

Jack Lu and Weijia Zhang, Wanchain: How to Bridge across 10,000 Blockchains - E41

Eric: Hi, this is Eric Hess with The Encrypted Economy. In Today's episode we have Jack Lu, CEO, and founder of Wanchain, as well as Weijia Zhang, who is the VP of engineering at Wanchain, as well. This is part of effectively a series that we've been doing, trying to get more into the infrastructure and how things work, where we've had Richard Yan regarding proof-of-stake on the podcast. A number of weeks ago, Uri Klarman speaking about layer one, the mempool, how blocks are ordered on the chain and even miner extractable value. After that we had John Wu talking about algorithmic stable coins and how they operate. So, this is trying to give a sense to the listeners of how things operate.

So, you can tie in with the overall significance and alongside of that, we do also obviously less tech. Episodes as well, some legal, some, more about use cases, but you know, we do try to mix it up a bit on . So, on this episode, again, we talked a lot about private blockchains, which I thought it was a very interesting conversation, particularly when we started getting into CBDCs and the potential for regulatory blockchains acting as a permission system on and off a private blockchain, certainly something we are likely to see in the future, particularly as regulations and countries, or even rules within banks start to arise and how those environments interact. Across the public blockchain.

At one point we talked about sharding. Now sharding, we didn't define in this episode and I'm not going to define here because we did that with Uri Klarman. But for all of those who are interested, we actually segment a number of pieces of episodes that we've done and put it onto YouTube in what we call Encrypted Bytes or Mini Bytes for easy reference. So, what is sharding is actually it might be an Encrypted Byte where basically it's just that component of the discussion with Uri where we talk about what is sharding. So, if you haven't checked out the YouTube channel and seeing how we organize the different encrypted and mini bytes there, we've been putting a fair amount of work into creating that.

As an easy reference I would encourage you to do so and of course, if you like it, share it, share this, share that, and thank you for being a listener. Hope you enjoy this episode with Jack Lu and Weijia Zhang. Welcome to The Encrypted Economy, a weekly podcast featuring discussions, exploring the business, laws, regulation, security, and technologies relating to digital assets and data.

I am Eric Hess, founder of Hess Legal Counsel. I've spent decades representing regulated exchanges, broker dealers, investment advisors, and all matter of FinTech companies for all things touching electronic trading with a focus on new and developing technologies.

This is Eric Hess with The Encrypted Economy I'm really excited to have Jack Lu, founder, and CEO of Wanchain, as well as Weijia Zhang, who is the VP of engineering for Wanchain, as well. We're going to learn a lot about what Wanchain does today, as well as cross-chain interoperability. So, gentlemen, welcome to the show.

So, Jack, why don't we start with a, maybe give your background and how you got to Wanchain and where you are today, and then we'll move on to Weijia to do the same. ,

Jack: Certainly. Yeah. I grew up in China. I moved to the US in mid-nineties. I studied in computer science and economics. I have kind a mixed background, got into blockchain space because I was in the uh, you know, internet world.

I've been a software engineer for over 20 years. I was working in Austin, Texas, and got exposed to a blockchain and got into, quite early in 2012. Uh, you know, did some mining and a Bitcoin mining and also coding. And I started a blockchain project in the early days in 2014. And I started, approaching company in China as well.

And I've been, you know, traveling around the world. I started a Wanchain project in 2017.

Eric: Excellent. And Weijia, how about yourself?

Weijia: Yeah. Hi, good morning. Yeah, this is a Weijia VP of engineering of Wanchain. I have been a software engineer as well, just like Jack. I was a principal engineer at Dell for 13 years and also have a PhD in physics and I've published over 30 technical papers and have over 20 U.S. patents.

And I met Jack in 2017 and Jack mentioned about Wanchain project. I was interested. So, I joined the Wanchain team. Since 2017. Yeah.

Eric: Excellent. Excellent. So now Wanchain, the project itself, maybe Jack, do you want to give us a little bit about, the, the, the project itself.

Wan, "W A N," in the computer world stands for wide area network.

And then we were trying to build a wide area network of blockchains, and Wanchain itself is a public chain. And then we are connecting with many you know, public chains as well as private. We, uh, act as a hub and a facilitator to make sure that all the isolated blockchains are connected. When in Chinese actually stands for 10,000.

