
ICANN73 | Virtual Community Forum – SSAC Public Meeting
Tuesday, March 8, 2022 – 14:30 to 16:00 AST

KATHY SCHNITT:

Hello and welcome to the SSAC Public Meeting. My name is Kathy and I'm joined by my colleagues, Daniel and Kim, and we are the remote participation managers for this session.

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And with that, I'm happy to turn the floor over to SSAC's Chair, Rod Rasmussen.

ROD RASMUSSEN:

Thank you very much, Kathy, and thank you to all for coming to our public session today. Greetings for both our members—I see we have a majority of who have joined us. And to those who are not members of the SSAC, this meeting is for you primarily, for those of you who aren't familiar with the SSAC, to learn more about us and for everybody to find out what we're up to and where we're going. So, we will begin. Kathy, can I have the next slide, please? Thank you.

So, I'm going to start off with an overview of the SSAC as a refresher for those of you who are familiar with us and as an introduction for those who may be new to the ICANN world and curious about what all we may be up to here, looking at stability, security, etc.

We're going to have an update on the Name Collisions Analysis Project known as NCAP because we like acronyms. And then I'm going to have various members of the SSAC who are leading work parties give updates on our active work currently and then our Vice Chair, Julie Hammer, will walk through our membership. Then open Q&A after that. Please think of any questions you may have now and be ready to submit those. We have an hour-and-a-half, 90 minutes, in this session, so plenty of time to cover both what we have on the prepared agenda and to answer questions and have discussions about interesting SSR—security stability, and resiliency—topics. So, that's the plan. Let's move forward to the next slide, please.

So, an overview of the SSAC and who we are, what we do. We have 36 members currently. It says here appointed by the ICANN Board. We have a self-nomination process which Julie will talk about in a little bit as far as joining. The Board does approve all of the proposed members.

We advise both the Board and the community on matters that impact the security, stability, and resiliency of the DNS and the other naming and addressing systems, and various other security, etc., issues that may affect the community at some point or the participants in the distribution workings of the DNS system and other naming and numbering systems.

We have a wide variety of experience and backgrounds in our membership. We try very hard to bring in various perspectives and experiences because no single person knows everything and has experience dealing with all the various kinds of issues that you may find [inaudible] to keep infrastructure running, looking at threats, all those kinds of things. You can see there's a list there. Julie will cover some of the things that we're looking for to flush out some of our gaps or areas where we want to strengthen that expertise and diversity.

We have published 119 formal publications and then many other correspondence, series, documents since 2002 when the SSAC was founded. You might note that was 30 years ago approximately. We'll have hopefully a 30-year celebration retrospective at one of the hopefully in-person ICANN meetings coming up later this year. More on that as we make those plans. Next slide, please.

So, how do we do our work? Based on what ICANN's remits are within the SSR space and in administration of the DNS and the namespace, etc., we provide advice. This is the way we do things within the SSAC is through our documents. So, any official positions of the SSAC are actually in the documents themselves. I as Chair can provide maybe a feel for things as far as views the SSAC may have, trying to pull together the threads. But our official documents are really what matters as far as our advice and official positions on things.

Anything else, we're a bunch of security and operational folks that get together and may have different opinions on things. But if you have questions about that and you know an SSAC member, feel free to ask them. But they'll point you to our documents for an official position.

Anyways, how would we create documents? We create work parties within our members. Typically, those with a background in the area that we're studying and we'll work together with our staff and potentially even outside experts to research the topics that we're looking at and write a report. That report is agreed upon by the work party and then reviewed by the full SSAC where members can have the opportunity to review the work, provide feedback, and that sometimes includes coming up with new ideas or even divergent ideas from what we have proposed in the work party. That goes through an iterative process to incorporate those views either directly on the work or as part of an alternative view that is then published in the document itself.

Those documents may or may not include actual advice. Sometimes we do things that are just explanatory documents, delving into issues and

trying to bring complex technical and security issues to the ICANN community in a way that can inform policy work, etc., without making any specific recommendations. But most times there are some items in there that are recommendations typically to the ICANN Board, though we do sometimes provide advice to other groups, both within the ICANN community and externally. They are free to do with that what they will, but the ICANN Board does have a formal process where, with the SSAC, as they do with other advisory committees where they take that advice, acknowledge it, and works with the SSAC to understand it—this is typically through the Board Technical Committee, by the way—and provide feedback and come to a plan of action for dealing with that advice.

