



Technology Policy Institute

Are the Metaverse and Web 3.0 Real or Hype and What are the Policy Issues?

Aspen Forum 2022 Panel Discussion

Panelists:

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Edward Bowles, Global Director of Public Policy, Meta Financial Technologies

Honorable Caroline Pham, Commissioner, U.S. Commodity Futures Trading
Commission

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Kevin Werbach, Liem Sioe Liong/First Pacific Company Professor, University of
Pennsylvania

Moderator:

Sarah Oh, Senior Fellow, Technology Policy Institute

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Event page: https://www.youtube.com/watch?v=47wcm4u_TiI

Sarah Oh:

Thank you everybody. For our, our afternoon after lunch panel we're going to be thinking about web 3 and the metaverse. So this panel is entitled, are the metaverse and web three hype real, and what are the policy issues? What is the relationship between web 3.0 and the metaverse? Are we in a hype cycle? Companies are investing significant resources in web 3.0 and metaverse and have routine announcements of new user experiences, innovations and payments, immersive gaming, and more. We're gonna discuss these issues and ask what policy makers should know about these new technologies. So here with us today, we have Professor Hillary Allen from American University college of law, Edward Bowles, global director of public policy at Meta financial technologies, the honorable Caroline Pham Commissioner at the U.S. commodity futures trading commission, Sujit Raman, general counsel at TRM labs and Professor Kevin Werbach at the Wharton school University of Pennsylvania Law school. So I just wanted to start us off definitionally. And if we could just go down the line or as you, as you want to talk about it, what is Web 3.0 and metaverse? Are they the same? Are they different? How would you define metaverse?

Hillary Allen:

I'll take the rear end. Why don't you start Kevin?

Kevin Werbach:

<Laugh> we're gonna start at my end. Well, so what's great about these terms is nobody knows what they mean. They mean whatever people want them to, so they can be used in a very general way, as I think of it to some extent, these are slogans about ideas. But there there's some kernel of reality in both of them. Web 3 is the idea of a next iteration of the internet. But it's fundamentally about a different business model. It's about business structures around users, owning data and owning assets themselves built on blockchain infrastructure dis-intermediation decentralization. So I think the idea of web 3 is it's the crypto space crypto trading, but everything broader than that; Metaverse I think of not really as business model, but as experiences metaverse is basically like the internet, but, but more so think about the experiences that we have being online, but much richer, deeper, more persistent more expressive.

Kevin Werbach:

And so that includes things like virtual reality and augmented reality, but also gaming and other pieces coming together. There is an area of overlap, which is open metaverse platforms like decentraland and sandbox are some of the early instantiations of this, which use digital assets, basically NFTs, non fungible tokens, to represent the assets in the metaverse. So if I've got this hat in the metaverse, it can be an NFT then I actually own as opposed to just some code that is controlled and owned by the platform owner and then licensed to me. Whether or not that will take off and the difference between that and the larger metaverse is a really important, interesting open question. I'm sure we'll get to, I mean, Hillary will get us to the end telling us how this is all a fraud in the scam. I'm sure <laugh> but I think that's, that's the point. These, these are overlapping ideas. They're not the same. But there is an area of convergence between them.

Sujit Raman:

Well, I would echo everything that Kevin has just said and really take a minute to focus on web 3, cuz I think it really is about a vision more than it is about particularity right now. I think there's a lot of sort of ideas about what web 3 stands for. So I'm gonna throw out some words and these are sort of the, the

concepts that I think most people associate with web three, it's a vision in which humans will reclaim their data, the internet, and essentially their anonymity from large outside forces, whether it's large corporate firms, whether it's government agencies, it's an idea in which the individual reasserts control over their information, who they are and essentially how they exist in the world. So you are gonna hear certain concepts like private individual control, you'll hear ideas like decentralization or disintermediation as Kevin mentioned, or anonymity or pseudo anonymity.

Sujit Raman:

You'll hear ideas about a more personalized experience of the internet through the use of machine learning or through artificial intelligence. So that again, you are sort of stripped away from the centralized forces that have built the internet that we know and reduce or remove and sort of give that power back to the individual. There's an idea sort of underlying all of this, of the absence of surveillance, right? The idea that these large outside forces, whether they be social media companies, whether they be the sort of pipes of the internet, not surveilling you and not having an idea of what you're doing through your user activity. So you'll hear, again, words like permissionless or trustless. These are all concepts that are intrinsic to web 3.0. Now with those new technologies come new risks. And I suspect we'll be talking about that as we go forward. So I would just leave you with this idea. I think web 3 is a vision of data itself. It's an idea where data is everywhere at once and also kind of decentralized and out of any particular individual or entities grasp. Ultimately that's what the vision of web 3.0 is all about.

Caroline Pham:

So first I have to provide my disclaimer not to break the flow, but the views that I express today are just my own and do not represent those of the CFTC or of any other commissioner. So this has been really interesting because I think already you'll see differences amongst the panelists. And so if you've got differences amongst the panelists, what does that mean for the broader ecosystem? My understanding of web 3, from all those who I've spoken with is that it really hinges upon this idea of an internet of ownership, which is similar in some ways to what Suji has described, but that the key thing to unlocking the internet of ownership is digital identity. And so many that I have spoken to have said that in order for web 3 to reach its full potential, there needs to be a immutable digital identity that is secure, that has privacy, yet is able to be used to enable this internet of ownership.

