Voice Over (00:02):

Welcome to What Matters, a podcast from the folks at Matter Most. We'll be discussing ChatOps, open source, DevOps, and everything that matters most to you. Let's see what we're chatting about this episode.

PJ Hagerty (00:17):

Hey, everybody, and welcome to What Matters, a podcast from the folks here at Matter Most. I'm your host, as always, PJ. And before we get started with our guest this week, I'd like to bring Ben Pearson in for the open source news. Welcome to the show, Ben.

Ben Lloyd Pearson (00:30):

Thanks, PJ. I've got a few stories for you, and the first one I want to start with is a fairly small but, I think, really cool release. So MIT has released an open source AI platform for developing new 3d printed materials. So they've teamed up with this company called BASF, which I guess does a lot of work with chemicals, and they've created this AI driven process that helps with the discovery of new 3d printing materials. They've named it Auto OED, which stands for Automated Optimal Experiment Design, and it can create hundreds of material iterations in the time that a chemist would only be able to do a small number manually.

Ben Lloyd Pearson (01:09):

The goal here is to increase the speed at which 3d printed materials can be invented, and reduce the material waste in that process. So I really like stories that bring open source into the physical space, which is why I kind of wanted to share this, because it's still kind of a new thing, and you just don't see it a lot.

PJ Hagerty (01:25):

Yeah, you don't. You're right. You don't see a lot of the open source side of the maker space, which is a lot of 3d printing and materials handling, and it's great. I'm glad you brought this story to us, because I think it's really interesting to see what people are doing to bring real life models, things that people can manipulate, actually handle, and do for themselves. Also being kind of an amateur 3d printer enthusiast, I think at best, it's always cool to see new open source projects coming out of that, so that's great. What else have you got?

Ben Lloyd Pearson (01:54):

Yeah. So the next one is an update from the Linux Foundation. So back in August, they launched the Open Source Security Foundation, or Open SSF for short, and they just announced that they've now received 10 million in sponsorships to support that initiative. And these sponsorships have come from a number of tech giants, including the likes of Amazon, Facebook, Microsoft, Red Hat, and quite a few others. The foundation hopes to play a major role in the renewed interest that we're seeing in supply chain security. So according to a recent study from Sonatype, "Supply chain attacks have increased 650% in 2021," which is pretty astounding.

PJ Hagerty (02:34):

Wow. That's wild.

Ben Lloyd Pearson (02:36):

Yeah, and the concerns have reached a point where the White House even weighed in on this back in May when they issued a cybersecurity executive order that is aimed at improving cyber security among any of the US interests, whether that be private or public. This sparked a lot of new initiatives at major tech companies, and this is just one of many. So according to the Open SSF, "This funding will be used to provide education around secure coding practices, improving automation, prioritization, and remediation of open source software vulnerabilities, and just support other various security initiatives." So it's always great to see open source security getting the attention it deserves. It's often overlooked, but I think people, companies in particular, are really starting to take it very seriously.

PJ Hagerty (03:24):

Yeah. And I'm glad to see a big piece of that initiative is actually the education, because I think that a lot of us think we know about security, or we think we're security minded, but there's always something more to learn. So it's great to see that developers will be able to reach out and have the opportunity to learn more about how to build more secure apps in the open source space.

Ben Lloyd Pearson (03:41):

And then the last two stories I've got for you, they share a common thread, but they're both unique enough that I thought it would be worth it to discuss both of them briefly.

PJ Hagerty (03:50):

Right on.

Ben Lloyd Pearson (03:51):

So they both relate to GPL violations, and the first one is the Software Freedom Conservancy has now sued VIZIO, the popular TV manufacturer, over some GPL violations in the release of their SmartCast OS, which is an operating system that they run on their TVs. For our listeners who aren't familiar, the SFC is a legal organization that defends opensource software and licenses in court. They have a long history of taking companies like VIZIO to court over various open source violations, and the issue with the GPL is that it's a copyleft license. That means that if you distribute a modified version of code license under the GPL, you're also required to distribute the source code for your modifications, and the SFC is alleging that VIZIO is not doing that right now.

Ben Lloyd Pearson (04:44):

So like I said, they have a history of litigating cases like this, but this one has one very key difference. They're bringing this suit as the consumer of a VIZIO TV rather than as a developer of the GPL code. So normally they represent the people who build the code rather than the people who consume it, and they want to use this to demonstrate that users are entitled to copyleft rights just as much as the copyright holders. So it's a very interesting twist on this very common tale of companies being taken to court over GPL violations.

