ICANN81 | AGM – Emerging Identifier Technologies
Wednesday, November 13, 2024 – 10:30 to 12:00 TRT

YAZID AKANHO: Hello and welcome to this Emerging Identifier Technology session. My name is Yazid and I'm the participation manager for this session. Please note that this session is being recorded and is governed by the ICANN Expected Standards of Behavior and ICANN Community Anti-Harassment Policy. During this session questions and comments will only be read aloud if submitted within the Q&A mode. Interpretation for this session will include French, Arabic, Spanish, Turkish, that's it.

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ADIEL AKPLOGAN: Thank you very much, Yazid, and welcome again everyone. Please we still have a few chairs around the table so if you can move up if you're sitting at the back, that will help. So, this is a session that we run as ICANN staff during the AGM meeting of ICANN every year. It's the Emerging Identifier Technology session where we try to explore the evolution of the identifier technology, looking at it from a technical perspective and potential impact on ICANN mission.

This is the seventh emerging identifier technology and from those seven, five of them are tackling the blockchain issue. So, it is a topic that is interesting for the community but also is a topic that from OCTO perspective we are following and want to make sure that we brought it to the community. So, the session today is going to be in three parts. The first is going to be presentation from my panelist Paul Hoffman, distinguished technologist at OCTO, and Fred Hsu from D3, CEO of D3. And then followed by a question Q&A.

What we are going to do is to listen to their presentation first and then we'll open the floor for question discussion around the topic of blockchain and specifically blockchain and the naming system. A few weeks ago, Paul has released two very interesting papers on blockchain, giving a broad overview of blockchain and drilling down into the naming system around blockchain. So, today he's going to summarize a little bit the outcome of his research for us and we will see then in the second part a more practical implementation of that on the ground. So, Paul, I will give you the floor and go.

PAUL HOFFMAN: Thank you. Slides. You really don't want me doing this ad hoc. Very good. Thank you. Good morning. Good morning here in Turkey. I know that there are plenty of people listening online. Some people it's the middle of the night. So, what I'm going to cover today, by the way, both of us have fairly short presentations. This session is meant to be heavily based on for Q&A. What I'm going to mostly be discussing is why are we

here, here at an ICANN meeting talking about blockchain name systems.

What has been very clear, as Adiel said, the last four or five of these have been about blockchain names, of these sessions which we hold every year have been about blockchain name systems. The amount of interest is increasing, both among current registries, certainly among some of the current registrars and the community in general. We're starting to see more people even in the wider community like the technical community being interested in what are these blockchain name systems, how do we describe them, what are they doing, and how do they compare to the global DNS.

So that's mostly what I'll be covering today. I do have a couple slides on the recent documents that OCTO published on this. And then I'm just going to do a very brief overview of some of the highlights of what are the differences, some of the differences between blockchain name systems and the global DNS. This is not exhaustive. One of the documents is more exhaustive, but there we go. By the way, there are still more seats over here and at the table for those of you in the back.

So let me just briefly cover this. I know some of you were at the session earlier this week, so these two slides will be a bit repetitive. But OCTO has recently published two documents and there's links for them in the next slide. Actually, go back. Don't do that yet. There's many ways to describe blockchain name systems. And many of the things that people in the community have been hearing have been marketing because

that's mostly what you hear about for anything that's new. But many people have been asking, well, what are the technologies behind these?

And when you're discussing the technology behind blockchain name systems, you have to discuss the technology behind blockchains themselves. A lot of people think they know what blockchains are and they'll go, oh, yeah, it's just this and this. But anything about blockchains, you can't use the word just in. There are many kinds of blockchains. There are many blockchains who are more recently developed in order to compete with earlier blockchains, so they will have differences and such. And so, these two documents are meant to help this community in particular, but also the wider community understand the technologies of the things that they are hearing marketed to them.

So here are the two documents. The first one is OCTO-039, which is specifically about blockchain name system technologies. And this is a shortish document. It is more of a list. It does not go into all of the details of all of them because they're changing all the time. But it does give the reader, hopefully—and by the way, I might not have done the greatest job on this, I admit that—an overview of what are the kinds of questions you might ask when you're looking at a new blockchain name technology.

OCTO-040 is actually an introduction to blockchains and it's applicable well outside the ICANN space as well. It's a little bit longer. It's definitely more technical. But for both of them, they are explicitly meant to be both neutral and technical. There really isn't much

marketing. And so, for example, in OCTO-040 about blockchains, there's almost nothing about finance, crypto coins. Crypto coins are extremely relevant in the blockchain ecosystem. Not so relevant here because in fact, there's not much technology behind them that's not similar to all of a blockchain.

Neutral is a hard one. So far, I've gotten approximately an equal number of people complaining that I didn't go hard enough on blockchains and people saying I went too hard on blockchains. So maybe that means I was neutral. But the idea here is to help you, the reader, figure these things out.

A note on these two that's sort of important. I based these two on the documentation that I could find about blockchains and blockchain name systems. That documentation that's out there now is terrible. It's inconsistent. It is often out of date. So, I may have made mistakes in these two. In both documents, it says that I'm going to do a V2, second version now five months from now.

Because these things are hard. Getting the terminology right is hard. So, if as you read them, if you have comments, if you find mistakes, by all means, get in touch with me. So far, I've only had one mistake reported, which is good. But I'm not assuming that as more and more people, especially in the blockchain ecosystem system read it, I suspect I'm going to hear more.

Certainly, look for the V2s, especially what I've heard so far is I don't have enough examples, so I can lengthen them. But these are based on the best information I have. And again, if for those of you who have even

started to look and say, oh, I should know something about blockchains and gone out and look in the documentation, it's laughably bad. So, I'm doing my best here. I hope you can help me.

I did get reviews before I published these from some really good reviewers. Some of you might know Molly White. She did a very good review for me and a few others. So, that's where we are on these two documents. Please do read them. Please do read them in the next few months and send me comments. I'll be very happy with them. And then I'm hoping that after V2, they're done. That is since these are on technologies, not on, gee, what's the very, very latest. Hopefully within six months, we can settle that down.

So, let's talk a bit about the differences between the global DNS and the many blockchain name systems that we've seen so far. And please remember that this is just the many blockchain name systems we've seen so far. You can create a blockchain name system on your own. You can do that in a way that's different than the current blockchain name systems to be competitive and such. The biggest difference, the most important one, the one that's going to make the sense to the people in this room is that there is just one global DNS. We're used to that.

If you've been coming to ICANN for 1 year, for 10 years, for 20 years, 24, I guess is the number that we're at, you are familiar with the global DNS, you're familiar with the fact that there's just one. Because of that, your thinking is very skewed towards there's one name system. Now, if there was just one blockchain name system, you could do an easy comparison. But there are many, we're going to hear about one of them

soon. We've been hearing about them for the last few years. Generally, I think at every one of the last meetings, we've had a different blockchain name system come and present about them.