They could refer it to other parts of the ICANN community—typically, the GNSO. Could be the ccNSO as well. They may afford things to other parties. We've had that happen with the IETF and other external groups, for example. Or they may have the ICANN Org implement the advice using the standard public comment process for doing things or just decline the advice. If they do decline the advice, there's typically an explanation for why they declined to follow that particular advice or they may take on part of the advice and implement that and other parts of it may defer or decline. So those are kind of the ways the advice process works here. Next slide, please.

So, our most recent publications—and these were all, I believe ... None of these are very recent but those are SSAC 118v2 which is an update to the EPDP. And then root server early warning system which is fairly old at this point.

We do have at least one publication we hope to be getting out very soon and we'll talk a bit more about what else we're working on that should lead to other publications.

There's information there on how to reach out to us. I believe that is it for the background on the SSAC. Before I move on to the NCAP any questions that folks are dying to ask right now before I move on? Okay, so let's go to the next slide.

Matt, I'm going to hand this over to you to give everyone an update on what's happening with NCAP.

MATTHEW THOMAS:

Sounds great. Thank you, Rod. Can we go ahead and get to the next slide, please? So, for all of you, my name is Matt Thomas and I am a Co-chair of the Name Collision Analysis Project along with James Galvin and Patrik Falstrom and I'm going to just take a few minutes to give a little bit of a status update in terms of where we are with NCAP Study 2 is and where it's particularly going.

But before we do that, maybe we can just have a little bit of NCAP background. So, NCAP was originally designed to be in three different work group tasks, I would say, or three different studies and those ... The first one has already been completed and that was essentially the curation of all name collision material out there and to create an authoritative kind of document that documents known materials related around name collisions. That document was completed roughly maybe a little over a year ago, and as a byproduct of it, it also

highlighted that some of the proposed studies—specifically, study two—that we’re currently in should be revised. That advice was taken in and NCAP Study 2 has been underway for at least a year-and-a-half I think now.

But at the core of NCAP Study 2, there are two main big objectives that we’re trying to achieve and that is providing some specific advice around dot-home, dot-corp, and dot-mail strings as well as answering a set of Board questions to help provide some guidance in terms of how to deal with name collisions going forward in general.

So, Study 2 has currently roughly 25 discussion group members which include 14 SSAC work party members and there are also 23 community observers that have been working on this. Next slide, please.

So, as many of you may have seen, the NCAP discussion group has released two draft documents out for public comment. The first document is a case study of six collision strings—corp, home, mail, land, local, and internal. While the original question was intended to look at corp, home and mail, land, local and internal were also added because they were receiving more than 100 million queries per day at the A and J root servers.

But this case study uses longitudinal data mainly from A and J root servers to measure and quantify various different DNS query patterns in which various changes were observed because of the DNS evolution over time.

The second document is titled “A Perspective Study of DNS Queries Non-Existent Top-Level Domains”. This study uses data from multiple different root server identifiers as well as recursive resolvers to better understand the distribution of how DNS name collisions are throughout the DNS hierarchy. And what this study does is it provides some insights into where and as to how DNS data can be collected and assessed for name collision purposes. Next slide, please.

So, both of these documents are very technical in nature and I have encouraged the community to go out and review those draft documents and to post any comments or findings or concerns they might have. But these documents will ultimately be annexed in the main Study 2 name collision report that the discussion group is currently working towards publishing.

So, to that end, I’d just like to highlight some of the preliminary findings that these draft reports are suggesting.

Per the case study of the corp, home, mail strings, the discussion group observed that name collisions are and will continue to be an increasingly difficult problem. Through that analysis, the group has identified and termed a set of quantitative measurements that we feel best describe the risk associated with particular collision strings. And the discussion group has termed or refers to those as critical diagnostic measurements, and those critical diagnostic measurements mainly focus on two dimensions—volume and diversity.

To that end, the ability to conduct mitigation and remediation becomes more challenging as those two primary dimensions of volume and diversity increase.

