
ICANN75 | AGM – Internet Fragmentation, the DNS and ICANN
Wednesday, September 21, 2022 – 10:30 to 12:00 KUL

ANDREA GLANDON: Hello, and welcome to the ICANN75 Plenary Session, Internet Fragmentation, the DNS, and ICANN. My name is Andrea Glandon, and I am the Remote Participation Manager. Please note that this session is being recorded and follows the ICANN's Expected Standards of Behavior.

Interpretation for this session includes Arabic, Chinese, French, Russian, and Spanish. Click the interpretation icon in the Zoom toolbar to select your preferred language output. During this session, comments or questions submitted in the chat pod will only be read aloud if they are in the proper format as I will note in the chat shortly, and during the designated discussion time.

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if you would like to ask a question, please go to one of the standing microphones in the room. There will three polls conducted during the session. In-person participants should log in to Zoom to take those calls. To view the real-time transcription, click "close caption" in the Zoom toolbar. Now, please welcome Pari Esfandiari. You may begin.

PARI ESFANDIARI: Hello, everyone, and thank you very much for joining us. Today, I have the pleasure of moderating this session together with Bruna and Nigel. I pass it on to Bruna.

BRUNA MARTINS DON SANTOS: Thank you, Pari, and hi everyone, my name is Bruna Santos, the other co-moderator. This session will also be moderated virtually by Nigel Hickson as well, so it's first mentioning that. Welcome again, and for the next hour and a half, we plan to entertain everyone with a relevant and timely discussion on Internet Fragmentation, the DNS, and ICANN.

Today, this is going to be a discussion and also an interactive plenary. We plan to also have some polls going on during the debate. As discussions, we'll be joined by John Crain from ICANN Org, Ram Mohan from the Security Stability Advisory Committee, Farzaneh Badii, our remote discussant from the Noncommercial

Stakeholder Group, James Bladel from the Registrar Stakeholder Group, and Paul Wilson from the Address Supporting Organization.

Before moving on with the session and handing the floor back to Pari, I'll, yes, I guess, just to remind everyone to pay attention to the mentee, we plan to have the interaction online for the first session as a mentee interaction with workloads and a poll, and so on. So, Pari, you can start with the session.

ANDREA GLANDON: Excuse me. Before we continue, just remember everyone to speak slowly. Thank you.

PARI ESFANDIARI: Thank you very much. I represent ALAC. Sorry. I represent ALAC, which strives to safeguard the interest of end users, and this session has a strong end user component. I'd like to start by explaining the purpose of this session. This is an attempt to contribute to the emergence of a shared understanding of internet fragmentation and to provide a space for an inclusive dialogue and reflection on the challenges it presents to the ICANN community.

Today's session is I like to explain our plan to conduct our discussion. The session is composed of five parts. First, I will

introduce the topic, explaining the motivation, the potential outcomes, and key concerns. Next, the fragmentation impacts on ICANN community will be discussed by Ram and John.

After that, we will be joined by three accomplished panelists from ICANN committee for a panel discussion. Next, we will welcome questions from the floor and online. Please log into the Zoom raise hand, and/or use the chat to post your question as we progress through this session.

Also, I would like to ask our panelists to address questions and/or comments from the chat room during their intervention if they want or answer it during the Q&A session. In the final part, panelists will have a chance to express their observing remarks, throughout the decision, Bruna, will conduct polls and discuss their results.

Now, without further ado, allow me to introduce the subject. Fragmentation as a concept is not new. From 1970s to 90s, a period known as Portugal Wars, multiple host protocols driven by commercial and technical motives fought over market share.

IP eventually gained critical mass and others voluntarily retreated. In 2000, cybersecurity, privacy, antitrust, and other concerns meant increasing legislation and self-regulations mainly at content and application levels, which increased control and was criticized as introducing some degree of fragmentation.

More recently, increasing reliance of critical services on digital technology elevated national security concerns, while pandemic highlighted dependency for services on foreign owned and control enterprises, sensitizing concerns over sovereignty and imposing doubt on the wisdom of globalization, and of course, internet as it's poster child.

Increased geopolitical tension and cyber hostility have pushed internet and its global open technology into the center of geopolitics. The internet is an extraordinary human achievement and the defining technology of our time. Its fragmentation could be determinant, not just for the technology, but also for our democratic values and lifestyle.

There is an ongoing debate about the precise meaning of the term fragmentation. In decision for the sake of clarity and with the danger of oversimplification, we refer to trends towards non-universal internet experiences where the globally connected internet is fragmented based on the location of user in sovereign territories.

While it's unlikely that in the near future any country will cut off itself completely from the universal open internet due to the economic and political disadvantages of doing so, it's a great mistake not to take the current trends in that direction seriously. Particularly concerning our trends towards multiple and

incompatible root zone files and associated naming and numbering systems.

The DNS root is at the center of contention because it is a centralized point of control on the logic layer. Other concerns are over changes in the routing architecture and the spread of incompatible technical standards. Two scenarios are predicted, one, clarification of the internet as a result of a strategic competition between the US and China resulting in technology cold war.

Two, a federated internet motivated by a desire for more autonomy with a collection of nation state networks is still linked by the internet protocol, but for many purposes, separated. These trends could fragment open and universal internet to an internet experience controlled by national borders. This will limit internet end users access to information and expose their data to national government scrutiny.

Another concern is that fragmentation shifts the internet governance from the global multi stakeholder model to government control model. In doing so, the voices of internet end users will be reached, if not diminished. There are also serious concerns over stability and predictability and possible collision between public and private names. Finally, there are concerns

over innovations mainly in blockchain that are aimed to decentralize the DNS system.

These are often initiated by non-governmental actors for commercial interest, and are libertarian sentiments, while unlikely to gain prominence, but is still our concerning. So far, the open and universal internet has shown remarkable resilience, but how long and how far can it endure the ideological pressures, and how would it impact the ICANN community and its multi stakeholder model? We have excellent speakers and qualified panelists to discuss these issues, but first we turn to Bruna. Bruna, the floor is yours.

BRUNA MARTINS DON SANTOS: Thank you Pari, and to get the conversation going, we have a first poll to get the feeling of the audience as well. So our first question would be -- can we have the mentee on the screen as well? Yes. it's on the Zoom chat for the ones online. So the first question for everyone is, "Is the internet currently fragmented?"

It's a single question, a simple question, yes or no. We plan to have like some views and perceptions from all. As soon as we have the results. Yes, as we go, we can work on getting the results for this poll on the Zoom, but also I will hand the floor to John and Ram who start the debate on a definition because it's often the

case that some parts of the IG brother community are still dwelling on whether fragmentation exists, what does it mean? But then we plan to have a conversation between community and the Org now, and then I'll hand the floor to you Ram or John, please. Yes, John. So please.

