ICANN78 | AGM – Joint Session ICANN Board and RSSAC
Monday, October 23, 2023 – 4:30 to 5:30 HAM

WES HARDAKER: All right. And the clock just ticked. So welcome to the joint meeting, the ICANN Board with RSSAC. This is my favorite meeting because it's the only one I'm not conflicted for. I greatly appreciate both groups letting me wander back and forth between you, especially on Sundays where both groups decide to meet continuously. And it means I get no breaks. The good news is that I'm going to read questions and I'm going to turn it over to either various members of RSSAC or various members of the Board to answer. And I can actually just point at people, so it'll be an easy meeting for me.

So with that, let's go on to the next slide, please. So as I mentioned, I'm Wes Hardaker. We will do a round of introductions. Brad, can I start with you, please?

BRAD VERD: Brad Verd, Verisign.

DANKO JEVTOVIC: Danko Jevtovic, Board vice chair.

MATTHEW SHEARS: Matthew Shears, ICANN Board.

HIRO HOTTA: Sorry. Hiro Hotta, M-Root.

KARL REUSS: Karl Reuss, university of Maryland.

KEN RENARD: Ken Renard, Army Research Lab, RSSAC Vice Chair.

JEFF OSBORN: Jeff Osborn, ISC, RSSAC Chair.

TRIPTI SINHA: Tripti Sinha, ICANN Board chair.

SALLY COSTERTON: Sally Costerton, interim ICANN CEO.

JAMES GALVIN: James Galvin, ICANN Board.

ROB CAROLINA: Rob Carolina, ISC.

AVRI DORIA: Avri Doria, ICANN Board.

EDMON CHUNG: Edmon Chung, ICANN Board.

DANIEL MIGAULT: Daniel Migault, ITF liaison to RSSAC.

MAARTEN BOTTERMAN: Maarten Botterman, ICANN Board.

DANIEL KARRENBERG: Daniel Karrenberg, RIPE NCC, K-Root.

WES HARDAKER: All right, thank you very much. And I'm Wes Hardaker, I work for the University of Southern California, but I'm also the RSSAC liaison to the ICANN Board. So I'm both a RSSAC member and a Board member. The questions that we have today are very far reaching. We kind of designed them that way in both directions to think more about the future. And so the three questions we're going to start with are the three questions from RSSAC to the ICANN Board.

I'm actually going to read all three in succession because they're kind of similar and then we're going to actually break them down. But just so you know that they all are aligned. The first question will be, "What is the next big issue on the horizon for the DNS?" The second question will be, "What do you view as the most important threat to the Internet's unique global namespace?"

And the third one is, "What do you view as the most urgent threat to the Internet's global unique namespace?" Note that really those questions are the same except for the wording between important and urgent, they have slightly different emphasis. We're going to start with what is the next big issue on the horizon for the DNS? And I'm going to turn it over to James Galvin to lead us off.

JAMES GALVIN: Thank you, Wes, and thanks to RSSAC for the question. We got to thinking about this and talking about this question, and I think what's important is, you know very well, of course, that you're asking a very broad question and you're certainly as well positioned, probably even better positioned to really have an answer to this question. But with that, let's try to scope this question a little bit just to give us a starting point for some dialogue and discussion.

So let's think about issue, like, to try and put a little definition on issue and call it points of change. So what do we think of the things which are most likely to change on the horizon with respect to the DNS? And with that, we'll highlight two things to get our discussion started.

The first one is expansion of the name space, topic near and dear to us here at ICANN. And I think this has three elements to it, which are useful to acknowledge for this discussion. RSSAC, of course, has already noted the issue of the rate of change of the namespace is kind of important, and root server operators care a great deal about that. And you've talked a lot about it in RSSAC31, so it's important to put that on the page as a starting point.

The second thing is that increasing the namespace certainly increases concerns about the relationship between the DNS and other name spaces. And this, of course, is a place where we would point folks at OCTO34, the challenges with alternate name spaces. And what makes them an issue is they increase the challenges of name collisions. And that is also a large topic that ICANN needs to worry about.

As we expand our DNS namespace, we have to care about even more how we work with the existence and presence and the increasing prevalence of those other namespace. So that's one point of change that's worth calling out. The second point of change is about including more strings in local scripts through IDNs. And I'm going to hand this off to Edmun Chung to expand on that particular issue. Thanks.