Caroline Pham:

So I think that's one thing that's very interesting. With the metaverse, there are two different definitions that I've heard lately and I've been out and about learning more about the metaverse and seeing it with my own eyes. I just returned from Seoul, South Korea and was also previously in Singapore and the two definitions of the metaverse that I find compelling. The first one is more broad. It says simply that the metaverse is a 3-D internet. And indeed that metaverse is here today. You can see that metaverse on gaming platforms like Fortnite or Roblox. My daughter plays Roblox. When COVID first started and she was eight years old. She was spending all of her time hanging out with her friends virtually in Roblox I think in a cat world lot possibly <laugh>. And so that that's one conception of it that does not require web three, another definition of the metaverse that I heard in soul from a CEO of a large gaming conglomerate is that the metaverse requires two components.

Caroline Pham:

The first is a identity and the second is an economy and that's what differentiates the metaverse from just another gaming world is this idea of economy, of being able to, to earn, to own, to buy, to sell, to

transfer, to use, and that I think can be accomplished without web three, but web three would I think unlock its full potential in that you could use tokens and NFTs to demonstrate that ownership and that ability to buy, sell, transfer, and earn and to transfer value between the metaverse and the real economy, so to speak.

Edward Bowles:

Well to tackle some of the, the postprandial torpor that I suspect is settling in. I'm gonna do a bit of audience participation. <Laugh> could those of you who have read Snow Crash, please raise your hands. Okay. So relatively small percentage. Snow Crash published almost 30 years ago, 30 years ago in November by Neil Stevenson coined the term metaverse for the first time. It's a fantastic read. I hardly recommend it to you. I don't think it necessarily represents what it we are trying to build for sure, but it's got extraordinary percipients. When you think about what the knowledge that Neil Stevenson must have had at the time that he wrote that in terms of computing power, that was going on. And the reality is Neil Stevenson is now in the metaverse business as well. He is just, co-founded a firm called Lamina One, which is building payment rails for the metaverse.

Edward Bowles:

So he's gone from creating the termed fiction to actually now building with a number of other companies, real payment rails to do with the metaverse. For us, Meta and I'll have to admit, obviously our name change did spark a bit of revitalization of interest in the phraseology and the terminology. We see the metaverse as something that is predominantly a physical, immersive present experience. And if you've ever put on a 3-D headset to use the crude term in our business quest two you would really know what that means. It's an extraordinarily visceral experience to be in a digital space with other human being representative forms in the form of avatars who are talking to you or talking to one another or taking part in some other social activity, I've attended a Billie Eilish concert in the metaverse. It was a novel experience.

Edward Bowles:

I wouldn't normally go to Billie Eilish anyway, but to go to see Billy Eilish in the metaverse was a truly novel experience and something that was radically different from standing in a mosh pit with a lot of sweaty other Herberts, you know, in real life I could leave when I wanted and without having to worry about it. I do think it's different from web three. Infamously, perhaps Elon Musk asked on Twitter, I've been looking for web 3, where do I find it to which Jack Dorsey replied between A and Z, which I think is a disservice to VC funding. I think VC funding's been an incredible driver of innovation in this space, but predominantly you don't say I'm in web 3, you would definitely say you are in the metaverse.

Hilary Allen:

All right, well, I've got my skeptics hat on. So I actually am gonna agree with some of the definitional terms that Kevin used, that that web three is an aspiration—it is not here; that it's something that is intended to be built on the blockchain and that it is something that is intended to be decentralized or disintermediated. The problem is that our experience with the blockchain already shows that that is just not gonna happen. I have written at length about the different intermediaries who are involved in all kinds of blockchain businesses, happy to take Q and A about that, but you don't have to take my word for it. DARPA commissioned a report on the Bitcoin blockchain concluded it was vulnerable because it was centralized. Tim O'Reilly has said that he's never seen anything centralized so rapidly as the Bitcoin

blockchain, the bank for international settlement has said that it's a decentralization illusion in crypto, and let's be real.

Hilary Allen:

Of course, there are intermediaries to profit. Why else are all those venture capitalists pouring this money into it, right? Why else is Meta trying to get into this space? This is not, you know, altruism, right? So we need to be asking ourselves, how do they propose to profit in web three? And the idea seems to be that instead of just having regular crypto, where it's all speculative transactions on tokens, it seems to be a way where we're trying to make a transaction out of every human interaction and that by sitting in the middle of those interactions, meta and venture capitalists and the, the, the startups that they fund can profit. So we need to be asking ourselves, do we really want an environment where every single interaction is transaction? We gotta think about what that does to the fabric of society. We also have to realize that the privacy claims in this space do not hold water. Right? On a blockchain, a public blockchain,

Hilary Allen:

You have pseudonymous--I can never say the word pseudonymous--records of every single transaction that someone's engaged in. Now, we're gonna make it every single interaction that someone has, you know, think about what that might mean for someone who is a victim of intimate partner violence, for example, to have, you know, as soon as they can figure out their, their key, they can see every transaction that they have ever entered into everyone they're interacting with. So these are questions about what this might do to how we interact that that Meta needs to think through. And frankly, Meta doesn't have the best track record of thinking through these kinds of social implications. And so I think we need to be very cautious about this space.

Sarah Oh:

So with that level setting where we know what each other thinks of web three and metaverses I wanted to talk about the profit motive. So now we can go more into the weeds. I don't know how much people are following crypto, but the difference between a security and a commodity. So digital assets there are so many different kinds of coins; they are ICOs, are they securities or commodities? So I just wanted to kind of tee it up for our commissioner coming from the commodities space and maybe start that conversation.

