

## Episode 106: Connecting the World through Blockchain and Mesh Networks with Melissa Quinn of RightMesh

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**Kelley:** Welcome to Crypto Token Talk, a crypto 101 podcast exploring how blockchain technology applications like bitcoin, ethereum, and other crypto assets could change the world. Learn from blockchain experts, thought leaders and founders of some of the most innovative companies and world changing ideas of our time. I'm your host Kelley Weaver, CEO of Melrose PR, a leading blockchain communications agency. Thanks for joining us today.

**Kelley:** Today I have the pleasure of talking to Melissa Quinn, corporate development manager at Rightmesh. She's here to tell us a bit more about Rightmesh, her work with the Blockchain Users Group, and help us understand how to bring more people into the crypto sphere. Welcome, Melissa.

**Melissa:** Thanks, Kelley. Thanks for having me on today.

**Kelley:** Of course. And full disclosure, Melissa is somebody that I have been working with since August of this past year. Rightmesh is a client of ours Melrose PR. And she, the first that I ever interacted with her I was blown away with the level of detail, authenticity and just communicative skills. The onboarding process, onboarding us onto the greater Rightmesh team was like nothing else that we've ever experienced, and I don't think ever will experience. Your level of detail over things just blows me away.

So it's so fun to work with you, and I'm so happy that we were ... To have you on the show.

**Melissa:** That's fantastic to hear. It's been a pleasure to work with you guys as well. And we're hearing that more and more often as we work with different groups in this space, like, "Wow, you guys are really mature for this industry." So it's good to hear. It's important.

**Kelley:** It's a great working relationship, so it's really a pleasure to work with you and your team. So first of all, can you give us a brief overview of Rightmesh and your goals for the platform and the protocol?

**Melissa:** Yeah, definitely. So, Rightmesh is a mobile mesh networking platform and protocol that we're giving away to allow any smartphone or IoT device to participate as a node in the mesh. Without having to rely on data, or internet, or infrastructure. So really what that means is mobile devices themselves create the connectivity and a decentralized network. And so, I'm sorry, did you ask the goals question?

**Kelley:** No, keep going.

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Melissa: Okay.

Kelley: I want you to explain more about what mesh is, because the audience may not be familiar with mesh in general.

Melissa: So this is the problem with getting the questions ahead of time. I'm just kind of looking at the questions and going through them. Feel free to cut me off.

Kelley: So should we clap and redo that?

Melissa: Yeah. Let's do that. Because that first question does say, "And your goals." So I'll go into a little bit of our "why."

Kelley: Okay. Wait, where are you looking. "First can you give us a brief overview ... And your goals." Yeah, yeah. Okay. Okay.

Melissa: Okay.

Kelley: We'll restart.

Melissa: Perfect.

Kelley: So, first of all, can you give us a brief overview of Rightmesh, and what your goals are for the platform and the protocol?

Melissa: Yeah. Definitely. So Rightmesh is a mobile mesh networking platform and protocol that we're giving away to allow any smartphone or IOT device to participate as a node in the mesh, without having to rely on data, internet connectivity, or other infrastructure. So what that means is that the mobile devices themselves, in a peer-to-peer way, create that connectivity and a decentralized network.

Our "why" really comes back to wanting to connect the next billion and empower people with the same social and economic benefit that, say, I get to experience having connectivity at my fingertips. For us that really came out of a pain point that we experienced with our team that we work with in Bangladesh. We started looking into mesh networks a couple years ago because they came to us with a solution.

They, every time we had to have a call with their team they would actually have to shut down kind of working so that we could have a Skype call between our two offices between Canada and Bangladesh, because the bandwidth was just oversaturated. And so they came up with this peer-to-peer solution so that they could still share files and devices and chat with each other without having to rely on the internet.

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And we said, "Guys, this is incredible, the amount of possibilities with this is huge." And so we started to take that initial prototype and turn that into a more sophisticated platform that it is today after doing a lot of market research on the use cases and the potential for that. And that's really led us to what Rightmesh is today.

And it's about connecting those people in a more meaningful way.

