EPISODE 593

[INTRODUCTION]

[0:00:00.3] JM: The world of software moves faster than the laws that regulate it. When software companies do get regulated by the legal system, that regulation is often enforced unevenly among different companies. Software continually presents the legal system with new requirements. Consumer data privacy needs to be enforced on a granular level. Software developers need a system of protecting their intellectual property. When a company becomes dominant, our legal system needs to scrutinize that company for potential antitrust violations.

Mica Kesselman is a lawyer specializing in software IP prosecution, but he does study a wide range of intersections between law and software. Prior to becoming a lawyer, Mica studied computer science. He joins the show to discuss a range of issues at the intersection of software and the law, including GDPR, software patents and self-driving cars. These are topics that we will cover in more detail in the future, but it was great to have Mica bring the perspective of a lawyer to the show.

We would like to do more shows on the intersection of software and X, things like software and biology, software and chemistry, software in society. If you've got ideas for these kinds of shows, please send me an e-mail. I would love to hear what your thoughts are. It's jeff@softwareengineeringdaily com.

I hope you enjoyed this episode.

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[0:01:38.2] JM: Every team has its own software and every team has specific questions about that internal software. Stack Overflow for Teams is a private secure home for your teams' questions and answers. No more digging through stale wiki's and lost e-mails. Give your team back the time it needs to build better products.

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[INTERVIEW]

[0:02:51.5] JM: Micah Kesselman, welcome to Software Engineering Daily.

[0:02:53.4] MK: Hey, Jeff. Great to be here.

[0:02:54.8] JM: You are a lawyer, and I actually met you at the Software Engineering Daily meetup in Boston, which was an interesting event. There were a lot of different people from different backgrounds there. Actually before that, we had gotten acquainted on Slack and over e-mail, because you're a listener of the show. You actually have a background in computer science, but you work in law. How did you get into law from computer science?

[0:03:20.5] MK: Yeah. I actually entered into law before I got into computer science. Previous to law school, I had been on a political science track into grad school that do post-grad PoliSci type work, which involves a lot of modeling and quant based analysis. I ended up going into law school, wanting to work with software companies primarily, and realize that it would be helpful to have a solid grounding in the actual engineering and science of computer science as well, if I want to work with software companies, to give a holistic offering of advice.

I ended up going back to undergrad at night, or at one point during the day and then law school at night at the same time, and finished them both in tandem with each other. Now a few years later, I'm mostly doing a patent prosecution work and a little bit of corporate and policy advice and stuff like that as well and some due diligent stuff.

[0:04:16.9] JM: Now I think of software and law as both infinitely ambiguous domains. If you cross them, does it become even more infinitely ambiguous? I'm not sure what the right formal measurement there would be, but –

[0:04:33.2] MK: I get what you're saying. It's a yes, I think that when you're working with software – and that's probably true in any domain that's rapidly advancing and changing all the time. There's always a certain amount of flex and particular in our US legal system, there's an amount of flex in the law and ambiguity associated with that, then I think at in software.

At all fronts, if you're a startup, just bootstrapping yourself into your first series A, or whatever you need to do to get financing. Or if you're a long-established mega corporation that's been in the software industry for decades, you never know how your software practices are going to interact with the laws that changes, and you also don't know how the law is going to change when it interacts with your software practice and your dev pipeline. Yeah, it can get pretty ambiguous while you're navigating through all sides of it.

[0:05:25.2] JM: I guess, you can say that about any field with if you have enough experience, enough depth, you will reach – probably within eight months the realization, "Oh, my gosh. There's so much subjectivity, so much undiscovered territory." It becomes like that. A lawyer is a knowledge worker job, much like a developer. I have been a developer before, you have lots of tools to improve your workflow. Does a lawyer have access to similar tools? How does the workflow of a lawyer compared to a software engineer?

[0:06:00.1] MK: I'd imagine that they're quite different. It's going from the firm and practice to practice. I would think that it's the same way in software too, depending on what specific domain you work in and what level of corporate you work in. Software engineers probably varies and workflow as well. There's a lot of room for technology's focus, smart workflow management and task management. One of the things I use personally that I don't see a whole lot of other attorneys use, but I use Trello a lot for my own personal docket and managing my own projects and cases. Most of what we do use in the legal field tends to be sort of, I don't want to say ad hoc, but it's not –

[0:06:47.3] JM: It's not specifically for lawyers.

[0:06:49.0] MK: Yeah, not designed from first principles, specifically for legal practice workflow. I mean, there's more and more technology like that out there, but at the moment they're slim offerings.

[0:06:58.3] JM: Yeah, this is like when we did that show about Atrium with Justin Kan, that's what he was saying is there's some lawyers will use Asana, or use Trello and that's about the limit of the sophistication, like that and spreadsheets, and that's cutting – it's like a cutting-edge law firm right there.

[0:07:14.5] MK: Right. Yeah. I mean, if you have an associate come in who knows Excel really well and can just put together a bunch of formulas, that alone will blow the minds of the partners at that firm half the time. Yeah, there's quite a bit of room for improvement in workflow software.

[0:07:30.8] JM: Yeah, so I want to get into some issues around the intersection of law and software, because I think you're well-equipped to discuss them. I've been wanting to do a show on GDPR for a really long time. People have asked for it. I actually have not been able to find a great guest for it, so maybe, I don't know, if somebody out there has gotten deeply familiar with GDPR they can send me an e-mail. I do want to ask you about it. Maybe you could just give your perspective on GDPR. What is GDP? Why was it put in place?