It's important to remember that as you hear about blockchain name systems, you're probably only hearing about one of them at a time, so you cannot generalize. You can absolutely compare what you're hearing to the global DNS, but you can't generalize. Blockchain name systems are businesses, mostly, some of them are sort of nonprofit or nonprofit-y in the blockchain world, but they're mostly businesses, so they compete with each other. A way to compete with each other is to differentiate. If you differentiate over time, you're going to confuse people who thought they knew what they were doing. So, start with that.

And I'm going to go through basically just three things that I consider to be important differences. More of them are listed in OCTO-039. But three of the big ones are blockchain name systems, one of the things you've heard about, one of the main reasons they exist is because they hold blockchain account identifiers, which are normally called in the blockchain world wallet addresses. In OCTO-039, I call them account identifiers because they're not wallets and they're not addresses.

Now you can start seeing how I had to come up with a lot of terminology. Most blockchains that we're talking about, I shouldn't say most because it's hard to count when there's thousands of them, some blockchain names have their own crypto coins. So, you're familiar with Bitcoin, you're familiar with Ethereum. Many of the smaller blockchains

also have their own coins and therefore, they want a way to say if you've got an account on that blockchain that has coins in it, you use that as your identifier to doing commerce, like when you want somebody to take your coins, you want someone to give you your coins.

That's been the big differentiator in the blockchain name systems for the last few years. Now, as of a few months ago, the global DNS has its own resource record type called wallet, similar to IP addresses, TEXT records, things that you might be familiar. So, those of you who haven't taken the DNS 101 courses, please do. That'll help you with a bit of the terminology here. But for those of you who are familiar with the fact that the DNS has many resource records types, there's now a WALLET RRtype. So, there is some now again, some parity between the blockchain name systems and the global DNS on how to deal with account identifiers.

An important distinction here is that not all blockchain name systems let you specify a lot of blockchain wallet addresses or accounts. Many of them only let you specify the account for that blockchain. Others have figured out well, gee, a lot of these people have many accounts on many different ones, so we should allow many.

So, this is a difference between blockchain name systems. And this difference is changing over the time as different blockchain name systems get competitive. But don't be surprised if you're looking at a blockchain name system, and it only allows you to specify your account identifier or your wallet address for that blockchain, even though if you're a cryptocurrency trader, you probably have lots of different ones.

So now let's dive into the things that are more near and dear to the hearts of folks at ICANN meeting, which is top-level domains. So, we know, we know, we know, we know that there's only one root zone for the global DNS. That's something that we all here believe in. That's why we're at an ICANN meeting and not 12 different meetings where each one of them has their own root zone.

Within the different blockchain name systems, however, they have all TLDs. And they by virtue of the fact that they are not part of the global domain name system, they get to in fact, pick names that they want. They don't need our permission. They don't have our permission. It's a funny little dance there. So, a lot of the alt TLDs that have been chosen by the blockchain name system, are strings that are not in the global DNS root zone. So, for example, you may have heard .wallet, .crypto, dot lots and lots of other things. Those are things that are not currently in the current root zone.

So, when a blockchain name system does this and says to people, please buy our names under these new alt TLDs, they're making a lot of assumptions of how that's going to work. Because remember, everyone understand to some extent, everyone understands the global DNS. If you've only been using the internet and the global DNS for a long time, you don't actually think about, well, what if it's not in the global DNS and such. So, the blockchain name systems are making some assumptions like, well, you have to get that name resolved. It's not any good to have a name without having it be resolved.

So, they're assuming that the user will find the resolver for their blockchain name system. But as I said before, there's lots of blockchain name systems, they each have their own resolver. So, that's a big assumption. But another big assumption is that the resolver that the user is using at the time, in fact, will be the one that that blockchain name system wants the user to be using. Because especially if a user is interested in lots of blockchains, they have to go between resolvers.

And a good example that has been given is many of you live in homes where you have your local Wi-Fi, and you also have a cell phone. Your cell phone is probably using a resolver that is run by your cell phone provider, your local home Wi-Fi is probably using a resolver that is run by your home provider. Now, in the global DNS, generally, those two resolvers are going to give you exactly the same answer. But if you are walking around your house, and you are resolving on alternative resolvers, you might switch from one room to another and you have two different resolvers giving you different answers.

Again, this is one of the assumptions that the blockchain name systems assume you'll be able to get over. Not so clear. The other is, of course, because we're only talking about account identifiers, most of the blockchain name systems don't have IP addresses in them. We're used to names linking to IP addresses. The blockchain name systems believe you're going to understand that. I'm finding that that's not a super common understanding.

And then here's more about that. And again, we're talking about the alternative name systems that are using names that are not currently in

the global DNS. The next slide will be on a different topic. Notice that I've been talking about blockchain name systems, plural. Because there is no central authority for blockchain name systems and therefore, they might choose any names they want. There may be name collisions within them. That is, one name system might choose a name that another name system chooses. If you run a blockchain name system and you've got a really, really good string that you're using, other people are going to want to use it too. There's nobody stopping you.

Now, there was an early effort to coordinate this. The Web3 Domain Alliance started up with great fanfare a couple of years ago. If you go to the website, you'll see a zillion logos and you'll see that it fell over almost as soon as it started. There's a section for blog. There's exactly one blog post that says, hey, we've started up. This is very cool. And then nothing else. You've got a bunch of competing name systems here. They aren't necessarily going to want to agree with each other, especially if the fourth one who came in didn't get as good alt TLDs as the first three.

And this last bullet, to me, is going to be the one that will interest many, many people in this room, especially those of you who are watching the next round, which is a blockchain name system is picking a name or a bunch of names—In fact, you guys, D3 has chosen a bunch of names, right? It's not just one—that they are going to apply, possibly apply for in the next round for gTLDs. It doesn't mean they're going to get it. It doesn't mean that anyone's going to get it. This is a big unknown. So, where we are now with these blockchain name systems is going to be

very different than where we're going to be three years from now, once some of these names are being allocated in the global DNS.

And again, what I'm doing is not comparing the name systems to each other in this last bullet. I'm comparing them to the global DNS. All of us in this room are used to the root zone in the global DNS changing, mostly growing, sometimes shrinking. But we are used to this. This is our world. This is the global DNS. And even for us old farts who've been doing this for 30-odd years, we have always been used to this. This is part of our ecosystem. It'll be very interesting to see how the blockchain name systems deal with this coming in, because that's not their ecosystem.

So now let's talk a little bit about some of the alt TLDs that these are choosing are already in our current root zone. And so, some of these blockchain name systems are trying to integrate, associate, bridge all sorts of verbs, none of them are well defined with the global DNS. Because a blockchain name system runs its own system, they can do whatever they want with these names. And so, some of them are saying, great, you've got a global DNS name. We can also put that on our blockchain. So, the names look the same, but the contents are different.