**Kelley:** So can you walk ... Because the listener may not be familiar with mesh networks in general. Does this mean that I, right now I'm sitting in New York, and you're sitting in Vancouver. Could we connect our phones? Or does it have to be ... Can you explain sort of how mesh works?

**Melissa:** So mesh networking is truly peer-to-peer and device-to-device. So what that means is you in your office in New York could be connecting to the person next to you from phone to phone. So right now if you sent her a message using the internet it would go your phone, wifi router, internet, wifi router, her phone. And there's a whole bunch of stuff in between, a whole bunch of people lurking that don't necessarily need to be lurking in your conversation.

Whereas if you were to use a mobile mesh networking application, it would go directly from your phone to her phone. And so what we've been able to do actually is create ... If you were to have various nodes within that mesh network in your New York office, and one person was connected to the internet, people could share a message and it could hop through those different people, but then go through the internet over to me.

So you don't necessarily need to know that it might be hopping through various people in different nodes to get to that internet connectivity. But at the end of the day, you just see that your message has been connected from your mesh network locally to my mesh network locally here. And I could, as well, pass that around in my office in a peer-to-peer way.

**Kelley:** Right, and just for the listener, what you mean by nodes is a phone that is connected to the mesh, correct? So, a peer that has a mesh enabled app, and we're sharing from each other, so then she would become a node. Her mobile device, rather.

**Melissa:** Yes, exactly. So, yeah, and could be any device. Because Rightmesh is a software based solution, it can be any device that runs that mesh common core on it. So it can be a phone, a computer, IoT devices, various different things.

Using wifi, Bluetooth and wifi direct, it enables those people's devices to be connected. So then, any person with that common core does become a node in the network, like you said. And so when I say node I kind of mean person, I guess. Or device.

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And what that means as well is that every additional node within that network, or every additional person adds benefit to all the other people within that network, because it strengthens it and leaves more room for different paths to connect through.

Kelley: Fantastic. That is very, very informative and helpful. And the listeners of the podcast may not be as familiar with blockchain technology in general. How are you utilizing blockchain in this system, and maybe take a step back. How do you explain blockchain in general for newcomers that are completely unfamiliar?

Melissa: It's a challenge. I often start with something like, "So, have you heard of bitcoin?" Because most people have at this point. That starts a whole other conversation on its own, but from there I start to go into how blockchain is the amazing technology that is underlying to that bitcoin, and those cryptocurrencies. And this doesn't get enough mainstream attention.

What I've found works with people is talking about it as a record of transactions which are digitized and decentralized, and trying to avoid the jargon of ledgers, and immutability and all those things. Just really trying to convey that it's a digital record of transactions that is chronologically recorded and publicly available.

And so, how that works in Rightmesh, again, going back to our initial prototype, what we realized with that single mesh networking application that we had is that people weren't necessarily incentivized to share their internet connectivity or their data.

And so when we were doing our market research, people loved the application, but it wasn't scaling the way that we kind of thought it would. And we realized it was because people didn't have that incentive, like I said, to share that. And so at the same time we were doing some research on how to identify different users or nodes within that network. Because you couldn't be identified with a traditional IP address when there isn't any internet. And yet we still wanted to be able to test and analyze the strengths of mesh networks. And with that you need to be able to identify how many nodes are in a mesh and different things.

So without getting too into the technical jargon-

Kelley: It is hard to stay out of the jargon. I agree. I mean, at first when I came into this space, and I'm sure you did too, my eyes glazed over, because I didn't understand half of the things that people were talking about. And I felt like it was an exclusive space. And then you try to make it so that it's really clear, and then I feel like you kind of come full circle where it's like, oh, it makes sense to use these big words sometimes.

Melissa: It's true, you're like, oh, I'm doing it again. So, where the blockchain fits into there is users will, or nodes in the mesh network generate an Ethereum wallet id. And what that enables them to do is buy and sell their excess phone resources. So primarily right now

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that will be excess data and excess internet. And so that enables a user ... Say I want to ... Say I'm visiting you in New York but don't have a data plan that allows me to connect internationally. But you're in your office and have wifi.