[0:08:02.8] MK: Sure. GDPR has actually been in the works for a while now, right? I mean, it was it – it's just going to go into effect here this month, but we've known about this for quite a bit of time. Before that, there were the, I believe the data directives in the EU that were the proto-GDPR, which weren't as enforceable. There's a lot of abstractions in this discussion, because this is not my primary practice area. I also want to give the quick disclaimer of I'm not providing anyone with legal advice and not setting up any attorney-client privilege, so if you have real specific questions about GDPR, any legal issues, please get an attorney.

You're welcome to contact me and we can talk about it later, but I am not providing anyone legal advice. With that said, the necessary disclaimer is put in there. Yeah, the GDPR has three main focuses really. There is legal practice focus for in-house counsel and how your contracts work, and how you communicate with your customers and users, or the people who you have data on.

Then there's the aspect of it for what you do with the data. There's the engineering pipeline and data pipeline workflows that you need to have comply with the GDPR.

Then there's even this aspect of having how you interact with your own vendors and services that you contract out, because at the end the day you might be responsible for what they do with the data you give them. You need to be capable of being responsible for that, for their actions, specifically if you have in-house counsel or a general counsel at your company, you need to make sure that they contemplate that and any agreements you have with the vendors you use.

With that said, the focus of GDPR is really to provide transparency of how data is being used and to tighten the relationship between, again the sort of my view of it, but tighten that relationship between average citizen, your person and the data about them, their data to make it so that data about you is something that is yours and yours alone. Not something that someone else can own in lieu of you. Does that make sense at all or –

[0:10:21.3] JM: It does, it does. What's on fortunate about this is that lots of companies have to change their privacy policies, they have to make engineering implementations to comply with GDPR. It's unfortunate, but if you're being realistic about it, it is nice that we're in a sense running these – Auren Hoffman came on the show recently. We talked a little bit about this. We talked about China versus the EU versus the US. You can imagine a continuum of privacy regulations.

In the EU, it's the most constrained, in the US it's somewhere in between with a lot of ambiguity and people having very mixed feelings about how they feel about privacy. Then in China, it's like we – well, I guess China's on a – you would have to have a third axis there, because it's maybe private in the scope of consumers to each other, or consumers to businesses and businesses to businesses, but the government gets to see all of it and have access to all of it, or at least have control over quickly changing policies over all of it.

Auren argued that this would add to – or create a continuum where the EU will probably have the least innovation, but it might have the most – some of the most interesting debates and discussions around privacy policy. China will just be forging ahead and have the most

aggressive utilitarian mergers between data and innovation with privacy kick to the side. Then the US will be somewhere in between. Do you think that's an accurate depiction?

[0:12:04.5] MK: Right, yeah. I actually recall that episode tonight. That carried with me as I look more and more into GDPR and its impact, in particular on the machine learning related spaces. Yeah, I think that that's probably a fair estimation of how things are going to go, that you're going to see a lot of interesting machine learning and AI-related tech coming out of China. That's also happening in tandem with the fact that China has stated that – the Chinese government has stated they want to take an aggressive stance on fostering machine learning and AI.

Aside from a little bit freer use of data sets and consumer data, they have a whole host of other incentives that are going to be probably rolled out, I'd imagine to incentivize and hasten AI and machine learning development. I'm hesitant to say that we're not going to see innovation come out of the EU. I mean, the EU has produced some of the most interesting innovations in machine learning and data science that we have seen in the last few decades. I don't think that that's –

[0:13:14.7] JM: Deep Mind, right? Didn't Deep Mind come out of the EU?

[0:13:17.4] MK: Right. That's a cultural thing, I think to a degree too. It's an academic and research culture. That's not going to disappear just because of the GDPR, or at least not overnight. I wouldn't take a super pessimistic view that it's all of a sudden software and data science and the EU is dead because of GDPR. There are some things in the GDPR that I do find concerning and I'm curious of how it's going to get sorted out in the future. We'll just have to wait and see.

These are requirement that you have to, for any automated decision you have to report the logic and to an understandable degree of how the decision was made. When you're talking about these deep neural networks and then you bring on another layer of learned architectures on top of that, I am not entirely sure that you can sensibly report anything from that. I mean, sure you can say, "Oh, look at all these nodes da, da, da, da." Cool, but how the hell are you going to know what this node means out of the thousands of nodes and layers in your neural net? That doesn't make a whole lot of sense to me.

[0:14:29.4] JM: Or if you're being – you could be AB tested also, like there could be multiple different policies being applied to different people. That could be interpreted as discriminatory.

[0:14:40.6] MK: Oh, yeah. I and I think the one thing to keep in mind is that at the end of it too, there is a certain amount of common sense that is being wrapped up into this. Everyone's freaking out about the penalties, for example and you have those two tiers of the penalties, the percentage I think is 4% or 2% between tier 1 and tier 2 off of total revenues, and then, or however many million euro fine, whichever is greater.

Those are maximum penalties and there's specific language in the GDPR that talks about other factors to consider that will reduce an impact the fine, because then there has to be a room for common sense and flex in this, because you're having rules and regulations run up against very rapid technological development that's developing and frankly, along vectors that we wouldn't have considered possible or likely even 10 years ago.