Per the prospective study, that data and measurements within suggest for the purposes of pre-publishing top-end non-existent TLD lists based on critical diagnostic measurements can be done by any subset or individual root server identifier and that list would largely or broadly be representative of what is seen as the whole of the root server system.

What's important from that is this helps form advice or suggests or gives suggestions to help address name collision issues. Specifically, efforts to help inform applicants about name collision risks prior to their application via the publication of top-end lists of non-existent TLDs will enable applicants to be aware that certain strings that they might be interested in expressed name collision risks.

However, the absence of a string on a top-end list does not in any way provide any assurance that that string is void or absent of name collision risk, nor does the magnitude or ranking of that string on such a list ensure an accurate representation.

I'd like to also just call out here that ICANN and [inaudible] efforts, specifically via Roy Arends has developed and deployed similar top-end measurements that's looking at exactly these critical diagnostic measurements. I encourage you all to go take a look at that. Next slide, please.

So, to specifically talk a little bit more about these critical diagnostic measurements, here we see a list of them that we've identified via the case study. These are still at a very high level. There are more details within the case study and I encourage you to go look at them there.

So, at the beginning we see query volume is the leading indicator of impact or harm that potentially might be coming out of a name collision based off of that. But quickly we see that diversity is a very important contributing factor in terms of what impact or harm might be happening for those name collision things.

Diversity across multiple different measurements, such as source diversity of IP addresses, net blocks, ASN distributions, query type distributions, label diversities, number of second-level domains, types of DNS service discovery queries, so forth and so on.

It's collectively that all of those critical diagnostic measurements will help paint a picture to conduct a more thorough and accurate assessment of the risks posed by a potential name collision string. Next slide, please.

So, there's some additional work outside of these two documents which I would say are largely supporting documents. The Name Collision Project Study 2 is also conducting work on what is called the root cause analysis. During the 2012 round and afterwards, when controlled interruption was being deployed on the delegated TLDs, ICANN was—or still is—runs a site for submitting name collisions. Those name collision reports have been collected and are being investigated by ICANN OCTO contractor [Casey Deccio] and they're looking into the

root cause of what those reports are and hopefully we'll get a little bit more insight into what will mean in terms of name collision assessments going forward.

Also, the group is trying to develop a framework to assess name collisions in terms of providing some kind of sustainable, repeatable, workflow process that name collisions can be assessed, measured, quantified, and appropriate remediation and appropriate outreach, appropriate mitigation can be applied to those strings within the next round.

That initial framework and other findings will be published in public comment in hopefully the second quarter of this year, as long as the discussion group can continue to make progress on those. Next slide, please.

So, here I'd like to just end with an ask to all of you to help by either reviewing the draft documents that are currently out for public comment, which the public comment ends on March 18, and if you are interested in learning more or contributing to the work, please join the NCAP discussion group. Thank you and happy to answer any questions. Otherwise, I'll hand it back.

ROD RASMUSSEN:

I see we have at least one question.

KATHY SCHNITT: We have a question from Jeff. “Matt, please say more about the previous slide first bullet, impact is increasing over time.”

MATTHEW THOMAS: Yes. Thanks, Jeff, for the question. I think if you’ll remember when we were looking at the corp, home, mail case studies specifically that across all of the critical diagnostic measurements, we've seen a significant increase of both query volume and source diversity, label diversity and all of that increasing over the longitudinal period of time studied. I think that's what is being referred to there.

ROD RASMUSSEN: Okay. Jeff says thanks. any other questions at this point? And if you do come up with a question, feel free to add it at the end of our session. Thank you, Matt, very much. Let me just add my emphasis to what Matt just went over, especially the last part there.

This is the time with this work from the discussion group out for public comment right now for folks that have been maybe on the sidelines on this waiting for a long time for the work to get to this point to speak up as we've got substantive work out there for comment and we're trying to get to the end of this process. We've been at this for a matter of years now and we’ve really gotten into the nitty-gritty.