PJ Hagerty (05:18):

Right, and there's kind of an interesting, fine line there that it's the user's perspective instead of the developer's perspective. Really interested to see how this kind of plays out, because I'm sure it's not

going to be a simple, straightforward thing. It'll probably take a while, but hopefully you can bring that back with some other open source news in a later episode.

Ben Lloyd Pearson (05:33):

Yeah, and you think about how many more users there are of open source code. That means that if this is successfully litigated against VIZIO, companies everywhere are now open to a lot more. There's just a lot more potential for them to get sued over these things.

PJ Hagerty (05:50):

Absolutely.

Ben Lloyd Pearson (05:51):

And then the last one is it's an interesting story. So there's this software called Mastodon, which is an open source Twitter-like micro blogging service that users can host themselves. It's licensed under the AGPLv3, which has very strong copyleft provisions, particularly as it relates to running code on online hosting services, and it turns out the Trump Media and Technology Group, TMTG, was just caught violating GPL code for the Mastodon social media service. Some of our listeners might have heard about how former president Donald Trump, he has an effort to launch his own social media network.

Ben Lloyd Pearson (06:32):

Well, it turns out they built it on Mastodon. They attempted to hide the fact that they did so, and now they're officially in violation of the AGPL copyleft provisions that require them to share the source code for the entire site. The SFC, the same organization that we just talked about with the VIZIO lawsuit, they've already notified Trump's organization of this violation, and they've given them 30 days to rectify the situation. If the problems aren't resolved by then, not only will TMTG lose all rights to that code forever, the SFC and the Mastodon founder, Eugen Rochko, I'm hoping I'm pronouncing that correctly, they both plan to take legal action against them. So the moral of these two stories, respect the GPL, don't try to hide your use of GPL code, because the SFC will find you.

PJ Hagerty (07:23):

It's so good that there's an organization like this out there to protect developers, to protect creators, people who maybe understand the license, but don't always know how to enforce it. It's so great that the SFC is out there to help them out.

Ben Lloyd Pearson (07:36):

Yep. Yep, exactly.

PJ Hagerty (07:38):

Awesome. Ben, thanks so much for the open source news. For this episode, I'd like to introduce you to a good friend of mine, Adrian Roselli. He's an accessibility advocate, a consultant, a writer, and a speaker. Adrian, tell us a little bit about yourself.

Adrian Roselli (07:54):

I'm an accessibility advocate, consultant, writer, and speaker. Wait, that's your line. I'm sorry.

PJ Hagerty (07:59):

That's what I said.

Adrian Roselli (07:59):

Yeah. I most simply, I'm a consultant that focuses on accessibility, which encompasses usability and UX, or user experience. My main focus is if you have questions about digital accessibility, whether it's getting a team trained, getting them to review or fix code to conform to WCAG, deal with lawsuits, basically I'm the guy that you drop in to help you train up your team, resolve that stuff, and get you stood up, so that doesn't happen again.

PJ Hagerty (08:31):

So you're like a single man accessibility A-Team.

Adrian Roselli (08:35):

I am like... What's his name? Murdoch from the A-Team.

PJ Hagerty (08:39):

Okay. That's...

Adrian Roselli (08:39):

I'm just him.

PJ Hagerty (08:41):

That's disturbing. We can touch on that later in the podcast.

Adrian Roselli (08:44):

Whatever.

PJ Hagerty (08:46):

But I mean, at least you'll fly in a plane.

Adrian Roselli (08:48):

That's true. I might fly the plane.

PJ Hagerty (08:51):

Exactly. So what actually got you started looking into accessibility and web development concepts around accessibility? What triggered you into this kind of? Because you were a web developer for years, but kind of working on client sites and things like that, then you moved into accessibility. What kind of made that?

Adrian Roselli (09:08):

I had always had that peripheral exposure and experience with accessibility way back to when I used to be a terrible concert promoter, and make sure wheelchairs could get to the stage instead of sinking in

the mud, stuff like that. When I started my original business, Algonquin Studios, we found that we were getting a lot of work for government or not-for-profits, and one of the market differentiators that we were able to provide was guaranteeing that they would meet, at the time, section 508 or whatever other accessibility standards they had. So I started to leverage my preexisting experience and interest, and turned it into straight up just a way to sell our services and beat out the competition.

Adrian Roselli (09:52):

But then once you start actually doing the work, and firsthand experiencing how that benefits users, and when I say, "Users," I mean other human beings, when you see how grateful they are, when you see how it changes their entire experience with the platform, or the things they're trying to do, it is very hard to not get pulled into it as something other than a technology or marketing effort. It genuinely becomes something that you can't imagine not doing, at least unless you want to be a jerk.