EDMON CHUNG: Thank you, Jim. And Edmon here. And I guess for those of you who know me, this is important topic. The expansion into internationalized domain names is not new, and there are multiple IDNs in the root and in the DNS right now. What is going to be interesting is that the ICANN, both the gTLD side and the ccTLD side is working through policy development to introduce more formally IDN variants. So that is going to have an interesting impact.

Maybe slightly less on purely speaking DNS, but certainly on provisioning, certainly on information that's related to domain registrations, including at the top-level domain area. But I think that is going to be one of the interesting things to watch, how the resolution patterns might work in the future. How much people actually use the

variant TLD, for example, are going to be an interesting kind of next big issue.

So I guess building on what Jim was saying, it's hard to say, which is the next big issue because there are multiple big issues that seems to be coming our way. On top of that, both because of the expansion of the namespace and because of internationalized domain names, the issue of universal acceptance is going to be I think an important issue. Maybe again at the root level, that is already so being dealt with, but many downstream DNS related applications and platforms will see the impact especially when IDN variants are being included.

And I guess I could add a little bit, when we think about IDN variants, we will need to also think about DNS SEC, the DNS security extensions that would apply to IDN variants at the top level and how it's managed with the concept of one TLD with having multiple variants and then having multiple DNS SEC related information at the top level, at the second level, and so on. So I guess those are some of the things that at least we've talked a little bit about and identified as some of the issues that will have impact on the horizon for the DNS.

WES HARDAKER: Thank you both Jim and Edmon. Is there any other Board member that wants to chime in on this subject? I don't believe so. So we do want this to be a discussion, so I'm going to throw a hard question to them that they won't be able to answer. So from the RSSAC's perspective, one of the questions that we always have and we'll get to it in a little bit later in the discussion, is sort of the growth rate of the internet. Do we have any feelers for the next round, and how possible

the expansion of the root will actually contain a lot more of the IDNs that you were just talking about?

EDMON CHUNG: Yeah. So that's not even the million-dollar questions, 1,000 or a billion-dollar question, right? And so, it's really hard to predict, but what I guess we can predict is with the IDN variance in place, the multitude of that might not just be linear in that sense, it will be slightly exponential for some of the IDNs.

But if you look at the overall situation, I don't think it's going to bring us to a point where there are millions of names in it, because also the policies do have, I wouldn't say a cap, but right now what the policy does say in terms of IDN variance at the top level domain level is-- well, the policy isn't approved yet, but the draft of the policy says that it's going to be the applied for top level domain plus three or four.

Anyway, there was a number, three or four, I forgot, which is included in the fee. So that's a barrier for increasing, but the allocatable variance is also capped by what is called the root zone LGR, the Label Generation Rule sets. So there's some limitations to it, so I don't expect it to run completely out of control. But it does tell you that it's a three times potential versus a one to one if IDNs take off, which I hope it takes off.

WES HARDAKER: All right, that would be a win, right? Okay. Anybody else want to respond or ask follow on questions on this first discussion item? Avri?

AVRI DORIA: I just wanted to take agreement with that would be a win because it's almost a requirement, so not having it might be a lose, but we really do need to have it. And on your wider question of how many, whether it's IDNs or others, come out of the new gTLD, I have heard, forget it, there won't be many, and I have heard tens of thousands. So among those that are into predicting, it's a very wide range. I expect normal, it'll be somewhere in the middle.

WES HARDAKER: All right, thank you very much. And Avri, thank you very much for your past years and actually helping run the next round of the program. So if it succeeds, it'll be attributed largely to you as well. Is there anybody else that --

AVRI DORIA: And if it fails, it'll be mine too.

WES HARDAKER: No, then it'll be somebody else's fault. That's how leadership works, right? Is there anybody else that wants to follow on on topic one? All right, seeing none, let's go on to the next question, which is, "What do you view as the most important threat to the Internet's unique global namespace?" And again, I will turn to Jim to lead us off.

JAMES GALVIN: Thanks, Wes. Got your name right that time. Yeah, so I'll kick this off and then hand off to others to fill in. And again, rather than focus on technical issues so much, of which you folks in the RSSAC are certainly more qualified to speak about than most, let me, in a word, call out geopolitics and the concern that arises from geopolitics and their effect in general on the fragmentation of the internet.