You're not going to see any sort of behaviors out and out prohibited, specific neighbors. You're going to see perhaps strong modulating influence on how you interact with consumers in particular. Then you brought the AB testing. Part of that is just a lot of GDPR compliance is going to just come down to keep better track of your data. That's easier said than done, I get that, especially when you're dealing with however many different data sets across however many distributed databases, doing who knows what. That can be very difficult, even for a small company.

That's really the crux of this; keep track of your data where your data is sourced from and be able to manipulate it when you need to, be able to transfer it out if you need to transfer to a different service, and be able to just purge out of the system. Which again, easier said than done, but I think that for companies starting now when they can start developing from first principles along those lines, that's not going to be as hard. It's going to be hard and it is hard. It has been hard for larger companies are very data focused outfits without a doubt. That sucks. There's no real good way of getting around it. It sucks and it's expensive and it's frustrating.

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That e-book is available at aka.ms/sedaily.

[INTERVIEW CONTINUED]

[0:18:38.1] JM: If you're Google or Amazon, you have to be very concerned about this. You do have to put in place some serious institutional rigors around that data protection. If the IRS audits you, they're going to find something wrong with how you're doing accounting. If you have anything sufficiently complicated, they're going to find something that you have done wrong and they can pursue you if they want to. They have to prioritize it based off of how much money they're going to make.

What I wonder is similarly, is it going to be the case with the GDPR? Are they only going to pursue the people who have made the most money, like the Googles and the Amazons in contrast to Software Engineering Daily? I read an article recently, it was like, if you're a media company, you need to be worried about GDPR. Software Engineering Daily has a platform where you can login and you're sharing data, and I don't think we have a – we definitely don't have a terms of service in place that complies with GDPR. Do I need to be worried, or is it really just the Googles and the Amazons?

[0:19:36.7] MK: Well, yeah. I mean, I think that any of large administrative oversight like this, it's going to have to prioritize the high-impact targets over others, because I mean, there's only so many people and so many man-hours that you can throw at these things. There's so many potential cases to pursue.

Yeah. I mean, your bigger outfits, your Googles, Oracles, whatever are going to have – are going to be the ones that are going to need to be the most on guard about it for sure, just because they're clearly your biggest impact target. One from the purely fiscal calculation, but also just when Google gets sued, that makes news. That disseminates information into the popular culture and the zeitgeist right off the bat, without much work. It's a high-impact high-value target for sure.

Smaller companies should still – you still want to comply with all the laws and rules that you're expected to comply with. I think if you put efforts to comply, reasonable efforts and you do comply, you're not going to really have anything to worry about. I don't want to sit here and say like, "Oh, yeah. You're trying to make a recommend, making a calculated bet against the odds of someone coming after you," because this is true for every industry, right? I mean, and for every administrative oversight. You see this with ICOs and the SEC, is another example. Not every single one is going to be gone after, but every single one should definitely try and comply with the requirements.

There are certain low-hanging fruit for sure that it's easy to comply with. You said you met stuff like terms of service and just clearly communicating to your customers what you're doing with any data you collect and what data you're collecting. If you start doing anything interesting with that data, sending out a holler to all of your –to everyone whose data that you have and let them

know what's going on, stuff like that. I mean, just clear reporting and communication, which is what I think just good business, in general.

That's really one of the big key factors in complying with regulation. Though that, I don't think is as hard to do as some people make it out to be. I think in particular, the GDPR there's a lot of fear-mongering going on, to be quite honest right now among – hopefully among attorneys, more so than anyone else. It's consulting work, and that's not to say that people should be aware of it and trying to keep abreast of it and comply.

One of the best ways to know what you need to do, or what you should be aware of at least is there's the – I've consulted these a bunch of times, the article 29 working party, which arose out of the previous data directives and now is focused a lot on just explaining the rules of the GDPR and what you need to do to comply and giving you hypotheticals and examples and whether or not those hypotheticals would be in compliance, and just looking at though the working party guidelines. That's really helpful and you can look through that.

It's usually broken down on pretty understandable language. It's not in legalese. It's meant to be approachable by our average day-to-day person, which is another part of the regulations, which is something I'm in favor of actually, is it just gets to communicating through your terms of service and user agreements and consent forms in understandable human speak and not lawyer speak, which is a good thing to strive towards.

[0:23:04.5] JM: Totally, more explainers, more wiki's.

[0:23:06.9] MK: Right. Yeah, wiki's. I would love to see a future – some say it's a trod for what I think and never panned out to have – just standardized contract language, a contract schema really, so that it's just easy to read through and parse out. Even if it's not necessarily immediately understandable by your average layperson, you could develop utilities to parse through it and explain it in some lay speak and understanding that makes sense to people, because it would be in a schema, it'd be standardized.

[0:23:37.5] JM: There's a law that any change to the legal system, the lawmakers have to fund the creation of a two-minute YouTube explainer of that changed the wall.

[0:23:47.0] MK: Yeah, if I had my way, it'd be any time you propose any legislation or legislative change, you have to also have a in-line citations to peer-reviewed academic support for what you're proposing. I don't foresee that happening anytime soon, unfortunately. Maybe, who knows?

