
ICANN76 | CF – Joint Session: ICANN Board and RSSAC
Monday, March 13, 2023 – 16:30 to 17:30 CUN

UNIDENTIFIED FEMALE: Welcome to the joint meeting of the ICANN Board with the RSSAC. This session is a discussion between the Root Server System Advisory Committee and the ICANN Board and we'll not be taking questions from the room. The attendees are welcome to chat among themselves.

To view the real-time transcription, click on the closed caption button in the Zoom toolbar. Please note that the chat sessions are being archived and are governed by the ICANN expected standards of behavior. A reminder to the speakers today, please state your name for the record every time you speak and please speak slowly and clearly for our scribes and interpreters. With that, I hand it over to Wes Hardaker who will be chairing this session for the ICANN Board.

WES HARDAKER: Great, thank you very much everybody. Welcome to the meeting between the RSSAC and the ICANN Board. First off, I would like to start by thanking everybody for the one meeting that is not in conflict with each of you. I've been running back and forth between meetings of the Board and meetings of RSSAC and it's causing me chaos, so this is actually going to be a pleasant hour for me where I'm not running up and down stairs.

Note: The following is the output resulting from transcribing an audio file into a word/text document. Although the transcription is largely accurate, in some cases may be incomplete or inaccurate due to inaudible passages and grammatical corrections. It is posted as an aid to the original audio file, but should not be treated as an authoritative record.

Why don't we start with a group go around the table. I'll start with myself. I'm Wes Hardaker. I am a Root Server Operator for the University of Southern California and also the RSSAC liaison to the ICANN Board. And we'll start to my right.

JEFF OSBORN: Hello, I'm Jeff Osborn with ISC. We represent the F Root. I'm the recently elected chair of RSSAC.

KEN RENARD: Good afternoon. This is Ken Renard, RSSAC Vice Chair at the Army Research Lab, one of the Root Server Operators.

CHRISTIAN KAUFMANN: Hi, I'm CK, ICANN Board and the liaison to the RSS GWG. Sorry for being late.

EDMON CHUNG: This is Edmon Chung. I'm the other liaison to the RSS GWG from the Board.

LARS-JOHAN Liman: Lars Liman, NetNod, one of the Root Server Operators, also a long-time member of RSSAC.

HARALD ALVESTRAND: Harald Alvestrand, IETF liaison to the ICANN Board.

- KARL REUSS: Karl Reuss, RSSAC member, Root Server Operator at the University of Maryland.
- MAARTEN BOTTERMAN: Maarten Botterman, ICANN Board.
- ROB CAROLINA: Rob Carolina with ISC and member of RSSAC.
- HANS PETTER HOLEN: Hans Petter Holen from the RIPE NCC and member of RSSAC, Root Server Operator.
- DANKO JEVTOVIC: Danko Jevtovic, Vice Chair of the ICANN Board, and we also have something to do with L root.
- JAMES GALVIN: Jim Galvin, RSSAC liaison to the ICANN Board.
- TRIPTI SINHA: Tripti Sinha, ICANN Board.
- WES HARDAKER: All right, thank you very much. Welcome back to RSSAC, Tripti. She was the past chair of RSSAC. As one final bit, we have a lot of Root Server Operators up here. I would like to just acknowledge the rest of them in there in the room that are not sitting at the table. Could I get the Root

Server Operators to stand up, or the RSSAC members that are part of the Root Server Operators to stand up, just to acknowledge the fact that there's a bunch of us here today. Suzanne, Duane, members of RSSAC. Thank you.

So we're actually going to flip the questions and start with the opposite set, because we are waiting for a couple of Board members that will help answer the questions to the Board. So I'm going to start with a question from the ICANN Board to RSSAC. And that question would be, what do the RSOs consider the state of the RSS as a whole to be with respect to security, stability, and resiliency? And I'll turn it over to Jeff for the answer.