And now let me say a little bit about what I mean by fragmentation, and then we'll let some others speak about the geopolitics issue. An assumption behind fragmentation when we think about it is that everyone can get to everywhere. And from the point of view of the DNS, we would certainly like that to be true, right? That's the definition of our one world, one internet, everything globally unique.

And this is what makes alternate name spaces a problem, because names are no longer unique, right? Given a name, especially one that looks like a DNS name, and alternate namespace in particular have a way of using DNS look-alike names. Users become increasingly challenged with being able to get where they want, a name collision, or perhaps they can't get anywhere and not being able to get anywhere, brings up the concern about the importance of resolution services.

We really only have one, which is common and broadly deployed. Just like the DNS, you've got DNS resolution services. If you're going to have alternate name spaces, somehow you've got to make them into something that lets you get somewhere. And so this becomes an important thing. And with that, let me turn a discussion of geopolitics over to Danko Jevtovic.

DANKO JEVTOVIC: Thank you, Jim. So first, I'd like to thank RSSAC for bringing these wider questions to the discussion center. I see that in light of your increased transparency, you are also thinking of the subjects that are out your very narrow view of your remit. So this bring us to the internet governance in general. And recently we had an IGF forum in Japan in Kyoto.

And we had a lot of discussions about multi-stakeholder versus multilateral model. And because the IGF is also a multi-stakeholder forum, we were there in a bit of a rough consensus of the importance of the multi-stakeholder model. But we saw that there is a significant, well, a significant drive from the UN to discuss these issues, it's also in the UN arena, which is by definition multilateral.

So in the UN system the consultations in the multi-stakeholder model is often just bringing views from the different stakeholders. But then when the governments make decisions, there are only governments in the room and the model is inherently multilateral. So we see this drive towards the basis plus 20 and the discussions that are coming from the global digital compact as significant, well, threat or change, possible change to the whole internet governance that might significantly impact the internet unique global identifiers.

And we think it's very important for all of the technical community, for ICANN and similar organizations to get together and to discuss the importance of our work and the work we do and the root servers define the internet as one network, and how much is that important for the functioning of the internet? And of course, for not having the

fragmented system in the technical way as Jim described, but also in this internet governance way. Matt, do you want to add?

MATTHEW SHEARS: Yeah, thanks, Danko. It's a really interesting question just to dig a little bit deeper based on what Danko said. We have a period of three years or so in front of us that are quite critical right now from an internet policy perspective, and that impacts across our ecosystem. From the global digital compact, which Danko just referred to, which the negotiations and the discussions are underway at the moment.

And this covers a range of issues related to internet policy areas of concern to all of us. That's underway now, and ICANN's GE is engaging and fully engaged in that process, that's going to be followed up next year by the summit of the future, which is 2024. And that will be followed the next year by the WSIS+20 that Danko has just been referring to.

And that's suite of actions, if you will, is going to be very determinative in terms of how the internet and the internet governance forum and the multi-stakeholder model will be seen and over the period that follows. So engaging now is critical, engaging across these three years is critical.

Danko has mentioned that the multilateral dimension, what we're seeing, which is so fascinating, is that those who are supportive of a more multilateral approach to internet policy are actually beginning to adopt the language of the community, of the multi-stakeholder model

language. So you see much more reference to consensus, bringing in stakeholders in these government driven texts.

So we have to again, watch how this kind of shaping of this discussion goes forward. What we don't want to see is in 2025 that we come out of the WSIS process with any kind of reduction of the significance or the role of the technical community. And this is a question under consideration in those discussions at the moment. So we fought very hard in the beginning of the WSIS process back in 2005 to ensure that there was a reference to the technical community and all that it does.

And that's being played with a bit in these discussions. So something that's important, it's high up, it's really in the policy space, but it could have implications further on down the road. So that's just to build on what Danko said. Thanks.

WES HARDAKER: All right, Thank you Matthew and Danko and Jim again. Does any other Board members want to chime in on answering the question? Nope. Okay. Does anybody at all have follow on questions or discussion items for this particular topic of the most important threat? Hearing none. All right, so let's go on to the next one, which is, "What is the most urgent threat?" And oops, Edmon.