[0:24:05.5] JM: Yeah. Okay, well other stuff I want to talk to you about. We should definitely do another show on GDPR at some point in the future, maybe an implementation show, like somebody who works at a big insurance company, or something and had to implement GDPR. I'd love to do that show.

[0:24:19.8] MK: Yeah. I think one of the big takeaways from any discussion about GDPR is that a lot of it is going to be fact-specific and situation-specific, depending on your specific data flow pipeline. That's really what it comes down to. This is true generally, but specifically in this regards, your corporate counsel, your in-house, or even just your consulting attorneys should be able to sit down with if you have a data engineer, or a data science team, or whomever, or even just your sysadmin and understand how data is being processed and going through the system.

Be able to reproduce that explanation in their own terms, so that they can advise accordingly. That's what it comes down to is how you're taking in processing and pushing out data. These days that – I mean, just did a show recently on data engineering a specific field now, that can be a really complicated process, but it's whose any attorney consulting a client, either as in-house, or just as a private practice coming in to understand that pipeline.

[0:25:28.7] JM: Okay. You are in patent prosecution. This is a totally different topic. What does that mean? Tell me about the day in the life of a patent prosecutor, who is focused on the intersection of law and software.

[0:25:42.8] MK: Sure. I would say depending on projects, I do anywhere between 50% to 80% of my day-to-day practice is patent prosecution. The rest will be – a lot of it is actually, I do a lot of work with post-grant stuff. Actually challenging patents in some cases, or helping with litigation matters.

Even then, a lot of it boils down to sitting down with the subject technology and the disclosures that I'm given, and just making sure that I understand how things work. Not necessarily from brass tacks, because that doesn't necessarily have to be the case for all your patents, but at least how the operative technology works that we're really interested in. A lot of diving into fields that I have some familiarity, where they're all familiar with a core field, like on the machine learning side of certain familiarities with it, but depending on the domain that it's in.

Also, and I have to start learning about terminology and specifics related to say, I don't know, the oil and gas industry, or something. A lot of exploration of resources on that front. That's the day-to-day of a patent prosecutor. Then drafting the patent and putting together figures and explanatory drawings, so that when it's filed the Patent Office can look at it and understand what's going on, and putting together claims that are to the greatest benefit that we can get for our client. This is where a lot of, I think misunderstanding and angst may be comes in from various fields about just patents in general, because you know as a patent prosecutor –

[0:27:24.4] JM: Yeah, some people hate patents. I bet if you polled Hacker News, if they were – first of all, they would boil it down to an inappropriately simple question like, "Are you in favor of software patents?"

[0:27:37.4] MK: Thumbs up or thumbs down. How many thumbs down?

[0:27:39.6] JM: Thumbs up or thumbs down. Yeah, 85% thumbs down. As you point out in an e-mail to me recently, there is a gradient of IP protection. You've got patents, copyright, trademarks, trade secrets, but there are so many people who are vociferously against software patents. Give the case in favor of software IP protection.

[0:28:07.8] MK: Sure. Software just generally speaking is an odd duck, right? Because it's protected by copyright in its literal sense, where you just copy and paste something from one source to another. That's infringing the copyright. Then from this systems and methods, methodology approach, it also can be protected under patent law as well. Then not getting into the whole issues with trade secrets and employment agreements and stuff like that. It also falls under trade secret law pretty commonly as well to specific parts of it.

I think the more I understand that when you have a trade secret, a trade secret is basically the antithesis of a patent, right? A patent is structured so that it puts ideas and technology and innovations out there into the public record, even if it's controlled for a period of time. While trade secrets are designed to keep things out of the public discourse.

The case for fans, I think is it's important to understand that the majority of patents, they actually don't really get used very often, whether or not it's a good thing or a bad thing, it's different. You have a whole discussion about making patents more appraisal and browsable and useful for licensing purposes, and actually being used and interacted with between patent owners. That's a different – it's a very long discussion, a very different discussion.

The majority of patents, basically just sit there and don't do anything. I think it's something over 90% that aren't using litigation, aren't used in licensing or anything like that. They're primarily used as financial instruments. To create a portfolio of assets that when you go to say VCs, you can show them that you have at least an IP strategy in hand and that you're actually thinking about greater marketplace of what you're doing.

This is a harder statistic to figure out, but they're also quite often used defensively in the sense of just you staked your plot in the ground and it wards people off. It's a fence for you to keep people away, either through litigation or just market competition, of course. There's no real good data on that, right? Because I can't – no one's going around to every single patent owner, or every single person, I guess and saying, "Hey, have you ever changed your strategy based on seeing such-and-such patents?" That's a big part of it.

Really, the way I see it though for most software companies, they're primarily there as useful to show that you have, again contemplated an IP strategy. Just a general legal and business strategy, and are we doing that hand-in-hand? Also, are using them again with understanding that it's building up assets that you can use just secure lending, secure financing, whatever you need to do, which can be very difficult when you're basically starting from nothing with just an idea, and trying to get to market, because those ideas can be hard as hell to implement.

[0:31:10.9] JM: Which is super strange, by the way, because shouldn't the implementation of the idea be the thing that gets – it's like either like I should be – if you're a VC, I should be able

to either show you a UML diagram of my idea, or show you the implementation of that idea. I don't understand why showing them the software patent would be some positive signal towards raising money.