Caroline Pham:

So the important thing about digital assets is that it is really, really broad. It is an asset with a digital representation. That could be anything--that could be a financial instrument. It could also be a piece of real estate, a piece of art, pretty much anything that you can create a digital representation of it does not even need to be necessarily on a blockchain. So let's just level set that as sort of the definition of a digital asset in talking about crypto assets, which is on a blockchain and uses cryptography, which has caught everybody's attention. There's no question that some of those products are securities based on what they're being used for. If they're being used for capital raising, if they meet the, how we test the United States and the definition of a security in other jurisdictions. there's also no question that some of these are payment products or are some type of banking product perhaps, and there Prudential supervisors and bank regulators and the Basel committee, and the BIS are all looking at those products very carefully to guard against systemic risk and to ensure the safety and soundness of the financial system and financial stability.

Caroline Pham:

So what is fun about the CFTC's jurisdiction and the commodity exchange act is that the definition of a commodity is so extraordinarily broad. It is pretty much any thing, good articles, service, right interest, pretty much anything except for onions and movie box office receipts.

Caroline Pham:

And the definition of a commodity also encompasses a security, actually. It's not something that people often talk about because it is confusing. But securities are actually also commodities. So the easiest way that I like to talk about this is that if something is not a security, then it's something that the CFTC probably has regulatory touchpoints over because of our broad anti-fraud and anti-manipulation authority over the spot markets, as well as in certain specific circumstances where we have direct authority over retail spot markets, for example, in retail effects and in retail, leverage commodity transactions and Congress granted us that authority because of the number of scams and fraud involved in those two markets in the need for a, a full registration licensing, compliance, risk management and reporting regime around those two areas. So there's a role for everybody in the U.S. regulatory space. There are seven federal financial regulators, and there's gonna be a seat at the table for everybody.

Sarah Oh:

Any other thoughts on digital assets, securities, commodities, we'll find out--unstable coins, money market funds, the whole gamut.

Kevin Werbach:

Yeah. So, you know, whenever I talk to financial regulators overseas, I do a lot of workshops with them. They all say, God, you guys have a really fragmented regulatory environment. And this is an opportunity. There's, there's benefits to the fact of, we have so many different gradations here, but it's also a challenge when as Commissioner Pham said, you have something this horizontal that it crosses over all of those boundaries. So just, just so people understand if you're not familiar with this area. So far, the SEC has said, essentially, that Bitcoin is not a security. So why is Bitcoin not a security? It's certainly not that it's not an investment because there's a, there's a multi hundred billion dollar market trading in Bitcoin today. There's roughly a trillion dollar market in speculative, financial trading, globally, and digital assets Bitcoin being the biggest chunk of that.

Kevin Werbach:

So surely this is an investment market. It's an asset class but there is no Bitcoin, Inc. If I'm buying and selling Bitcoin, I am not there is not some Bitcoin entity that is raising funds. There's 10,000 or more people organizations around the world that are running nodes on the Bitcoin network. Now, there are lots of players that are making markets. There are exchanges like Coinbase and Binance and FTX that are centralized intermediaries, intermediating transactions, there's all kinds of financial activity. But Bitcoin is not a thing that is issuing securities to raise money in a venture. The SEC has suggested, although in a speech by a non-commissioner in 2018, that Ether, which is the token of Ethereum second most valuable platform also appears not to be a security. That's about all the Commission has said other than the fact that of the tens of thousands of other digital assets that have been created, the vast majority of them appear to be securities.

Kevin Werbach:

So one thing is we need a lot more clarity here. Everyone sort of agrees on that. The problem is the industry say they want clarity but they don't want a determination of what constitutes the security that goes more broadly. And even though everyone kind of understands much of what is happening here is either investment fundraising or attempts to circumvent. There is room for more than one regulator. The CFTC has some real expertise dealing with oversight of commodities markets. I testified in February for the, the Senate Agriculture Committee, which oversees the CFTC with, with chairman Benham and, and Sam Bankman-Fried of FTX, a large crypto exchange. And when I said there was, you know, if the goal of getting digital assets more into the CFTC is a regulatory, get out of jail free card, if it's, well, this is a smaller agency.

Kevin Werbach:

That's, that's not going to do real oversight about market manipulation, insider trading, front running, and all that. That's problematic, cuz these are massive markets and these are investment financial markets. If on the other hand we have multiple competencies and we can have shared jurisdiction and coordination between the agencies. We have that all the time in the government. Now it's not perfect, but we have, for example you know, the FTC and DOJ coordinate about mergers and so forth. So we can do that. And I think unless we radically rip up and change the basic structure of financial regulation in the us, we're going to have to do that. But we need some more clarity. And the, the last thing I'll say, say is there's some obvious gaps. The CFTC has very limited authority over spot market transactions, cuz it regulates commodities. And most commodities you think about oil, cattle, futures, whatever, primarily derivative markets, primarily things like futures and options.

Kevin Werbach:

With digital assets, we have derivative markets. We also have very big spot markets. And if these are commodities, the CFTC needs appropriate jurisdiction and appropriate resources. They need the funding to be able to have oversight of these markets. There's several bills that have been introduced in Congress. I think there's some good opportunities to work on. But you know, we need to have more beyond that. Stablecoins you mentioned we can get into in a, you know, later on--digital assets that are created to track the value of the US dollar to be stable. Problem there is well who regulates that? Is it under the federal reserve? Is it under the banking regulators? Is it under the CFTC or the SEC? Is it under the OCC? Is it under the FDIC? And so that's one we're given that stablecoin are a more than 100 billion market now. We need some better framing. So I've seen a lot of movement just in the last year of the digital asset industry. Many of the bigger players no longer saying, oh, don't regulate us, but saying, okay, let's come to the table and work out what this regulation should be, but we've gotta go a lot farther in that direction.