EDMON CHUNG: I actually would be interested to know if the RSSAC has has any thoughts on that question in terms of the threat that the root server

system might be seeing to alert on the other side as well. I wonder if there's any thoughts there.

AVRI DORIA: Add a question to his, we keep talking about policies that might help these things. Is there any technical solutions to these alternate name spaces or anything like that, that we should be looking towards?

WES HARDAKER: I think that's a fantastic question. I'll give a quick answer and then I'll throw it to Jeff by force. So a couple of things. One, the one thing that the root server system does see is when somebody is trying, as Jim was saying earlier, to try and resolve a name that they can't, because it's an alternate namespace, that query leaks to the root. So we actually do see queries that really aren't for the DNS, they're intended to be for an alternate namespace.

When you ask a query that you actually get a proper answer from to the root, you're allowed to remember it for two days, so there's a long caching time. That's not true for it doesn't exist answers, that caching time is a lot lower. That being said, the root server system is so massively over-provisioned for much worse attacks than just leaked names, it's really in the noise for us still. However, it's an important thing to consider. As more alternate namespace take up, we'll actually see an increase in our traffic load. I was going to say something else, but I forget, so I'm going to throw it to you now.

JEFF OSBORN: Thanks, Wes. The RSSAC is an interesting organization with a very particular technical area that we provide advice to the ICANN board for. So I've been a member of it for about six years and chair since the beginning of the year. And one of the things we've spent a lot of time on was, in January, I noticed that I had a 90-minute presentation to explain to the GAC how RSSAC worked, or how the root server system worked in general.

And when they caught me climbing the fence on my way out, they insisted they could put that off a while. And we began a series of meetings that have been running since then on how do you explain the root server system to somebody who doesn't operate a root server. And I'll give you the whole speech, and I appreciate your indulgence.

So I started with this, I said, my mother has a master's degree and my father has two advanced degrees, they have no idea what I do for a living. Anyone else in this room? Does your mother know what you do for a living? No hands. Partners, brilliant partners who know what you do for a living? Not a hand going up.

So there's obviously an issue of how do you explain this to people who don't know? And we had a lot of interesting times talking about it, but it was pretty narrowly determined that the people we really need to be talking to are brilliant non-technical regulators and legislators, and in particular probably, cutting the story short, the friendly ones, the hostile nation states that have been in our fever dreams of, oh no, who's going to take this thing down have been replaced by the well-meaning legislators and regulators of let's say, pick two out of a hat, the US and the EU, where out of all kindness and good intentions, they

could kill the internet with a three sentence piece of legislation, and then go have a party and be happy about it.

So we are spending a fair amount of time trying to figure out how do we explain what it is we do, why it's important, and why the last thing this device needs is regulation and input from 193 nation states. And that's challenging, needless to say. I'm going to throw it to anybody else who wanted it, but that's the base.

WES HARDAKER: All right. I will say we didn't answer Avri's question either, which is technical solutions, and interoperability between namespaces is going to be key to solve. What Jim was talking about earlier is how do you do resolution when users don't know what they're using? They just need a name that works. And so there isn't a technical solution for that, there's not really a policy you can wrap around that either.

So it's going to be a challenging time if we do end up with lots of alternate proposals and some become popular. I can speak for the roots of our operators because we've said it before in multiple meetings. If the DNS got replaced by something better, we'd be happy with it. Something better is always good technically, but there's got to be transition in the same way that there's transition from IPV4 to IPV6. There's got to be transition for-- Jim, please go ahead.

JAMES GALVIN: No, I wanted to add, it occurs to me, I'd be remiss as the RSSAC liaison to the ICANN Board, I'd be remiss if I didn't call out the fact that RSSAC

has a work party on DNS resolution services and looking about resolution issues on the internet. So this'll be a nice overview and a look at the problem space and a discussion about the issues how things have evolved over time and kind of where we are.

It's certainly not going to make any kind of prescriptive recommendation about a solution, but as we're sitting here talking about the fact that there are large technical issues that don't have an obvious solution, that is an important one as alternate namespace come around, the interaction and relation between them, between the DNS and all of them is important. And it's a challenge for users as well as for us. So look for that document before the next ICANN meeting. Thanks.

