty:

Alright. We always like to start things off nice and easy, especially since we're recording at the end of another long work day, so my first question, and Bill this is to you, although I want to hear from both you and Mike, Amanda as well. The question is whether or not you're secretly a hoarder or you embrace a more Marie Kondo style, what is one thing that you collect or would collect if you could? Bill what do you think?

Bill:

So, the one thing that I collect, and my coworkers know this because when we started the quarantine, I started to put a different one of these every day and went on for about the first two months of quarantine, is I collect Disney mugs. So, every morning for our stand-up meetings I had a different character with my morning joe.

[00:03:02]

Marty:

I like months.

Bill:

Months.

Marty:

Unlike children, I know it's hard to answer, but do you have a favorite of those Disney mugs?

Bill:

So, it depends on which cannon of Disney you're talking about. I would say that Baymax is my favorite based on the character, but for sheer size and shape, Chewbacca's the go-to. It's like a 20-ounce coffee mug.

Michael:

Basically, a naked furry guy wearing an amo belt across his chest is pretty fabulous.

Marty:

So, Mike what about you? What do you like to collect or would if you could?

Michael:

Is it too cheesy to say memories? I collect [inaudible 00:03:43] miniatures, I like to build them and paint them, it's a lot of fun. I don't play enough, but that's what I collect. But otherwise, I do purge everything outside of my life, I love purging.

Marty:

Amanda, what about you?

Amanda:

I collect cameras and records, so I have a bunch of old vintage cameras, and most of them are working, so I try to use them when I can.

Marty:

Yeah, I've seen some of your cameras, they are amazing, and totally intimidating frankly, because they are so cool and complex, much like you, cool and complex. OK, so let's jump into our conversation Bill. Let's do all about the Bill. Bill, I am so excited you're here. I'd like you to start off by giving listeners a chance to know who you are, what is it that you do for us here at Tamman.

Bill:

Yeah, so I'm a web developer for Tamman, I work as the lead of the development team, which consists of four developers at this point, and we are in charge of creating the accessible websites and lending pages and interactions for various clients. One of the biggest roles that I have is trying to introduce accessibility standards among developers who are really good at what they do as far as visual design, but also being able to foster and improve the accessibility of the sites that are designed as the product of what is being developed.

Marty:

Yeah, for sure. So, one of the things, and you allude to that, is you mentor all of the other devs and frankly other staff, but certainly the devs, and I'm curious, when we have a new employee who starts as a front-end developer perhaps, or someone that will be working closely with you, what do you tell them about working at a place like Tamman that has such a focus on digital accessibility?

Bill:

Well, the first thing I would say is no matter what the site looks like, it's most important to be able to identify what the site sounds like. You know, how do you interact with it if you can't use your keyboard or your mouse? How do you hear it if you can't see it on your screen? And being able to identify, you know, the things that you think should happen, and the things that actually do happen with the assist of tech that we have. You know, the various browser and phone models that you're able to use all the tools and all the quirks that there are in this system as the goal of your design.

[00:06:02]

Amanda:

When you're starting to introduce these concepts, and I know a lot of the team really looks up to you for your expertise, are any of the newer developers ever

intimidated or scared of all of the accessibility rules and regulations that they need to implement?

Bill:

I don't know if scared is the right word for it, but I will say some of it is a bit overwhelming, it can be. There are so many different permutations of different technologies that are available and what's expected of certain clients, and what's expected of the product in general, that it's not just make it work on Chrom, Firefox and Safari. There's so much more out there, and there's so much more than just being able to tab through or to click through something and make it work. At the very base, a webpage is just text in a document, and so if you can get that text in the document correct, you can become accessible from the very start. You know, it's only when we start adding things to the site that we start getting in the way of accessibility, and being able to drive that point, you know, that's kind of where you have to shift it, where you're not scared of what you don 't know, but you're trying to shape what you do know into something positive.

Marty:

That's a really healthy, positive way to look at it, Bill. You know I remember when I first started getting involved in accessibility, it's sort of different than how I think I learned other new technologies or other new paradigms of thinking, accessibility hit me a little differently, and I'm curious to know if you encounter this or if you watch this with the rest of the team, that instead of saying, oh, well now I'm going to become a back end developer, or learn some back-end techniques, but you learn what you need for one thing and you can kind of buildup, accessibility feels like a giant wall you have to get over. There's no like, incrementally building up to it. It feels, at least when I first learned about it, that like somehow, I need to learn all of this at once and implement it, there's no like dipping your toe into it. Is that true? Is that how it felt for you, or do you see that in others?