And that we're trying to connect 10,000 chains eventually.

I guess there's are we up to 10,000 chains? Maybe? I don't know. I don't, I'm not sure but, but the chains have to get there before you connect them, uh, to 10,000. And that's a, that. Exciting this notion of the interoperability or the internet of blockchain as you frame it, do you want to build on, on, on how you know, the parallels to.

Jack: Yeah, a uni already. There is a, actually may audit is a as a consultant. I know that many companies have their own computers connected. I created something called local area networks, and these networks are not connected to outside of that company sometimes. And in today's production world, even.

Public chain. I use Bitcoin as example, it's built on top of internet. But they have their own protocol. There are consensus and protocol and their own languages. You know, not talking to other bloggers. It's kind a local area now with 30 days of the internet. But eventually, we

know that all these you know, local area networks, when they are connected to the internet, when you create the internet or the, where we build uh, all kinds of applications, all the innovations on internet. And then when we see all the values, the powerful value that bring to.

I think that it will be the same for watching as well. Right now, we have a lot of you know, private or consortium chains built by many companies, or, uh, private companies. And even the public chains, they are not connected. We call it you know, value islands. They are not connected to each other, eventually, the assets and also the data. They have to be an exchange. And we, we have to build applications on top of all these products. And it's very important for all these isolated blockchains be connected. And I think, you know, it took internet around 30 or 40 years to get here, but since we're already having internet compared to 40 years ago, I think a blockchain industry will move a lot.

Eric: faster.

Great. So yeah, Wanchain, as opposed to maybe a project like a Polka Dot. Polka Dot, has it's Polka network. And you have a number of projects that are based on that protocol. And those are you know, there's interconnectivity to some extent with other chains, but to a large extent you're operating within the polka dot ecosystem where you're operating with the car Dano ecosystem or your, or.

Acting within like Tendermint as, as that ecosystem, but Wanchain is different because Wanchain's is, is across all different chains. Whether it's Polka Dot or Dano others that aren't, that don't have their own ecosystem. And even, private systems are what you were referencing too.

Private, private blockchains.

Jack: Yeah. That's exactly right. We are trying to build that. Universal connectors or integration mechanisms that will connect with any type of block chains. I, and currently we have proved that to the market, and we have you know, I, since 2017 we have integrated with Bitcoins.

A UTI and a U us and the light coin. And recently, we are, we just announced that we integrate with, uh, PokerStars walk by many other chains in, on the way. So, we have proved that we do have the capability or a mechanism to connect with any type of chains, including the productions. Private blockchains, we publish that our trusted brand.

Mechanism that will, we'll be able to connect with you know, local area networks. We called private.

Eric: chains. Yeah. And I, and I think I recently read that, you're connecting to XRP enabled XRP to now be used in decentralized applications in a way that wasn't even possible before, like maybe even facilitating XRP entering into defined.

Is that do you want to talk about that a bit?

Jack: Yeah, exactly. Yeah, we, we integrate with XRP ledger, just to not long ago, but XRP tokens can be transferred to not only when chain, but also we have some new mechanism called. Multi chain you know, infrastructure, cross-chain bridge infrastructure, XRP can be moved on to different chains and these tokens can remain the same and user when user move those tokens onto Ethereum or when chain they can participate in many of the defy actions.

And just a number of weeks and we have more than 6 million uh, XRP tokens move on to munching alone by their tens of thousands of transactions happening. Many users are using them. So, this is a very good. And we are moving onto other changes as well. I think we can see that we, these bridges do provide value for many of the uh, blockchain.

Eric: Great. So now we're going to start to get a little bit into how Wanchain works, because there's obviously, it's not easy or else everybody else would do it. So, you know, and there are a lot of cross-chain concepts that you use, right? There's or that our users, the source chain there is target chain.

There's the native token, transform token, one way bridge, bridging between chains, two-way bridge, direct bridge sticks. And collateral that's a lot, but, in order to understand how this operates, it'd be good to just walk through these concepts before digging into, what wine chain does, with regards to them.