JOHN CRAIN:

Okay. I'm John Crain, I'm ICANN's Chief Technical Officer. I'm going to start with what I consider a basic concept around this, and that is that the room we're in today, all of you here are part of the discussion that helps create and maintain the internet experience of the end users. The domain name system, this multi-stakeholder community has spent almost a quarter of a century more for some of the individuals in here. Some of us have been working on this predating ICANN.

It was about defining norms and safeguards that have enabled users to experience a single interoperable network. That's a network where the underlying navigation of that network is defined by unwritten agreements that we will use the same protocols, the same name spaces, and also the same policies and agreements that couple those together. Fragmentation in my mind is moving away from those agreements.

The very meaning of the word fragmentation is not having something singular. It is actually the dividing of those networks

and the splitting of those networks. Domain name system is a critical part of the Internet's infrastructure no matter how you interact with it. Whether it's through apps or typing into browsers or emails, it is absolutely critical that it is a unique singular system.

Intervention in how that domain name system works can be very problematic especially when it's invisible to the end users. So that's sort of how I think about fragmentation. It's that moving away from the single interoperable internet and an understood set of expectations from the end users about how it works. So with that, I'm going to hand over to my good friend Ram Mohan, to take it a little bit deeper into some of the technical stuff. Thank you, Ram.

RAM MOHAN:

Thank you, John. I'm Ram Mohan, and I'm here from the Security and Instability Advisory Committee. Fragmentation is about how a combination of factors, geopolitics, regulation, new technologies can and have already combined to shake the trust certainty and stability that the domain name system will continue to work seamlessly and interoperable.

We are witnessing something momentous where the ability of a user to type in a website in a browser and to know that they will reach the site automatically is no longer certain, depending on

where you're accessing the internet. The DNS is a critical part of the infrastructure no matter how the user interacts with it.

I gave you an example of a user typing it into a browser or you sending an email, but the DNS is actually necessary to apps that don't appear to use it at all. That's the common case anymore for most users almost all the time. We're using applications on our phones on various devices, and those applications don't give you an indication that they're using the DNS underneath, but that foundational layer is what all of this underpins.

The fact that the user cannot see the DNS in their favorite apps or cloud services means that users expect the DNS to just work. As John said earlier, intervention in the functioning of the DNS creates important and problematic issues even when such interventions are invisible to the end user.

As a foundational infrastructure layer, fragmentation at the DNS layer will create failure of critical infrastructure that the world depends upon. Now, what actually happens? Fragmentation creates internet islands without bridges to connect them.

Pari was speaking about a federated internet, but what we're really talking about is a system that could leave users stranded, national economies undermined. The other point to think about is fragmentation shifts power and control from the user to the bodies that build these internet islands and do it in a way that is

often invisible to the user, but also removes the ability of the user to reverse course, it takes away options from users.

Predictability and stability underpin the user experience on the internet. The degradation of the user experience is the fundamental issue that fragmentation really is about. This is not a technology problem, this is not a content problem, this is not a problem about new disruptive technologies that create innovation, it's not any of those.

It's actually about making sure that the protocols that provide for predictable user experience and utility remain stable. If the user's experience is degraded, people are going to be forced to have to transact across multiple networks in different ways, and that results in a completely fragmented user experience.

So a fragmented internet is really the technical way of looking at a fragmented world than a fragmented user experience. The power of the centralized DNS is in its interoperability and the utility that it provides for the end users to come together and use all of these technologies in a simple, single, and predictable way.

PARI ESFANDIARI:

Thank you very much. Thank you, John, and thank you Ram for very interesting and informative discussion. Indeed, it's this characteristics of the internet that turned it to defining

technology of our time. I would like now to invite our panelists for an exciting discussion. We have three teams to deep dive into.

I want to start with the first team, the impact of internet fragmentation on ICANN community, especially end users. Of course, all three of us touched on this subject and explained the possibilities alike, now to ask Nigel, who's our remote moderator to intervene and maybe we can hear his opinions on these topics. Nigel.

NIGEL HICKSON:

Yes, good morning, and thank you very much. I'll be very brief indeed because I think the value is going to be in the in the discussion and in the chat. I do encourage everyone to log on even if you are physically there, and it's great that you are physically there and I wish I was as well, to take part in the chat and raise questions on this issue.

Just really want to reflect something that others and Pari said right at the beginning, and Bruna as well. We're not going to solve the problems here, we're not going to come up with a solution to internet fragmentation, we're not going to convince the governments of the world to think more about their policy and legislative initiatives, but I suppose what we hope to do, and what we've discussed at length in putting this panel together is to at least to get us talking about this issue, how it affects ICANN, how

it affects other institutions, how it affects us all, how it affects the end user, how it affects the future of the internet, just so we're a bit more aware of some of the implications of internet fragmentation, and it's great to be among the so many experts. So, yes, so I look forward to the discussion.

PARI ESFANDIARI: Thank you very much, Nigel. I'm going to ask if the industry will be able to provide a consistent customer experience and maybe Paul or James, would you like to take it?

PAUL WILSON: Pari, thanks very much, and thanks for the opportunity to be here. I think I'll take my mask off because it seems that the voices are harder to hear through that filter. In the hours where we work at the layer of IP, which is the internet protocol, which provides the services on which we all depend, and we're often asked about IP fragmentation, which is just as Ram explained, it's about creating islands in the IP network, islands that are mostly, they're mostly tend to be geographic, although sometimes specific to individual networks, but in either case, what happens is that the traffic flow between those islands is interrupted in in some way.

In an unfragmented internet in theory, package should be able to traverse easily uninterrupted from any one point to any other,

and fragmentation represents an interruption or an interference with that traffic flow. So that absolutely, certainly has huge impacts on those who are affected.

It tends to happen at local level, and it tends to be implemented by governments, for instance, to the extent that people in this room can take a message about fragmentation back to their own governments, back to their own communities, and discuss the impacts that happen specifically within those communities to understand whether or not the fragmentation that exists has got an impact on them, it becomes a local issue.

I think one of the things that we accept that this happens throughout the world in many cases for many reasons, that I think probably one of the critical things for industry is a question of transparency and whether when at the IP, but at any layer of the internet, in fact, when filters are placed, when the theoretical global end-to-end internet is being interrupted in any way by deliberate act that needs to be done according to some, for instance, rule of law, some transparent process, some process in which, for instance, through a multi-stakeholder policy development, we can have some say in the void, for instance, the unexpected unintended consequences of filtering or fragmentation, which happens for one, apparently reasonable reason in theory, but which can affect and have impact on many

people. So we're talking end users here, as well as the industry that's trying to provide services to those users. Thank you.

PARI ESFANDIARI: Thank you very much. Thank you. Actually would you like, James, to make a comment?

JAMES BLADEL: Yes, thank you, and thanks for allowing me to participate. One of the dangers of appearing on such a distinguished panel is that a lot of the great points are already made by the time your microphone is lit up. So I just want to echo a lot of the comments that have been made previously.