[0:31:33.9] MK: Oh, sure. Well, understand that when you are granted a patent, you have to have – it has to be able to be implemented from what you've disclosed and what you provide. It's not a UML diagram, for sure it's not a UML diagram. I still have nightmares from my undergrad days doing UML diagram courses, but it's definitely going to be explanatory enough to show that like, "Okay, this system in place, in theory granted." The cases that don't do that are the ones that often make headlines, right?

As someone who works in doing a post grant patent stuff as well. The patents that we tend to go after, tend to be the ones that are boiled down to – I know I use a computer, and I don't know people smiles, and it gives me this output or something, I don't know, like without further explanation. You do have that too and those are – it's problematic, it's hard, but those in theory at least, are challenged and weeded out.

[0:32:34.4] JM: Yeah. I mean, well I think the most problematic type of software patents are again, the ones that people hear about. Do you remember the podcasting patent?

[0:32:43.4] MK: Yes. Yeah, I follow that one. That was crazy. Yeah, and I mean, I think also you have to consider that the way that the Patent Office works, there's basically eras of patent prosecution, and a lot of the real bad patents that people see and makes them – that make them loath patents in general, tend to be out of this dotcom era, where basically anything for – I don't want to say anything, but a lot of problematic patents came out of the office during that era, when it was just being understood that you could get IP protection around software implementations.

[0:33:22.1] JM: I could submit like, I am making an ad network based on a relational database and it's like, "All right. I'll rubber stamp that patent."

[0:33:30.0] MK: Yeah. I mean, that there's an era where it almost felt like that. I don't want to overly simplify it, because they clearly all went through prosecution and back and forth, and you

can – even as just a public person, you can just go out there and go onto the USPTO site and actually look at the history of prosecution of a granted patent that's been published, and see what the back and forth between the Patent Office was and the patent prosecutor, or occasionally the random inventor them self and see how there are arguing, what they're arguing about and what they were saying – how they were saying what meant what basically.

That's also gets to this other issue that a lot of applications go to the USPTO. People like to crap all over the Patent Office saying, "Oh, they don't know what they're doing. These people are idiots." Look, they don't have a whole lot of time to review all of the patents they're given to them on their docket. You can't be a subject matter expert in literally every single thing out there, and in every single domain space that's out there too.

A lot of times, to their credit, it can be really challenging to look over some of these patent applications and spot what is artful crafting and what is legitimate innovation being presented for protection. Within the scope of software patents I mean, there are arguments to be made about how broad software patents should be. That's been a continuous issue.

We just had years of uncertainty in what's called a 101, or Alice-related law, which Alice was a Supreme Court case that came down a few years ago, that put the kibosh on a whole bunch of software-related and business method patents. Unfortunately, the way that it did that, it made it really unclear what was patentable and what wasn't patentable. There's a lot of hand waving involved in if it's – this is an abstract concept, but this other thing. If it's abstract, then this thing makes it not abstract.

Then how that actually works out in reality, because in theory anything involving software can be abstract. Clearly there are some things that you – there are innovations in software development that are worthy of protection or a patent that are novel and took investment and time to develop and get to where they're at, that you want to – and that are easily reproducible once they're put out there, that you want to make sure that the person, or the entity that spent the time putting it together can recoup some of that. That's my argument, I guess, for software patents.

I'm not going to sit here and bullshit you or the audience that there's not room for a reform, or change in the patent law sphere. That it isn't a moving target at the moment of where that balance is. It's hard, but certainly our patent system for other domains and other technologies has been really critical in fostering the development that we've had. There has to be a balance found at some point and hopefully we'll get there.

[0:36:45.3] JM: Yeah. I mean, I would say, so there are software innovations for sure. You think about PageRank, if Larry Page – I mean, maybe he did file a patent on PageRank, but PageRank, that's a decisively innovative approach to search, probably worth getting a patent on.

[0:37:02.4] MK: Right. That seems abstract to you, right? It's not.

[0:37:09.0] JM: Sure, absolutely. Because PageRank has been abstracted, like people use PageRank like methodologies for Netflix, in Netflix, or to measure the which friends to recommend to you, like based off of PageRank-like methodology. If Larry Page patents PageRank for web pages, does that mean that Facebook can't apply it to people? I don't know, but –

[0:37:36.9] MK: Well, exactly. It's a question of approaching data really. That's really all software is without getting too much into the functional programming solitary. It's how you approach data, and that can always be abstracted.

[0:37:52.0] JM: Your point is that this is just another, it's an ambiguous protective measure that under some circumstances it's going to be useful to have this patent in your hand, whether it's to assess the value of a company. Like I'm Google, I have the patent to PageRank, nobody has assailed that patent yet, so it's hard to quantify what is the value of having a patent on this. But it is at least some degree of legal moat that should increase my valuation as Google.

[0:38:22.0] MK: Right. I mean, I think that's exactly where the krux of it is, because I mean, ideally, I don't like the thought of people going out and suing everyone and anyone for infringing every single patent.

[0:38:35.3] JM: For infringing on the podcast patent.

[0:38:37.3] MK: Yeah. I mean, or even if you have a really solid patent and just starting up litigation all over the place. I would prefer a situation where there's collaboration and cooperation and licensing. That's why I primarily work in patent prosecution and patent litigation really.