Weijia: Yeah. I can check. I can give an explanation of that uh, I think. Give a very good analogy about inter blockchain versus inter PCs. And if you look at the bridges they are just like network connections when you view TCP IP for internet. So, when we say source chain we mean that there'll be connected with target chain, which is approximate B.

So, a bridge. So, source chain is where the asset or originally the site and where the action will take place. And the target Chan is the one that the asset will be moved to. And that the action will take place up to the bridge operation.

Eric: Great. So, when we were just talking about XRP, being able to leverage the Ethereum and, and, you know, access to defy applications that would be in that case, XRP would be source chain and target chain and Ethereum would be the target channel.

Yes.

Weijia: If you move it from XRP to Ethereum then there's the source chain the other one is the target chain, but if you move it back, then it's the other way. Yeah. And will you introduce the concept native token? Because that's, that's important. Let's take the analogy of Bitcoin versus Ethereum blockchain. You can probably move BTC from Bitcoin to Ethereum, but rarely people will not move.

Ethereum blockchain to Bitcoin. And that's the native token concept. BTC is native in the BTC blockchain, Bitcoin blockchain, and these are native in Ethereum blockchain. So, when we say one way bridge we mean that native token can transfer from blockchain A to B , but not the other way. So, for example Ether cannot be transfer from Ethereum block chain to the bitcoin chain, therefore all the bridges so far are one way bridge.

You can move BTC from Bitcoin blockchain to Ethereum blockchain. Not the other way, the native cannot be moved. Yeah. Yeah. So that's the concept of native token versus a one way bridge. And once you, it's simple to do the two way bridge because Ether can be moved from Ethereum blockchain to Wanchain and one coin can be moved from Wanchain to Ethereum blockchain.

So, it's two way bridge.

Eric: Okay. And so, what's the concept of a transformed token?

Weijia: Transform Token is this difference here.. When you move a token from a source chain to the target chain, you need to lock the token on the source chain. And then the other one, the wrap token on the target chain is a transform token because it has dependency on the source chain.

And this is important for us to know because the token that is locked in the source chain has implications for the security as well. So, the source chain security is very important. You just lock it there, it's still existed, and you transfer it to the target chain. And that is the transform token on the top.

Eric: And you lock it so that you don't have a double spend issue? .

Weijia: Exactly. Exactly.

Eric: Excellent. And then, so what's the concept of bridge staking in collateral? How does that come into play?

Weijia: Yeah, for bridges, like, you need to make sure it's a secure, it is decentralized. So, there are two kinds of bridges:

one is the permission, the bridge. For example, when you are connecting with a private blockchain, you are connecting by banks. Those are trusted entities. So, you probably have a permission, the node, and now you don't need to do a staking, things like that. But if you are connecting a public blockchain with public blockchain, you are making their permissionless.

So, everybody can be a node to operate the bridge. And in that case, you have to have something to secure the bridge. And the way we do it is to make sure which node operators actually put their stake into the bridge operation so that they will not do something wrong. So, they will not do the collusion, if they do something wrong, their stake will be slashed based on the mechanism we have.

Jack: Yeah. It's a very similar to a proof of stake mechanism. We, uh, you modify that, and they'll apply. You know, we caught a stolen you know, mechanism- stolen, uh, nodes. It's very similar to a POS.

Eric: Okay. And then there's the, so there's the store man concept where the store man is transferring between, a layer one.

And a layer two solution. Is that or it could be?

Jack: Yeah. When we say layer one layer two it's because the guys, or the transaction cost on Ethereum is quite high and. We are working on that. And we are building the bridges or solutions to facilitate, you know, assets can be transferred directly to layer two potentially, and also with our connections to our layer one as well basically allowed users to transfer the assets from layer one to layer two.

So other chains as well at the same time, in a faster and easier way.

Eric: Excellent. And then there's the notion of the voucher too, right? The voucher also serves a similar, validating a role where the voucher would commit the black information of layer that you have on layer two on layer one. Is that right?

Jack: Yeah. The voucher mechanism as we stayed in the white papers really, it's more like a validated one type of validators to make sure. The information and being a transfer from one block to another is valid, or we have the right mechanism to, or use the same similar consensus mechanism, make sure that the information is being transferred.