From an industry and commercial service provider perspective, fragmentation is friction. It prevents us from reaching our customers and developing markets and providing services on an equal and consistent basis around the world. It prevents our customers from establishing a globally useful and recognizable and resolvable identity for which they can reach their audiences.

So fragmentation is a diminishment of the value of the internet itself. I think that the points made by John and Ram and Paul are incredibly important because it becomes an increasing burden, not only on the businesses that are trying to provide those

services, but on the consumers that are trying to use them, and their confidence that those services will function as intended.

I think in the best case scenario, fragmentation means you're not sure if your message is getting through or your services are resolvable across boundaries. In the worst case scenario, the DNS could be used to intercept those requests and those traffic requests and resolve them to alternative sources of information or alternative resources masquerading perhaps as something that we're developing or putting out, or it's something that our customers are trying to develop.

So it becomes an erosion of the value of the internet itself. What to do about it, I think is the next big question. I had two thoughts on that. I think one echoes what Paul was saying earlier, which is that I would propose that we would turn the multi-stakeholder model inside out. Normally, I think we're familiar with everyone coming from government and industry and technology and academia, and bringing our perspectives into ICANN to advance the work.

I think that that has to flow the other direction as well, and that we have to be comfortable taking our knowledge and expertise and our appreciation for the multi-stakeholder model back to our day jobs, whether that's in government or industry, and recognizing when maybe attempting piece of legislation or a new

protocol undermines the interoperability of the internet and to flag that in those circles for discussion and for understanding and to carry that message back outside of ICANN into those circles.

The second thing is, I think, and this is a theme that comes up quite a lot is that I think it's important for us to work to advance the practical and real world outcomes of the work that we do at ICANN. So many different topics or initiatives are stalled or takes too long to develop, and that creates a credibility problem at ICANN, and it encourages and incentivizes folks who and interests around the world to try to find ways to work around ICANN.

I think that's a problem, and I think we can -- all of us, I think someone mentioned in the chat, we're all a little bit responsible for this issue here of turning ICANN into a credible and effective vehicle for addressing these problems, and maybe the temptation of a fragmented solution won't be so prominent. Thank you.

PARI ESFANDIARI:

Thank you very much. With these remarks, I like to ask, could the industry remain competitive considering all the problems that it's facing? James, would you like to take it?

JAMES BLADEL: Yes, thank you, Pari. It is a good question, and I think it speaks to the additional costs and burdens and uncertainty that businesses would be faced in terms of being competitive around the world. There are pluses and minuses, of course, to being whether it's a global service provider, but again, I think ultimately the benefits outweigh some of the downsides in that a customer can expect in even consistent and valuable experience no matter where they live.

Whether they live here in Malaysia or in Europe or in North America, everyone can participate on an equal basis, and I think that's what is in jeopardy of being lost with fragmentation.

PARI ESFANDIARI: Paul, any comments from you? In this case, I like now to ask Farzaneh, what are the greatest concerns of civil society increasing the digital fragmentation? Farzaneh?

FARZANEH BADI: Hi everybody. So this is Farzaneh Badi, Noncommercial Stakeholder Group. Sorry, I didn't know that I have to come from the civil society perspective. I had my own thoughts on this, but, of course, we have discussed this as in CSG, and I hope that I can give you an accurate answer.

So, internet fragmentation can affect access to the internet and prevent us from having access to an interoperable global and secure internet that may remind everybody here the basis for indiscriminatory connection of all people, regardless of their gender, their nationality to the internet.

For civil society and digital rights activists, this is fundamental to freely express themselves online when they don't have those chances offline, and to fight for their rights as they have been doing for many years, and they're doing event today in the world.

So and I think that for internet fragmentation, if I want to bring the more academic perspective and the more ICANN related, I think that internet fragmentation we've been talking about in so many ways that we are not paying enough attention to how our access to critical properties of the internet is being diminished day by day and we need to monitor the situation.

By critical properties of the internet, the internet society has several definition, for me, how I frame it is that when there's no alternative to connect to the global internet, that would be internet fragmented. So when we don't have access to IP addresses and our devices cannot talk to each other, when the segment of the society and the world faces these issues, that is internet fragmentation, which has not happened yet, and hopefully it will not happen.

I disagree with, I don't know if I got Ram's point that the degradation of service is-- internet fragmentation service has been degrading for a long time through external and internal reasons. Apps have not worked in certain countries because of sanctions and because of other issues.

So I don't frame it like that, but if you ask me from the civil society perspective why internet fragmentation is a bad thing, it's that because then we are going to have a discriminatory internet that will judge who can access what based on the color of their skin, where they are located, and their race, their gender, and I'm not saying that this is not happening now on the internet, but at least the critical properties of the internet can afford us to indiscriminatory connect people, and internet fragmentation will stop that. It doesn't exist yet by the way. Thank you.

PARI ESFANDIARI: Thank you very much. Yes, please, Ram.

RAM MOHAN: Just to quickly respond to Farzaneh. The point I'm making about the degradation, I recognize that when you're on a plane, your app doesn't work and you're not connected to the internet.

You can't call that a fragmented internet, I understand that, but really I think the thing that we ought to recognize is if we accept

as a norm that degradation of our experience on how we can access the internet, degradation is the norm, and that we should just expect degradation to happen, that I think is actually the beginning of a slippery slope where you can get to the point where for whatever reason, you do not have predictability in how your applications, how you access the internet works. I think that is a real problem.

PAUL WILSON:

I just would like to make a point on the nature of fragmentation as an entropy in the internet that the internet has been imagined and it has been maintained as a consistent global infrastructure, consistent at all layers and unfragmented to the maximum extent possible.

There's a tendency to take that for granted as though it just happens as though it's just an automatic outcome of the internet and the standards. The fact is that the standards enable that, and that's the key. The standards enable the global consistent internet that we all know and love, we take it for granted, but the maintenance of that is actually a lot of work.

The possibility is enabled by the internet, but the actual implementation requires a lot of work. Like any kind of coordination or collaboration. It doesn't happen automatically, it happens by very extensive combined efforts across the world.

If those efforts stop, then like the randomness that occurs in the universe generally without energy being added, entropy takes over, and the internet becomes fragmented.

I think a fragmented internet is a lower energy, easier outcome in many respects than the internet that we need to maintain as the consistent global model that we all kind of take for granted. Thanks.

PARI ESFANDIARI:

Thank you very much. Anyone else from the panel want to make any comments? No. So next question is directed to Ram. What is the impact of fragmentation on ICANN mission?

RAM MOHAN:

Thank you. In this area, I think we have to look at fragmentation in multiple ways, right? There is the core issue about the DNS and the technological challenges with interventions, with automatic rewrites at the DNS layer that users have no control over, that is one aspect.

Pari, as you began at the very beginning, there are geopolitical types of concerns as well. Now, earlier this year, we saw how ICANN, the organization and the board, responded to requests to take TLDs off the root, things like that. So I think there's already ICANN in that way is setting a good example of how to respond to

those kinds of requests that are a little bit more in the geopolitical area.