JEFF OSBORN:

Thanks for that, Wes. I think we really appreciate the change in format where the questions are not standard across all the SO/ACs, but rather direct and proportional. That being said, we may have overthought this. So I would actually like to read our answer, and then questions and follow-ups can be a little more tag-team, but we just spent enough time crafting a thoughtful response to the stated questions that I'm simply going to read.

The state of the Root Server system has been and remains strong, secure, and stable. For more than 30 years, it's operated 24 hours a day, 365 days a year. It has never failed to provide correct answers to the users who depend on it. You can wonder how has the Root Server system achieved this record, and the answer is through the technical dedication and constant collaboration of the 12 Root Server operators. We've dedicated our time, our experience, and our resources to the

mission of assuring the continued stability, security, and resiliency of the Root Server system.

The stability is based on the massive redundancy, distribution, and variation we've created through the Root Server system, where there is no single point of technological failure. With our core value of acting collectively through consensus, there's no single point of organizational failure.

WES HARDAKER:

All right, thank you very much. Does any other RSSAC member have something you want to add, or do any of the Board members have a follow-up question? I think one thing that I would like to personally highlight is there is a myth or a notion that we don't communicate much, which couldn't be further from the truth. We meet three times a year. We have an e-mail list associated that we communicate over with. We have instant messaging forms of communication. We have the ability to stand up emergency phone calls that are immediately noted by anybody. And the fact that most people don't know that all of these exist means it's a success, right, that the Root Server system is very stable, and nobody notices that it goes down because it never does, right?

JEFF OSBORN:

Just to follow up on Wes's point, we believe that the governance and technology are strong, and there has been no end-user-affecting failure in the 36 or 37 years that this system has been in operation. So perhaps if we fail, we fail to have much of a messaging system. The issue there is

the conflict, because this is something that you don't want to have attacked by every hacker out there. The last thing you want to do is brag in public about security. That's the absolute number one no-no of Cybersecurity 101. So it puts us in a difficult spot.

WES HARDAKER: Ken?

KEN RENARD: So we've talked about how we communicate instant messaging. We sometimes know what's happening on other people's servers at 2:00 in the morning. But we are always evolving and keeping pace and have our eye on the security of our systems, as well as the general security of the Internet. And we're always looking to evolve that and improve it however we can and keep well ahead of the threats that are out there. Thanks.

WES HARDAKER: All right. Thank you. Liman?

LARS-JOHAN LIMAN: I would also like to add that the root server operators are all well engaged in the DNS community in general. So you will find us at any major DNS event in the world. So we do get very early information. We also have very good relationships with the software vendors that produce the code that we run so that we can very quickly have patches created if we need to. So there is an entire infrastructure around the root server operators, how they operate, that is probably not well

known and doesn't really show, but it is there as a weave underneath to make this work well. Thanks.

WES HARDAKER:

Thank you, Liman. Yes, many of us will be at the IETF in two weeks in Yokohama because we like traveling, apparently. Anybody else with comments or questions or addition to the discussion on this question? All right. Hearing none, can we go on to the next question, please? If we want to talk about the additional questions. So there was a number of questions from the Board to RSSAC. So the new generic top-level domain subsequent procedure, SubPro, will result in the creation of additional TLDs. This obviously increases the size of the root zone file, and I've received this question personally many times. How are you going to handle that? How confident are the RSOs that the current root server system will be able to handle the expansion of the root zone created in this process? Like last time, nobody knows exactly how many new TLDs will be created. And for the purpose of this answer, assume that there were three different hypothetical growth rates, right? 100 new TLDs, 1,000 new TLDs, 10,000 new TLDs, and is RSS currently able to function at all three levels of growth? Liman?