Because remember, I said the basic thing for a blockchain name system is to have an account identifier. Almost none of these have started using the WALLET RRtype. In fact, they're not using WALLET RRtypes at all. They're not using the DNS. Their resolvers do not use the DNS protocol. They're mostly web API's. So, this is an interesting situation

where you've got two name systems, same name, but the data is going to be different and the resolution is done very differently.

Some folks are hoping that you can show that the owner of this name on the blockchain name system is the same as the one in the global DNS. But many of these blockchain name systems, not all of them, but many of them allow contracts to own things. That is, that an account on the blockchain might not have a human behind it that put money in. It might be a contract. Does a contract and a human, can you compare the two for ownership?

So anyways, this is just a subset of what I've covered in OCTO-039. Happy to answer questions later. We're going to do both presentations and have questions. Hopefully this has gotten you interested. Hopefully it's gotten you interested in reading the documents and hopefully it's gotten you interested in commenting to me both here but also offline, especially if I've made any mistakes. So, thank you.

ADIEL AKPLOGAN: Thank you, Paul. Now we'll move to you, Fred, to share with you a little bit about what you are at D3 in terms of bridging the gap between these two systems. Thanks.

FRED HSU: Yeah. Thanks, Paul. Thanks, Adiel and OCTO. Now I know how to pronounce that, not OCTO.

PAUL HOFFMAN: Yeah, you can call it that.

FRED HSU: Thanks. My name is Fred Hsu from a company called D3. I've been part of the domain industry for probably about 23 years, mostly sort of on, a little bit off. I do have a presentation I'd like to share. Now as Paul mentioned, I'm going to talk a little bit more so from the startup sort of commercial end.

We at D3 have been trying to be very thoughtful, intentional about working with the DNS since day one, right around when we started the company. I believe it was around October 2022 during the last contracted meetings, contracted parties meeting in LA. So D3, we have a global mission. It's basically, we think aligned pretty well with ICANN is to increase accessibility, security, transparency, and to develop what we call these primitives, these Web2, Web3 primitives that will enable all kinds of usage, commerce, more domains being registered, more domains being renewed ultimately over time.

So, for some of you, and I know most of you are experts in this whole area, but for some of you who aren't as familiar with the domain industry and haven't been in it for 20+ years, I wanted to give a little bit of a primer, right? In the '90s, you can buy pets.com. We know about this. I think there was even a fax method to register these early names when I was frankly in high school. Then during the last gTLD round, there was a XYZ. So, you can buy another nice name like that prior to Google buying abc.xyz, which one of our co-founders had a hand in.

And the 2026 round, which I'll call it 2026+, because as Paul mentioned, we're not sure exactly when it's going to come, but I do envision a world where there's going to be large Web3 communities also applying for and winning their generic TLDs or community TLDs. I go back to in a world where DNS is the global source of truth. It's in every browser, every phone, every ISP, therefore powers all humanity. This is how we talk to our partners regularly about.

And there's one thing on the slide I'll mention, which is WALLET. And as Paul mentioned, RRtype. Now as a public moniker we can use. And there's also kind of this concept of real-world land value or what we call in the Web3 world RWA. I know it's a little bit of funny lingo, but there's a lot of those in Web3. So, I will try to do to try to my best to kind of interpret it for the audience here at large.

Next slide, please. Again, a primer. So, coming from a domain guy myself, there's really only one domain. And then you have Web3 identifiers or what we call alt roots. And I got to apologize for the red-light stoplight. I don't mean to insult anybody's intelligence, but we like to make it very clear. One thing we believe is that it's all about education first, sort of enact any potential change, right?

So, DNS domains, as we all know, and regularly interact with on a normal basis, reaches all humans, all 5 billion, most humans, 5 billion plus users. I believe Ram Mohan came up with a term called universal acceptance. So, we're talking about universal compatibility out of the box without having to do anything special. We align really well with ICANN and the DNS system because it's ultimately about protecting

users from malicious activity and IP rights, which we love. And it's trusted at scale. And it's also has this governance body called ICANN around it.

If you look into the Web3 identifier world, as Paul mentioned, there are some extensions like .888, .crypto., .eth name collision on top of our mind as much as everybody else. Compatibility issues. We think about this sort of like jailbreaking a phone. Imagine a world where you had to only speak with another party with one jailbroken phone and the other side had to also have a jailbroken phone and that's the only way you can interact. We don't think that's realistic, scalable, nor secure.

Similarly to limited functionality, right? Social names, specialized apps, maybe some Web3 crypto wallets that perhaps trade crypto coins, Dogecoin for example, that maybe do some resolution on it, but it's kind of limited, right? And also, a lack of technical depth. There's a lot of obscure APIs, wallets, various servers sitting in various homes, cloud machines, all over the world. It's kind of like the Wild West. So, I'd like to kind of, my part here is primarily educate, first and foremost.

So Web3 tried to create alt routes, and they did fail. And I'll just basically add a little bit more detail over here, right? D3.eth doesn't work in your browser. It may at some point, 10 years from now, when Ethiopia agrees perhaps, we don't know. Web3 identifiers, they're not really traded, right? There's no underlying value, just having an identifier. Don't get me wrong, I have a monkey JPEG much like a lot of Web3 people do. I love monkey JPEGs, I call it a monkey JPEG or an NFT. I do not call it a domain name.

These alt assets, we call them, are confusing to end users. I know some registrars that have sold some, also with a dot, causing a customer service nightmare and therefore they ended up having to pull them. And what this results in is ecosystem fragmentation, which is not really good for anybody and certainly does not allow for mass adoption and innovation, which I'll talk about in a bit.

So, here's a QR code for you. I think Paul mentioned, you can look at it, but there are, I think, two or three different .wallets. If I'm a crypto user or Web3 user or if I'm a Web2 user and I see that my colleague or my friend has a .wallet and there's another person or human or bot across the world that also has another .wallet, if I send money to that wallet, who gets it?

We're talking about a real practical example and one of the biggest use cases for crypto is easily being able to send money in a trusted fashion back and forth as various people instead of a long crypto address that's 34 characters long, whether it's on Bitcoin network, Ethereum network, Solana network, what have you. A lot of what drives the future of crypto is these easy naming conventions that's easily human understandable in our approach to building this business.

We're actually pretty excited about some standards that ICANN's coming out with, or the OCTO is coming out with. We ourselves have proposed a draft with the IETF to standardize Web3 wallet mapping using the DNS. So, in this example, all I'm trying to do, if I'm a recipient that owns a .com or even like a future .doge name, all I want to do is I

want to specify my Web3 wallet address for maybe my Ethereum address. I want to put in my DNS TXT record.