As far as issues such as new technologies that come through, I think really ICANN'S role is to welcome innovation and to really make this an open tent and bring the opportunity for new technologies to come in to work and to interplay.

As a community however, and as a multi-stakeholder community, I think the biggest part that we ought to be concerned about and keep an eye on is to make sure that not only new technologies, not only DNS interventions, not only geopolitical issues, that while we keep an eye on those, the real lens that we look at, all of these fragmentation areas that can cause fragmentation, the lens that we look at is what happens to the actual users of the internet?

What happens when their applications, their systems that they expect to work stop working inexplicably. That's not necessarily something that is completely within ICANN's remit, but we are part of that global ecosystem that Paul was talking about where we have to invest our energy to make sure that the idea that this thing just works continues to remain a core deliverable. The expectation has to continue to be met. So I think that is a real challenge for ICANN and our multi stakeholder model.

PARI ESFANDIARI: John.

JOHN CRAIN: Yes, following up a little bit on what Ram was saying, we need to realize that the network and the way we use it will continuously evolve, and that's a good thing. So we're all for evolution of the network evolution even of the name spaces, et cetera. It is, as Ram said, important to remember the end user perspective on this.

It is normal for different networks to behave slightly differently, they have different filtering rules, things like that, often done with purpose, but it does change the user experience, and especially in the area where we have the risk of overlapping name spaces for example.

We've talked for, I don't know how many years about the issue of name collisions within the DNS name space, we do need to keep an eye on these things. We have to remember that when experiencing the internet, a user will use a device and they may not realize that they can actually, even from a singular device, see different pass into the internet and different filters, et cetera.

So I think at ICANN, a lot of it is for us to help to understand these things and then to bring people that are looking for other solutions into the discussion so they actually understand that

when they're looking for revolutionary ideas, that there are going to be consequences of those, what they are.

We can help them within our framework take a sensible evolutionary approach to this, whereas Paul said, we build in the maintenance and we make sure that we keep the internet working for the end user and as far as we can keep it as single and interoperable as possible.

PARI ESFANDIARI: Any comments from the panel?

PAUL WILSON: I do have one to follow up Ram's mention of new technologies, and within the RR system, we're often asked about IPV6, we often hear the misapprehension that IPV6 and IPV4 are not compatible or that IPV6 represents a fragmentation of the internet, and that's not the case at all. It's a little like at the lower level, you have evolution of technologies from modems to 3G to 4G, to coax cables, and optical fibers.

None of these are compatible with each other. They're in fact, alternative ways to provide that lower level service to the internet. Likewise, IPV6 is an alternative to IPV6, and we're going through a transition now between one and the other, and it is not

that there needs to be a compatibility because one is simply replacing the other.

There's an analogy that I know that Farzaneh will like which is to think of the V6 transition as like the transition to electric vehicles from gasoline vehicles. The two vehicles, they're not compatible, you don't put petrol in electric car, but they both use the same roads, they provide the same service to passengers and drivers, they operate, they're designed to be compatible, so it's not a case of random design, of some random new transportation mechanism, it's something that is designed to fit in with the layered model of transportation. So that's one analogy.

Another part of that would be this sort of suggestion that V4 and V6 should have been more compatible, there should have been a transition between them that made it easier. Maybe an analogy there would be the hybrid vehicle, but the decision that was made back in the early days of IPV6 was that they wouldn't do that.

The added complexity of providing some higher level of interoperability between the two at that layer would've added a great deal of complexity, and there's no more complex vehicle on the road these days than the hybrid vehicle, right? So there was an optimistic sense that the V6 transition would be easier than it is, but it is carrying on just like the vehicle one, and it's something that we'll all gain the benefits of in due course. Thanks.

PARI ESFANDIARI: Thank you. Please.

JAMES BLADEL: Thanks. I'm trying to keep one eye on the chat because there's some really interesting ideas going through, and I know we're probably eager to get to open discussion, but I just wanted to make at least my view that making a movie available in one region and not another region at a different schedule, or detecting a user's location so that you can change the language or currency of a website.

I don't consider those to be within the scope of the fragmentation that we're discussing. I think those are deliberate, those are efforts to either serve a business purpose or to enhance or facilitate a user conversation. I think what we're talking about is maybe as John and Paul discussed, is getting down to those lower layers of the infrastructure and also doing so in a way that might not be fully detectable by the end-user or by the service provider.

This is such a big topic and there's all these different facets to it, and there's a lot of discussion in the chat, and I wanted to think that in order to have a valuable session, I think we have to draw some boundaries around what's in and what's out. Thanks.

PARI ESFANDIARI: Thank you. Now, I do like to bring Nigel in because very interesting conversation is taking place in the chat. Nigel, the floor is yours.

NIGEL HICKSON: Yes, thank you very much, Pari. Yes, a really excellent discussion that's taking place in the chat, and Andrea will read out a couple of the questions perhaps, and we can spread these over the whole session, but there's some excellent questions as well.

On the comments in the chat, because there's a debate going on whether the internet is fragmented at the moment or how much is it fragmented at the moment, should we worry about it? There's was a discussion on new internet protocol, some of the standards that have been proposed in the ITU for example, is this an example of fragmentation? Is this significant or not?

There's a discussion on whether actions of the private sector should be factored into this discussion, and then, of course, they have been already just recently whereby James and others has business and interest in fragmentation indeed.

Does business not want fragmentation? Because even the likes of Netflix, of course, depend on the global internet for their business. So we're having discussions on that as well. The role of

standards, can we standardize against fragmentation? Is there a role for standards here?

Of course, there's also a debate about decentralization versus fragmentation. Are they different concepts? Are they the same? So yes, those are some of the ideas and we can come back with others. Andrea, perhaps you could just, yes, focus on a couple of the questions. Thanks.

BRUNA MARTINS DON SANTOS: Thank you, Nigel. The first question, "Based on the poll, 53% responded that the internet is fragmented, so what is ICANN doing or can do to fix this?"

PARI ESFANDIARI: Thank you. Anybody wants to take this question?

JOHN CRAIN: So there are questions. Sorry, I've got echoes here. So there are questions about what is the role of ICANN the community here, ICANN the Org, ICANN the Board. So from an Org perspective, and specifically the group that I run, the office of the CTO, we are spending a lot of time trying to gather information to inform the community.

So, we do need to build discussions about this into the community dialogue. From an Org standpoint and where I sit, a lot of that is about providing advice, providing technical advice specifically. You'll see we've put especially in the alternative name space discussions, we've put out a couple of blogs and papers.

I think from an Org perspective, that's where we sit. From a community perspective, I think we just need to have these discussions, we need to understand how this affects our policies or not. For example, we will have a session, I believe it's later today on emerging identifiers, which is where we bring people in who are working on things that look different to the internet we know.

So we need to sort of embrace these people at some level so that we can understand what they're doing and we can actually bring it into the conversation. Ram.