The heart of the matter, as it were, and are looking for as many comments and questions as possible from the community as this is the opportunity to bring up questions that we may have missed or we may have had a different interpretation of or thoughts about, so that we can

incorporate those at this time, so that the final work product that the discussion group puts out and eventually the SSAC comments on as well have at least had that as input and can reflect on those things. So, please, this is the time to be paying as much attention as possible to this if this is an area of interest to you.

So, then, let's go ahead and move on to the next section here. We're going to talk about various active work parties we have in the SSAC. Can I have the next slide, please?

So, as you can see here, there is quite I bet that we're working on right now. I know we haven't put out any recent documents. There's just a lot of work going on. we are hoping to get one of them out before this meeting. We're just working on finishing that up right now so you should be seeing that soon, along with some other responses to the Board on issues as well.

We have two new work parties which we'll talk about shortly in more depth and give you an idea of what's going on there. Then we also have our ongoing DNSSEC workshops which are tomorrow. So please if you are interested in not just DNSSEC, but overall security issues with the DNS, we've got lots of great sessions tomorrow.

Then, of course, we'll talk about our own membership here in just a little bit. Can I have the next slide, please? Russ Mundy, I'm going to hand this over to you to talk about the routing security.

RUSS MUNDY:

Thank you, Rod. I appreciate it very much. This is a work party that's been underway for over a year and it really is one that originated from discussions within the SSAC itself where a number of SSAC members had noted that there seems to be a lack of useful information and understanding in the particularly DNS realm of the ICANN activities about the impacts of routing security on DNS and DNS related activities.

So this is work that really is undertaken by SSAC from a ... We see an area in perhaps the community could use some additional information and that's the focus of the document that we've been working on. It is an effort to help folks that are not deeply involved in the routing world or the routing security world to understand how security issues related to the Internet routing system can impact the part of the Internet that they are involved with and the emphasis is most of all on being helpful to DNS operators of various types, and DNS registry and registrar activities and so forth.

So, the publication does not contain and is not expected to contain any recommendations. It really is intended to be an informational set of things for people in the community to make use of. We've been working extensively to try to make it a level that is useful for the community, that's understandable to the community, and for anyone who has spent much time trying to look at and understand the complexities of the routing world. You probably have an appreciation of the challenges that have been faced by us to put an informative document that would be helpful to a broad audience. But that is the intent. This may or may not be the last document that gets published in this area. If there is a

need to do more and we decide to go deeper, then that's possible, but this really could be thought of as an introductory type of document.

So, right now it is in the process of going through the standard SSAC document review process and is under review by the whole SSAC. You heard Rod describe that process earlier in the meeting.

So, we hope and expect, at least at this point, that we could have the document completed and published by ICANN74 and if we indeed are successful, we can and will be able to provide at the next meeting a little more details about the actual content of the document. But we do need to get it finished and published before we can get into a great deal of detail on the actual content of what's in the document.

So, that's all I had at this point, unless there are questions or comments that folks have on this work.

ROD RASMUSSEN: Thank you, Russ. Any questions or thoughts from folks that would like to discuss this a bit more before we move on? Going once.

KATHY SCHNITT: We have a question from Eric: “How do we join the discussion in the routing security area?”

RUSS MUNDY: Thanks, Eric, for the question. The document itself is being produced within the regular SSAC process and one of the earlier on decisions that

gets made as we sort through this process is whether or not there will be outside individuals asked to participate in the discussion and the creation of the document. In this case, the work party concluded that we would produce the document solely contained or by the use of internal SSAC expertise in the area.

So, at this point, we don't see any external or non-SSAC participation in the actual production of this particular document. So, at this point there is not a way or external folks to participate.

ROD RASMUSSEN:

Let me add to that, too. We're in a final review process within the SSAC on this document as it is, so it will hopefully be published very shortly. Russ, we also did do a formal liaison via Geoff Huston with the RIRs or RIR community. I don't know if you wanted to speak to that at all.

RUSS MUNDY:

Yes. We do have members in RSSAC that are also very closely engaged with the RIRs so we did establish a liaison relationship between the two. there's information being passed back and forth between the two ICANN groups.

ROD RASMUSSEN:

One of our goals there was no surprises.

RUSS MUNDY:

Right.