WES HARDAKER: Thank you very much. Anybody else on-- so I believe we've sort of actually answered both of the last two questions. I don't know, Danko, if you wanted to add any more about the urgent threat you were talking about geopolitics for that as well, correct?

DANKO JEVTOVIC: Well, if we move to the last question, there are things I would like to add. So first of all, we are looking here at one more difference, the importance and the urgency. But if you look at the crossroad of those, I wanted to mention that the Board is very aware of both the importance and the urgency of this internet governance related threats to the system.

And one of the things that we are now doing at the board level is that we had a board working group on internet governance. And because of the importance of that, all of the board members applied for that to be in that group. So we are moving that to be Board wide, one of the important Board wide areas of the work, and it'll be directly chaired by Tripti. I think this very much shows the importance of the internet governance questions in the minds of the Board. So this is something we do.

But when we try to think about the most urgent threats, one of the things is that some of the governance we think would like to say, are have digital sovereignty and we are here to help. And these are very frightening words as the old saying goes. So there are obviously discussions, especially in the European Union about digital serenity and its important concept because the role of the governance as hopefully democratically elected bodies that's govern the countries, is also to care for the safety of the people.

And internet is a critical resource for our lives, for modern economy. And it is very important that it continues to work. But I think it builds on what Jeff has said. In order for internet to work, it has to evolve with very careful way and very much in line with what we as the technical community do.

DANKO JEVTOVIC: So we need to have good communication with governments. And we in ICANN, we had a government engagement group that is doing that. But also for them to understand the possible consequences of technical decisions in the legislation that is coming. So we think that

all these discussions about digital is something that is normal, that governments have to care about, but we see this can be an urgent threat. And there are different reasons why governments might increase their activity in this area. And I think Matthew would like to mention at least one that has global impact.

MATTHEW SHEARS: Yes. Thanks, Danko. If I may, I'm just going to turn this question just a little bit because it says, what's the most urgent threat to the Internet's unique global namespace? I think if you look at the trajectory that we've outlined and the number of the issues that we've outlined, we are entering a critical space at the moment. So we have to be very careful about what we undertake or what we do or what we don't do in this period.

So I would look at it as how do we ensure what we have to do? What's the most critical thing is ensuring that the work of this community in the broadest sense cannot be discredited. Because the moment the work of this community is discredited, we give ammunition to those who would like to see it be changed.

So I think there are a couple of things that can be done, and I'll come to Danko's point. What we have to do, and this may sound trite, but what we have to do is ensure that the ecosystem continues to do what it does well. This is really important in this period and something that was raised earlier today. We need to make sure that all is well within the ecosystem. So John Curran this morning talked about the AFRINIC situation.

So in my mind, at least this falls into that urgent category. And I think there are a couple of other things we need to communicate much better about what we do as a community and how we help the UN and these governments, including the governments who may have different ideas about the internet community, about what we need to do and how well we do it, and how well we support the UN's sustainable development goals, how well we support innovation and entrepreneurship.

And each one of the parts of the community has a role to play in that. So that's an important thing as well. And an example of that, for example, as Edmon raised, would be take up of IDNs and greater universal acceptance, for example, as specific things that would put this community in better stead in this next three to five-year period. So just thought I'd add that. Thanks, Danko.

WES HARDAKER: All right, thank you very much. Does anybody want to add additional context around the most urgent threat to the DNS? Okay. I think with that, we will move on to-- we're perfectly at time to switch into the inverse role of questions. So we could go to the next slide, please. So the questions from the ICANN Board to RSSAC, I'll read the first one out. It's a little more lengthy, apologize.

"Given the impending increase in new gTLDs under the upcoming next round, can you reconfirm that your advice in RSSAC031 published in 2018 in February still stands with respect to the acceptable growth rate of the root zone? Furthermore, does RSSAC have any thoughts or

concerns regarding the long-term trends of the growth of the root zone that they wish to voice?" And I'll turn first to Jeff.

JEFF OSBORN: Yes.

WES HARDAKER: You have concerns?

JEFF OSBORN: The question was does our advice still stand? And the answer is yes. Sorry for the flippant attitude, but the question is a funny one where a policy group asking an engineering group isn't getting a straight answer. It's inconceivable that you guys could put together a plan that would generate more or a bigger root zone than we could handle.