RAM MOHAN:

Thank you, John. I agree with you. Going a little bit further than that in addition to bringing those conversations and understanding these points of views, I think there are two things that ICANN, as a community ought to be doing. First is not to reflexively become defensive and say, this is mine, and if there is something new that comes in, it is automatically bad.

So the first job is to actually understand what other technologies or other initiatives are trying to do. The second thing, and this perhaps may be a bit more controversial, this is my personal perspective is I think we have a particular issue going on right now, which is that ICANN and all of us in the community, not just the ICANN community, but the technical community, the civil society, all of the communities together, we are the beneficiaries of reasonably stable and predictable technology, we're calling this the internet, and we have a syntax about it, we have a nomenclature about it, and we have a context about it.

We call these things TLDs, we call these things domain names, we have a particular syntax, something dot something as an example, right? We expected to work in a certain way, and I think we ought to have a conversation about what is a TLD? Is a TLD something that is in the IANA root? Is a domain name an identifier that is a part of that root system, right?

I think we ought to have that conversation because the place where I worry about is that you have other technologies or other areas that come and appropriate the syntax, the nomenclature, the context that all of us have worked very hard to build credibility in, and we take it.

The place where I worry about, and inside the SSAC, we are having some conversations, is what happens if that terminology

gets taken over, diluted, and then there are failures in parts of that system, and failures "outside of the system," is invisible to the end-user. End-user doesn't really care whether this is part of the DNS or not part of the DNS.

They just say, my domain name stopped working when it may not actually be a "domain name" the way we know it. So I actually think we ought to have a real conversation about, when we say a TLD, when we say a domain name, is that syntax something that we ought to put clear boundaries, clear definitions around so that there is clarity in the minds of users that when they're using a domain name and they're using a TLD, it is the part of the system that has credibility and stability associated with it. So I think that's a question that we ought to think about and work through.

PARI ESFANDIARI: We have two hands in the online room. Just so can we go to Farzaneh first?

FARZANEH BADI: Yes. Thank you. So actually my comment was related to the question as well. I'm so surprised that our technical experts don't mention this. What is ICANN's mandate? So, it is not the coordination of the whole domain name system. There are multiple actors that operate on the domain name system, and

ICANN doesn't have the authority to tell them what to do and how to do things.

So ICANN has a very limited mission, but it is a very important mission because it is providing that global architecture, and as my dear friend Paul Wilson analogy puts it so well, kind of the motor way, some part of the motor way of the traffic and how we actually connect. So as long as ICANN's mission is endangered by policies that government come up with or by take corporations, consolidation, or through other factors, then we need to monitor the situation.

Or if blockchain finally one day comes up with that DNS, alternative DNS that they wanted to come up with like five years ago, then we need to think about it, and we need to think about that is when fragmentation gets serious. Now, there are serious challenges that ICANN's face in coordinating the allocation of domain names, but at the moment, people have alternatives.

Despite the fact that we have the issues of some policies that probably provide hurdles for ICANN to allocate new gTLD to some countries, we still have and ICANN is pretty operational globally. I am not denying that there is this danger and we need to monitor it, but at the moment, I don't think policy-wise, there are certain things to monitor, but at the moment I don't think that there are many risks.

The other thing that and I was really surprised by John Crain's comments that they are discussing emerging identifiers, and that is like some looking after the topic of fragmentation at the DNS level, because I don't know if emerging identifiers are ICANN related or within ICANN mandate, I don't know. I'm not a technical person, so you can respond.

Anyway, I went on and on, and that's what I wanted to say that the risk is there, we need to monitor it, but at the moment we don't see alternatives that are operationalized and can affect it, that global motor way that we all have access to. Thank you.

BRUNA MARTINS DOS SANTOS: Thanks, Farzaneh. Yes.

JOHN CRAIN: So I don't remember using the word thread anywhere in my conversation, so I will go back and look at the transcript to see if I actually said that or not. So, ICANN's mission is about the single global interoperable internet of which the public DNS is part, right? You are completely correct there, and then we have always had alternative offerings, different DNS environments that actually use the DNS protocol have existed for years.

Corporations sometimes run their own ecosystems internally, so that is true. While ICANN doesn't have any authority over those

systems, we should be aware of them and we should understand how they affect the ecosystem. One of the things that I personally worry about is that when you see discussions and offerings of naming systems that are being promoted as being the DNS, the public DNS, sometimes they're not, but it's often not clear.

When the end user is being offered these products, one of the things I would personally like to see is those offering those products being a little bit clearer about what the end user should expect from what they register, which is why we did a blog about what we called Buyer Beware, to make sure that people, when they're buying these things, actually understand what they're being sold.

Some of these things that we call alternative DNS actually don't even use the DNS. There are some of the blockchain technologies that also don't use the DNS, but they do, as Ram was saying, look like the DNS, very much so.

That could cause confusion, and when there is confusion, there is always opportunity for security problems, and we do have to worry about that.

BRUNA MARTINS DON SANTOS: Thank you so much, John. We have a queue on-site and there's also one hand online, but maybe we can start with the on-site own. So, please go ahead.

LUCIANO MAZZA DE ANDRADE: Hi this is Luciano, I'm Brazil's representative to GAC. Certainly, it will be a bit out of my depth to delve into this discussion from a more technical perspective. I just want to perhaps to bring a little bit of a more, if I may say so, political diplomat view on this debate that might be helpful.

I recall when Nigel proposed this topic for debates, the first thing that came to our minds was that perhaps all the topics should call Avoiding Internet Fragmentation not Internet Fragmentation and its Implications. I think as has been discussed in this panel, there are different interpretations about what internet fragmentation means.

I'm certain that in certain levels, certain segments of the internet, this may already be true, but following the debate, it seems to me that relation to the ICANN's main role, it's not yet full reality. What concerns us is the extent to which the debate on internet fragmentation somehow informs narrative that are politically instrumentalized from different purposes in the international domain, let's say.

So it's not, of course, so we recommend a bit of caution when we assume and work on the assumption the internet fragmentations already there, because I think that serves political purpose as well.

So I think that should be always be approached with some question. Of course, it's not new to say that from the south perspective, at least from the Brazil perspective, very sure further countries from what has been called more recently the global south, trends of internet fragmentation run counter to central objectives in terms of innovation, development, the reduction of inequality, increase in connectivity, reduction in digital divides, the increasing of digital literacy, et cetera, et cetera, et cetera.

So in order review, the consolidation of the view that internet fragmentation is already there as a giving is something inevitable, is not something positive. So as I said, I think ICANN and the ICANN community should approach this issue with circumspection in the sense that this is part of a narrative that can be instrumentalized in a political perspective.

That can involve just strategical debates on coalition building, on areas of influence, on the definition of which are the right places to devise the next regulations on several aspects of the internet, or even on several aspects of the digital economy. So I think that's something that we should have very clear in our minds.