I can then buy a megabyte of data off of you at whatever price you're willing to sell it at. And that blockchain and those transactions enable me to earn, or pay you with mesh tokens, and you to earn mesh tokens, and facilitate transactions through there, and I get the connectivity I need, and you're compensated for sharing that with me in that trustful way.

Kelley: That makes sense. Makes sense. I wanted to tell the listeners, by the way, I'm in New York right now, but I'm based in Las Angeles. I'm here just traveling for work. And I know, Melissa, you are based in Vancouver, Canada. And you're the director of the Canada division of the Blockchain Users Group. Can you explain what is the Blockchain Users Group?

Melissa: Yeah, definitely. It's a pretty new group. I think it started early last year or so, which really in crypto world that's decades old now. What they're really working on is enhancing the blockchain community and connecting people with ideas and resources, and making a stronger, stronger ties for the business success at the end of the day. And kind of my interesting in it was there's so many segregated parts within this blockchain community already in these early days, and everyone's got different meetup groups, or telegram groups, or WhatsApp groups that they go to.

And I really wanted to be part of something that was bringing all those pieces together, and really just helping people to learn and grow as a person, as well as within their career or within their company. And so the Blockchain Users Group is really just trying to do that, and support people in different ways, rather than trying to go and reinvent the wheel and do different things in terms of creating resources or different things like that.

We're really just trying to get on the ground, and support meetups, and support events. And bring people together, and create a stronger blockchain community globally, really.

Kelley: Towards the end there [inaudible 00:17:15] ... I think if you just repeat that last sentence then we can probably cut it back in.

Melissa: Okay, did I cut up? Because you just cut up there for a second.

Kelley: Your phone just cut out.

Melissa: Okay. I'll start that one over?

Kelley: No, don't start from the beginning. We can maybe make it work, but if you want to just repeat kind of the last bit about-

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Melissa: Creating a stronger-

Kelley: Yes, exactly.

Melissa: And so really the Blockchain Users Group is trying to bring all these pieces together to create a stronger blockchain community around the globe.

Kelley: Fantastic. And this is for people who are already interested in blockchain, correct? Or working in blockchain? Or is this for those looking to enter?

Melissa: I think it's more those looking to enter. What I envision is breaking down the barriers so that it's not so intimidating, really. A lot of the different meetups that we have gone to, or have attended, it starts with blockchain 101, and bitcoin 101, and various things like that. But really we want to make it so that there's a community of support and learning around that so people can come in and see kind of business opportunities within blockchain from that initial level rather than kind of people who have been in it since 2013 and really understand it, and understand the business opportunities around that.

Kind of opening it up. But there's definitely that beginner aspect.

Kelley: That's fantastic. That was gonna be one of my questions, was why do you think it's important to educate and bring more people in? I think breaking down the barriers is important. Because I think it is intimidating. It was intimidating for me when I first entered. I don't know if you had the same experience.

Melissa: Absolutely. And I think the one thing that's exciting is that it's such a nascent industry, and there's so many opportunities. And if we can break down those barriers kind of now while it is still in its early days, I think we can invite in so many more people, and get so many diverse perspectives. Because as I've entered the industry anyways, you see a lot of common characteristics.

Be it libertarians, or different things like that. And the more we can bring people into the industry I think the more we can continue to kind of create a diverse, decentralized network, which is equally as important as just a decentralized network, I think.

Kelley: [inaudible 00:19:46] the world, and really helping, you know, countries that need it. Obviously us as well, you know, first world nations. But really more so this is for people who don't have connectivity, because the UN declared it, like, a basic human right. And I feel like there's so many other great people within this industry that are also working towards noble causes like that. And I love how everybody's kind of working together.

Melissa: It's true. And there's a lot of blockchain for social impact groups. We actually just joined the Consensus Coalition, which I'm really excited about. Because there's so many admirable blockchain solutions out there. And the one thing that makes me really

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excited and passionate about Rightmesh is that we can kind of extend that opportunity that much further, to those four billion people who currently lack internet connectivity. Because although there's these admirable solutions that claim to give people identity, and decrease the digital divide by providing financial inclusion and different things like that, the one thing that no one's talking about is that blockchain still relies on connectivity, and internet connectivity today. And when there's something like political unrest, or a natural disaster, and that connectivity potentially gets threatened, then what?