The value in my mind of a patent is really more of proving a mindset and also providing at least some indicator of valuation in your in your company, or your project that, "Hey, look. The USPTO said that these are actually really novel," and they've done searches and looked at other stuff and technology that's out there. This is actually a new thing we're doing. It's really cool. That's where the value in it, in my mind.

Certainly, if you ask other patent prosecutors and other attorneys, or anyone else you might get a million different opinions on it. I don't want to sort of present it like this is the standard thought in the legal community. I won't be spreading them very much a minority on this.

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[0:39:46.6] JM: Your company needs to build a new app, but you don't have the spare engineering resources. There are some technical people in your company who have time to build apps, but they're not engineers. They don't know JavaScript or, iOS, or Android. That's where OutSystems comes in. OutSystems is a platform for building low-code apps.

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[INTERVIEW CONTINUED]

[0:41:39.2] JM: Switching topics. I want to talk to you – there's a couple more topics I want to get to you. Antitrust is one of them. We've evaluated the Microsoft case. We've done a couple shows about the Microsoft case back in the 90s. Have you looked at that case much? Are you familiar with the history?

[0:41:56.3] MK: I'm very loosely familiar with it. Antitrust law is not – is so far removed from my own day-to-day practice, that it's hard for me to say a whole lot about it with any –

[0:42:07.6] JM: All right. You're familiar enough to pontificate. All I want is a pontificator. Pontificating interlocutor. There's a book, I think what's called like, was it War 3.0, or World War – No, what was it? Some book about the case against Microsoft. It was really interesting. It's on audible, I don't remember what it is, but it was all about this case. One thing I took away from this case is it seemed like the case was as much rooted in press – actually, it wasn't very rooted in precedent, because it was a weird new thing, like dominance over the operating system platform. Does that mean you have dominance over – dominance over a specific operating system platform that you develop? Does that mean you have dominance over computing as a whole?

It felt like, from my reading of it, that this was a hugely subjective pursuit of Microsoft. Looking at it in a retrospect I'm like, "Was this actually good for the public?" It looks basically Microsoft was pursued and it just beaten into the ground and witch hunted and scapegoated, frankly. I feel like maybe Bill Gates presented himself in a way that made it easy to scapegoat him, because he came off as hostile and superior.

[0:43:27.2] MK: There's also a certain amount arrogance on the other side of that, from what I've read of it too.

[0:43:33.1] JM: David Boies, the legal side of it. I feel there's a parallel thing happening with Facebook. It's like Facebook, did they really do anything wrong? They were just trying to figure out what their business model was and then they expose this data, because they were trying to do it to become a platform. Then oops, they switched to becoming an ad company. Then looking backwards, exposing that data looks really bad. Did they do anything legally wrong? It's super ambiguous, but the way that they're attacked is like, "Oh, this is unanimously a bad thing." Facebook is unanimously done a bad thing. I look back and I try to put myself in the shoes unbiased observer for the Microsoft case. I'm like, "Did Microsoft really do anything wrong?"

[0:44:19.4] MK: Right. I mean, I think that that served just another – it's really just another case of law and technology and the evolving global markets. I'm having a hard time staying at parity with each other, right? Because at the end of the day, if you're engaged in what would otherwise be normal business endeavors to protect your business, or advance your business, but you have such consumer uptake that you're basically in a monopolistic, or quasi-monopolistic situation, all of a sudden. Maybe even without you knowing it, you have this new expectations on your behavior that can be completely at odds with how they were before, right?

It's another one of those lawyer answers where it's like, "It depends." Those are really hard questions and it depends from that, based on the facts of each case. I've also that the outlook on, or the popular news and headlines regarding the whole Facebook scandal, and you serve misuse of data and wrapping back up circling back to the GDPR discussion earlier, of lack of transparency of what they're doing with that data, or real transparency, just putting something in fine print isn't really transparent.

It's interesting because, it's – because yeah, you're right. I mean, Facebook is becoming – if not, they've already become another Microsoft, where they have this market power, or whether they realize it or not and new expectations are going to be put on them to utilize it in certain ways. How that will shake out? I don't know. I mean, that's going to be, again, a lot of it's going to have to do with I think different areas of law converging. It's not going to be just purely an antitrust thing.

I don't know that antitrust ball is really the solution to the things that we're worried about now in this day and age, because the things that we're really worried about, so personal sovereignty of data and ability to express and communicate with each other and stuff like that. As mentioned, net neutrality and bringing up various other influences on how we communicate, but without getting into that. These are things that aren't necessarily directly antitrust issues. It's more just systems, how the systems we have in place are administered, I suppose.

[0:46:39.6] JM: Well, what I'll say is if you're talking about ways to punish a technology company, I am much more in favor of fining the technology company than enforcing some crazy breaking up of the company, because that's just super disruptive and it potentially hurts the consumer.

[0:46:58.0] MK: That hasn't happened since the AT&T days. I mean, Microsoft was broken up into a million different –

[0:47:03.2] JM: Absolutely That's right.

[0:47:05.3] MK: Frankly, yeah. It's not feasible these days really, because I don't know, half the companies are like these –

[0:47:10.2] JM: Well Alphabet, Alphabet did it. They did it themselves.