PJ Hagerty (10:25):

And I think that, I mean, it's different for you, because you kind of immersed yourselves in the rules, and the guidelines, and the laws, and different things around accessibility. And I think one of the things that I hear a lot from people when they talk about accessibility, or they look into accessibility, is, "Oh, there's so many rules. There's so many different things. I just don't know how to get started. Maybe we just don't bother." But how can someone kind of at least make sure they're airing on the side of caution? How do they find out? How do they figure out where do they start?

Adrian Roselli (10:53):

Well, the first and probably easiest step is to know HTML, quite simply. Everything, and it doesn't matter what language you're using at output, if it's going into a web browser, it's outputting HTML, with the exception of Canvas or those people still anchored to Flash or... But Canvas is an example where you get outside of that. PDF is where you get a little bit outside of that. But if you know HTML, you're already off to a good start. The things that you output are outputting HTML. So I don't care if you're React person or an Angular person, it's still outputting HTML. Custom elements are where it starts to get a little bit tricky. That's where you do need to pay attention to ARIA, which is Accessible Rich Internet Applications, which are a series of attributes to add onto HTML that provide hooks for the accessibility APIs on a system.

Adrian Roselli (11:44):

If you know HTML, you're already most of the way there. From there, validate your code, have a linter to make sure your HTML is good, and if you focus on the low hanging fruit that from my audits most people get wrong, you're going to be in good shape, and that is don't have terrible contrast. That's easy to measure. There are a ton of tools. The browsers have it in their dev tools for free now. Use headings well, make sure you have alternative text for all of your images, and it needs to make sense in the context, and make sure that the keyboard works, which means every time you start building a thing, throw the mouse away, or throw your friend's mouse away, and just use the keyboard.

PJ Hagerty (12:21):

Right. And there's lots of tools, and we'll get into that in a little little bit. I mean, there's lots of different things you could do, but when you talk specifically about accessibility, do you feel like you're talking specifically about front end development, or is there also backend development that can be done to

make sure when you're building an application, you're ensuring that the way the backend functions will allow accessibility in the front end?

Adrian Roselli (12:45):

The short answer to that is it's a lot of front end and front end adjacent, but there is a backend component that still feeds into it. So when you say backend, I'm going to pretend you're talking about the people who might be building the data structures, for example, and I'll just take that for a second. If you're building data structures, it's good to know that your front end developers might need fields, structures in the database to hold information such as alternative texts for images, additional interaction information that your developers can then pull from the database and update, so that not only do they have the information available for them to draw on however necessary, but to feed into different applications. And should your thing ever be localized, because it is after all a world wide web, should your thing ever be localized, that those strings themselves can be translated, because you can't count on the browsers to automatically translate the accessibility information that you might include for users.

PJ Hagerty (13:47):

Right. And one of the things that we've actually realized when we looked at localization specifically is that sometimes translation isn't really enough, because there's also different features of different languages, such as how they appear. We had a team of open source developers come in and say, "Hey, we speak Arabic. It needs to be right to left," and wrote what they call the RTL plugin, so that if your language is right to left, it will appear the way it's supposed to appear in Matter Most, in the browser, and in I think the desktop application as well.

Adrian Roselli (14:14):

Yeah, and that's a great point. Not only does your data structure need to support all these extra potential strings, it needs to support double-byte encoded characters, and there are still developers today who write databases where the fields don't account for, to your example, I can't put Farsi in there. I can't put emoji in there where it's forcing capitalization or not on the fields. Yeah. And again, I've unintentionally limited this scope to databases, but when it comes to localization, internationalization, and accessibility, they're all thoroughly intertwined, and you don't ever want to have a data structure that limits your ability to do all of those things.

PJ Hagerty (14:58):

Well, right. Because I mean, at the heart accessibility, well, I think a lot of people think of, "Oh, it's for the blind. It's for the people who have difficulty with visuals, or people who are hard of hearing or deaf." Accessibility is really about having access, giving someone the ability to have... Literally break down the word to the ability to have access to a thing, and that's what we're focused on, not just, "Oh, we're making sure that our colors are good, so that color blind people can see our content."