The DNS TXT record is a standard that's been around, DNS and DNSSEC has been around I think for 20+ years. In short, it's a system that's not broken, you don't need to fix it. Work with it and the standards that we are very happy to be seeing being developed to basically push forward mass adoption between this Web3 Web2 world.

Okay. So, now I'm going to talk about tokenization. This has been a topic that I've been trying to simplify down as much as I could. All right. So, tokenization, this is from Gartner directly. Tokenization refers to a process by which a piece of data or asset or livestock or whatever is replaced by a circuit value known as a token. And we see this with RFID chips on shipping containers. We see this with tagging the cute little livestock I see up here. Poor guy probably has to have a tough life with that all around sleeping and such. But also, oil and commodities markets. When I'm buying and selling, for example, a barrel of oil or oil future, I'm not physically storing a barrel in my garage, right? I'm storing an electronic identifier that represents that oil. Similarly with a gold bar.

All right. So, this is where I'm going to talk a little bit about where the future opportunities may lie once we kind of create trust and an international standard. Hopefully, right? We can then start unlocking and doing things like our attempt as a company to transform elements of the domain industry. We're doubling down on an area called what

we call domain finance or what we call domain fi. Now I wanted to kind of create a very simplified definition for you all.

It's really simply the management of revenues and transactions with real domains, with real asset or reservable market value, which I know all too well, have a ton of value. In the finances, again, orgs, individuals, companies, anytime you're talking about revenue and tracking finances, the world, at least in Web3 has created this short fi concept. So, domain finance or domain fi. The underpinning of this has been to number one, modernize, introduce some of this blockchain technology and some of these core primitives into the ecosystem. So, that you can insert, like I said, trust, enable things like low cost, fast transfer, and ultimately, a lot of liquidity.

ADIEL AKPLOGAN: Sorry, Fred. Go ahead.

ELAIN PRUIS: Yeah. Sorry, there's a computer here that's open that's got audio going, and we would just like it to stop having audio going. So, if we could close the computer or silence it in some way, that'd be great. Sorry for the interruption.

ADIEL AKPLOGAN: For those who are online, please bear with us. We are coming back to the session soon. Is the issue fixed now? Thank you. We are back online. Fred, over to you.

FRED HSU: Yeah, no problem. So, step two in this sort of view, just like with the livestock world, once you tag that cattle, you can better start trading and leveraging and seeing how much productivity they have, etc. Monetization capabilities can then be built on top of these primitives. So, think about a world where one can borrow, trade, borrow, lend against their domain names, as opposed to keep creating kind of liquid or trapped capital attract trapped equity that where you can't really do anything with that value, locked in that domain.

And the third is building an innovation. So, once we sort of establish these primitives and make it possible for people to do things like commoditization, there can and should be a healthy ecosystem of folks building on top of this open framework, much like millions of people build on AWS, or millions of people build on a certain programming language. Blockchains are an open system, and there's a lot of code behind the scenes, and much of it is open source. So, we think about the next generation of registrars, registrants, applications built on top of this framework. And we're very excited about this.

So, our mission at D3. Again, a little bit more on the commercially minded mindset was we were trying to expand the land on the internet by 2X, starting with these primitives. Once we unlock and enable all the Web3 liquidity come in all now I believe $3 trillion worth of Web3, post-Trump, we can better start increasing the composability, the ability to build these apps and run these apps and ultimately, like I said, ownership, usage and further adoption. Maybe there's a world where

every human and their bots one day or AI agents have a domain name. This is very aligned with our model, and we believe ICANN as well. Without speaking for ICANN.

Last slide is, again, this new model where we want to build the new internet together. These blockchain features, these primitives, the ecosystem we're trying to build on top should be available for all registries, registrars and registrants. The result of that is going to be improved discovery. When I started the domain industry, I think there's less than 120 million domain names back in early 2000s. Now that number has tripled. And we do believe we believe that it can get the next 1 billion as long as we have an active global standard and have healthy ecosystem on top.

Speaking of that, to our ICANN members only for this, that we do have serve some limited early participation programs. You can feel free to email me at Fred@d3.email. Thank you.

ADIEL AKPLOGAN: Thank you very much, Fred. So, this ends the presentation part of this session. We will now open the floor for question, discussion, input from the two panelists, both in the room here and also from the online participant. So, who want to go first? Actually, if you are online, please remember that you have to put your question in the Q&A so that we can relay them.

YAZI AKANHO: Thank you, Adiel. So far, we have 48 remote attendees. There is no question in the Q&A so far, so we can start with the room. You can turn on your mic and reminder, state your name and your language if you are not going to speak in English. Thank you.

DAVID LAWRENCE: Hi. David Lawrence, and English. Do we have any insights into the actual adoption of these technologies beyond the conceptual or crypto applicant stage? Is there any notable software that is using any of these names for delivering its services?

PAUL HOFFMAN: Thank you. Good question. As many of us here know, I guess the ccTLDs aren't as involved in this as the gTLDs. A lot of registrations are never used on the internet. That is so counting the number of names in a zone does not indicate its use. The way one would measure use best is by looking in resolvers or looking in authoritative servers and seeing which names are done.

So, to answer your question, no, we don't have any good numbers, partially because the resolvers for blockchain name systems are in fact, run by the name system themselves. They're often web interfaces with API's. They may be counting, but those are not things that are exposed, like some of the names in the day in the life data sets that are collected by the technical community in the global DNS.

I look forward to us having better metrics like that. So far, I have seen almost none. I've seen plenty of-- Because all of these names, not all of

these names, many of these names are stored on blockchains, you can actually count registered names. But that's quite different than counting usage or notoriety, or however you want to do that.

FRED HSU: Yeah, from my point of view, to people, the biggest usage right now I see, and it's not a lot, it's in Web3 wallets, primarily if I'm trying to send you crypto, and I don't want to paste that big long string, I want to send it to maybe david.eth or something and vice versa. It's not like it's being used as frequently as a social handle like on X.

ADIEL AKPLOGAN: Thank you. Anyone, anything online?

YAZID AKANHO: No online question.

EDMON CHUNG: Hi. Edmon here. So, I have a kind of a stupid question, because I read an article earlier that that challenged my way of thinking of this. I thought the blockchain names, they store the registration information in the chain and you would extract that data and then build the zone and then you stick it into a good old DNS kind of software for the resolution. This article that read explained that the resolution part is also extracted directly from the chain. I wonder in your research, was my original understanding correct, or is there some other resolution path that some of these blockchain names are actually using?