Bill:

Yeah, there's definitely not like, a rule book, you know, that you can go through and follow now that the WCAG and the ARIA standard, you know they have some pieces of it, but there's nothing hard and fast from start to finish. That's being developed as we go along, but just like with browser, you know, aging browsers, there's technology shifts as we go through. And you know, whenever you look at the mobile experience, we have a far different, and there's an ever-changing landscape with the mobile devices that we have, and all the assistive technologies that go with it. So, while you're still trying to catch in the string of things with

regards to the change of the technology, but you're also trying to unearth what you don't know about accessibility. Probably the easiest way to understand accessibility is just to immerse yourself in it. You know, being able to say I want to be a part of how this application works, or how this assistive technology works by taking something I know, a website I know or a place I know and being able to try to feel my way through it. It's like being in a safe place, but also trying to like, stretch your boundaries. And people do that with technology all the time. You know, you can watch a 30-minute YouTube video and pick up a new tech, but with accessibility I feel like, you know, you're right, there's a lot riding on it because it's as old as the web itself. And part of assistive technology is the fact that it's been a work around. It's been developed against the flow for 25 years. So, the more we bring accessibility to the forefront, the more that the assistive technology is going to be a handhold rather than a reverse engineering of the web.

[00:09:38]

Michael:

I love the way you put that Bill, that's so awesome.

Marty:

I just want to refine that a little more, because I think where I also see a lot of people that are new to accessibility development kind of getting stuck, or at least how it seems to me, is that they have all these paradigms they have to unlearn, and this is both on the design and the dev side, frankly. It feels like they learned a way of doing things, gotten comfortable, even if they're new in their career, they may have learned some of those things in school, because I don't think they're really teaching accessibility, or if they do it's like one lecture of one course, you know, to talk about digital accessibility rather than it being the focus or the starting point. Maybe that's changing now, but I mean certainly the people that we've been interviewing and hiring and working with that came out of school even just a few years ago, are not coming out of school with accessibility knowledge, or not deep accessibility knowledge, and it feels like there's a lot of unlearning that has to happen before learning can start. Do you find that that's true as well? Because you're leading a team of four others that had to un-learn some of these things and then learn new habits. What do you find there?

Bill:

I think a good dose of humility is always a good place to start, especially if you're working as a team. You're not always going to be right; you're not going to agree with how everybody else things, you're certainly not going to be able to pick up, you know, a technology that you've never had experience with. If you've never used a pencil before and you find that going forward because of some ability now I must use a pencil for everything and you've never used a pencil before, that's going to be very jarring for you. The same way with the tech, it's like I've used all this other tech before, but I've never done this specific piece with the tech. That's what I have to do.

Michael:

So, Bill, I think that's sage advice. What you just said is really not even so much about accessibility, but just about working on a team and new technologies in general, so it's great. What I think is liberating about that too, is that instead of accessibility being something that's so mystifying and monolithic where you feel like you have to approach the whole thing or nothing, and you're afraid to approach it, I feel like if you kind of just do what you said, which is treat it like any other new thing that you learn with a team, you know you can lower the temperature on it potentially a little bit and make it a little more approachable. So, I like the way you put that, thank you Bill.

Marty:

So, our listeners may not know Bill, but you are a sited man, and a sited developer. Because accessibility and assistive tech and everything we've been talking about involves individuals with different use constraints, I'm really curious, how do you maintain users with a broad range of use constraints, of possible use constraints at the forefront when you're building and you're coding?

[00:12:06]

Bill:

Tamman gives us the ability to make that choice and to be thinking accessibility first. Not just—the design is the design, it's going to look like what it needs to look like at the end of the day but trying to get to act the way that it needs to act in an accessible way is, you know, really a freeing agency that we get, specifically in our workload. The biggest way though I think is to just jump in, you know, to use the tech to be able to listen to your site, to be able to avoid, you know, using the standard methodologies of access. To be able to use your site, to be able to forget

using your mouse or being able to tab through with your keyboard, you know, turning off your monitor and just listening to how the site sounds, how it feels, how it reads, and being able to just use the persona of the accessible person as your guideline.

Marty:

Amanda?

Amanda:

That makes me so happy to hear Bill. You just put a smile on my face.   I know that you're always considering the different users and different use constraints that a user may have, and I just wanted to say thank you for being conscious of others and like, having that ability to put yourself in other people's shoes. I think that's really a key factor in building the accessible web.