LARS-JOHAN LIMAN:

To begin with, I am fully confident that we will continue to work with all these sizes, but I would also like to stress and inform that this question isn't new. It actually pertains to the ability of the root server system to adapt to changes, and that has happened during the entire lifespan of the root server system. We have adapted to new types of technology, for instance IPv6 and DNSSEC, and we have adapted to higher traffic

volumes. As the Internet grows, there is more traffic on the network, so today the system that provides service is 1,000 times bigger than it was 20 years ago because the system has adapted.

So this will be an adaption, and what we need is a kind of a notion of what to adapt to. The root server operators are quite able to roll out and produce enhanced service, but there needs to be a target for what to provide, and this is a continuous ongoing process. We roll out new hardware all the time. We update our software, and we move things forward. If there is an intention to change the root zone, we as root server operators need to know how fast. We need to have some kind of projection for what's the change rate going to be, how many new TLDs are going to be added per what time gap.

And I think that the factor that limits the number of TLDs that can be added per time sequence is mostly administrative. The technical problem of adding new zones to the root server system is minimal, but to process the applications in the ICANN administrative system is probably much, much higher.

But the really interesting number is actually what's mentioned here, the rate, how many per which interval, and then also if there is a target to stop at a certain number, that's also very important to know. But the numbers mentioned here are not worrisome at all, I believe.

I would like to just mention that back in 2009 there was a study conducted which was called the Root Scaling Study, and that was in preparation for the first round of new TLDs, and in that study there were a couple of conclusions, and the most important one was just focus on

the rate, not the total number at the end, so we know how steep the hill is.

But that again, if the end number is 100,000, personally I'm not worried at all, but if we are going to do it by the book, I would like to see a formal request from the Board with numbers, with projections, and say this is what we intend to do, and this is the time frame in which we intend to do it, and then send a request to RSSAC and have that responded to by the root server operators, because then we can do our homework properly, do an inventory of the systems and see what we have now and what we need to do and in which time frame. Thank you.

WES HARDAKER:

Thank you, Liman. I'll note that we had that request in the past in 2018, and it ended up publishing RSSAC document 31, which was the answer back at that time, and maybe it could be time to revisit that. That's a good point now that SubPro is actually getting to the point of realization. Is there anybody else that has comments or follow-on questions to this topic? Jeff?

JEFF OSBORN:

At the risk of trying to improve on what Liman said, which is never something I've been able to do, the too-long-didn't-read version of that is that the root server system is extremely unlikely to be a gating factor in anything involved with SubPro.

WES HARDAKER:

That's an excellent way to put it. Anybody else have questions or follow-on comments? All right, seeing none, can we go on to the next question? So this question, in the past five years, RSSAC has made a series of major recommendations about the future of the root server system governance in RSSAC 37 and 38, RSSAC 55, 58, and 59. What is the current opinion among the RSOs about the progress in developing and answering these governance ideas?

And actually, let me pause here for one second and explain that ICANN also has the governance working group, of which Edmon and CK said that they were liaisons to earlier. That is not this body. This is the root server operators and the policy that we develop around running the root server system. The GWG is developing sort of the next body of governance that will come out, and it's all very interrelated. We're all members of that as well, but today really is about RSSAC, not the GWG, although these questions bleed into it for natural reasons. Did you want to answer that question?

JEFF OSBORN:

I'd love to start, sure.

WES HARDAKER:

Jeff.

JEFF OSBORN:

The issue of conflation of RSSAC and GWG has been fairly widespread, so I just want to second what Wes is saying. The root server operators are represented on GWG. We have seats on it, but we are not it, and so I

don't feel comfortable speaking for it. But the question specifically says, what does RSSAC think about the operation? I'm reading this as the operation of the development of the GWG. And to that, I think it's fair to say we have seen much better progress in the last 12 months. The current GWG process has the potential to produce a good result, and we are cautiously hopeful.