PAUL HOFFMAN: Not a stupid question. So, you started with the same assumption I did. But no. So, you are correct that essentially the equivalent, what we would consider in the global DNS zone file is completely available to anybody. And again, remember, these are blockchains, which are not necessarily simple here, enter this name in and remove this name. Many blockchains are based on the Ethereum model, which has programs as part of the system, what they call smart contracts, which I don't consider smart, and many of them aren't contracts. So, you can't just look in the blockchain in order to make the zone file. You have to process it through all of this. But at the end, you have sort of what we would consider like a zone file.

So, anyone could set up a resolver. But a resolver isn't useful, except if you know where to get it. So, all of the blockchains have, of course, set up blockchain name systems have, of course, set up their own resolvers. So, everyone pretty much goes to them. Thinking in terms of the way we know the global DNS, that's like saying that there are no resolvers. If you want to get your data, you have to go to the authoritative server, and that there's going to be just one authoritative server for every TLD. And that authoritative server will know all of the information under it, not only SLDs, but the third levels and fourth levels and such.

So, you're right in the sense that you could do that. Virtually no one is doing that. And what we find is that two systems, one is you just go to the resolver that they tell you, or some people are making sort of super resolvers, they're taking that blockchain information, and then putting

it into an additional resolver. That's really useful. Of course, they can't cover every single blockchain name system, because they're popping up all the time. But they also don't know how to handle when there are name collisions.

Admin.wallet could be in three different name systems, so a resolver that is being a collector would have to make an opinionated choice about which one it was going to answer. Further, to make it a bit more difficult, one of the most popular blockchain name systems is the Ethereum name system, ENS, we had them come a few years ago. ENS now has what they call gasless names. Not a good descriptive term, sort of humorous term, in fact. But those are names from the global DNS, which they are going to resolve in their resolver, in their resolver. Those names don't appear on a blockchain. Those names only appear in their resolver.

So, if you use their resolver for one of these names, and you use someone else's resolver for one of these names, you're going to get a different answer. In fact, that other resolver is going to say, I don't know, never seen that. So no, there isn't a single way of doing resolvers, even within the blockchain name system, even within the folks who are trying to bring as many blockchain name systems together.

EDMON CHUNG: So, I do understand that, but I just want to make sure that the resolver itself is just running the good old DNS protocol, that technical piece of it, but it's using alternate zone files and so on. But the protocol itself is still the DNS or it is not?

PAUL HOFFMAN: It depends on who you ask. So many of them, absolutely, it is not. That it is just a web API. And many of them have exposed web APIs, their web servers. Some of them, and I think yours, you, you have pulled some into the DNS that you have DNS resolver. Some of them who are trying to work better with our community, in fact, are doing the same thing with a DNS. But again, now you've asked the user, which of these two kinds of resolvers do you want to use.

So, for example, if you are using an alternate, when I say alternate browser, a minor browser, such as Vivaldi, or Opera and such, and you enter a wallet name, like a .eth name in the address bar, they will first go out on the web API, see if it's there. If not, then they'll come back and do the DNS. I challenge you to describe that to anybody who has not taken DNS 201.

ADIEL AKPLOGAN: Okay. It seems like we have a question online.

YAZID AKANHO: So, we have-- I can't read the name now. Okay. Michele Neylon from Blacknight, you are now allowed to speak, please. You can open your mic.

MICHELE NEYLON: Generally, no, and I'm in the room, and it's Michele.

YAZID AKANHO: Oh, okay.

MICHELE NEYLON: That's okay. I mean, thanks for the presentation. Both presentations out there were very, very helpful. Because as somebody who works with the DNS, I've been hearing a lot about blockchain for years and I found it very, very hard to wrap my poor little brain around a lot of those. And your presentation has done a very good job of kind of simplifying and explaining various parts of it. But now I'm actually quite freaked out.

The idea that there would be multiple dot coffees—sorry, it's morning, so coffee is a good idea—dot coffee extensions of some kind that could exist in these alternative systems scares the hell out of me. Because the idea that if I'm going to use this identifier to make it easy for you to send money or cryptocurrency, whatever, to this wallet, what's to stop somebody from creating a second one? It just sounds like it's a recipe for chaos. Am I misunderstanding something? Please tell me that I'm not, that I'm crazy. Because I'm trying to understand why anybody would spend any money, invest any resources in any of this if it's not tied into something that allows that deals with these kinds of collisions, because I just I don't know, I can't wrap my brain around it.

FRED HSU: Sure, I can expand a little bit more on that. I'm as concerned as you are, right? When we talk about another dot, dot coffee, and I don't know if

there's actually a dot coffee. But if a dot coffee did exist on the route, whether today, or in 3+ years, that's the foundation, that's the hook into that's the hook into reality is the hook into the DNS system. As far as blockchain extending, if you remove a lot of lingo, the way that it can and should be used by apps, in our opinion, is through the DNS. So, through things like DNS TXT records, through standardized technologies that have long adopted standards.

I cannot comment on other kind of not or alt systems, I will pull up on another example. new.net. I don't know how many people followed new.net from back in the day, but it was a project where I believe IdeaLabs and Bill Gross created. The whole idea is instead of visiting amazon.com, you would visit amazon.com.net. It was an interesting idea, but ultimately, it was classified as an alt root system, and it died a slow, probably painful death from sometime between 2008 and 2012.

In fact, I think I read somewhere that, and to your point as well, scary instances, it was deemed malware at one point, and some guy went to jail as a convicted felon for enabling a group of kids, I believe, to accidentally see some takeover content on an unauthorized machine had to do with porn. So, that didn't help that alt root system. And I do not believe that that type of contract will be successful long term for what we have coming up in blockchain and blockchain naming systems either.

PAUL HOFFMAN: That only helped a little. I always got to love the hardware issues of humans. So, Michele, I can't make you feel better about it, but I can

remind you that we do have a global DNS, we will have a global DNS for the long term. ICANN has no power over any other name system. Many people think of name systems as things that look like DNS names, but there are plenty of name systems that don't look like DNS names, which thankfully, ICANN also has no power over.

You live in a country with postal codes. Postal codes, to some extent, are a naming system. Your postal codes are very easy to confuse with postal codes of some other countries. You don't want ICANN coming in and saying, oh, those are too confusing in your name systems and such like that. So, we are not meant to do that for any alternative name system, much less the blockchain ones.

Having said that, that doesn't make you feel any better. I understand that, even after you've had your coffee. But our task here as a community is, in fact, to try to come up with what we think are the correct rules, positions, policies, possibly, for how any name system, especially the ones that are right in our faces right now, will affect the global DNS. Maybe the answer is, oh, they can't at all. Maybe the answer is we want to fully embrace them. That's why we're doing this.

We're not just doing this to say, look at this interesting thing out there. It's already in here. What do we do with it? And when I say we, I don't mean staff. I absolutely mean the ICANN community. Staff, me, wrote those documents, those are to support you in your considerations and your discussion, which again, is why if I messed up in those documents, certainly factually, let me know because those are out there to help support what you do next.