ROD RASMUSSEN: Okay. And then there was another question which is not directly related to this which is being handled in the chat a bit. The question is how to join the DNSSEC workshops tomorrow. Kathy has already put in a link, so there you go.

RUSS MUNDY: Join the Zoom room. Yes, indeed.

ROD RASMUSSEN: Yep. Anybody can join that. It's open to all. I believe you do have to have registered of course, like any other ICANN sessions.

Okay. With that, I think we will move on to the next but. Thank you very much, Russ. Yes. Reviewing community feedback on SAC114. Just a quick update on this. This has been on our agenda for the last year now.

The good news is that we're getting ... We are at the end game of this process. It has taken much longer than we initially anticipated for us to go back over some of the things and some of the feedback we got when we published SAC114 a little over a year ago now.

SAC114 dealt with SubPro and some comments we had about both the contents of the SubPro report and some of the meta issues that we saw that we felt needed to have some questions asked and some thought put towards, that the publication of that SubPro report elicited, thinking bigger picture, longer term.

So, we've had a long internal discussion around that. We will be publishing an addendum on that to that report shortly. For those of you that have been following that closely, the recommendations on SAC114 are formerly on hold as we have gotten some feedback from the board. The RYSG and other folks in the community asking some questions about the recommendations and how they were presented. So we will be moving forward on that. We're planning on having a discussion sometime after ICANN73 with the RYSG as they requested that we have a discussion, but we should be shortly releasing that addendum which will dive into various issues that came up.

One of the future topics that I'll talk about in a little bit was also uncovered in our discussions around this and we'll be forming a work party that will take a look at that. I'll describe that in a bit. So that's a quick update on that. Expect to see something in the very near future from us on that. Any questions on that before I move on? Not seeing any. Let's go on to the next slide, please.

The EPDP temp spec. Steve Crocker, you want to do a quick update on that?

STEVE CROCKER:

Sorry for the delay. I'll try to do that. Well, over in the GNSO, there's been a process related to how to define how to move forward with a request for registration data, sort of a replacement for WHOIS.

There's been a proposal for an SSAD, a series of processes related to all of that. EPDP Phase 1, Phase 2, Phase 2A and some other things. I

participated, along with Tara Whalen, in the Phase 2A. Tara has been involved longer. Ben Butler preceded me in some of the earlier work on that.

As part of the participation in the Phase 2A effort which was focused primarily on the question of identifying whether a registrant was a legal or natural person, that is a business or a real individual and what should be done about all that.

We made recommendations. We expressed opinions within that arena but also came away with some thoughts that were outside of the narrow confines of the particular questions that were being taken up there. So we packaged up both the recommendations, advice that we were giving within that working group and the larger picture and brought it back to SSAC. There was the usual process within SSAC to get everybody around and we published SAC118.

The key point there was we raised the question of whether the SSAD, as defined, is actually fit for purpose. That is we raised a fundamentally an existential question about SSAD. That is a sharp message. That is a very attention-getting kind of message because it questions whether the previous work of making the recommendation that there should be an SSAD was properly formatted in the first place and whether it's time to back up and take a fresh look.

Without making it too big of a deal, it poses a bureaucratic difficulty because it puts the ICANN Board and the ICANN management in the position of saying back to SSAC—back to us—are you telling us not to

follow the advice that we were formally given by the GNSO? Not too put too fine a point on it, the answer is damn right.

But they came back with questions that essentially asked that sort of question and we've tried to say in polite and civilized terms, yes, that's pretty much what we were saying. Think about what you're trying to do and this isn't going to get you there. Please start over.

Tara, would you like to add any leavening or civilized patina to what I've said here?

TARA WHALEN: That was incredibly civilized and already shiny and smooth, Steve. Thank you for that.

STEVE CROCKER: Thank you. So, the form of what is going to come out ... Let's see. It says SSAC is responding, so I'm not sure precisely what the state of play is, Rod, but I think we've all signed off on what the wording is and then it's part of the process here to get it out.

ROD RASMUSSEN: Yeah. Not to get in too much inside [inaudible], that is imminent we are in a final review process with the full SSAC right now.

All right. Any questions or comments on that? Feel free to think about that and add it when we get to the end here. I believe we should have time to cover any questions that come up. Thank you, Steve. We're

going to move on to the next slide, which may also be you. Yes, that's also you, Steve. So, go ahead.