Adrian Roselli (15:23):

Yeah. And I'm glad you mentioned that, because so many of the things that are accessibility affordances map directly to sort of stress cases or temporary scenarios for users in everyday life. I might be deaf, in which case American Sign Language might be my first language, so English is my second language. I might be somebody who has a cognitive challenge, in which case I might really benefit from being able to switch the language or get simplified language. Even if we go to the thing that most people think of,

to your point, users who are blind, contrast is huge for low vision users, because they need to be able to still see the screen when they're on the train, and the sun is shining in through the window, and they need to be able to have captions, that would be deaf users again, or audio description, because they can't have the audio on on the train, or the screen is too dark, and they need to be able to hear.

Adrian Roselli (16:25):

Basically, there's always a mapping to a real world scenario that we have all experienced at one point, and we find once our clients, once my clients, because I'm still speaking past tense when I had my bigger company, once my clients start to recognize how those accessibility affordances benefit them as users of their own software, or users of whatever it is I'm helping consult on, then they get to buy into it a lot easier. And not to go too far askew, but, hey, you're letting me talk. Your mistake. One of the things I do when I build personas for clients is I don't build a disability persona. Those always get thrown out. A team will often cut those down to a very few. I make sure that a persona has traits that correspond directly to a stakeholder in the project.

Adrian Roselli (17:16):

So if the CEO of the company is always walking around Midtown holding a coffee in one hand, then now I can use that as a trait of the persona to better support one handed operation and high contrast controls, because they're in the sun, they're holding their coffee, they're distracted, et cetera. All those affordances suddenly come crashing down to a real, tangible benefit for them in their day to day life.

PJ Hagerty (17:40):

Interesting. And I assume, we mentioned this a little bit earlier, but there's a lot of tools that go into testing to see what kind of things are ADA compliant or just simply accessible. What are some of the tools that you use? I'm sure JAWS will come up, because I've never been to an accessibility talk that didn't bring up JAWS at some point in time, but what kind of tools do you think are super helpful that teams can adopt now, and start seeing like, "Hey, we really missed the boat on this, and we need to focus on fixing these issues right now,"?

Adrian Roselli (18:12):

The first and best tool is the keyboard.

PJ Hagerty (18:17):

Okay.

Adrian Roselli (18:17):

Period. Keyboard. And that includes for mobile as well. Just because you're building an iPhone app doesn't mean that your users aren't going to rely on a keyboard. I am always at conferences where blind folks have their screens off, and their phone in their pocket, and they're listening with one earbud to VoiceOver, the screen reader, and typing away on their keyboard, because they're not going to swipe on the screen. So keyboard is the easiest, just like I mentioned before, get rid of the mouse. You're going to know if your stuff breaks or not.

Adrian Roselli (18:46):

After that, free stuff. All of the browser developer tools have accessibility testing features built in. In Chrome you can use the dev tools, and you can immediately see the contrast to something. Firefox has the entire accessibility tree, which Chrome recently added a nice way of doing it. It shows the accessible name calculation. It basically has all this stuff that's free and available, and you don't need to do any extra work for. All of the OSs today also have a screen reader built into them, iOS, iPad OS, and Mac OS all have voiceover. Windows has narrator. You can download NVDA for free. Orca is for Linux systems, GNOME specifically. TalkBack is on Android. It's free. It's available, and to your point, yeah, you can also buy a JAWS license.

Adrian Roselli (19:34):

The caveat there is if you've never used a screen reader before, maybe don't just fire up a screen reader and think you understand how it works, because then you're going to start doing stuff to fix issues that aren't really issues like, "Ah, this pronounces funny. I need to change it to pronounce correctly," and then you've just set everything on fire. Beyond that though, there are other tools built into the operating systems that you should learn to enable, zoom features, contrast settings, reduced motion settings, all of which can be accessed by the browser and native applications.

PJ Hagerty (20:06):

Very cool. And one of the things that I've heard about a few times people have mentioned, accessibility overlays. It's a quick fix, so somebody can kind of toss that up and like, "Hey, we're compliant enough, or we're doing enough." Is that really a thing?

Adrian Roselli (20:22):

They are a thing in so far as there are some very well funded startups that have a ton of money that are pitching, "Hey, we will fix all the accessibility on your site if you embed this one line of code and pay this monthly or annual fee." And they pitch it by saying, "You want to avoid lawsuits from disabled people." So they're already sort of demonizing the audience that I'm out there trying to help, but more importantly, a number of experts have been able to demonstrate they don't work. Not only do they not work on a technical level, we can see where all the code is going wrong, and stuff that doesn't actually support per WCAG where they guarantee compliance.