[0:47:15.0] MK: Right. Yeah, exactly. No one came down on them and said, "Hey, you're no longer Google. You're now all of this other stuff." Even then, it's not really feasible to break up a lot of these companies, because so many operations intersect within the companies. A lot of these major companies or these monolithic entities. so Yeah, the breaking of a company,

breaking up a monopoly so into a bunch of different smaller companies. I don't think is a feasible approach anymore, but who knows? Maybe we'll hit a point at some time where that has to be done, because Facebook becomes the internet of all of Southeast Asia, or something.

[0:48:00.6] JM: Right.

[0:48:02.2] MK: I'm not going to say it's not a possible future, but –

[0:48:06.0] JM: Isn't that already happening? There are a lot of people that think Facebook is the internet.

[0:48:10.9] MK: Well, yeah. That's what I mean. I just mean, the breaking up of the company I think isn't something that's completely impossible to happen, but there are strong pressures against it, for a lot of very good reasons. I think the better bet is to – this is like pie in the sky, high-level discussion. There's no real legal basis for this, but think about the specifically fostering competition, again these model, the companies and finding ways of incentivizing competition and the consumer uptake in the same sphere, so that they're forced to compete against other companies, rather than breaking up the monopoly. Just turning it into a multi-actor situation.

I don't know what that would be. I'm sure the second, even right now people listing, I'm sure there's a selection of people who are saying, "No, that's way too much government involvement." I mean, that has its own host of other issues too. Yeah, who knows? I mean, it's a hard problem solved though. One would hope that our legislators are contemplating it and it's something on the mind of our judiciary, but who knows?

[0:49:15.6] JM: Speaking of which, when are we going to get lawmakers that have – I was looking at some of these questions that they asked Mark Zuckerburg. When is that going to change? Are they going to rotate out eventually?

[0:49:31.1] MK: Yeah. Most of the news I've been reading lately covering elections at various levels have been talking about how there's so many more engineers and scientists and people

of various backgrounds, minorities and women as well, entering putting their hat into the political arena finally, which is –

[0:49:50.4] JM: It's going to get so much better.

[0:49:51.4] MK: - very different than it used to be. Yeah, I mean, I honestly hope so.

[0:49:55.5] JM: I would be so much happier to pay my taxes if there were people who understood technology. I'm like, look, take my money. If you're going to apply it to intelligent decisions in technology, that is great. If you're going to apply it to bureaucracy, can I keep my money, please?

[0:50:11.9] MK: Just have an awareness of how – just seeing awareness of how legislation you're discussing might impact the actual technologies that you're talking about, because this is like the GDPR thing when it comes to reporting out, reporting out the logic of a decision, right? If you think about with any understanding of the technology that you're regulating, that is – that's crazy. Doesn't make a whole lot of sense. Yeah, today the law that doesn't really get – I don't have a lot of confidence that that's happening in the current state of the legislature. I don't know, maybe we just need more patent prosecutors in office.

[0:50:53.8] JM: All right. Mica Kesselman for Congress.

[0:50:56.4] MK: There you go. Give me a few years in person.

[0:50:59.8] JM: Self-driving cars. This is going to be a glacier-sized series of questions around the intersection of law and software. I know you've thought a little bit about this. What are the big legal questions that we're going to have to answer around self-driving cars?

[0:51:17.2] MK: Yeah. I think you had mentioned at some point, maybe in Slack chat or elsewhere about machine learning coming into this as well, because it really it's all part of the same – it's part of the whole kit and kaboodle of machine learning and AI development. I actually really love the self-driving car sector. I think it's really cool. Being here in Boston too,

just to your listeners, that's where I am located. We have a lot of companies doing really cool self-driving car testing right here in the city, over in Seaport District.

The big issues I think are going to be more on the liability side, right? Who's liable for accidents? How is that liability divvied up? If I owned a self-driving car and you hit someone, am I the owner liable for that? Is the manufacturer of the car liable for it? Do they license their AV software from someone else's? Is that person liable for it? Frankly all this serve, will probably get sussed out in contracts and indemnification clauses and warranties and all that nonsense.

I think really what it's going to come down to is it's basically going to be sorted out by insurance companies. That's how it's going to sort out, for better or for worse, because at the end of the day, it's going to be one insurer eating the cost, because another insurer won the argument of who's responsible for this accident?

I think that states and communities are really going to have to, as they're drafting regulations and a lot of places, they're still drafting the regulations. They have some of the books. Here in Boston, we have a – I forget what it's called precisely, but we have a committee devoted to this entire regulatory sphere of self-driving cars, and how it needs to be sorted out, then just the federal side of it as well.

[0:53:06.3] JM: There's a committee in Boston that is devoted to self-driving car policy?

[0:53:10.6] MK: Yeah, I'll have to look it up and I can send you a link to them for the show notes. Yeah, they are focused on helping deciding what our regulations need to be for self-driving cars.

[0:53:22.8] JM: I got to interview somebody from that committee, if possible. That would be a great show.

[0:53:27.3] MK: I'll look it up after, try and pass it along to you. That is one of the arena's where it's a more apparent than probably anywhere else that you need to have. Your policy-makers have a technical understanding to some degree at least, of the subject matter technology and also a technical understanding of the subject matter law and how stakeholders interact, because

you have a such a crazy convergence of different interests. I mean, you have pedestrian interests and just – look, you even have this issue – this is part of the discussion here in Boston, where community segregation based on access to transportation and income.