Just to complete this desirement, I think also the internet fragmentation narrative is not very helpful when it comes to trying to find some common ground on the base that we have ahead international field.

So we're talking, for instance, on strengthen of the IGF, on discussions on the ITU, on discussions under the UN, or perhaps the renewal of the WHOIS agenda, also on the debates on the global digital compact.

So as I said, I think there's a technical element to debate, of course, and I'm not the best person to say where fragmentation is or is not, but I think we should be cautious when we look this debate on internet fragmentation as something that can be used as a tool for political purposes. So that's what I wanted to bring to you. Thank you very much.

BRUNA MARTINS DON SANTOS: Thank you so much, Luciano. I'm going to suggest that we take all the interventions, and then speakers can talk about them on the closing remarks, but we can go up to the next one.

ALIREZA SALEH: Thank you. My name is Alireza. I'm here on my own capacity. Basically, I think that as everybody says, one of the reasons

actually people are thinking about just the fragmentation of the internet is geopolitical reason.

As a former CEO of the .ir, which was very much involved in the day-to-day operation, that in the sanctioned countries, I was actually witness to some threats or sometimes on the act by gTLD operators or other stakeholders against the people that actually using the domain names that in the sanctioned countries.

Sure. Some of them actually has been, as Ram said, some of them has been addressed properly by ICANN regarding some of the things that happened, but I think that the threat is still there, and actually I think that people are still thinking about what happened if the next threat comes in, because I think that there is no clear kind of policy that with regards to these things, dealing with the domain name system in the sanction countries.

For example, if we look at the previous round of new gTLD application, it was not clear about what happened if someone from a sanctioned countries wants to have it new gTLD. Actually, it was somehow that it hasn't been addressed.

So I think that it's now time for ICANN and community to come up with some clear policy around that, that actually everybody knows that what they need to do, because I think that it's a foggy environment right now. I was hoping after NTIA transition, this

will happen because it makes things easier, but it didn't. I think that now would be the time to do that. Thank you.

BRUNA MARTINS DOS SANTOS: Thank you. Sébastien.

SÉBASTIEN BACHOLLET: Thank you very much. My name is Sébastien Bachollet, and I will be speaking French. ICANN's is one world, one internet, but maybe in the future, there will only be one internet, and I'm concerned about the world.

Thank you very much, Ram and John for insisting on the fact that it's not because some people use the same name to call one same system, which is the word that we use, that it necessarily means that the system is the same. It actually brings back to my mind a commercial, you probably weren't born at the time, but when I was young, there was that advert for Canada Dry, and it said it has the color of alcohol, it has the taste of alcohol, but it is not alcohol.

I have the feeling that all of those who try to tell us about DNS outside of the DNS that we manage here at ICANN actually look for something that they don't have. For the final user, we would really need to get things straight. So once again, thank you, John and Ram for doing that.

BRUNA MARTINS DOS SANTOS: Thank you. Next.

NAMRA NASEER: Hello. Thank you. I'm Namra Naseer, an ICANN fellow. I'm currently working with .ADAC based policy think tank. I think it's fair to say that internet policy and international affairs move together. Fragmenting internet is also fragmenting the world order right now.

Internet has been both a product and a driver of political realities. We saw that in Arab Spring, we saw that in US elections 2016. I would like your thoughts on how interoperability opens doors to participation and in why it's collaboration.

As cross border goals emerge from containing COVID to tackling climate change, I believe interoperable internet becomes more crucial. My question to the panel is that in what ways is ICANN playing in making interoperable internet more understandable and immediately relevant to policy? Thank you.

BRUNA MARTINS DON SANTOS: Thank you so much. I'm just going to check the two interventions from the onsite participants. So we have Chokri and then Jorge. Ah, it was an online hand, but yes.

CHOKRI BEN ROMDHANE: I thought I had to raise my hand in the -- So I really appreciate what you have said, Ram, and your openness for the development of new technology, but I'm quite confused. Are you here defending the fragmentation of internet or you are defending the centralized system of the DNS?

Because if a new technology is emerging and going ahead for a decentralized system, what we can do? Are we going to follow this new trend or we are looking to maintaining this centralized system that in some cases, it's not in the profit of the end-user?

In contrast of that mentioned by some of my colleague, because end-user finally, or the user of internet is looking for improving [01:12:36 - inaudible]. So, I'm insisting that let's discuss this centralized and not be conservative and push the end-user to looking for something else. This is my idea.

RAM MOHAN: If I may quickly respond to that. I don't think this is a, a fight between "a decentralized internet versus a centralized internet." We all know that the DNS from its very designed is decentralized, that's not the issue. What I'm actually arguing for is a centralized user experience, a predictable common user experience using terminology that actually means the same thing everywhere,

where a TLD means something to everybody, the same thing. So I'm solving and I'm advocating for the defense of that predictable common user experience that internet fragmentation really threatens.

BRUNA MARTINS DOS SANTOS: Thank you, Ram. So, Jorge

JORGE CANCIO: Hello everyone. I hope you hear me okay. This is Jorge Cancio from the Swiss government, but I'm speaking here more on a personal basis. I think it's important to be aware and I mentioned it, that there are ongoing discussions at the international level on the issue of internet fragmentation, especially the discussions at the UN Internet Governance Forum and the forthcoming Global Digital Compact, which has been proposed by the UN Secretary General. So this is an issue very high on the agenda of digital governance. I think this community has a role to play and it's important that all engage in such discussions.

What ICANN can do regarding these trends or narratives as Brazil mentioned, I think is twofold, probably. On the one side, of course, to continue its operational excellence in making the DNS work or contributing to making the DNS work as we saw through the pandemic. So there, ICANN has very important functions.

On the other side, I think as a model of multi-stakeholder collaboration, I think that ICANN is best advised if we continue working on our inclusivity and diversity because those are really the cornerstones of the legitimacy of this model.

What is out there still as a question, which has been posed in the past by other countries, is whether some of these functions or some of these elements that some have called the public core of the internet need some international protection, some agreement that countries will not interfere with such functions. Because nowadays, this depends very much on the goodwill of countries, and there's the possibility of being immersed in functions in geopolitical tensions, and there are no protections, at least nowadays on these functions that are performed by ICANN and other critical institutions in the coordination of the DNS.

So that's probably something to be continued to be discussed and which was addressed to a certain extent by the Cross-Community Working group on accountability some years ago. So I leave it by that, and thank you very much.

BRUNA MARTINS DON SANTOS: Thank you very much, Jorge. Before we move on to the queue, we also have a word cloud, so we can gather more views about this. The question on the word cloud is what concerns you

the most about internet fragmentation? So we'll post the links and the ways to participate in that in both the chat, and here and as we move on in the conversation, we'll have it on the screen soon. So Chris, please go ahead.

CHRIS BUCKRIDGE:

Thanks very much. Chris Buck from RIPE NCC and also currently a member of the IGF MAG. I think one thing worth noting that I haven't heard mention too much is that this is far from a new conversation. There has been a lot of work done on this over the last 10, 15 years. A lot of it by members of this community.