Eric: Great. So maybe let's go through some of the I know we touched on it, but cross-chain use cases. What do you see as some of the most compelling cross-chain use cases? Maybe it's a theory, going to Ethereum, but maybe if you could develop on it, w what trends do you see develop.

Weijia: Yeah.

I, I, there are many of them actually uh, Wanchain has been chairing, cross-chain interoperability work group and for EA enterprise and EA actually published a document called yeah.

into ability use cases. And over there, we have over 12 use cases, this state, and this is working with Clematis and consensus as well. So obvious one would be the cross-chain defi, right? You can do cross-chain exchanges, you can do a cross-chain transform. You can also do cross chain asset applications.

And also, you can do a lot of things that they CBDC actually. By the end of this month, they uh, MBA, as the monetary authority of Singapore is having a global CBDC challenging as central bank, digital currency challenge. And they have a topic called the interoperability and standards. And that is about kind of how do you make different blockchains work together?

So, we are submitting a proposal. For coaching operation multiple, CBDC blockchains, together with consensus. And so, there are many use cases other than the defi we also can connect uh, different banks digital currency. And also, we can do cross -chain contents indication. We can do even cross-chain charity.

A lot of things can be done with cross-chain.

Jack: one thing I want to add, Eric, is integration with the traditional financial world. I think that's our goal, it's in the early stage, right? Many companies, especially the financial institutions that are building private blockchains or consorting blockchains, and the many of the traditional assets will be, move on to blockchains.

And eventually when we are, you know, connecting all of those you know, private blockchains and those trillions of uh, traditional financial assets can be integrated or connected with the public chain as well, and at the time the real chain technology will show its value.

Yeah,

Eric: you just. It really was eye opening when you talked about CBDCs potentially using Wanchain, because we often think in terms of CBDCs as being like, confined to a region, if a CBDC integrates with a Wanchain, then you could have a Chinese digital currency trading on Ethereum and back and forth, and it could be fully interoperable with the public blockchain.

It's just not something that people talk about a lot, but Wanchain would seem to be well situated to help any kind of CBDC integrate with sort of the public blockchain ecosystem as well as the private one.

Weijia: Yeah, I think that's a great point. I, when we look at the topology, there's a central bank issue, the CBDC token, and then there could be local banks or banks and different countries can issue their own token, that bank token, and those bank token can be used by FinTech companies.

To bring to the public blockchain two bridges. So, there are many ways bridges can play a role overlay to connect all these different banks, different authorities of blockchain.

Eric: and then once again, the notion of these private blockchains and how that integrates with the system. So, it's fascinating, there's definitely a lot of there's an open field for wanting chain, right?

Weijia: Wanchain has a trusted bridge built already . We have the trustee bridge framework where we can put a private networker or consortium network who is public blockchain.

Eric: Excellent. Excellent. So, I, you we were talking a bit before the episode and Jack mentioned that when we talk about the operation of Wanchain, like how it actually operates, Jack referred to teleporting.

Because I think it goes to the mechanics. Um, Jack, maybe, did you want to explain the, at a high level, the mechanics of actually bridging between chains?

Jack: Yeah.

I want to, use the title body and I'm a stock tracking fan. And all the stuff is accurate. But, uh, you when we move assets from Wanchain to another, we have to make sure that no double spending is happening.

I follow we call, conservation law. And one day I said when, when we want tokens moved to another chain, make sure the original one is like a teleporting right. Being raised or putting the place in the gate. In a different chain, you maintain another one. And when, once that tokens finishes uh, you know, do these moves, we have to move it back.

Then the opposite has to happen, right? The, the copy has to be raised or burned then, and moved back to the original. I am we make; we have to make sure that no more tokens or created, or no less tokens are created. So, this is very important. And also, we have to have a mechanism to make sure that, different chains are being recognized and somehow they know each other.

And then will you use the network to do that? Commonly, suddenly you can use a central authority or third party to do that. But, uh, that kind of defeats the purpose of a blockchain, right? We are building a network and networks to facilitate and basically people or the user actually trust this network.

Network of stoma nodes or other validators, make sure that this whole process of cross-chain assets move to in crossing you know different chains are executed correctly. Yeah. That's why I wanted people to easily understand, use the teleporting mechanism, but actually the technology itself is lot more complicated and which I, and I actually have a pattern for the interoperability question technology in the U.S. Patent office and the extra technologies are quite more complicated, but easy to understand, we just want to use this term.