See, and the engineers all say, I know about asymptotes and compound. If we took every molecule on earth and gave it a root zone letter, then we could break this. But in practical, purposes the least of your concerns is the roots server operators being able to handle the size of a resulting root zone. And now I'll pass it off to the engineers to tell you the corner cases.

WES HARDAKER: No problem. So one of the ways when we were discussing this, phrasing it was with the expected plans that are coming out of the ICANN policy process right now. And I've been telling the ICANN Board

this for since I've been on it, we're ready, we've been ready to handle the next round for a decade at least.

We get a lot of traffic today and the size of the root zone is small compared to many other things. So with that, does anybody want to add, especially from the RSSAC side, additional colorful commentary or have anybody from the Board have follow on questions? Looks like no. Okay. Oh, Brad, please.

BRAD VERD: Yeah, I'll go. I think both these questions are very related to the size of the zone. I guess I would ask for caution. I agree with Jeff with his statement. Everybody gets excited about, we can put everything in the root, but when you think of security, stability, and resilience, the sign of a good operations is out of sight, out of mind. And I think the root has been out of sight, out of mind.

It's been operated well, it's been running well, and I think when I put my operations hat on, I said, well, what can break that? The rate of change can break that. So I think we need to be careful in-- we've described a number of things here that affects queries to the root new round variance, which is over half of an order of magnitude potentially.

We've got alternate namespace that as Wes pointed out, sends NXTs to the root, all of which were described to happening in the next five to six years. So that's a lot of change happening all at the same time. So I would just make sure we're aware of that, we as a group are aware of

that and understand our decisions and how it affects that change going forward. Thanks.

WES HARDAKER: Well put. Thanks, Brad. I will remind everybody that RSSAC031 is actually us responding to, I think it was the GNSO, was where the question came from, as what rate could we handle as the rounds were potentially increasing. And our answer was 5% a month, I think was-- the document is three pages long. I'm summarizing at a very high level when we did the math to figure out, well, okay, was that ever going to break?

It would be years and years out before-- even if you expanded to the maximum rate, it eventually gets to a rate that the next round application process could not meet. So when we got to hundreds of thousands of new TLDs a month, that might become a problem, but we're not there yet, and that's a long way off. So that was sort of one of the points. I would say that the one thing RSSAC would transmit to the Board, which you're already doing, which is we need to know the plan.

And I think that's sort of one of the points behind Brad is we can't engineer a system that can handle something if we don't fully know what's coming up. Now, because of the ICANN open process, we're always going to know the plan. So we're already doing in ICANN what we need to figure out what that rate should be. Brad, go ahead.

BRAD VERD: Yeah, I agree with what Wes said. Again, I just echo what I just said, which is 31 was to address the question about the rate of growth of new TLDs, essentially the way we think about it here the next round. But we just listed off two other things that are not addressed in 31. So what I'm saying, these are things that we need to take into account as a group while we think about this going forward. That's all.

WES HARDAKER: Yeah. Another way to put it is, there's other factors beyond ICANN that we also have to take into account. So it's not just the growth rate that ICANN might throw at us, it's also the growth rate of the internet and the number of phones that are in existence that are causing more requests and the number of alternate name spaces. I think Brad is spot on that. So does anybody have additional comments or questions about this question or topic?

All right, hearing none, let me go on to the next one, which I'm going to have to almost stand up to read. "Given the hopeful increase in the deployment of universal accepted technologies and the corresponding growth of the use of international domain names, does the RSSAC believes it is ready to handle the additional potential expansion, both in terms of size of the root zone and potential increase in accompanying queries for IDN TLDs to the root server system?"

So a little bit of background on the question. One of the elements of having to run a root server, if there was a gazillion TLDs and nobody ever asked about them, the traffic level would be the same as if there

was one, right? So we do have to be aware of not just how many TLDs are in the root zone, but are they all being actively used?

And with the hope that universal acceptance actually takes off, we would actually expect more queries to the root zone from resolvers that are trying to find answers to these universal-acceptance based TLDs IDNs. So Jeff, did you have an answer for that?