ADIEL AKPLOGAN: Thank you very much, Paul, for that last bit, because it's very important for us organizing this. And as I mentioned, this is the fifth time we are doing something on blockchain. That means we really want to raise the awareness around those issues or not issues for the community to react. I think we have a question online, Yazid.

YAZID AKANHO: Yes, Adiel. So, we have Zak Muscovitch who would like to speak. I'm not sure if you are in the room or online. Oh, okay.

ZAK MUSCOVITCH: Thank you very much and thank you both for your presentation. Zak Muscovitch, Internet Commerce Association. My question is for Fred. Paul, you mentioned in your presentation about the nomenclature that we're using and how some terms have yet to be defined precisely, yet we're at the beginning stages of these conversations at ICANN. And so, I'd like to ask Fred, what do you see as the most accurate and apt terminology to use? Is your preference Web3 identifiers? Some people even call them domain names. What is your suggestion for how we refer to these things going forward? Thank you.

FRED HSU: My view is call them Web3 identifiers until they become domain names. I know that is a little counterintuitive, but just another example, Web3

domain itself to me is a little bit of an oxymoron. It's either a domain name that works in the DNS or it's a monkey JPEG.

PAUL HOFFMAN: I'm going to take the mic here because I disagree with Fred. I can't stand the term Web3, partially because, in fact, with us being here talking about names, this is not about Web3. This is about the use of names. By the way, Web3 is almost universally used in the blockchain ecosystem, so I may be tilting at windmills here. But Web2 is also sort of a diminutive. And we all like the web. Actually, most of us who have our laptops open at the moment are using the web. We're not using Web2, we're using the web.

So, I believe, to answer your question, we should have terminology that we, in this community, understand and feel comfortable with. If it turns out to be Web3, I will go in my corner and whimper a bit. But I believe that we already have good terminology for not only the names we're using, but also the ones that are coming in. Which is why I coined alt-TLD. Actually, I didn't coin it. I had a worse name in it, and one of my pre-viewers actually said, why don't you call them alt-TLDs? So, that may not be the final name, but we should be agreeing on terminology that we can use, and hopefully it's not just an acronym.

YAZID AKANHO: Thanks. Another one? Online. Oh, sorry. In the room thanks. Jonathan please.

JOTHAN FRAKES: Hi, and I correct people I like. Who did you call? Oh, okay. I didn't want to. Hi, my name is Jothan Frakes. I'll correct people I like. It's Jothan. Fred, this was a really good presentation because I think it breaks it down into really simplified ways that are difficult to articulate to general folks. Paul, I wanted to thank you and the OCTO for having this conversation. I want to note to people who are viewing online just how maximum density this room is packed here in Istanbul, that this is obviously a conversation that should be happening and that it's very helpful that we're having these conversations.

I've run into some challenges in-- I look at various different namespaces. I am agnostic, really, about how this looks. But in some of the cases where folks kind of plant a flag and set up a namespace, I'm noticing that there's a concept in the blockchain where you set up and you establish your rules in the contract. You have some sort of logic that's baked into it that is that set of logic and things that are going to identify the policies of how that blockchain works. And here in the world of ICANN, we have 30 years of guardrails and different types of things about how do we deal with disputes, how do we deal with security issues.

When you get into blockchains and you have those established, those get kind of locked in and then you require things like soft forks or hard forks in order to evolve those. So, if you have something that you release and then you later realize, oh, we need to make a modification, we need to make a change. How do we get that to happen? How do we put that into effect to make sure?

And that's one of the areas that I think deserves some focus here, is how will policy be able to be updatable? How will you come into those situations? Because you end up in places where you have hard and soft forks can really create splits in the namespace and more separation and potential collisions or confusion. I think that's going to be an important area to focus in on as we do this. You can see it in IDN where some namespaces may follow a particular standard, another may follow a different standard, some may allow emoji, some may be unrestrictive.

So, there's a lot of diversity and challenges as we look at this that I don't know if the right way to look at it is that the various things about policy represent constraint of market or if those are things that are actually valuable as safety nets that we've designed over the last three decades. Anyway, thank you for letting me have the opportunity to speak. And absolutely, on behalf of what looks like almost standing room here in the room, this is a great conversation. I hope you continue to have these conversations. Thank you.

FRED HSU: Yeah, Jothan, I think I wanted to add one comment to that. If you think holistically, we got to think about a world where do people rule the blockchains or do blockchains rule the people? I'm very much on the former. Blockchains can only be as useful and secure as they enable us to replicate real-life use cases. So, you mentioned things like forking, yes. Source of truth, yes. ICANN can and should be at least in this namespace. I explained this to a lot of customers, partners, et cetera.

Anything that has a dot is governed by these ICANN rules. The moment that some other civilization, either domestic or alien, starts adopting some alternate namespace with a semicolon, with a hashtag or something, and it starts getting mass adoption, then great. That seems to be pretty clear to me outside of the DNS system purview. But on the core technology side, there has to be functions that adhere to transfers, to UDRPs, to government and criminal investigations, right? And I think a lot of the incentives in the Web3 world are not tied to kind of go there, unfortunately, yet. So, my opinion on this. But thank you for bringing it up, Jothan.

ADIEL AKPLOGAN: Thank you. But I think, Jothan, you wanted to talk?

PAOLO DOMENIGHETTI: Thank you. I want to refer to the example. Paolo Domenighetti. I'm the CTO of FreeName. I wanted to ask, let's say, a more business question. We saw that's certainly true that in many namespaces, we have the same TLD, for example. We saw the .wallet example. But we also see that there is a community in the Web3 namespaces that comes also from the Web2 world or DNS world that have invested a lot of money in domains and top-level domains, too, on these namespaces.

And I wanted to ask if it's in somebody's mind, the idea that if in case one of these top-level domains, like .wallet, would be approved in the 2026 round, there is a process to accept the fact that this domain exists on chain and so let these people keep their property on the Web2, or

what we are going to do. Are we going to erase everything, start over, and start selling domains under the TLD with new people?

PAUL HOFFMAN: So let me answer that. There are some people, I believe, from ICANN Legal in the room who are really afraid of the fact that I'm at the mic now. The simple answer is it's up to this community. You asked, will we do this? Will this happen? Those rules are not set yet. They may not even be set when the round opens, in the same way that let's say there weren't any of these names out there and someone poked one up two weeks before the end of the application period. Some of these have been existing for many years and I think you're talking about history and they have a bunch of names behind them. Someone pokes one of these up two weeks before the end of the application period. No one even notices. Should they be given special dispensation, special consideration?