So I'm looking back to things like the World Economic Forum paper that came in 2016, which really helped lay the groundwork for a lot. There have also been some more recent papers, I think there were links to some of them in the Zoom chat, which further complicate the discussion and the matter.

I think despite that, perhaps to an extent because of that, we have driven ourselves into a bit of a cul-de-sac in that we don't have a really clear common definition of what fragmentation is. So in pinning my colors to the mast here, I want to call back to John Crain's initial intervention there, because I think he really captured it quite nicely and pithily when he said it's that breakdown or the fragmentation of the consensus, the

agreement around what actually is necessary to constitute a global internet.

I think that's a really good way of framing and constraining the conversation. I also recognize that it's useful and important that we've had quite a long discussion here and in other venues about the definition because, and here I want to refer back to what some of my, well, colleagues from the GAC have said.

Avoiding internet fragmentation has become a byword, and not just in the technical community, not just in ICANN, but in up as far as the top levels of the UN. So looking to next year, well, the Global Digital Compact to be prepared in the coming years, avoiding internet fragmentation has actually been identified by the Secretary General as a key theme of that. Now, to me, that's a problem if we don't even have a clear sense of what avoiding internet fragmentation looks like.

So I think for this community, it's really important discussion to try and nail down, try and identify what we actually mean. Then last point here as well, I think it's also equally important to move from that discussion argument about definition to the practical measures of what can we actually do then?

I think James, you started to mention this, but others have pointed it out as well, and I think yes, communicating very

specifically on issues or actions that can cause that fragmentation is really important.

Jorge, I think made some really important points there about maybe there are other practical measures that different stakeholders, regulators, legislators can do to try and ensure that that fragmentation doesn't happen. So finally, finally, finally, as I said, I'm a member of the IGF MAG with Bruna.

I'm actually facilitating a main session at this year's IGF on Avoiding Internet Fragmentation. So I'd really invite people to get involved there and to work with us to try and bring this to practical outcomes that we can actually do to avoid fragmentation. Thanks.

BRUNA MARTINS DON SANTOS: Thanks so much, Chris. I'm closing both queues. We have Nigel and Thomas Rickert on the online queue, and we also have former people queuing up here, but I'm going to go to the online first. So, Thomas.

THOMAS RICKERT: Thank you very much, and thank you everyone for this really useful discussion. I do think it would be helpful to address what fragmentation is, alternative roots have always existed even

before ICANN was formed, and yet those alternative roots have not been part of the ICANN community.

So I guess the question is, does ICANN want to include alternative roots, of course, nowadays we're talking about blockchain or do we think as long as they don't collide with the [01:22:19 - inaudible] root, then they're not within ICANN's remit. So I'd like to throw that question out.

BRUNA MARTINS DOS SANTOS: Thanks so much, Thomas. Can I go to Nigel?

NIGEL HICKSON: Yes, thanks very much. I'll just be very brief. I just wanted to raise a few more issues that have occurred in the chat. First of all, over 300 people as you can see, so really excellent participation. The ICANN role, of course, has been discussed where, how, what should ICANN do, what it shouldn't do.

IPV4 versus IPV6 has been raised. Is this an issue? Of course, blockchain is that within scope? People have been discussing that, of course. Not having access, Stephanie Perrin raised this point, but for some people, fragmentation is a reality every day because they can't afford to or they can't get access to the internet.

So for them, the internet is also already perhaps fragmented. Sub domains, the role of sub domains in this debate has been raised and no clear definition of what internet fragmentation is. So thank you very much.

BRUNA MARTINS DOS SANTOS: Thanks, Nigel. Alexa.

ROSALIND KENNYBIRCH: Great. Thank you, Bruna. Thank you to my colleagues as well, who have made some great points today. And my name's Rosalind KennyBirch. I'm the GAC alternate for the UK. In the context of this fruitful discussion, I thought it would be useful to highlight the important work being taken forward on this issue through the IGF policy network on fragmentation.

It is encouraging that the network plans to carry out a survey, the purpose of which is to collect existing resources, case studies, and perspectives on fragmentation from the wider community in order to map existing thinking and start to synthesize different positions.

I wondered if panelists had also been following this work and had any comments on it. We, as the UK support the work of the network and look forward to seeing the results of the survey. Thank you.

BRUNA MARTINS DON SANTOS: Thank you so much, Rose. Next up.

JAVIER RUA-JOVET: Javier Rúa-Jovet, I'm a ccNSO councillor. I speak in my individual capacity and I speak here as an individual user and also as a citizen from a non-sovereign territory, and I want to make a statement about multilateralism, the world of sovereign states versus multilateralism in the world of everybody that wants to participate, and to echo a bit on James comments on the need to do more inward and outward defense of multi stakeholder, and from my perspective and what that means to me as a Puerto Rican.

ICANN be here because this is a multi-stakeholder context, as an individual and as a member of a society that is not a sovereign state, that is not possible in multi-lateral context, or it's very difficult in multi-lateral context. So, this is the part of the broader geopolitical issue here, that one of the drivers of this potential fragmentation is this competition of governance models a little bit.

So I just wanted to stay clearly a view of a very practical aspect of the benefits of the multi stakeholder model versus other state driven models to achieve conclusions that take into

consideration very, very diverse views, particularly views that are usually not present like mine in a multilateral context. So just a general statement about the need to really defend this type of governance. We can't let it pass us by. Thank you.

BRUNA MARTINS DOS SANTOS: Thank you, Javier. Next up.

DAVID CAKE: David Cake. So it's about around Ram's discussion about the value of what a TLD means and expressing that, but also around this idea of alternate roots. Obviously, there's a long history with ICANN and alternate roots and not being very friendly to them and having expressing its advantages over them.

We have this, the RFC 67/61 special use domain names process. A lot of that problem with alternate roots is name collision, and that does prevent name collision. Most of the things in that list, well, actually most of them are sub domains of .apa, and thus managed within ICANN, but the most of the things are pretty obvious in their use.

When we add things like do blockchain, it may not be obvious. We're interested in responses, but also mindful if we do start to really try to articulate the differences between alternate roots and ICANN TLDs, then to be very mindful of that space within the

process, and perhaps we should be encouraging, not in encouraging groups to work entirely without the system, but to say, here is this point of connection, the special use domain names and to encourage people to at least think about taking that to the IATF and working with them, and as we work within ICANN to articulate the difference, but also the value of there being one unified system, even if it allows some diversity. Thanks.

BRUNA MARTINS DOS SANTOS: Thanks so much. Next one.

ABDULLAH QAMAR: Good morning and as-salamu alaykum. My name is Abullah. This is my first ICANN meeting as a fellow. I am from Pakistan, and my job is I am a STEM educator and computer science instructor. I believe that assignment of gTLD has an important role and impact on expansion of internet. My question is to know whether and how the child and the common main person safety is considered in the new gTLD in this dark fragmentation, and what is the role of ICANN? Thanks.