Caroline Pham:

I'm gonna go ahead and respond to some of that. Thank you for those comments. I think first of all it's important to note that the CFTC has been incredibly active and aggressive in the enforcement space. Just recently we brought in an enforcement action for a Ponzi scheme in Bitcoin. That was \$1.7 billion. And because the CFTC, unlike nearly every other U.S. regulator has a global jurisdiction, we were able to reach a misconduct that was in South Africa. The only other U.S. regulator that has that type of global jurisdiction is the Fed since they regulate bank holding companies and the OCC, to some extent because of banks and their foreign branches. So that's one point I'd just like to note. And the CFTC has brought over 50 enforcement actions, totalling hundreds of millions of dollars in penalties since 2015, when the CFTC first identified Bitcoin as a commodity.

Caroline Pham:

And since that time, the CFTC has also identified ether, lite coin, doge coin, and a handful of other coins as commodities under our jurisdiction in our pursuit of fraud, we've also brought actions against crypto platforms and firms for being unregistered. And so I think anybody who thinks that the CFTC is going to take a light touch to regulation is confusing what principles-based and flexible regulation and a system of self-regulation is versus having a prescriptive regulatory framework that is not as able to keep up with adapting and anticipating new risks and new changes, whether it's a change in technology, a change in market structure, there are new derivative products being developed all the time. And I think that's why the CFTC with its mandate to promote responsible innovation and fair competition--it's to keep up with the risks that commercial end users, corporates dealers, and everyone else who uses our markets for risk management encounter. I'd also note that with the Dodd-Frank act, the CFTC was given the jurisdiction over the nearly 700 trillion swap notional market and has built out an incredibly robust framework around swap regulation and swap dealer regulation. I used to be the global head of swap dealer compliance at Citigroup among other roles. And it was a hard job <Laugh>.

Hilary Allen:

So I'll jump in and say, one of the concerns that people have about the CFTC having jurisdiction in this space is that the CFTC, unlike the SEC doesn't have an investor protection mandate, right? The CFTC deals primarily with institutional players, that's the kind of market that they're used to. And they're great at market integrity in that space, but protecting sort of everyday investors has never been part of the bread and butter of the CFTC's mission. And so there's a lot of concerns about in the crypto markets, which have a much more representative retail trader constituency than, than the regular commodity markets that they might not be a great fit for that. Also the CFTC is simply much smaller than the SEC has a lot less experience in, in doing these investor protection areas. So Kevin mentioned some of the bills that have come out.

Hilary Allen:

One of the concerns about these bills is that they are carving out jurisdiction from existing, or at least some of the proposals from the SCC and giving it to the CFTC they're creating these special definitions of digital assets. Now, as the commissioner said, a digital asset can be anything. It doesn't have to be on a blockchain. And so sloppy drafting in this space, which is what I've seen in a lot of these bills is a real problem--because what it allows is basically regulatory arbitrage, right? You offer a regular security, you know what, we'll call it a, you know, a digital asset is just a computer file. A blockchain is just a database, right? So you say, okay, well we have a computer file on, on the database representing your security. Now it's not a security more, it's a digital asset. And now we can get away from the jurisdiction of the SEC, which is being a much more aggressive regulator like it. So I think there are a lot of concerns about these regulatory proposals to consolidate jurisdiction.

Caroline Pham:

Yeah, I have to disagree and correct you. The CFTC has very strong retail protection mandates and enforcement actions. I just mentioned our spot retail, FX mandate, we bring dozens and dozens of actions pursuing fraud in those markets. We also have for example, there's a lot of scams on precious metals. And so that's something where the CTC has gone after that as well. The CTC does not have an investor protection mandate because the C does not have oversee investment markets. We oversee commodity markets, which are used for risk management and for price discovery and for speculation. So

people in our markets should know, and they do know that when they are purchasing something, it is speculative. There is no 100% you're gonna get your money back.

Hilary Alleen: That's true of securities as well.

Caroline Pham:

So for our markets, what we call is we call it customer protection because we want to ensure that the anybody who's in our markets, whether institutional or retail has the sufficient protections in place from disclosures to some level of suitability requirements and other transparency measures. So I just, I have to disagree with that.

Sujit Raman:

I, I hesitate to insert myself into the discussion but I would offer just one thought, you know, the, the security versus commodity discussion is, is very important for the, for the obvious reasons. But I think for many people in the industry, it's also a little bit academic. I think what most folks in industry are looking for is clarity one way or the other, because in the absence of that clarity, a lot of the innovation is being driven outside the United States and where, you know, the values of web three are being developed as we speak. And you think about the web 2, the internet, as we know it, it's American values that diffuse the internet as it developed in the 1990s and the early 2000. And so all the concepts we talk about free speech, open ideas, transparency, et cetera, you know, no one is suggesting that the internet, as it evolved as a beautiful, perfect thing, but we need to make sure as a society that web three is similarly infused with those values that I think Americans and other allies prioritize the danger is in the lack of that clarity.

Sujit Raman:

A lot of the financial innovation in this space is happening in other parts of the world that don't regard individual rights, individual privacy in the same way that we do. And so a lot of the innovation in the, in the FinTech space in the web three space is happening in a way that's actually quite scary. You talk about how China is already miles ahead when it comes to a centralized, you know, a CBDC, which they are now exporting to other parts of the world in a very aggressive way. So this infrastructure is being built. As we're speaking, it is part of the belt and road initiative. And yet here we are squabbling within the United States about, is it a security or a commodity? I'm not suggesting these are not important questions. They are extremely important questions, but I, I just hope all of us collectively can kind of get our head above the, the fray.