Bill:

We're all getting older, I keep getting reminded every day, my kids get older, and I keep getting reminded of how out of touch I am with regards to their tech, and eventually you know, I'm going to be this way. You know, I'm using contacts now, but I can imagine that as I go further on, I'm gonna be with readers and shaders and I may go blink at one point, you know I may lose the ability to type at one point, you know.

Marty:

Although to be fair Bill, if you asked your children, I'm sure they would say you're ancient already, and you can't get any older.

Bill:

So, we all have the potential to become disabled at any point. God forbid, I could hit by a bus, and I would not be able to walk, I would not be able to do all the things that I expect to do on a daily basis. I still have to make a living, I still have to pay for my house, right? So, I'm making sure that what I'm doing is almost paying it forward.

Marty:

It's an interesting thing that you bring up, right? Because like, we talk a lot about, in fact we tackled this on an earlier podcast about awareness verses empathy, or at least we've touched on that, and we like to use the word awareness a lot, because I think that's a good place to start, it's non-threatening, it's approachable by others, but what you just said there, which is really like, I'm gonna be in the situation too someday, like I can imagine myself there. It's more than just awareness, that is, if it's not directly empathy, it's certainly tangential to empathy, and that the idea of like I'm going to build for future me, and future me exists out in the world today embodied in any number of people, and like that's powerful. I think that's a really just a very interesting, powerful take that when I'm thinking about our listeners and I'm thinking about what I want everyone else in the company thinking about, like yeah, that's the thing. That's the thing you hang your hat on when you start down this road. So, it's beautifully put, thanks Bill.

[00:15:05]

Michael:

It's got a vulnerability to it that I think is eloquent.

Marty:

So, Bill, let me turn a little bit to a little bit more of a technical question: Is there a browser that you find is more difficult to build accessibly for?

Bill:

Yes, a different one every day. Last week it was actually Safari with voice over, yesterday it was Android Chrome with talk back. So, you know it's not just the Internet Explorers of the world, but there seems to be a twinge every which way you go, and you have to be able to have a fully tested holistic solution to be able to make things accessible and reusable, and I'm thankful that we have such a good quality assurance team that keeps us on our toes and keeps us true, but at the same time there's some faults that I'm seeing that I'm really surprised that you, the big three have let through.

Marty:

It's interesting you say that, right? Because at Tamman we get to build some number of landing pages and small web apps that are pretty straight forward, they're more like, how do we get content in the hands of others. There's other

sites that we build that are really rich visually, or from a user experience perspective have sort of non-standard or more creative user experiences in them, like how you get through the information, and sometimes we're designing them, but often times we're being handed those designs. So, it's just interesting to think about yeah, it's not like every time you go to put your fingers on the keyboard to code, you're building a page that has the easiest way to get at that info, and it's always the same kind of approach, so that all the approaches are constantly changing, so you're finding new challenges on each new project. Is that fair to say?

Bill:

Yeah, we're also seeing that maybe things that we did six months ago, and you know, we tested and were accessible then, that the world has kind of changed around it, and in six months a lot of things have changed unexpectedly in a number of cases. So, it really has shed a light upon you know, how we need to insure going forward that what we're doing really is up to muster every time.

Amanda:

I know you look backwards in time, not only just six months ago, but we have a big focus on like, backwards compatibility, and I'm curious to know like, why do we need to consider so many versions and why does this matter for accessibility?

[00:17:23]

Bill:

So, the accessibility tech, well the good stuff, is not free. As a matter of fact, it's incredibly expensive, and because it's not as prolific as it might be, there's a price tag to it, and users spend money that they, you know, may not have the ability to replace tech as often as you might, you know, replace every five years or so, or even sooner. So, a lot of users are using some old tech from 15 years ago that's still serviceable, as long as security patches are available. They don't have the financial ability to upgrade, so they are kind of stuck there a little bit. Now with phones it's kind of a bit easier to upgrade. Like, you are going to have fewer mid-level phones than you might, at least in the US, and that's because the phone manufacturers have a call for accessibility that kind of comes back from their being phone companies as opposed to being a tech company, that they have certain requirements that they have to fulfill, and because the phones themselves are getting outmoded so quickly it kind of forces that upgrade, as opposed to

Windows or Mac from 10 years ago, it's still serviceable, but it's not where we are today.