BRUNA MARTINS DON SANTOS: Thanks a lot. The last intervention from the floor.

PEGGY LEE: Hello, everyone. I'm Peggy. I come from Taiwan and I work in a company named Net Talent. I got a little wild, maybe a little tricky opinion to the public, but I'm not very good in English. So I will speak in my native language, Chinese.

I have a rather a crazy idea. Maybe the internet fragmentation is not necessarily bad. If we look at it from a different perspective, it could be something criminal. Sometimes, maybe in the beginning, it could prevent the spread of a crime, of some crimes.

Maybe that could also protect or help the law enforcement to effectively handle the situation. We all know that the internet spreads information very fast. If something spreads, it's very difficult to distinguish it very quickly.

BRUNA MARTINS DOS SANTOS: Thank you so much. We're moving to the very end of this plenary session. I'll give our discussants the opportunity to do the closing remarks leaving a tweet or a longer tweet kind of mode, but then maybe we can start with John.

JOHN CRAIN: Okay, there was a lot to digest there, and I've got my own little word board here of different words that I heard, but I'm going to try and summarize it. So, one of the important things that we

need to remember, and Farzaneh raise the word threat, but we also need to remember where there are threats or opportunities.

Some of these changes, they are indeed opportunities and that's why we like to talk to these people that are doing different things and try to understand why they are doing things. There are always reasons why people want to fragment, if you like, the network, it could be commercial, it could be user protection, and it could be many other things.

We absolutely encourage people developing new technologies and protocols to look to the IETF and those processes to document those things and have a discussion with the other engineers. There's actually a draft out of the moment on what looks like a namespace and uses a lot of DNS like terminology, so we do encourage that.

On the issue of how do we include these alternative systems, the word alternate is almost in my mind opposite to single interoperable. I look at these namespaces as a Venn diagram. When we look at them, and you say, well, we have this one single interoperable namespace and ecosystem, including protocols, et cetera, that we want the users to have that experience, and every time you add a new piece of that Venn diagram, it gets more and more complicated, and it becomes harder and harder to have

that single, interoperable space, and that is single interoperable Internet where people can work.

So I'm a strong believer that the single interoperable internet for the end user is really important. I've been here for 20 odd years, maybe longer. I've been here a long while, not at this table, but that ICANN. So, I am opinionated on this, and yes, I think we should do our best to keep the user experience as clear as possible.

BRUNA MARTINS DOS SANTOS: Thanks so much, John. Ram.

RAM MOHAN: Thank you. Users take the single interoperable namespace and ecosystem for granted. There are many forces that look to change that experience. The biggest thing that we at ICANN need to do is to ensure that that expectation from users have a single interoperable namespace that we work to fulfill that expectation. That's it.

BRUNA MARTINS DOS SANTOS: Pari.

PARI ESFANDIARI: Thank you. I repeat myself, I think internet is the defining technology of our time, and I think the technical problems will be resolved once technology or internet had a geopolitical component. Today, it has become a geopolitical issue with technical component. I'm confident that technical issues will be resolved, the key problem is the geopolitical issues that we need to focus on. With that also have any thank you everybody for being here and pass it through.

BRUNA MARTINS DOS SANTOS: Thanks. Paul.

PAUL WILSON: There's an ironic t shirt showing the layered internet model which has politics as at the top. It's actually more true than ironic these days. I think the place where fragmentation is most apparent and most costly, and where we need to do most work, as I said before, to fight, it is at the political layer, that the solution to doing that is participation.

So I think this is also a question about the function of ICANN, and it's not ICANN's role to be all things to all people, but this is a really good example of a place where the bridges can help to be built between the disparate political models and the fragmented political models that we have.

We also have the IGF, if anyone thinks the IGF job is over, or the evolution of the IGF is over, I think that's quite mistaken. I think that is a place where we've got a huge amount of work to fight fragmentation on the political level, and we do that through participation.

So I think the internet is getting bigger, it's getting more complex, the challenges are getting bigger, and the cost and the investment that needs to be made in that is getting bigger, I'm sorry to say. So that's what we need to do to fight the fragmentation that really is coming from the top down on the internet. Thank you.

BRUNA MARTINS DOS SANTOS: Thank you. James.

JAMES BLADEL: So just briefly, I think the most effective way to push back against fragmentation is to provide an effective and conspicuous contrast and uphold the value and the meaningfulness of a unified internet, both in our discussions and interactions.

And I think that means that it falls to all of us to take that out into our day jobs, as well as to help to ensure that ICANN work products are being completed in a timely manner. I think that will tamp down on a lot of the ideas that maybe this model or this

unified internet is no longer desirable. So, less telling and more showing.

BRUNA MARTINS DOS SANTOS: Thanks, James. Last but not the least, Farzaneh, if you're still in the session. Thanks.

FARZANEH BADI: Yes, I am. It might be midnight, but okay, I love this conversation. So basically, I don't I agree that we need to look at architecture, but we need to move away from the narrative of layers, of the internet, and look at what has become or is becoming the critical property of the internet.

What are the critical properties of the internet that if people do not have access to, they will not be able to connect to the internet? It doesn't mean that they cannot have access to online services or have like lower quality, it means that through interoperable, global Internet, and that is not only by technical coordination, or technical shortcoming, it's also because of policies that some corporations could take that could kind of hampered their access, and also through our collective action.

I want to mention that we are here because we give legitimacy -- ICANN is here because we give legitimacy to ICANN to coordinate an interoperable domain name system. We need to preserve that,

but we also need to monitor the risks and opportunities that John tells me that are out there that provide a better access, that facilitate access to interconnection for people without any discrimination.

Last point that I want to raise is that I think that in these discussions, we don't mention Afghanistan access to the internet much. I go around and talk about Afghanistan because I think that has been overlooked by many of us, and it might not be an ICANN mandate but I just want to put that on your mind as the last remark to think about how their access has been affected. I think about ways to help and support that internet community. Thank you.

BRUNA MARTINS DOS SANTOS: Thank you, Farzaneh. I'm not sure if Nigel has any closing remarks as well, but I'd like to give him the chance to know.

NIGEL HICKSON: I'm absolutely fine. Thank you very much, everyone.

BRUNA MARTINS DOS SANTOS: Thank you so much, Nigel. Maybe last but not least, and also talking about participation, we planned with this disciplinary session also to launch a call for action to the global digital

compact as it was already mentioned by some of the interventions before.

The idea behind the GDC is to outline shared principles for an open free and secure digital future for all, and internet fragmentation is very much on the agenda for this discussion. So any contribution from the ICANN community in a bottom of way will be a very interesting one, and that's also something we plan to share with you all. So I think thank you all for joining and for staying around. We went in minutes after but thanks for joining.

ANDREA GLANDON: Thank you. You can stop the recording.

[END OF TRANSCRIPTION]