Edward Bowles:

So to step into this little battle zone here to be fair, I, I think the U.S. government has now realized that it was slightly behind the curve, right? And it, through the issuance of the Executive Order a couple of months ago has sought to put some overarching narrative together to encourage its rather disparate agencies to be more aligned and to start to draw together a roadmap for how the U.S. can resume its role as the leader of innovation in this space, in terms of supporting what industry is doing, whilst being aware of the areas where the industry might otherwise go off the rails and harm consumers and others. Now, part of the, the challenge is the likelihood of legislation coming off the Hill is relatively low. And so therefore it does in a sense, come back to the agencies, looking at what existing powers they've got now to support and facilitate innovation in this space.

Edward Bowles:

There are some interesting opportunities, I think for collaboration in a sandbox type way between industry and regulators, now that there appears to be a more pro-innovation agenda being adopted by the administration. It is also true. However, there are other jurisdictions in Europe is one where as they did with GDPR, they've rushed out the blocks and they've created a new regional framework for markets and crypto assets, MiCA as it's called, but MiCA's been driven interestingly, I think by a sort of European sovereignty, which is partly anti-US in the sense in which innovation in this space has been very much driven by U.S. companies and partly by the desire to crowd out private sector action, particularly in respect of an emerging class of currency, i.e. the digital Euro and what I think is encouraging to see anyway and it is true in the U.S. is the recognition that actually the U.S. can innovate to in a public sector sense. It should look at what the role of a digital dollar might be in, in increasingly digital commercial environment and including in relation, I would say to the metaverse. And so there is an interesting opportunity now for U.S. authorities to work together more with industry, rather than just working against bits of industry.

Hilary Allen

Well, it's interesting that you mentioned the executive order, cuz I've been quite critical of that because I think the major fundamental flaw of the executive order is that it just assumes that all innovation is good, right? It doesn't take a critical approach to think, well, why are we even doing this? Because when you get down to it, blockchain tech is pretty bad, right? So to try and achieve decentralization, things have to be inherently inefficient, clunky, wasteful, otherwise it's too easy for a bad actor to take over, but then it doesn't scale very well. And so we're adding the intermediaries back in and we're getting the worst of all worlds. We're getting sort of this clunky decentralized sort of quasi technology with intermediaries layered over them. And there's a lot of negative consequences of this technology, right? I mean it has spurred an entire sort of new industry of ransomware attacks.

Hilary Allen

It has major environmental costs. If you look at what proof of work mining does, the blockchain for Bitcoin alone uses as much energy as an entire country--like the Philippines or in the Netherlands or at least it did until this sort of crypto winter. So, you know, and then people are getting hurt. People have lost their life savings. You know, there are suicide hotlines posted at the top of crypto threads. Is this really the innovation that we want to be leading the world in? Right. Let let's stop and think like, is there anything really useful about this technology? And I understand you can't always predict that from the get-go and you know, if there were no negative consequences, sure, go nuts, keep tinkering with this, see if you can find something. But when the writing's on the wall, that this is fundamentally flawed technology and you know, again, don't take my word for it. There's a letter concern tech signed by over 1700 technologists around the world saying this technology is bad technology when the writings on the wall and the negative consequences are so bad, we need to just stop and think about whether we want to promote this in the first place at least have that conversation. And that conversation has been entirely missing from the administration's approach to this, which I think is a fundamental flaw of the executive order.

Kevin Werbach:

No, but the, the executive order tasked a whole variety of agencies with doing reports, including OSSTP and others doing reports on things like the energy usage and so forth that, you know, Hillary's absolutely right that blockchain technology has been overclaimed and, and overhyped, and it is not perfectly decentralized and everything. And they're real questions about the viability and scalability of many of use cases beyond financial speculation. So no question. To say that it's all inherently nonfunctional that

it's inherently bad, there is not one thing called blockchain technology. It's sort of like saying, is internet technology good or bad? What, what is internet technology? Are we talking about the TCP/IP protocol? Are we talking about packet switching? What, what part? I mean, people here know about all the different pieces of this industry and the way that that looked 20 years ago or so when I was at the federal communications commission is different from the way it looks right now, same thing with blockchain.

Kevin Werbach:

This is a set of engineering approaches, where there are a variety of different systems that are being built. Bitcoin is one instantiation that has a certain value proposition, certain pros and cons. Ethereum is another. Ethereum was not designed for payments. Ethereum was designed as a platform for decentralized applications and there's a whole ecosystem getting built up on top of it. And those are just two. There are systems that are being built for example, to the question about privacy, to protect privacy, Mike Mosier, who was the head of FinCEN, the anti-money laundering, regulator U.S. is now general counsel of a company called Espresso Systems built on some academic privacy work using what are called zero knowledge proofs to protect privacy while also being consistent with anti-money laundering. I see tons and tons of smart people around the world who could do whatever they want. And we're not just talking about VCs. We're talking about people who say, where is the cool opportunity for innovation? They say, I want to go work for a DAO, a decentralized autonomous organization. They say, I want to explore these possibilities now, is there bad stuff? Is there hype? Are there VCs that are scamming people? No question. But I think we should be careful about making these generalizations at that level. Certainly should agree, it's not all good, but it's not all bad.

Sarah Oh:

As we see more innovation happening and capital going in, maybe Sujit. Could you tell us a little bit about TRM labs and the, the layer of infrastructure that you're building in the clients that you have?

Sujit Raman.