WES HARDAKER:

Okay. Does anybody have follow-on questions or comments? Seeing none, I think now we will turn to the question from RSSAC to the Board. So to the Board, ICANN stands for the idea of one world, one Internet, and a single unified name and number space requires a single root zone served by a unified root server system playing by the same set of rules. In the recent debate over the European Union's NIS2 directive, the European Union was reminded of these principles and decided that it was inappropriate to try and regulate the root server system. What steps are the Board taking to monitor other threats to and defend the independence of the root server system? I think, Tripti, you were going to start with that answer.

TRIPTI SINHA:

So first I'd like to start by saying, yes, regulating the root server system is just a bad idea, and I'm glad that NIS2 was adjusted to address that. The Board monitors these threats with the work done by ICANN Org, so I'm actually going to turn this over to John. Thank you for coming in, John. You just came here in the nick of time. And is Mandy here yet? I know she and I were in a meeting together.

WES HARDAKER: John gets to fill both roles.

TRIPTI SINHA: Right. John, you're speaking for two people now.

JOHN CRAIN: I just heard all sorts of comments from my colleagues here as I went by. Some of these are old friends of mine that I've known for many years. So I'll start with sort of the technical threats, because I'm the CTO. So it is a fundamental part of what ICANN is. When we say one world, one Internet, things like this, what we're talking about at the technical level is the ability of a particular IP address to be resolved to by a domain name, and that no matter where you are when you type in that domain name, you go to the same endpoint on the network. And what is core to that is the root servers. It's the root server system. That's where it all starts.

So we watch this very carefully. We look at all new emerging technologies that we can find. If you were in the executive Q&A, you would have seen us talking. There was a question that we replied to in writing about alternative name systems. One of the things there is that we want people to be very clear about what is and is not DNS. It can become very confusing. And what we do from the technical side is we spend a lot of time working together with Mandy Carver's team, our government engagement team, and we spend a lot of time in rooms with people from various governments and various legislators, explaining to them how the Internet works and the critical importance

that when somebody types something online, they want to go to the place they expect to go. It sounds very simple.

But if you don't have a single point of entry, which for the Internet identifier systems, I mean the one single point of entry really is the DNS, then you have a problem. You can't guarantee that you get the same place. So we are heavily involved and we're spending a lot of time and a lot of resources going into these discussions along with our government engagement and our technical people to try and explain this to people and to defend the single interoperable Internet. Mandy could talk a little bit more to what happened during NIS2, but it was basically that they got us in the door, we got to speak to people, and we got to explain what was at risk and what the problems were.

So we are heavily involved in discussions almost every single day around what is out there in the policy world, what are the upcoming regulations, what are the discussions about what may be just an idea of a regulation, and we try and get in there early and often and just educate, educate, educate.

WES HARDAKER:

If I can ask one follow-on question, how much of those discussions, I mean you launched into a very technical sort of answer, but I'm curious how much of it involves also explaining to them ICANN's multi-stakeholder type of approach of governance, which is the only thing that really sits above the root server system because geopolitical boundaries don't really work with something that's distributed as widely as the root server system.

JOHN CRAIN: Well, that's a fundamental element of why we are able to set and keep setting policy for this system, and often that's what they want to do, right? They want to set some form of policy. So the importance of the multi-stakeholder model is clear. Yes, we spend a lot of time not only explaining the importance of them but reminding them to actually come and participate because they are also stakeholders. So, I mean, the really good outcomes are actually when those people come and are in these rooms.

WES HARDAKER: Excellent. Thank you. Does anybody else have comments or questions? Edmond.

EDMON CHUNG: I guess adding on what John says on this particular question, John and his team also regularly updates the Board, especially through the Board Technical Committee, as well as the full Board on what is out there and what they have seen in terms of the threats and issues. So I just want to add that part.

WES HARDAKER: Excellent. Thank you. Robert, did you have something to add?