Eric: So, so when you're moving assets from Wanchain to the other, do you first you lock assets on that chain? Because obviously Bitcoin, you don't want it spent again. So that's so I, I'm not sure how that mechanism is accomplished, but I guess it's just it's a, there's a message that's sent out to the network.

Networkers validate that this block is locked. It's actually on chain that it's locked. Is that what it is?

Jack: Yeah, something like that. Weijia, do you want to go into details?

Weijia: Yeah.

They, actually there are two details here. First one is that it depends on the network. If the network is supporting smart contract and the smart contract would lock it.

So, this then it's controlled by the smart contract. If the network doesn't support a smart contract, then the storeman node, right? These 25 nodes or many nodes can work together that we waste the MPC. Multi-party computing to lock the account using lock the account. So, you need to overcome these 25 node or 35 nodes to unlock their account, so to make it secure. So that's one thing. And second thing about teleporting today, we need to lock it because the smart contract to know, talk to each other right now, we still have to know have cross-chain smart contract operation. And someday when we talk about teleporting we can, we don't need to lie.

We can just burn them and then create the other one on the other side. But we do not have that mechanism right now. And that's why we still need to lock it. But I believe someday we are, we will, should be able to just directly burn it and then create the other one on the other side of the blockchain.

Eric: And if it's a two-way bridge, and if it's anticipated to be a two-way bridge, I guess you would still lock it because you would, maybe it would help if like we looked at it from the perspective of sharding.

So sharding is just basically you take, you lock it on the network, you, you, you do transactions on the shard and then it goes back to that network. Now, in your case, the cross-chain operability doesn't necessarily do that, but maybe just a. Explain like the distinction between sharding, which is really almost like a private chain.

That's trying to offload some resource limitations versus the true value of cross-chain interoperability of course, is where you're utilizing other protocols that you couldn't utilize. Or you could, you didn't have interoperability with, but maybe explain the distinction from a lacking minting and burning mechanism to.

Weijia: Yeah, there are similarities between the two and the differences and sharding is almost like a hierarchy. You have Merkle tree that goes up and then you can go through the Merkle tree to the other side of it. But for cross-chain, it doesn't have that tree structure. It's just, it's heterogeneous and it can be heterogeneous.

So, it's, it's more complex than the sharding topology. That's one thing, second thing is then when we talk about interoperability, there are several factors here. There are bits, the asset. How do you transfer assets from one to the other? When we say locking, we mean the locking, the asset, just that.

And then you also need to it for messages, data, and also we have interoperability of state and also the command. And for sharding you need to deal with the state, they actually lock the state and those, some transactions over there, but one 10% do that because we need to deal with the asset right now.

So, we just dock the essay on one side, and we don't lock the state of the blockchain. There's no way you can lock the state of the blockchain overlay. So today we just locked the asset. And if you in the future, When we do the cross-chain operation, the command, the mode command then there'll be very similar to the sharding because you need to operate the command from one source chain to the other chain.

There'll be similar to the sharding.

Eric: Great. So today I let's say I am on I'm on Bitcoin. I lock it on Bitcoin. And now on Wanchain before, I guess if I want to go on a serum, if I want to utilize a theorem. Does Wanchain do after that? The Bitcoin is locked. What's the next step.

Weijia: So basically the

Bitcoin is locked there and then we know that this Bitcoin belongs to someone and then there's a target.

Jack: Yeah, would I say Wanchain, actually, the user actually trusts this network. And then that will control that alter log Bitcoins, right? At the same time, this network will create or maintain another one on the target chain, for example Ethereum.

Nice and assign that to this particular user. So basically, the user will have this minted token on Ethereum and then you can move the BTC along with his private key. He owns the asset, and one was the user wants to move back and then follow the reverse protocols.

And then that will go recognize it. You know, your event gave the original token back after burning the minted one.

Eric: What is the minted one? Is it a Wanchain token, or is it an Ethereum token, what is being traded on the on the target?

Jack: chain? Yeah. Yeah. If it is on, we call it as a BTC at the Ethereum.