So if we can go in and support these admirable causes to go that much farther, and connect that next mile of people, I think we can really increase the benefit to a lot of people and make that social impact that much larger.

Kelley: I totally agree. Can you also explain the example, because I like this example, because it relates to us today, of a a football stadium, or a major event? And how mesh networks could really change the game for things like that?

Melissa: Yeah. It's true. A lot of people, we find it hard to relate, because we don't struggle with the same issues of connectivity as people do in emerging markets. And we say, "Well what do you mean? I've got data if I don't have internet, or if I'm not on the wifi." And people don't understand the differences of the three.

But the best example, every time we sponsor an event people are like, "Oh, great, can you actually do a mesh enabled conference application? Because the WiFi's been really bad in the past, and we don't know how to fix it."

Just because there's a finite spectrum, and when there's that many people, particularly nerds like us in the crypto industry who are always on their phone, or on the internet-

Kelley: Connected to five devices. Each.

Melissa: Exactly, not just one, but ... It becomes way too oversaturated. And so in a mesh enabled environment, we could allow a lot fewer people to actually be connected to the internet and just connect more horizontally, if that's a better visual, than always having to go up to the internet and back down.

So if there's, say, twenty people that pull down the internet and spread it amongst themselves, that's much more efficient than all 200 people having to go up to the internet and kind of clog up that bandwidth.

And from an energy efficiency perspective, it's actually much more positive as well. Because if you can connect ... Our team's actually doing a lot of research on this right now. But if you can connect directly, peer-to-peer, the amount of energy saved is actually a lot more than if you were to connect via 5G or 4G.

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There's different scales within that, but direct peer-to-peer communication is much more energy efficient, actually.

Kelley: That's amazing. And another example that I loved that you gave me early on is natural disasters. So if there's a hurricane in Puerto Rico, for example, you may be able to connect to your neighbor's device, and so on. Even if there's no connection to the main internet. And just let everybody know that you're okay.

And I think ... Are you guys working on some safety feature or something that I heard about?

Melissa: Yeah, we actually just announced a new offline emergency application. And that stemmed from, we had a tsunami warning appear in D.C. after there was an earthquake in Alaska, I believe. And we thought, you know what? There's been all these cases of communication apps coming out after natural disasters. And we've been working on one kind of in stealth on the Rightmesh platform, because we know it's an excellent use case, and we thought why wait to bring it to the public?

It really enables, like you said, a form of communication on that direct peer-to-peer way. And so people can ... Can I redo that?

Kelley: Yeah, sure, but you're doing great.

Melissa: I start to ramble, and then I notice that I'm rambling and cut myself off.

Kelley: You're fine. We have plenty of time, so don't worry.

Melissa: Okay, perfect. I'll start off with the emergency offline app again.

Kelley: Okay.

Melissa: Is that okay?

Kelley: Yep.

Melissa: Okay. So, we actually did just create a new application. It's an emergency offline communication app on the Rightmesh platform that's called Flare, and that really came out of an issue, we had an earthquake in Alaska, and there was a tsunami warning in B.C., and we always talk about creating these emergency applications. And we've been working on one in stealth for a while that will be open sourced so people can learn how to create mesh enabled applications, and we thought why not release it to the public?

It's time that these things happen. And really, for us, there's two benefits to it. One is people can connect directly, peer-to-peer if infrastructure does go down, in case of a

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natural disaster, which you see a lot in, say, Puerto Rico this past year. Like I said, if there was to be a tsunami here a lot of that infrastructure goes down and you have no way to connect to your family and let them know where you are, or if you're safe.

And the other benefit that we found is that because any phone that has a mesh enabled application on it is now a node in that mesh network, that application doesn't necessarily need to be running in order for that app, in order for that node, sorry, to be active in the mesh network. If you're a parent, you're gonna keep that application on your kid's phone. And they're not gonna take it off, because you want to know where they are if something does happen.