ROBERT CAROLINA: Yeah, thanks, Wes. Rob Carolina with ISC. John, thanks very much for that. That's extremely helpful. And I think, as Wes has alluded to, or

maybe I might have misheard him. I don't want to misquote him. But from my perspective, the problem of DNS is very large and has more facets than I can count. The question is really very narrowly focused on the problem of the root server system, which is only one of those facets. And the argument that we made, and I know that ICANN government engagement was making it at the same time we were making it, is that although governments around the world and regulators are looking at people like the recursive resolver community as a target of regulation, and I don't want to comment on that at all, but the argument about what sets the root server system apart is this need for a unitary system. And if any one government in the world attempts to regulate it, suddenly we're facing 100 or 150 or 200 conflicting set of regulations, which would really put us into an almost impossible position. And that was the argument that helped the European Union understand to pull us out of NIS2.

So just narrowing the focus very, very specifically to the RSS, what is it about that that might be a special part of the brief? And if I could go a step beyond it, how might we be able to cooperate more closely with ICANN government engagement on this particular issue, which is so very near and dear to our heart, because we're willing to invest time and energy in assisting with this issue area.

JOHN CRAIN:

So I think there was basically two questions in there. What sets it apart? When you look at the identifier systems, most of the identifiers are administered in some way through the IANA functions, and you could argue that that's a centrality. But when it comes down to the technical

aspects of it, if you look at most of the other identifiers, they don't have this central single point of entry like the DNS does. And that's what makes it unique, and that's what makes the root server system very unique for the Internet. And how can we cooperate? Well, we can talk. Obviously, RSSAC can give advice. But on a day-to-day basis, I would say the best thing to do is literally do that, collaborate. Let's swap, you know, let's exchange e-mails, let's have discussions.

Mandy has staff, or ICANN has staff that are engaging with governments around the world. You know, we understand that we may have more facilities or more capacity for doing that than, like, a single operator or so. So, you know, it really is, let's just collaborate, because that's what we do best. We are a multi-stakeholder model, and we work together, you know, not only with the root server operators, but at least one of you is also, for example, an RIR, and we do stuff with them, and we do stuff with other parts of the organization. So we are an ecosystem together. So absolutely, come talk to us. Let's figure out how we can share information, because you might be hearing things that we're not, and vice versa. And now Mandy can say exactly what I said, or the opposite.

MANDY CARVER:

Everything he said. My apologies. I was in the GAC. And John is absolutely right. You will hear things that we—or things will come up in your specific radar, perhaps in a way that we haven't seen. Please, we welcome hearing about them. We are happy to come and brief. We are in these spaces. We are publishing papers. We do have dialogues that we're facilitating in different locations, specifically about these things,

because in most instances, this is a mismatch between, I'm trying to think of the appropriate way to put this, those that are passing or drafting these regulations don't always understand the layers or the interface between something they're trying, they have an issue with, and the way they're trying to fix it. And so we're trying to help them understand, we want to help you define your problem statement here, so that you do not break all of this.

And so we were able to do that in a multifocal, collaborative way when it came to NIS2, but that was one piece. And as I'm sure you're all aware, there's Article 28, and we now have every member state is going to have to have enabling legislation. So it's a moving target and a challenge.

WES HARDAKER:

Thank you. Mandy, could I get you to give your full title? I don't want to misremember the right wording order.

MANDY CARVER:

My apologies. Mandy Carver. I am the Senior Vice President for Government and IGO, or Intergovernmental Organization Engagement at ICANN. So I have the government engagement teams, and I work with John's OCTO folk who help come do briefings, and we work with the global stakeholder engagement teams in the fields, because they're the folks that are usually at the capitals. And obviously we also work very closely with the legal department in getting an analysis. So when we see proposals, does this impact on the technical side, does it impact on the regulation, have an impact on the contracts, or other kinds of things that would impact ICANN and the multi-stakeholder model?

WES HARDAKER: Got it. John, you have something to add?