That's how we all know notation, which invented that. So, if the BTC is on Wanchain, it will be BTC at Wanchain, and we are the whole infrastructure support all these three different chains as long as they are on this network and the user can treat that exactly the same as the original Bitcoin.

So, it doesn't matter where the coin isn't maintained.

Eric: So, and so does that mean that Wanchain is, the crushing interoperability is just a mechanism for spinning. Wrap tokens, right?

Weijia: Yes. In particular. Yeah. You can say it that way. Yeah. It's just the

and the user use actually specify which address want the token to be minted at. So, the user would say, this is a target chain. This is the target address. So, we just minted for that target.

Jack: Yeah, but as Weijia mentioned that, is a lot more complicated just by moving the assets. I mean, includes the uh, not only the assets, but also the information, the data, and also the command.

Making the operable, you can command the action or event from different chain. And that's why we are building the infrastructure from ground up and making more and more complicated.

Eric: Right.

And so, then once you're done trading effectively the wrap door on, on the target chain, if it's it, if it's a two way bridge, which right.

Then you burn that wrap after, if you want to go back to the source chain, you burn that asset on the target chain. And I guess simultaneously you're, I don't know the order, but you're also then creating or you're unlocking it on the, on those, on the source chain.

Weijia: Yeah. Unlocking is the right word for that.

Yes.

Eric: Okay. Yeah. You're not recreating it because you've locked it, then you'd have nothing just sitting out there, like waiting for something else. Yeah. Okay. Great. And then on the, at

the store man and the voucher level, do you want to talk to me about the, uh, honest majority assumption and how you ensure the security, you know, the anti-collusion aspects of lunch chain.

Weijia: Yeah, I think yeah, I can, I can describe that. So, one channel has some challenges. Of course, it's about security. We need to make sure that breaches are secure. And the second challenge is decentralization. We need to, we want to make a permission. This I, and the way we do is that we have an open enrollment.

So, I think at the sixth of each month, we allow everyone to stake their asset and say they want to be cross-chain bridges. And then we just rang the stake they put that to whatever duration, and at this time, top 25 pounds chosen. And then within three days, they need to, if they are chosen, they need to set up their system based on the bridge operation.

steps procedure. And then up to three days, this new group of a store man will start operation. So, he's going to be selected and there's the rank by the state they put and to make sure that he has spent them this and also has a stake so that to prevent them from collusion.

Eric: And then also, I think I read that, you have the typical slashing mechanisms, if, as a potential panel,

Weijia: Yeah.

So, there are two kinds of a penalty. One is that if the note doesn't do anything and they become inactive, if they are inactive, we have a penalty for the reward they can get, and they, if they do something wrong, then there's a way to slash their stake.

Eric: Excellent. And so then thinking about, I know we talked a bit about CBD sees as a potential future path.

How do you see Wanchain evolving over the next few years? Like this kind of crushing interoperability, does it become more ubiquitous? Does Wanchain is Wanchain in a position to you know, by being at the center of the hub, have the capability of continuing to evolve and grow into other natural businesses.

Yeah,

Jack: certainly, you know, we are focusing on the public chain at this stage. I think it's a badly needed as we see the more chains and defy applications uh, you know, opening up of people have to move their assets into different chains to pursue all those high yielding activities. And then this is a very needed at this point.

And, uh, we discussed earlier, Wanchain is trying to build a wide area network on blockchain first. And we let's say we got 10 or 20, or let's say 50 blockchains connected. We create, actually create a web oh, blockchains already. And then we possibly can create many when you know, why you are hiring network.

So other blockchains or potentially we can work with other partners. And they said they if they have. Another wide area networks. We will be connecting with them as well. And certainly, in the infrastructure level, we try to connect as many changes as possible. And if we can come up with a you know, common protocol, which I talk all the time about, TCP IP, Or HTTP you know, if we can become a Tim Berners Lee and that'd be great, right?