Yeah, I'd be happy to. So TRM labs is a leading blockchain analytics firm. We're an early-stage startup series B have attracted a fair amount of venture capital funding, which is great. But really we are the picks and shovels of Web 3, right? We're the digital infrastructure that helps different verticals, whether it's governments, whether it's financial institutions or whether it's crypto native entities like exchanges to essentially assess the risk of what is happening on the blockchain. So let's say you've got a particular cryptocurrency wallet that you potentially want to interact with. You would use TRM's tool to get a sense of whether or not a sanctioned party has interacted with that tool with that wallet. So what we essentially do is help create integrity in the broader sort of web 3 crypto ecosystem. You know, what's really interesting about the kind of work that we do is we are sort of analyzing raw blockchain data and then building intelligence on top of that through open-source investigation through our own investigation. So we really are kind of a neutral player in the, in the ecosystem. And our goal is to, again, help outside parties identify fraud, scams, you know, bad actors, terrorists, sanctioned parties, to make sure that this infrastructure that we're building is sort of focused on good actors rather than becoming a haven for North Korean hackers or, you know other illicit actors.

Sarah Oh:

Thanks. And going with that same theme about just activity in this space. Edward, would you mind talking about the metaverse the standard setting body?

Edward Bowles:

Well if you don't mind, I'll do two things. Cuz I'm quite concerned that Hillary is leaving everyone with the impression that this is all a disastrous exploit. There, there, some of you may have seen the news reports about 10 days ago of the conjoined Brazilian boys, these two, three-year-old twins who were separated after some 27 hours of surgery involving a hundred different medical practitioners, including those who were taking part from London in the surgery that was happening in Brazil. But that surgery was prepared using virtual reality headsets over a two and a half month period that they built a 3-D image of the children's brains, blood systems, vessels, how the skulls were joined and where the operation was gonna take place. And they trained the surgeons over a period of months as to how that was gonna take place. And the, the mere fact that that sort of thing can happen now is an extraordinary example of, I think, innovation in this space, which is yielding some incredible public goods.

Hilary Allen:

And just to be clear, I have no quibble with virtual reality, my quibble that's with blockchain.

Edward Bowles:

that's charming. But <laugh>, but, and, and to take it to take a second example something that I participated in only three weeks ago is an entirely new genre of film. So VR heroes, which is a Polish film company, built a camera that films in 3-D for the, for the entirety and the first film that they've made, which is now starting to be viewed again, using the quest headsets is about the Warsaw uprising. And it's an extraordinary experience, a very visceral experience to find yourself as a first party participant in a virtual reality film that is in fact a true record of something that happened in relatively recent history, in which one of the colleagues who I watched it with, who was a Ukrainian national, who sat beside me and watched it at the same time, both wearing our separate headsets was an extraordinarily profound and real thing that's happening right now to her and some of her families. But, but back to your back to your question in, in terms of the, metaverse just remind me what the question was, really

Sarah Oh:

The standard setting body that you're part of, and then I'll have one audience question as well.

Edward Bowles:

Yeah, so the metaverse is only going to achieve the true scale and opportunity if there is interoperability. So we have built something called horizon worlds, which is just what we are building, but we would like that to be connected to others. And for people who are creators in the metaverse who are building digital assets to be able to have those assets moved from one world to another. And so approximately six weeks ago, we together with about 40 other international organizations, some of which are standard setters, some of which are other actors, Microsoft, Ikea, the furniture shop go figure--I dunno why--got together and created something called the metaverse standards forum and in the four weeks or so that followed that more than a thousand other organizations joined it. Why? Because they see the opportunity of helping to try and shape the standards that were a bit like HTML when it was developed in plugging together, different disparate groups within the sort of web one part of the internet. And so that will be the key to unlocking I think the economic potential that sits behind true crypto investment opportunities for particularly self-employed and other creators and indeed driving different sorts of innovation that I think America frankly, should be very well positioned to take advantage of.

Sarah Oh:

Great. Well just to head into audience Q and A, I thought I would take a poll among this audience about if you're pro crypto or skeptical of crypto. So, you know, we try and have balanced panels and this is a crowd of lawyers and economists. So just as, just as a, a poll, raise your hand, if you are gungho crypto, Or skeptical. or both. Okay, great. So I guess that's a, a good segue into audience questions and how our panelists can answer your, your, your questions. So <laugh> okay. Hi Julie.

Julie:

Hi. Hi Sarah. Thank you very much. That was a great panel. So my name is Julie Owono I'm on the Oversight board and although I'm thankful to the, to the panel for the very great you know explanations, I still feel like we haven't talked about the elephant in the room, which professor Allen has tried to to to discuss, which is of course, this is all very exciting-ish, but there is also a lot of concern based on recent history. So my question to the panel is what are the, what are the safeguards that should be, of course, I'm not asking for an exhaustive question here, but a response here, but what are the main safe safeguards that we should keep in mind when building these new innovation, whether it's web three or web four or web five, actually, I don't care. But the question fundamentally is how do we think through and build infrastructure that is inter interoperable and all the very beautiful things that we've discussed, but from a safety perspective. So basically can we transform, can we transfer rather the, the, the safety concerns and, and rules and safeguards and principles around rule of all democracy, all of the things that have protected our societies in the real world, how do we transfer them in the, in the metaverse and other type of innovation? I would like to hear your thought on that.