JOHN CRAIN: Yeah, I was just going to say this is in some way the way that ICANN internally sort of reflects part of the multi-stakeholder model. It's the engineers and the policy folks and everybody working together. And I have to say, I just love reading regulatory documents, and I get to read hundreds of them. But they're actually quite fascinating. And when you look at them from a perspective of an engineer, you see different things than people looking at from a regulatory perspective, and that's bringing together of different skill sets is exactly what multi-stakeholder model is about. So it's actually pretty cool.

WES HARDAKER: All right. Thank you very much. Robert, go ahead.

ROB CAROLINA: I was just going to say, since we're doing introductions, it's Rob Carolina. I'm general counsel with ISC, and I look forward to talking with both of you.

WES HARDAKER: All right. Anybody else have additional comments or questions related to this topic/question? All right. Seeing none, let's go ahead and go on to the next question, please. The next and the last question is, when the root server system governance working group concludes its work, in

other words, that was the GWG that I was talking about earlier, and issues its report and or recommendations, how does the Board envision supporting engagement with the Internet community to discuss the results? CK, I think you were going to start.

CHRISTIAN KAUFMANN: I do. Then Edmon can chime in for all the parts I forgot. Jeff talked very quickly about that the root server operators are part of the RSS GWG. There are a couple of more people. There is a representative or liaison from the IAB, from the IETF, from the ccTLD, from the gTLD, and then the two Board liaisons. So you have quite a variety of people in this construct.

A little bit of background for the people who haven't seen what we do. There is a call every two weeks, unfortunately around midnight. There was also a meeting and a workshop end of January in D.C., where we had a lot of discussions. I think it was three days. And we had a survey, because everyone has a survey. And I would echo what Jeff said. I would be also optimistic. We made quite some progress, and I think I personally see more similarities than differences or issues.

From a liaison perspective, and that comes more back to the question, I think the Board, or specifically the two liaisons, wait now for the recommendations when they are done. And then we bring them back to the Board and discuss them with the Board. I guess we then have to see what we do with them. But if there are any bylaw changes or budgetary implications, then they will be handled through the regular ICANN processes, and I guess to ensure accountability and transparency. And I guess that includes then public comments,

meetings, sessions, potentially webinars, whatever. I guess we will see that part.

WES HARDAKER: All right. Thanks very much. This is Wes. Edmon, do you have anything to add?

EDMON CHUNG: I guess I'll add a little bit. I think the question is quite interesting. So it's talked about after the GWG presents the results. I think at that time, ICANN and the Board, obviously one of the things that we'd like to do is to get everyone involved in telling the world that this is complete, this is done. And recently there has been discussion about getting the ISTAR group back together, ICANN and IETF, ISOC, the RIRs. I think everyone needs to be involved in it.

But I wanted to go back to what Jeff said earlier and really emphasize on the point that it's not like this revolutionized the RSS. It's really documenting what is already working very well. The stability and security of the RSS has never been an issue. And the governance also has been strong. We are, however, building from strength to strength to ensure the future of the system continues to be strong from the foundation.

So I think the message there is important. But in terms of reaching out, I think definitely it's not just ICANN. We'll definitely leverage the org from the government engagement and also the stakeholder engagement groups. But it's the entire ecosystem of the Internet community and Internet institutions that need to work together to tell

the world that the future of this is also in good order going forward as well.

WES HARDAKER:

All right. Thank you very much. I think you bring up an interesting point that there is, after this is completed, there's a significant educational factor that will have to go into what happens with the results and what stands up afterwards. Does anybody have additional comments or questions related to this question?

Hearing none, we still have a significant amount of time left. RSSAC doesn't like to waste the time of the Board, and we're very good about giving time back. Having said that, I'm going to make both groups mad at me at once and say any freeform questions, which the ICANN Board has pushed to try and be more interactive and less scripted, and now's our chance. Anybody want to ask an unscripted question? We can't be unscripted unless you—All right. Seeing none, I think that we can conclude today's joint RSSAC and Board meeting. Thank you very much for everybody attending. I found many of the remarks enlightening. Appreciate it greatly, and we can stop the recording.

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