JEFF OSBORN: They've got to stop asking us yes or no questions. My answer to this is yes. And then you really said everything I would've said in addition to that. I don't know if somebody else wants to pick up on it. The interesting thing about more IDNs is rather than having a bigger route, it's a more frequently used one. And It's interesting, but I just don't see it as being problematic with any reasonable timeframe.

WES HARDAKER: Okay. Excellent answer. Anybody else? Liman? Nope. Sorry, Ken.

KEN RENARD: Yeah, just maybe a little bit of context, how to interpret what we say as RSSAC, we're the nerdy engineer types here. We are very concerned about the stability and resiliency at the root. So we are giving you very conservative answers. So, this is something that is very near and dear to us, very important to us. We measure the heck out of this system.

We've got some great people at research institutions, and Verisign does some amazing work. So we're always looking at this and able to

see trends. So, when we say we can take this rate of whatever, we're being very conservative because that stability is just so important to us.

WES HARDAKER: That is an excellent point. Thank you. Because we have engineered the system to such a way that it can handle attacks that will not measure any-- that far exceed anything that might come out of naming systems to the most extent, aside from Brad's listed set of concerns regarding the other places that we see a lot of queries from. It is very similar to the way that engineers, when they're designing airplanes and skyscrapers and stuff, they say, well, this is the number of people that can stand in this room safely.

And that number is far, far lower than what would actually take to break the floor or to break the system because of the bending of the steel or whatever. So engineers don't like to get that wrong, and certainly the roots never failed, so we haven't gotten it wrong. Go ahead

JEFF OSBORN: And I will apologize for my purposeful flippancy if it wasn't taken in the spirit of which it was intended. I've been concerned sitting in other meetings where people said, we have a series of issues we have to solve before the next round, and one of them is the capacity of the root server system. And it leaves me slapping my forehead because we are not an impediment to this in any way whatsoever. Having said

that, we're engineers and we're going to be very careful about it, but if we are seen as a block, I don't think that's correct.

WES HARDAKER: All right. Thank you. Anybody else? Avri, please.

AVRI DORIA: I just wanted to add that I've always believed you when you said that was the case, and therefore, was happy to push on even in the face of people saying 10,000 or more. So thank you.

JEFF OSBORN: Had you said 10 billion, I would've been doing some math, but you said 10,000, we were fine with that.

WES HARDAKER: All right. Thank you very much. Does anybody else have comments on this particular topic? I am seeing none. Is there another slide, I've honestly forgotten? Nope. Okay. So with that, we'll go to a quick, any other business round. We are ahead of schedule by 20 minutes, so we failed to fill the time with the discussion, but I actually think it was a very valuable discussion nonetheless. Does anybody else have thoughts, comments, more questions to throw, more concerns? Edmon, please.

EDMON CHUNG: Yeah, so I guess the exchange was really useful, at least for me and hopefully for the Board members. It seems like we did cover the types of threats, the upcoming issues. No, at least we both on the ICANN side and on the root server operator, well, the RSSAC group, we have covered, the right things, and we are prepared for that expansion for the additional thing that's coming. Maybe we're not completely prepared for the alternative namespace, but at least it's a known issue. I guess is that takeaway the right take away from this session? If it is, then I think I'm very comfortable with the conversation.

WES HARDAKER: Yeah, good question. Thank you. Do you want to answer?

JEFF OSBORN: Yes. No, Edmon, I think you put it really well. I always come into these wondering what is the subtext and what is the other thing? And we have spent much of the year worrying about this political stuff we can hide we're not going to be able to hide from a whole lot longer. And a lot of the people who deal with it all the time have been brave and quiet and it's about time we all sort of recognize we have a problem and we are all going to be dealing with it. So it's nice to have it be out on the open.

WES HARDAKER: All right. Thank you very much. Any other business, open questions, comments, discussion? All right, hearing none, I would like to thank everybody for their participation. I thought this was a good session

too, just like Edmon said. As a reminder, all the presentations, recordings, and transcripts from the ICANN meeting sessions will be posted in the schedule within the next few weeks, and use engagement@icann.org for any follow up questions or information about ICANN. And you can use ask-rssac@icann.org to ask any questions to the RSSAC as well for that matter. All right, thank you everybody very much for coming, and we'll see you next time we meet, which will be a future meeting, which I won't predict.

[END OF TRANSCRIPTION]