To date, this community has not said anything like, yes, we will. The community also hasn't said, no, we won't, explicitly. So, we're going based on the history of ICANN, and historically in ICANN, if you look at ICP3, and there's a link to that in my documents, which was enacted in the early 2000s, very early in ICANN history, the wording there is very specific, and it was not about blockchain name systems. We didn't have blockchain name systems. It's about all alternative name systems.

So, to answer your question, maybe, if this community gets active on that before the beginning of the next round, or even after the next round, but not without that. You certainly don't want ICANN staff

picking and choosing without direction from this community. It might have to happen anyway. Sometimes the community punts towards staff. I sincerely hope that's not the case here.

But if you want some rules around that, don't be looking at me. Be looking at the rest of the room. They're the folks who, if you're going to get any of these rules, and by the way, they're going to need to understand what you're asking. You've got as much of an education problem as I do here, and if I can help you on that, great. But educating people on these hard issues and trying to give them a deadline of the next round might be a bit challenging.

ADIEL AKPLOGAN: Great. I think I'm seeing something in the Q&A.

YAZID AKANHO: Not really a question. It's more of a comment from Kunle Olorundare from Nigeria. Next identifier technologies are already on earth, and it is a matter of time before they take over. As much as technologies are being driven by innovative competitive markets, next identifier technologies will thrive. Discussing issues about them is just up, and we need to do more research into how the evolution will affect the DNS. I'm already researching in that area. Kunle.

ADIEL AKPLOGAN: Thank you. Good to see that there is a lot of questions. There is one question there.

SETONDJI HOUNZANDJI: Okay. Sorry, I want to speak in French. Okay. Good morning. Thank you for your presentations. I am Setondji Hounzandji. I am the president of ISOC Benin, so I come from Benin. I would like to say that I'm amongst those who train others on the DNS. I'm not the only one in the room. So, we train people on how the DNS works, but also how to set up primary and secondary servers. So, my question would be, when do you think we should start to update what we train people on, in view of everything that you said? And then going back to your presentation, do you think we should be afraid or not? How do you see the future? What's your take on everything vis-à-vis our courses? Thank you.

ADIEL AKPLOGAN: Thank you. Do you want to say something on that, Paul?

PAUL HOFFMAN: Please allow me to answer your second question first. We should never be afraid. These are new things. Some new things may turn out badly. I'm from the United States. Some new things may turn out just fine. Some new things may turn out boring. Some new things may seem boring at first, but 20 years later, all of a sudden, people get them and such like that. So please don't be afraid. Michele might be afraid, but he hasn't had his coffee yet.

To your first question, and by the way, thank you for training people in the DNS. Great respect for that. My proposal, and it'll be interesting to hear if Fred disagrees with me, is that you don't train them on this until

there has been ICANN community consensus on how they are going to be met in the global DNS.

Now, it's hard for me to say to you, please don't train somebody on a particular topic. I don't want to make it sound like it's a bad topic, but I believe that any training that you did today would be confusing, because it will change in the future and such like that. And again, I'm hoping that this community does come to some agreements on how we will deal with this, and then you can start doing that, but I'm not sure. Fred, how do you feel?

FRED HSU: Yeah, I think until the jury is out on some of these standards as they relate to DNS, I think that maybe not whipsaw your constituents too much. Things like the RFC process, which is actually getting a review on the DNS Web3 Wallet mapping thing that we're doing right now. We're also waiting to see if we can get further feedback on that before we preach to our constituents as well. So, I think taking a measured patient approach is probably going to be the right one.

ADIEL AKPLOGAN: Yeah, thank you. Thank you. And I just want to add on the capacity building thing, because it's a part of the thing we do. I think the fundamental training on the DNS will continue as usual. The concept of the way the DNS works is still there. There are some evolutions, like the new era type of wallet. That is there. It is already there. It can be taught, but really the gap between the DNS, the blockchain, et cetera, is still at

a very infancy level, and I don't think somebody is prevented to talk about that. You can talk about that, but it is not something that is properly yet to be part of a formal training process.

YAZID AKANHO: I think we have another question. Is Elaine in the room? Yes. Okay.

ELAINE PRIUS: Hi, thank you. It's Elaine Proust. I'm a member of the Next Round Implementation Review Team and was active in the Subsequent Procedures working group. I just wanted to ask a question to you, Paul, based on your question regarding if an alternative name system that already has registrants would have any sort of priority in the next round. So, Paul, you suggested that the community needed to get together and make a decision on this. I just want to say that it was not discussed in the SubPro working group. There are no recommendations on that, and the Next Round Implementation Review Team, it's also not on our slate.

And so, I think what you're possibly suggesting is that we would need some sort of expedited policy development process to consider this. I'm a little confused because in the past, when there have been questions like this, I want to say dot web from 2004 or '6, ICANN, I don't know if it was the Board or the Org, but a decision was made not by the community whether or not that thing should proceed given that they had a set of registrations already or not.

And same thing's happening with web, home, corp and mail from the 2012 round. The Board made a decision that those would not proceed based on name collision problems for the 2012 folks, but anybody can apply for those in 2026. So, I would like a little bit of clarity about where this answer's supposed to come from. I think the next round IRTs were just expecting that the Board would give some direction. Thank you.

PAUL HOFFMAN: Great. Now I am asking you to expedite something and I'm asking the Board to tell you to expedite something. No, no, no, no. When I say it has to come from the community, I don't mean that the community has to do it. But to answer the question of who would do it, it would be the community, possibly quite frankly through your group, which as you said has had plenty of opportunity before now to look at this and it hasn't come up. It has not been brought to you by the community, it has not been brought to you by the Board.

Maybe it's too late, maybe it's not. I don't want to say it can't happen, because it can, but now I'm volunteering your time if it's going to happen. I don't sit there next to you and hopefully you all are reading my documents, nor do I want to say that the Board is going to do something. What I'm saying is in order for there to be understandable consistent rules on what Paolo was asking, they would have to come from the community. They couldn't just come from us. And you two should actually have a little talk afterwards, because I think you can answer his question better.

I think you did answer it by indicating that it's feeling too late and that you're pretty darn busy with other things, but that's up to the community to decide. I'll take one exception, and boy I hope the legal people are not going to be upset at me with this. In 2012, when the Board decided something, that was the community. And I'm saying this as a true believer. I come from the tech community where our Board equivalent is also community driven. This is an absolutely lovely place where the community chooses the Board, the community yells at the Board, the community is with the board and such like that. You are two people over from a new Board member. When the Board does something, it's for the community.

ELAINE PRIUS: Can I respond to that?

PAUL HOFFMAN: Please?