Adrian Roselli (21:03):

But users with disabilities have been repeatedly complaining, to the point where VICE NBC news, they've written articles. They've interviewed people, some well known people. National Federation of the Blind kicked one of these accessibility overlays out of its sponsorship ranks. They're a problematic product, and their entire sales pitch is based on FUD, fear, uncertainty, and doubt, and I maintain that they're genuinely causing harm.

PJ Hagerty (21:30):

I feel like we should be open and honest. I've seen you tweet about this quite a bit. You have some very particular thoughts on this, so it's not like I didn't know what your answer was going to be there, but I'm glad you clarified that, because I think if someone looks at your Twitter, they might not. It's not always clear in 280 characters exactly where you're going.

Adrian Roselli (21:48):

Yeah. And so many of my tweets, so many of them are sort of technical that if you're not in this space, all you can think is, "Oh, there's Adrian banging on about that thing again." And it's meaningless, but most of my audience are practitioners and disabled users, so I don't have to give background. They already know what I've been shouting about for the last five years.

PJ Hagerty (22:12):

Right. You're kind of preaching to the choir, so they get it.

Adrian Roselli (22:13):

Yeah, exactly. Which I guess means that misery loves company.

PJ Hagerty (22:20):

So speaking of which, if people want to try to kind of not necessarily follow your path, but get into it as much as you, are there courses or learning modules that people can look into to learn more, or are there more well-versed techniques to ensure that a team can build up an accessibility kind of profile on their team, or where can someone get started to learn? They could pick up the tools. They could toss out the mouse, but if they really want to learn, where can they get started?

Adrian Roselli (22:47):

The best, easiest, and cheapest place to start would be the W3C. They have a bunch of free training videos, and they have documentation, and they have sample patterns, and techniques, and ideas. There's a ton of free stuff there. I admit the organization is a bit weird. They're going through sort of an overall rebuild redesign of their site, and they've brought in an information architect to help with that. Separately, Microsoft has a ton of videos and resources on its site, including how-tos within Office documents, and Teams, and things like that. Google has free Udacity. Udacity, how do you pronounce that?

PJ Hagerty (23:28):

Right. Right. Yeah. I think it's Udacity.

Adrian Roselli (23:30):

Udacity. But Google has a bunch of free Udacity courses. WebAIM, which stands for Web Accessibility in Mind, they have a bunch of tutorials that are available out there. There are tons of other free resources from expert bloggers, and I have to qualify there are accessibility experts, and then there are accessibility dabblers. So don't worry if you don't know how to find them yet. If you spend some time looking at this stuff, it'll become obvious. I have a Webotron blog that I maintain, which you can read at adrianroselli.com, or block it from your RSS reader.

Adrian Roselli (24:06):

There are paid courses. There are meetups online and real. There are free conferences. Inclusive Design 24 just happened last week. I'm still catching up on sleep from that, because I'm one of the organizers. There's a dedicated Slack channel where you can just go ask questions, and a bunch of people all trying to look smarter than the other pile on to give you feedback and help. So there's a ton of free stuff out there.

PJ Hagerty (24:31):

Awesome. Awesome. So lots of great places to find out more about accessibility. We're kind of coming up to time. If people want to know more about you, what you're doing, follow you, see the things that you have to say...

Adrian Roselli (24:43):

I'd [crosstalk 00:24:44] they're buying me dinner. This is awkward.

PJ Hagerty (24:45):

Yeah. It's only 4:00. We're not that old, but where can they find out more about Adrian Roselli, and the things that he's doing in the accessibility world?

Adrian Roselli (24:52):

Adrianroselli.com. I'm on Twitter as Aardrian. That sounds weird to pronounce. A-A-R-D-R-I-A-N. And those are really the only two places to get my information. It's just easier, but I have an RSS feed, so you can avoid whatever I decide is a good design on my site, and just get right to the meat of my content there, if that interests you.

PJ Hagerty (25:14):

Awesome. Awesome. Adrian, thank you so much for taking the time to join us. I know accessibility is a huge issue, and I think the more we talk about it, the more people can get into it and get started. So thanks for taking the time to join us on What Matters. For those of you listening, we look forward to bringing you many future episodes of this podcast. Keep listening and feel free to get in touch at community@mattermost.com. You can also join us on community.mattermost.com, which is our community server. Grab us, tell us about your questions, your comments, and episode and guest ideas. Let us know what you think matters most.

Voice Over (25:45):

You've been listening to the What Matters podcast hosted by PJ Hagerty, @aspleenic on Twitter. Music is Upbeat Party by Scott Holmes. For more information, contact community@mattermost.com. Let us know what matters to you, and we'll talk next time on the What Matters podcast.