Michael:

You know Bill, as you're talking, I'm going to spring a question on you that obviously we didn't let you read in advance, not on purpose, but just it's coming to me in the moment. We've talked about performance, you, and I, in the past, and the sort of performance of a website or a web page or a web application. As you're talking about older tech, I'm curious to know if you have an opinion about where, at least in your experience or in the stuff you have to build, where does performance fall in the sort of the pantheon of accessibility approaches? Because it's often like, not talked about, but it's certainly if you're talking about older tech, you're also talking about performance.

Bill:

Right. Well, I alluded to, you know, the fact that the phones in the US are probably on a two or three year cycle, but in other countries that have slower broadband or have slower overall infrastructure, you know, they're going to be using phones that are recycled and they are outmoded as far as we're concerned, and you know even in lower income areas where there isn't maybe a high-speed internet available, that maybe the person is using a hotspot, but they still need to be able to access the information that we are delivering. Now, whether it's, you know, a marketing advertisement for something or if it's the ability to be able to register for your food stamps or pay your phone bill, to pay your electric bill, that's important to do. You know, if the website is setting up a COVID test, like that is definitely something you're going to need to do, whether you're on a state-of-the-art iPhone or you're on a Samsung J4.

Marty:

There are two big areas, there's probably more, but just two that come to mind that are like two big areas that I feel like are missed by the guidelines or about the legal community when we talk about digital accessibility. I mean, one is performance, like we just talked about, another one is dark patterns, which is a whole other podcast about dark patterns which I'd love to have one day, but the idea that just you can be within the WCAG two point one guidelines and still really miss the mark on accessibility, performance being a big area, dark patterns being another. Like, there's just so many different areas that I think as we become deeper into this, or at least as I do, I start to think of more things that I want to do in that space. Where do you typically draw the line when you're like, hey I can't do

everything I want on this site? I can't make a perfect site. Is there a line that you won't cross or a line that you feel like you have to cross every day around those kind of things that are not included in the WCAG guidelines, but that are really things that you know you should do?

[00:20:55]

Bill:

Ooh, good question, good question. There's always, you know, the kiss principal, keep it simple, and there's also don't be a you know what, and you know, sometimes you come across that stuff, and you know, you have to be able to say you know that this on face value feels a bit off, and if it doesn't nail down a particular piece of the WCAG, a lot of the things that are dark patterns, or that are negative experiences can really roll up maybe under a cognitive requirement. For example, if somebody decides to put navigation above some important piece of content that needs to be drilled in, that you know, one of the things that you come across are not necessarily things that violate the WCAG as a line item that you'd be able to say does this fail, and Google comes back and says yes, that's WCAG one dot five dot two. But there a lot of things that you're asked that are like, I shouldn't be doing this, and it would come back to maybe being that that dark pattern violates cognition, or it violates the equality, you know, that you're saying that you know, this is a super visual site, and because of that, a non-sighted user is going to have a different experience, and we've all learned that separate is not equal. So, a lot of the things that while at face value it doesn't violate because they can still get to the content and they can still see it, you know it's like having a flash introduction on your website. Like, people aren't going to see that.

Marty:

You know, there's a term we use often, and I know you and I have talked about this before, but there's a common term that most people know which is MVP, minimum viable product in software development, and there's another term that's come up a lot, I think you and I have talked about it before, but it's MDP, minimum delightful product, and it's important to not just have a minimum delightful product for your ideal power user, or your ideal middle of the road user, but when you think about your stress cases on the edges, what's their minimum delightful product. And as I hear you talking about this, it's kind of a little bit about that. Different is not always the same, that's OK, but can we make a delightful product for sort of all users. I really like that idea. And that's not exactly what you're saying, but that's kind of the vibe I'm getting from your answer. Does that sound right?

Bill:

Well yeah, I mean you can say that there's some differences that are allowed, but I mean at some point, the choice you make to be different is going to block somebody from accessing information, and therefore be in violation. So, you know, those decisions that are made to be different or those decisions that are made in the sake of expediency or budget, you know that you're going to cut that one corner, that could just be the wrong corner, and you don't know.

[00:23:33]

Marty:

Well, and you know it's interesting too, because you use that term violation, right? That's a loaded word. And we know what we mean by that in Tamman, and we know what we mean by that when we're working for other people in the industry that are doing digital accessibility. But for a lot of clients, and we're an agency, right? A lot of clients hear violation, and they may conflate that with legal violation, which it may or may not be, right? What I'm hearing you say, and I agree with you whole-heartedly is that violation, whether that's the right term or not, you know, we know that it goes against the principals, so you know, can we build something that meets the spirit or the principals of the legislation, or the WCAG, even if WCAG isn't a part of legislation, and even beyond the WCAG, are we really giving access to people? That I think is the really powerful part, that once you get your head in that headspace as you're talking about you've gotten your head in that headspace, I think that's where real magic starts to happen, because then we can design and build and we're really thinking about everybody. There's an awareness of everyone else's situation that comes in. But Amanda, I think you wanted to ask or add something to that.