STEVE CROCKER:

This is a whole other matter. A different activity within the GNSO is looking at whether there's any need to make changes in the rules about transferring a registration. There are two scenarios for the transfer of a registration. One is the transfer from one registrar to another without changing the registrant. That is the registrant simply wants to take his business somewhere else.

The other scenario is the change of registrant, where somebody sells or otherwise transfers the registration. Both cases, there is a process to be followed and instances where it can go awry, both either maliciously or by accident, where the handoff isn't smooth or somebody interferes with it or fakes some of the processes.

The processes in the past have depended in part on availability of WHOIS information. The impact of GDPR is to make some of that information less available—or maybe a lot of it less available. So that's what's triggered a reconsideration or consideration of where that transfer process sits.

It's intended to be a short-term, narrowly focused, lightweight operation and SSAC was asked if we would contribute somebody in the process by which they were operating. And Rod, you can fill in the details here. It was sort of too quick for us to go through the formal process, but Rod asked would somebody like to participate on a special

case basis. I raised my hand because I have an interest in a particular aspect that is not top-of-mind for most of the people there, which is what happens if there is a DNS service as part of the transfer, as part of the service that is being supplied? And particularly, when there's a change of registrar, how to move that service. And if that service is signed, if there's DNSSEC involved, then there's key rollovers and related things that have to happen, and it is not, as I say, top-of-mind in the people who think about these things to say, "Oh yeah, that's something that we have to nail down carefully as well."

So, I joined and I said all of that at the beginning and they listened politely. And now they didn't ignore it exactly but they're now moving on or have moved on to the main focus of precisely what tokens have to be passed back and forth.

This all relates, what I've said about transferring a signed DNS service relates to topics that several of us have been focused on quite a bit and will be presenting current state of the art in the DNSSEC and security workshop tomorrow and as part of an ongoing panel that [inaudible] and I have been chairing for I think a little more than two years from now and continuing onward.

So that's probably more words than are necessary for this particular thing but that's been the aspect. I've also been paying attention to the broader aspect of their concern about whether the transfers take place reliability and efficiently and they seem to be doing fine on that score.

ROD RASMUSSEN: Thank you, Steve. Any questions on that? And stay hot here, Steve, because the next one is yours, too. It's great having Steve back in the SSAC. He couldn't stay away. Lots of good stuff to be working on. And it's a related topic to the last one. So, Steve, do you want to talk about it? And this we have an actual work party on. Do you want to talk about our DS Automation Work Party?

STEVE CROCKER: Thank you. As I mentioned, there's a small set of issues related to DNSSEC provisioning, one of which, as I mentioned, is if you're transferring a running zone from one provider to another. But another is, even if you're not transferring a zone, key rollovers take place from time to time, and a consequence in a key rollover in the child zone is that you have to update the DS record, it's called, in the parent zone.

Well, if the DNS service is being provided on behalf of the registrant by the registrar, no problem because the registrar rolls the key as part of the service that they're providing and then has direct access to the registry and just sends the appropriate EPP messages upward to the registry.

On the other hand, if the DNS service is not being provided by the registrar, there are no well-defined pathways. Why are there no well-defined pathways? Didn't we think about that when we were designing all of this?

Two issues. One is it wasn't top-of-mind in some respects, and the other is that there is a peculiarity in the contractual structure in which

registries and registrars exist and DNS providers simply outside of the mindset and contractual framework and constituency structure in ICANN. Good technical work is underway. We have now started, as Rod said, an official work party within SSAC not to do the design work but to do an evaluation of the state of affairs and to make recommendations that will raise the consciousness and provide guidance to the ICANN contracted parties and to ICANN Org as well as to the broader world that's not governed by the ICANN contracts that proper interfaces and procedures should be added to the software and to the systems that are running.

This is a brand-new work party. It will have a relatively short schedule. Short schedule means that a number of years is one instead of several. We might get the bulk of it done around the time of the AGM this year, but the AGM is early this year. I would expect that we will be completely done and have the recommendations out the door before the ICANN meeting a year from now. Thank you.