And so for us that's another node in the mesh network that can strengthen that localized area. And so if have an island like Puerto Rico, who everyone is concerned about another natural disaster, and everyone has this application on the phone, not only is it absolutely crucial when the infrastructure does go down and they can't connect, it also creates an entire mesh network on that island if multiple people had the device connected via mesh. So there's various aspects there, but it's exciting, and it's necessary I think.

**Kelley:** It's totally necessary. I love when Facebook implemented the check in safe, but that's one, it's Facebook, very, very centralized, they're storing your data. But two, you may not have access to wifi. To connect to Facebook in the first place. So this is a real ground-up solution, when the infrastructure goes down, inevitably, it really could save lives, I think, if you're trapped somewhere, or ... I mean, there's all sorts of use cases that come to mind.

**Melissa:** Absolutely. And you think of the case where someone checks in on Facebook, but someone a block away from them, maybe not having connectivity, can't check in. And that makes you worry even more, right? You're like, oh jeez, I know these two people are there. One person's okay, what about the other? They haven't responded.

It really just creates that anxiety, I think. Whereas even if they could connect to peer-to-peer and say, "Hey, I can't connect to the internet, or no one around me is able to connect. Can you let mom know at home I'm okay?" And you can connect that person locally in the mesh network to then hop off to the internet if necessary. Or worse comes to worst all just locally you know each other are okay.

**Kelley:** Totally. I want to bring it back a step in terms of bringing people into this industry. You and I have traveled all over the world together at this point, and been to a number of different conferences. And we've both noticed that this industry is largely male dominated at this point. It's like 90% men, or maybe even more than that, I think we would say.

What do you think that we can do as a collective to help invite more women into this space, and encourage them that it's not scary, you know?

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Melissa: Yeah, I think there are a lot of groups out there working on this, and there's conferences that we've been to where they make an admirable effort to invite 50% and have equally as many attendees, and make sure they have balanced speakers, and panelists, and things like that. And I think that's a start, absolutely.

I think there are various groups of women as well trying to empower other women, which I've seen, it's amazing. Whether it's Women in Blockchain Telegram Group, or Slack, or whatever the platform is. And they'll say, "Hey, I'm organizing this event, I really need some speakers." And they go to women first.

And supporting each other in that way. But I think as well what we need to see more of is women just stepping up. I think it's in our nature to not. And when you do see a room full of men, like you said, we've seen all around the world, and then you've got technical jargon, I come from a non-technical background-

Kelley: Same.

Melissa: So it wasn't easy to adapt to. So putting those things together, it is really intimidating. And I think we can encourage women in these early days to get involved. And because it is new, it kind of breaks down those gray haired benefits that other industries get, right?

Sorry, to elaborate, in my head that made sense. You get those benefits from experience, and age, and different things like that. And so to come into an industry where it's new to everyone, and you can learn as quickly as everyone else, there's a lot of opportunities for women to step up and say, yes, I've arrived. I know as much as you. It's new to everyone and it's changing every day. So let's be in this together, and I'm an active participant in this industry.

I think empowering each other to step up in that way and be active is important.

Kelley: I totally agree. And I think women helping women is such an incredible phenomenon. And it's happening ... I feel it so strong these days. And it's just wonderful. There's so many opportunities. And everybody's really, it's a very friendly and welcoming environment.

Melissa: It's true, and it's global, like you touched on. Around the world I feel like there's a big enough community that I can say, "Hey, I'm coming to London, is there any women here, or is there a meet up going?" Or different things. Not that it's all about women only, but knowing that you can go somewhere and feel like you have a network already and be supported is really helpful, I think.

Kelley: I totally agree. And that's one of the things that's been so fun about working in this space. Especially right now when it's so new.

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Melissa: Absolutely.

Kelley: Beyond all the amazing work that Rightmesh is doing to connect the world, what other projects have you seen, or what other ideas are you truly excited about? I know you touched on a couple earlier. But maybe you want to tell us about any that you've seen that piqued your interest?