Amanda:

Yeah, I like where both your heads are at. I think it's an interesting conversation to have, because sometimes people think that if they're designing to the WCAG guidelines, inevitably their site might look clunky or ugly or something other than delightful, and they may want to go add in a bunch of design flairs that may not be accessible. But I think here at Tamman, we do a good job putting at the forefront like hey, like they're not—having an accessible website and having like an interesting, delightful interactive website, they're not exclusive things. We can both design an accessible website that is interesting and interactive and responsive.

Marty:

So, when we think about what we build to be delightful, a lot of that is dependent on the designs. Accessibility really starts at ideation, but thinking about the partnership that exists between designers and developers Bill, I'm curious, you have a platform, you have a microphone in front of you, what is one thing that you want every designer who works with you to know or to do every time when it comes to accessibility?

Bill:

Read your site. Please. Read your site. You're looking at it in Photoshop and Sketch, you're looking at it in InDesign, you're looking through all the beautiful pictures, the wonderful color, the great layout, but ask yourself, what am I reading? If this was printed in one column from top to bottom in black and white, how does it sound? What am I trying to convey?

Marty:

Bill, thank you. I want to move onto our final segment with you, which is three questions. We ask the same three questions to all of our guests, so I'm going to ask them to you now. Are you ready, sir?

Bill:

Yes, let's go.

Marty:

So, the first question is, what is one personal accommodation that you make for yourself?

Bill:

Recently, it's actually text size. After a year of sitting in front of a monitor with really, you know, it's a little different you know in one position, you know, trying to get around this and trying to make sure that the environment is correct, but I think tech size is probably the biggest one.

Michael:

It's funny that you say that Bill, because I'm in the same boat, I used to spend six out of 10 hours in a day in meetings face to face with people, and I didn't spend that much time in front of a computer. Didn't realize, my eyes are starting to go, and I'm having to pump up all my text too, it's really interesting.

[00:27:06]

Marty:

I think you can both just lean in a lot closer to your monitor if you need to read. But text size, text zoom, very good.

Bill:

That also leads into the fact that you know, you should be testing text zoom because that's a part of the WCAG and if you can't do it, or if zooming in the text breaks your design then there's something to be said about that, right?

Amanda:

Great plug, Bill.

Bill:

It's kind of unclear on dog food.

Marty:

Great. So, my next question is one I'm a little nervous to ask you, but I'm going to go there anyway. What is something about the world that keeps you up at night?

Bill:

We've had some very grave milestones, and it's been at the edges of my vision for a long time. I have one friend who's died of COVID. It's not as bad as it was, you know, before the 20th of January, but I have spent some long nights doom-scrolling. I'll be the first one to call myself out on that. Not so much anymore, I feel like we're starting to turn the tide, but that is the thing that keeps me up. Am

I doing enough to keep my family safe? You know, am I not being too over protective? You know, am I following the right guideline?

Marty:

At one time or another. So, let's end on a happy note, away from doom-scrolling as it was. What's one recommendation for a game, book, movie, TV show, something that you are consuming for entertainment that you would have for us right now?

Bill:

I have been re-watching, well, it's only really two half seasons of Pushing Daisys. That was the show a couple years ago that the guy could touch dead people and bring them back to life for one minute, and the way that that show was shot, it was just like super saturated colors, and the script was such an alliteration, it's a pleasure to hear, it's almost like poetry, and the plots are predictable, but you know, it's fun, it's an escape, and I think maybe a little bit of escapism is what we need every now and then.

Marty:

Absolutely.

Michael:

Amen.

Marty:

Well Bill, I appreciate your time and for your sharing, and your insights today, that was really, really great. Let's do this again, shall we? And we'll keep the conversation going in the meantime.

Bill:

Absolutely, thank you guys.

Michael:

Thanks Bill.

Amanda:

If you like what you heard today, and want to explore more about digital accessibility, inclusivity, or to schedule a time to talk with us, you can find the whole Tamman team at Tammaninc.com. That's Tammaninc.com. Or follow us on social media, at Tammaninc on LinkedIn, Twitter, Instagram, or Facebook. We'll talk to you again next time.