If you have a whole AV fleet, or all of a sudden all our tax dollars are going to go to supporting some state-based AV fleet that allows people to get a car anywhere, rather than our trains and busting system. Is that going to be to the detriment of poor communities over wealthier communities and how you balance those interests too? People have a right to mobility and transportation. How does that right interact with the very real desire and interest of take of removing control of multi-ton chunks of metal going down the street at high speed from a human and transferring control of that to an automated system that is even today, basically safer in every regard, but still scarier to a lot of people. I think at the end of the day, it's really going to be the insurance companies that end up driving a lot of the regulation on that front.

[0:55:10.4] JM: Why is that? Why insurance companies?

One, it's a question of power and resources and ability to interact with policy-makers. Also again, it's who's ultimately going to be footing the cost for a lot of a lot of accidents and incidents in this regard, because your average person is not – there's going to be some insurance policy that contemplates ownership of a self-driving vehicle, and how liability is sorted out in an accident for your own personal car insurance, and how that policy is drafted as we have to comply with regulations and obviously they're going to want to have an influence on how those regulations are implemented, because again it's going to be their pocketbooks hit.

I think it's easy to hear that and make it become very nervous, right? It's not like insurance companies have a fantastic reputation, but this might be one of the situations where it actually makes sense to leverage their interaction and stake in the game to get them onboard with policies at the right at brass tacks, rather than trying to do hot fixes decades down the road.

[0:56:28.2] JM: I bet this will also be one of these areas of amazing disruption in terms of improving the consumer experience, because right now my experience with my insurance company is like – I mean, it's like my experience with the hotel industry, or the taxi industry 10 years ago. It's adversarial, the customer service is not really there. As we've seen, these kinds

of industries just get destroyed by the new – actually, the hotel industry definitely did not get destroyed by Airbnb, and the taxi industry. Well, the taxi industry did get completely destroyed.

[0:57:04.5] MK: Well, depending on the city you live in, there's certain amount of sympathy that is there or not there.

[0:57:11.3] JM: That's true. Actually, I was in Copenhagen just now and there were no Ubers there. It's weird, like there was all taxis. I don't know why that is, but there was all taxis.

[0:57:21.2] MK: They probably have a good taxi system. I mean, frankly in my experience, the cities where that the taxi industry has been hit the hardest. Cities where the taxi industry has been the most anti-consumer here in Boston, before Uber and Lyft became as commonplace as they are now. I was actually just reading a article that's posted to the Boston separated about how the – I think Boston is second to San Francisco in Uber and Lyft usage, or something.

Yeah, part of that, you've been in a taxi and half the time, you'd be lucky if you could pay with credit card. This is like, five, six years ago. It's not credit cards were these novel amazing things that just came out of nowhere and took them by surprise.

[0:58:08.0] JM: I was in New York recently. Actually right before the meetup in Boston, I was in New York and I got in a cab with my older brother. This is the first cab I had taken in years. We got in the cab and it was a very short drive, maybe a four or five-mile drive. Along the drive, this taxi driver just yelling, he's furious at people around him. At one point, we're in the middle of traffic and he gets out of the car. He stops the car, gets out of the car and begins threatening another driver that's nearby. We're like, we're sitting in the back seat and we're like, "Do we get out here?" I was just like –

[0:58:45.3] MK: Or you just joining in and also help threaten him, or are you supposed to just wait?

[0:58:49.0] JM: Right. Well, but it just makes you realize like, "Oh, my gosh. All of the good drivers switched to Uber, because they're not afraid to be rated." This guy is like, now there's like this adverse selection.

[0:59:01.9] MK: It's crazy too. It's part of this whole gig economy that's developing, which is super interesting to me, because I recently bought a home and my lending agent actually, when he had to drive down to go through documents with me, because he lived out of the city, he would actually throw up his Uber and Lyft tags and give people rides along the way, because he was commuting anyway, so why not drop – why not make a few bucks and transport people on the way? Which is that's super cool that that's possible.

Yeah, it's a just super cool way of just approaching that service, so be interesting how that shakes out. I mean, and then again, with circling back to the self-driving car discussion, it's a very new industry at market that just came about in the last really three years. It's very serious risk of itself being replaced and obsoleted within the next three to five years. I find it crazy, the pace of these things.

[1:00:09.5] MK: It is crazy. I will be curious to see how big the moat of the fleet operators is. I'm sure that's a question for a different show. Okay, well this has been awesome. I mean, we covered a lot of ground here. I'm sure we could have covered a lot more. I need to ask you about ICOs at some point in the future.

[1:00:27.5] MK: Yeah, I'd be happy to talk about – I mean, again I'm not a securities lawyer, but I'd be happy to chat about ICOs at some point within, or at least blockchain companies in general.

[1:00:36.2] JM: Right. Okay, well more to explore in the future, but we should wrap this up. Mica, it's been really great having you on the show.

[1:00:41.2] MK: Yeah, it's been great being on the show. Thanks so much, Jeff.

[END OF INTERVIEW]

[1:00:45.7] JM: GoCD is a continuous delivery tool created by ThoughtWorks. It's open source and free to use and GoCD has all the features you need for continuous delivery. Model your deployment pipelines without installing any plugins. Use the value stream map to visualize your

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