But anybody can propose make a proposal. So, what is the ultimate? I mean, universal, you know, protocol for the, all the blockchain is public and private to be connected at the time. We will, we're trying to try to find that solution, and, and Wanchain we'll be, you know, giving the, uh, our contribution, not only by providing the services to all these connected.

blockchains, but also their users. Uh, once we have the infrastructure, we want to provide the services. We want to become a, let's say one stop shop for all users, for all the financial services in this new digital land. It doesn't matter what it is. We'll be working with the partners view that the service.

for our users. I think we have to be user centric\\, make sure that they would like to use this infrastructure just like they use internet today. They probably won't even feel the technology is behind. But everything is connected behind the scenes and then they can move as it's just uh, you know, we are sending the emails today.

They can move assets and make, cross-chain of command, like what we discussed earlier. And I think that's the wall we are walking.

Eric: Excellent. When I was reading I was, I was doing some research looking at some other things that you were working on. And one thing that struck me, I'm a lawyer, right?

I was a general counsel for an exchange. I was at Lee. I was at work for a bulge bracket law firm on the street and worried about compliance and asset markets. And it was a comment about how Wanchain fits into a regulatory compliant structure for training and the way that it was framed is, it's, it's, just, uh, you just bend your mind to, to think into it.

If you're servicing a private chain or you're servicing a, even a CBDC or some jurisdictional specific chain, there is still the need to inter-operate with the public blockchain, but if you create a private blockchain, then how do you do that? If you, if you have all these rules to comply with, how do you do that?

And watching basically would facilitate, Hey, I'm going to create a blockchain with all the regulatory compliance bells and whistles, what I have to do for AML and all this other stuff. And maybe it's not necessarily supported at the public layer, but from. Within the country, the trading that I'm doing, I can ensure that it's meeting my requirements, on, you know, in terms of the information I'm collecting, but then Wanchain would facilitate that interconnectivity to the public blockchain and still facilitate that, that interaction between the compliant and a more public, or what you might say is international, because it's an international world.

You trade with other jurisdictions. You don't worry about the laws in every jurisdiction necessarily. But it can also even apply, I'm going to take it one step further, if let's say that

the us regulators say, Hey, you can only, you have to have a comparable regulatory system. Gary Gensler, SEC chairman talked the other day about this.

He talked about, um, I forget the name for it, but basically if you have a comparable regulatory structure, then there can be reliance between the two jurisdictions. And what's intriguing is that Wanchain could facilitate that between the jurisdictions, without the jurisdictions necessarily have to having to build all that interoperability themselves and waiting for it to happen.

Yeah,

Weijia: I think yeah, I think you brought up a very good point and I want to mention because we are submitting a proposal to CBDC challenge by M A S with consensus, and one of the items they have is about risk and challenges, and one of the risks and challenges we mentioned about regulations.

And then we also have mitigation method for that. And so, we describe it this way. We said that yes, regulation is very important for CBDC, and we said that the whole interoperability should be layered, and they should be different region and have different regulation. And also, the regulation can be a blockchain by itself.

And so that you can do the question for regulation as well, and you can leave them open customizable, and then have some flexibility for proxy to handle it. So, it should be region specific and country specific.

Eric: Interesting. So, let's, let's pull on that thread a little bit. The regulation can be a blockchain by itself, but maybe you've thought into this.

So maybe take that a step further. Yeah.

Weijia: Yeah. So, I think they, when we talk about cross-chain interoperability you have different blockchains and I get decentralized identity. So, you kept him can have one identity and a private identity in different places. And then for blockchain, same thing. The beauty about blockchain it's trustless by and different countries can have different regulations.

And these regulations are separate from the financial portion itself. The authority can build porch in themselves and put the put the regulations over there. So, what needs to be done for the blockchain FinTech company is to cross-chain, to let identity, the regulation, blockchain, and pull all the regulations over there.

And apply that to the blockchain, cross-chain policy so that the data will not be from one blockchain to another. Because there are countries who will prevent leaking of some user data from one country to another. So, you need to apply that specific regulation to the cross-chain operation. And now you need to trust a source and this source could be a regulation blockchain by itself.

Eric: Interesting. So that's a, there's a lot of wood to chop there, as well. Do you see the integration? Like when you, when we start to think about personal identities, you know, to

the extent that some jurisdictions require reporting on personal identities, I've talked to a number of people on the podcast, regarding,

and I know it's complicated, homomorphic encryption, or even multi-party computation. Do you see those kinds of privacy enhancing technologies integrating with this cross-chain interoperability for regulatory blockchain?