Melissa: Like I said, become part of the Blockchain for Social Impact Coalition [inaudible 00:31:23] consensus has been really exciting. Just seeing the different things that people are working on there, and knowing there's a community of support is amazing. But specifically, things that are going to decrease the digital divide I think really excite me. I touched on it a little bit. But being able to create applications that are maybe mesh enabled, and can extend that connectivity so people can increase their financial inclusion opportunities and maybe have an identity that's more meaningful than what they use today, and different things like that.

As well just anything, I think, that benefits from transparency and decentralization. Looking at the charitable industry, things that Bit Give is doing, stuff like that. I think that that can generate a whole new realm of trust. When you look at the new generation, and the amount of them that don't trust their banks, or trust centralized authorities, and shifting to being able to have something more decentralized and transparent I think can really disrupt industries in a whole new way where we can start to build trust in a different way. An absolutely different way, but just build trust again in systems, be it decentralized or not.

Kelley: Yeah. Totally agree. So, those who are looking to get started in crypto, what do you usually recommend as the first steps, when, like, family and friends come to you and they say, "How do I get some bitcoin, or how do I get involved?" What do you usually tell people.

Melissa: And we know that those conversations are happening everywhere now, whether it's your car rental person, the person next to you on an airplane, it's crazy. I always say start small. So start to do your reading and start to do some research, learning about some of the people who are reputable in this space, and not first and foremost talking about profit or making money.

Look at the people who emphasize their values and the underlying tech, and the excitement in the longterm about what this can do for the world at large, I think that's important. So people like Andreas Antonopoulos, different people like that who you know have a good intention.

Kelley: I know Andreas Antonopoulos has a great bunch of series of YouTube videos that are great to watch. We can put those in the notes. And then Naval Ravikant I think is his last name, he is very active on Twitter.

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Melissa: Yeah, his blog's really good as well. The Unchained Podcast, of course, is a really good one to listen to as well.

Kelley: Love it.

Melissa: She goes in ... It's fascinating to listen to the old ones. It almost makes you laugh a little bit when there's price comparisons. Not just on hers, but even on Andreas' old YouTube videos, different things like that. And you hear price come up and you're like, oh, this is really ... The main core values don't seem to change, like I kind of just touched on. It can be a YouTube video from 2014, and he still talks about kind of breaking down that centralization, and talking about what is really money, and what does that mean to us?

And yet then he starts talking about bitcoin at whatever price it is and you're like, hold on, when was this recorded?

Kelley: Totally. It dates it, but it's not been that long ago. It just changes that fast.

Melissa: But it's amazing that those common core values still stay the same.

Kelley: I totally agree. Are there any more resources that you recommend that you get your news from? Those are some great suggestions-

Melissa: I'm reading a few good books right now. I'm reading "Cryptoassets" by Chris Burniski, that's a good one. It's all about the innovative investor, and kind of changing the way you're thinking. But it does go through some basic principles as well. So it's helpful. Yeah.

Kelley: That's great.

Melissa: Good old fashioned books are always good.

Kelley: Well, thank you so much, Melissa. It's been really great having this conversation. Can you let people know where they can get in touch with you, or learn more about what you're up to?

Melissa: Yeah, @melissaaquinn on Twitter. And if you join the Rightmesh telegram channel I'm always on there as well. Especially leading up to our token generation event that goes live next week. It's getting pretty crazy.

Kelley: Wow.

Melissa: It's hard not to be on Telegram.

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Kelley: And by the time this airs it'll probably be live. So check out Telegram, Rightmesh Telegram Group. Well, thanks again, Melissa. This has been really fun.

Melissa: Thank you so much, Kelley, it's great to chat.

Kelley: That's all of today's episode of Crypto Token Talk. To learn more about blockchain and keep up to date with this fast paced industry, subscribe at [cryptotokentalk.io](http://cryptotokentalk.io) where you can also find today's show notes. If you have suggestions for topics or guests, please drop me a line on Twitter [@cryptokelley](https://twitter.com/cryptokelley), or you can follow the show on Twitter [@cryptotokentalk](https://twitter.com/cryptotokentalk). If you enjoy this show, please rate and review it on iTunes and share it with family, friends and colleagues who want to stay up to date on how blockchain technology is changing the world. Thanks for listening.

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