Caroline Pham:

This is a really important question. I'm glad that you've asked it because there are very real risks involved with this type of technology. And if indeed, that's with blockchain technology, there's very real risks that we've seen. And that's why regulators all around the world and within the United States are in fact working together through international standard setting bodies and through other initiatives to promulgate principles, which I've actually described in my 10 fundamentals for responsible digital asset markets to guard against systemic risk, to ensure that the activities within the regulatory perimeter, that there's minimum financial requirements and risk management requirements. But the broader question that you're pointing out is that if we are going to be living our lives in the metaverses, we need all of the same protections for users that we have today, that we are struggling with today. And many of the debates around tech policy and around the use of the internet can be maybe even more magnified in a metaverse if we're concerned about cyber bullying today, when it's words being exchanged, what if you're in the metaverse and somebody is, is virtually physically threatening you. So I think this, these are really important questions that deserve a careful thought and study,

Sujit Raman:

If I can offer just an additional thought there. I mean, it's a wonderful question. And I think many people who are in the industry are themselves trying to figure out the right answers. I'll, I'll give you an example just because it's top of mind cuz it's something, I mean, I've just been dealing with over the last few days, many of it, maybe aware OFAC sanctioned, tornado cash just a few days ago. Tornado cash is essentially a smart contract on the Ethereum blockchain that allows people to essentially mix their Eth-transactions so that, you know, we talked about the immutability of the blockchain earlier. So one way to try to preserve privacy is to essentially create these intermediaries where you can mix up your

transactions and thus, it gets harder to trace where A sends money to B, right? So that's a, a privacy enhancing technology.

Sujit Raman:

It also happens to be a technology that the north Korean government was using to launder hundreds of millions of dollars from recent packs. So, you know, we're confronted with a dilemma, this new technology on the one hand has created opportunities for privacy protection that just didn't exist. Right? This just wasn't there before. That's a wonderful thing. At the same time, it's created opportunities for a rogue regime that is under international sanctions everywhere to essentially raise money for its weapons program, which is also happening. Right. So how do you deal with that? And those aren't questions that we have answers to, how do you protect privacy in this new kind of era where, you know, the blockchain does have an immutable ledger that cannot be erased. So you wanna create technology that helps. And yet that very technology is now being, you know, abused. And now we have OFAC jump in the fray and with its sort of, you know, traditional IEPO authority that was developed in the 1970s or eighties sanctioning a smart contract, which had never happened before. It has huge implications, but I'm not sure that that discussion happened within the government and now it's happening, you know, in the public and all of us are kind of just stumbling our way through. So it's a great question, but I, unfortunately, I don't think there's a neat answer because the technology is so novel.

Jennifer Warren:

Actually I, I have the microphone <laugh> I was always just gonna ask my question. Jennifer Warren this is a really interesting panel. My question though, focuses on the fact that this is really a global challenge. This is not us set of us regulators only. So what is the nature or plans for any sort of multi-stakeholder dialogue that is international in scope kind of when you look at what the internet governance forum did to try and educate and socialize and bring disparate countries together with, with their citizens. Have you guys had that conversation about the value of that kind of approach? Thank you.

Hilary Allen:

So I can say that that's actually happening a lot already with the financial regulators. So there's a long tradition of cooperation with financial regulators because the financial markets are cross border. So there actually are already a lot of forums and they're putting out a lot of research in this space and there's a lot of discussion and coordination there.

Kevin Werbach:

Yeah. Yeah. It's more multi-lateral than multi stakeholder to this point. And, and partly it's because we're just working through the issues. And most of the, like for example, the, the financial regulatory issues there, those are clearly issues where financial regulators have to decide what to do. You don't have quite the same push and pull between governments creating the infrastructure and controlling the infrastructure versus the kind of bottom-up approach that we had with the internet. But there's no question we need to go there. And you know, there's a big challenge in this area. When, you know, when the internet came about and, you know, Jennifer, you and I, a lot of people here were, were around when these debates were happening 20 years ago, virtually everyone on the internet was here in the United States and this was the centerpiece.

Kevin Werbach:

And then it grew up in other places. The blockchain phenomenon is truly global and different countries are approaching it in different ways. And also we have entities that are basically nowhere. Binance is the largest crypto exchange in the world, nominally by a factor of eight it's eight times bigger than any U.S. based exchange it. I think as of now claims to be domiciled in the Caymans, it's not regulated by anyone. And that's a huge problem tether, which is the biggest stable coin. Again, asserts that it has some oversight in the, you know, The Bahamas or some place like that, but essentially, and asserts that not only does it do no business in the U.S., it does no business with anyone who does business in the U.S. that is simply not true. And yet it's a challenge to go after these entities. So, you know, that's not your question.

Kevin Werbach:

That's not about multi stakeholders, that that's all about multilateralism and cooperation on enforcement. But we've gotta get over that hurdle. The good news is, yeah, there is a recognition that this is global. And as Hillary said at the, at the regulator level, the government level, a lot of the international organizations like the financial asking task force, anti-money laundering and so forth are doing a lot of work in this area. You know, but, but we don't yet have a, a vehicle for the kind of multi stake, or I think it's, it's a little too early. But you're absolutely right to pose the question. And, and I think most people that are in these debates, I don't think see the, the challenge that, that is why multi stakeholders came about in the internet.

Caroline Pham:

Yeah. I, I think to provide a specific answer to your question for the technology and data policy issues the engagement, and there's a lot of engagement in the international community around this between different ministries and governments it's led by the state department some part of the commerce department and also the treasury department, which data issues have been very important, particularly cross border data issues over the last several years. And that's where that discussion's happening.