Weijia: Yeah,

I think, EA enterprises one thing they have done is to bring the privacy into blockchain because the same blockchain itself, public blockchain itself doesn't have privacy protection.

So EAP or the privacy layer two and I think for CBDC the banks, they have a private kind of priorities for several things. One is to the protection of privacy. Second is the regulation. And then, so of course it's always about security. So yes, those components will be extremely important.

And I think a MPC zero-knowledge proof, those are very important. And once we once know, of course is very interested in working on these technologies.

Eric: It sounds like we're going to have to continue to follow you guys as you can, you know, build into this because this space is probably going to get more regulated, but to the extent that operators like yourself, make that easier, that's a net benefit to the entire system.

So exciting stuff. It's a great place to be exciting times for you. Congrats. So, before I break or before we break, I've asked a number of questions, but maybe I miss something. Maybe there's something you wanted to talk about, or you think would be good to tell the listeners about that I missed.

So, this is your chance.

Weijia: Yeah, Eric, I have a question for you. You had mentioned that you a lawyer, and then for us lawyer is someone very high up. Okay. So, can you say something about yourself? What is your background and what is your roll in blockchain? Say something?

Eric: This is my promo shot?

So, I come from "TradFi" or the traditional finance background. I was associated with an electronic order management system, an alternative trading systems, multiple ones, before then transitioning. I was the, I became the general counsel and CLO of a stock exchange where I was for a number of years before then trying to build a system myself.

For that as a founder and CCO, it didn't get past the Greek debt crisis. So, then I went into business for myself, and I started, I represented stock exchanges, and I represented digital asset exchanges, centralized exchanges, and my practice has both the traditional finance component, brokers.

you have stock exchanges, et cetera, as well as the more digital asset component. And obviously to even get into the space, you can't ignore cybersecurity, you can't ignore privacy.

I owned a cybersecurity company for a while. I hate to say it wasn't all that successful, so it's in the business to in the process of winding down, it, these are all areas that everything gets so interconnected.

I'll say, what's interesting as a lawyer, when people talk about the rabbit hole, you go down the rabbit hole. It's like Alice in Wonderland. It's the same world just everything's different. It's another world it's just, everything's upside down, and in many ways, that's what it's like as a digital asset lawyer in this space.

Jack: Yeah. Impressive. Yeah. I was in the financial space as well for quite a few years. Yeah. For me to step into the blockchain space was lucky enough, to be exposed, but at the same time I was willing to try. I think it's important you know, for our audience to give a try. Either, to do something, either download our application,

I go to our Wanchain let's say, website to download desktop wallet or try our web based application. Maybe you use all a system to get a little bit token somewhere, right? It doesn't matter whether it's crypto asset like Bitcoin either is, or USDC or, uh, some, you know, tokens, anything that you want, just give it a try. And use the cross-chain mechanism and see for yourself. I need to see the web where the value and also maybe so give us suggestions what we can do. And how we can improve our systems. It's just trying it out. That will be something that I want to leave to the audience.

Eric: Yeah. I'll say this, when I look at people who utilize your application, you have a very strong and charged community that obviously like anything that community needs to grow because you're trying to build a business. Those who are using Wanchain today like it a lot. And I think you know, one of the things that resonates and hopefully like through this podcast it helps with that is that the word has to get out.

You know, people you've done a lot technically, you've really been thoughtful in creating this and engaging with the development community. And now, that the rest of the world needs to know that how, what a powerful tool Wanchain actually is. So it was, so before we break, so people who want to learn more about Jack or Weijia or Wanchain, where should they go?

Jack: Yeah. Go to our website first, [Wanchain.org](https://wanchain.org), you can follow our Twitter account or go to our category, become a member there and the ask us questions, and yet all the social media accounts are on our website. Just search for Wanchain, W A N chain.

Eric: Excellent. Yeah, I saw you have all the LinkedIn, how about anybody particularly active on Twitter?

Jack: Yeah, certainly. Yeah.

Eric: Okay. Do you do personal accounts stuff or?

Jack: Yeah, we do.

Eric: Excellent. So, gentlemen, thanks so much for coming on the show. This was great. I really appreciate it.

Jack: Thank you so much Eric. Really appreciate it..