ELAINE PRIUS: I think the Subsequent Procedures working group didn't pick this up, because I think you referenced it, ICP3, and in that it says that ICANN or we won't support alternative name spaces in some way. So, I think it was sort of like the working group felt like, well, ICANN's never going to support this, but here we are dealing with our reality. And what I'm hearing is there will be some innovation that will potentially help the domain space and registrants if we can figure out how to get this together. So, I certainly am not volunteering anybody to do this, but I

think we need to answer the question, where is this going to come from, because I don't think we should wait for the next, next round to have figured it out. It will be way too late. Thank you.

ADIEL AKPLOGAN: Thank you. I think this is the kind of discussion that this should actually trigger, and it's good to see that. We still have a few questions. We'll take them quickly before we wrap up. I think there is one here from the gentleman.

SATISH BABU: Thank you. My name is Satish Babu and I'm part of the ALAC. I'd like to know what is your advice for an average end user who's asking questions on the prognosis on what's going to happen in this space, whether they should just hold on for the moment or should they be reading up 039 and 040. What is your advice?

PAUL HOFFMAN: My advice is they should be looking towards the ICANN community. I know all users are sort of represented through the ALAC in the ICANN community. The ICANN community is becoming more aware. Some people are becoming more concerned, etc. I would not advise them that they have to hop in, in the same way that as, for example, the IETF changes some of the standards for how the DNS works.

I believe it is sufficient for the user community to be aware of this more towards the end of the process, not at the beginning, but I certainly

don't want to say, oh, don't pay attention now. The more people in the community we have paying attention, the better, but I don't want to say this is more important than the 80 other things that they are dealing with at the time. Does that help?

ADIEL AKPLOGAN: Thank you. We'll go back online. I think we have a few questions online.

YAZID AKANHO: So, we have two questions online. Let me read them. Is the D3 plan to distribute the token? And if yes, what's the value of it?

FRED HSU: Is the question, is the D3 plan to distribute Web3 name tokens? Is D3 planning to issue a non-fungible token or fungible token? No.

YAZID AKANHO: So, if you are listening to us, you may provide more details to your question, please. This is for the online participant who asked the question. Let's move to the next question. How do I get more involved in this group or initiative? Thanks.

ADIEL AKPLOGAN: Yeah, well, I think by joining different groups at ICANN that are talking about the topic is already one thing, but we have had this question several times. We have an initiative that is the SIFT, the Special Interest

Forum on Technology, that is an initiative that was launched some time back, which objective is to create interest on technology thing, and it's something that we are looking at maybe reigniting and creating something around this topic.

But I think participating and volunteering to participate in a session like this one, because we are going to continue to have this kind of session at ICANN meeting, is already one way of contributing to the discussion. But I'm sure different constituencies are going to go out there and start processing this as well, and one way is to join those constituencies and contribute. So, that's what I would say for now, but when something more formal is set up, you will be aware and invited to join. So, we'll come back to the question inside. We still, we only have seven minutes, so briefly. I'm going to Edmon, because he--

EDMON CHUNG: Yeah, so just very briefly in actually response to Elaine, you mentioned ICP3 and also Paul did. By the way, for those of you who don't know, the long form is Internet Coordination Policy. ICP3 is established in 2001, and I think one of the things that we can build on, in fact, is to review ICP3. In fact, the Board, myself on the Board, has been urging for that. In fact, in the Kigali meeting between the Board and the GAC, our response to the GAC on this particular issue is that we are looking at kind of reviewing the ICP3.

ADIEL AKPLOGAN: Thank you very much, Edmon. I think there are other questions in the room back there.

GEORGE MINARDO: Good morning, George Minardo from .build registry. I really want to commend the room on some clear thinking and vision, having been at these sessions from the beginning, having seen a couple almost fistfights at NamesCon over namespaces. This is really productive. My question is just really specific on the resource record WALLET. I think that's really big news. I think this is a small tent, but we should be shouting from the hills on this one. As a registry and as a registrant, and I guess for the registrars, is that something we have to adopt? I know it's already in the-- it's IANA, so I get that, but how do I put my wallet address in a wallet resource record? Thank you.

PAUL HOFFMAN: Very good question, and it's actually none of the three that you mentioned. It's actually only for registrants, and the registrant deals with their own hoster, the people who hold your zone. Registrars, many registrars are also hosters, so that when you sign up with certain registrars, they handle your zone for you, but not all registrars are hosters. And certainly not all registrants use their registrar to maintain their zone.

So, Wallet would be something that you would put in your own zone file, using whatever mechanism you currently use to change your zone information, the same way you might put in a TXT record or things like

that. Your hoster has to be able to handle Wallet. It's very early now, may not be able to be useful. That is, they may not know how to handle it. That will get more adopted over time. Adoption of new IETF technologies is slow for most things. I'm looking around the room at a couple of people who are sort of nodding their heads like yeah, yeah, yeah. But that will happen over time. I would be surprised now if many hosters could even handle it.

ADIEL AKPLOGAN: Thank you. Last question, because we are almost at the top of the hour.

T. SANTHOSH: Thank you. I am Santhosh, the GAC representative from India. Thank you, Paul, for your detailed presentation. So, during the presentation of Security Stability Advisory Committee with the GAC, they had mentioned about DNS and blockchain. So, the discussion which has happened regarding which will be that PDP. So, it can come from SSAC, Security Stability Advisory Committee. So, this is a comment for this discussion. Thank you.

PAUL HOFFMAN: Thank you for that. So SSAC is certainly one of the communities in ICANN. They make recommendations to the Board, and then the Board either acts or doesn't act, considers the recommendations. If SSAC actively does something specifically about blockchain, I am assuming-- And by the way, some SSAC documents don't have recommendations to the Board. But I'm assuming that if SSAC engages with this, they will

finish with a document, make recommendations to the Board, and that will be part of the community input on this.

SSAC has a lot of people with a lot of technical knowledge. And I've given a presentation to them on some of the stuff other people have as well. So, I would certainly look at their outputs as well, and I look forward to seeing if they have such outputs and what they recommend to the Board about this. But don't forget, other advisory committees also advise the Board. That's one of the hearts of the ICANN community is people can talk to the Board and make requests.

ADIEL AKPLOGAN: Thank you very much, Paul, and thank you, everyone, for participating to this panel. I don't know if, Fred, you want to say something last? No? Good, thank you. We are at the top of the hour, have to conclude this session. Thank you for joining. So, the Emerging Identifier Technology session is going to happen, as we have been doing it at the General Assembly of ICANN, the last meeting of the year, so next one we are going to talk.

We are not saying we are going to talk about blockchain again, but it is a topic that we from OCTO and Intel, we continue to monitor to see how it's evolving, engaging with people working in the area as well. And if the topic comes again, it could be one, but if there are other topics, our goal is to focus on emerging identifier technology in general, and you're welcome to the next session, and we hope that the information that we got here will help the community dig into the issue and make any

recommendation or any work that needs to be done from policy side. Thank you very much. Have a good day.

[END OF TRANSCRIPTION]