Speaker (Audience Member):

My question really asks you to go beyond the inter the mere international and global dimensions of the metaverse. What about the meta physical implications of the metaverse and the, the, the increasing disintermediation decentralization of human bonds and the impacts on society and democracy, you know, if bowling alone was a problem of several decades ago, virtually bowling alone is gonna further disrupt the bonds. You know, that, that keep us together and further accelerate the trend towards tribalization and echo chamber. Our, you know, our academics, our companies, our regulators applying philosophers and sociologists and somebody else to make sure that some of the pathologies that we've seen with the, you know, plain old internet is not gonna be quite as bad as internet 3.0 in the metaverse.

Edward Bowles:

I'm happy to give it a go. The reality is we're already living because of COVID in a situation whereby I don't think there's ever gonna be a return to the level of normality that we saw before. I dunno what on average occupation rate of offices are around this sort of gathering, but I suspect it's well below 50% and will probably remain consistently like that. So the question is, how can we assist if we're going to have this persistent factor of people working remotely by choice now, because they actually prefer the work-life balance. They prefer to live somewhere where they want, how can we facilitate that? What are the means by which we can bridge that connectivity gap? And from the company's point of view, one of

the ways we are trying to do it is by simply plugging people together with bits of hardware, such as the headset, as a means of trying to bring people together in a more quasi present manner than is otherwise gonna be possible because people are gonna be continuing to work, work remotely. And so, you know, I think this is a meaningful challenge, and it's one that I think technology offers an opportunity to try and overcome, but it's not without the risks and challenges there,

Caroline Pham:

What you describe as something that keeps me up at night. It is something that I'm very concerned about because as people increasingly align themselves to communities that don't align to national borders or familial bonds or, or their physical communities. With all of this opportunity comes great risk. And the national security risk in particular is something where, what if you end up with these non-state actors and they have their own currency. What if in a future world, we have a one financial system that's based on the us dollar as the reserve currency, another one that's based on the digital Yuan and then a third one, that's a non-state currency. And what does that mean? And, and what does it mean if we have conflict in that where people are aligning themselves in such a way, so not to be alarmist, but what if we have a Al-Qaeda in the metaverse or something like that. Right. So it's a very important question.

Sarah Oh:

Great. Maybe one final question. You wanna go? Yeah.

Jonathan:

Hi, I'm Jonathan I'm with R Street Institute. So, you know, we talked a lot about blockchain about metaverse itself, and I feel like there's a lot of applications with blockchain beyond the crypto, the NFT that, you know, we're barely skimming the surface as the utility of what that technology can provide. So a lot of the pitfalls that, you know, you've raised and the concerns raised about the technology as the technology evolves, presumably a lot of those issues will go away. New issues will come up and those challenges. So how are we working to work through a lot of those challenges to address that? Because, I mean, this is a technology that's here to stay. So how do we embrace and evolve that technology by protecting privacy and all of these other things that are kind of emerging as we learn more?

Hilary Allen:

So, something that's interesting about your question is that it's really hard to get anyone to pin down a use case for this stuff. There's a sort of a cottage industry of interviews with VCs, trying to come up with a use case for, for the blockchain. And, you know, sometimes you hear micropayments and that just doesn't make sense because micropayments don't work right now because they're too economically costly to do. Right. And so what you're gonna replace it with the blockchain that is more cumbersome and more expensive and slower like that doesn't work, or you hear mortgages like, oh, we'll just put mortgages on the blockchain. And that will fix, you know, the mess that is the U.S.' mortgage system. What, what the people pro promoting this technology are very good at doing is diagnosing real structural problems that we have in this country. But then technology won't fix structural and political problems. You need structural and political fixes. And so I actually, you know, disagree with the premise that there is, you know, a lot for this technology to even do. I think we need to focus on the structural and political problems in the first place. And then you can replace it with centralized technology. As I said, you know, there's lots of good technology. I'm not, you know, anti-tech, it's just this particular type of tech. It doesn't work very well. So let's think up the simplest centralized solution to the problems that we have and then fix it.

Kevin Werbach:

Yeah. We're at the end of the panel. So I don't want to get into the, the, the back and forth other than to say, that's an open question, what's the technology going to be like going forward? It has a lot of potential has a lot of limitations. And again, there are many different implementations. So people talk as though there's this decentralized web 3 world and this perfectly centralized web two world. I mean, what, what is Facebook? Facebook is not like one thing. Facebook is tens and thousands of servers, hundreds of millions of servers all around the world. It's incredibly decentralized. And yet, you know, in some ways there is central control over it. So it's really easy to generalize about these things. The real question is what are the incentive structures going forward? How do we know the answer to your question. How do we get empirical data?

Kevin Werbach:

There, there are use cases out there. There's lots of enterprise use cases of blockchain right now that are at small scale. And we have to ask the question, are they better at scale than the alternative? Good question. We need to watch that going forward. The question is, is the innovation going to happen in a way that is driven more towards exploring those spaces and less towards scamming people, fraud, speculation for speculation sake and all the abuses, and that that's where regulation has a really important place. But no, we shouldn't assume that the problems are going to go away, but, but at the end of the day, I think these distinctions are not going to matter very much. I mean, at the bottom of a lot of blockchain is cryptography and you can employ cryptography and cryptography does get employed widely and other kinds of technological platforms. And, you know, at some point, if we look back, it's like, sort of saying again, what, what's the line between internet technology and non-internet technology in the world today? Really impossible to draw. And, and it's not, there's not a point of drawing it. It's part of this overall ecosystem. I agree with your premise though, that this is not going away. This cassette of technologies and activities, metaverse, web three, blockchain, that is going to be a part of the future that I have no doubt.

Sarah Oh:

Well, I just wanted to say thank you to our panelists. We're at the end of the hour, and this is a great conversation technology policy, years to come, we'll be discussing it. Thank you.