ROD RASMUSSEN:

Okay. Any questions on that? All right. So, that is the Steve Crocker portion of our show today. Thank you very much. Let's go ahead and move on to the next slide. This is Evolution of DNS Resolution, another new work party. Barry, please inform us.

BARRY LEIBA:

Hi, I'm Barry Leiba and I'm co-chairing this new work party with Russ Housley. About two years ago, we published SAC109 which was an

analysis of DNS over TLS and DNS over HTTPS, and what that looked like from the point of views of different stakeholders with different perspectives.

We didn't have a lot to say about the technical consequences of it. It was more how the different stakeholders viewed it. And now two years in, we want to take another look at those and other things that are coming along in DNS resolution. The different transport protocols, the new one coming up of DNS over [quick], looking at different—at the effects of having different applications on the same computer used by he same user having different resolution mechanisms and different resolvers.

We're looking at what might happen with DNS resolution in general as people have talked about using blockchains to hold DNS records. What happens when application directly accesses that rather than going through the DNS protocol? All that kind of stuff, what may be coming along relative to DNS and DNS resolution issues.

The intent here is to take a technical look and any advice we give will go toward implementers and operators and that sort of thing, and perhaps to users who are confused by different applications behaving differently and what that means to your view of the stability of the DNS system.

So, like I say, we're just getting started on this. We're just finishing up our own charter of what the scope of the working group is and what we will be considering and what we won't. And in the next month, we should be starting actual work on this within SSAC.

Again, timeframe, I hope this will be also within the next year we should get this done.

ROD RASMUSSEN:

Great. Thank you, Barry. This is one of the reasons I joined SSAC was to do this kind of cool stuff, thinking about the implications of where technology is heading, the impacts it's going to have on the industry and people using the Internet, etc. A lot of cool stuff here. Any questions? Okay. Well, thank you, Barry. Let's move on to the next one, then. This comes to me.

So, these are some of the things that are in our next-up list of potential work. The first few of these have been on our radar for a while, first being taken a look at the various data sets ICANN has or could be able to obtain that have SSR value of some sort where we can look at those for indicators of issues, problems, trends, etc., try and identify some of the gaps of what may not be being collected out there, etc.

We actually have some staff doing kind of a background research for us on that right now, and once that's done, we'll take a look at where that is and potentially form a work party to take a look at that, etc., how the things might be used, etc. This has been a discussion we've had with ICANN Org as well. It's been interesting trying to, from prior SSAC advice around looking for usable data sets that will give those inputs that the Org can look at for understanding trends, etc., especially where those may lead to various issues. That's a broad topic space as you might imagine because there are lots of different aspects to data that is being

collected that can be used to indicate various parts of the system, so to speak, that one could use to predict and monitor for issues.

That all came out as a bit of a word salad. Sorry about that. It's a broad topic space and we're trying to just get our arms around it right now.

There is a particular issue where we're hoping to kick off a work party at some point. There's been some research done where [inaudible] delegations can lead to hijacking of domain names. It's a specific topic that we hope to be able to provide some insights and potentially some advice on dealing with those.

We've had on the list for a while, and as many of you may have seen, this actually was an issue that ICANN Org had to deal with here last week, which is, from the SSAC perspective, the technical implications of a forced removal or transfer of a TLD. Particular ccTLDs are very sensitive on that but that could be any TLD.

From a technical perspective, what does that look like? What are the implications, etc.? That's been something we've actually been talking about doing for a while. We don't have any formal work on that or formal positions on that at the moment but it is an area of concern and understanding what those implications would be. It's something we'd like to explore and provide information to the community on, and given recent events, that seems we may have to move that up the priority list at some point.

And then the last one here is one I referred to earlier. We're continuing to look at the SubPro and the long-term implications of continuing to

add TLDs to the root zone. What does that mean in the very long term in various scenarios where that might be a very large number of TLDs? What does that mean to how the DNS works and resolution, etc.?

The DNS is a hierarchal system, intentionally so, so that caching and things like that work. So at one point does flattening that name space start to affect how the operations go? What are some of the long-term things to think through on that question? Again, taking a look from a technical aspect, not from a policy aspect is more [inaudible] policy decisions around the long-term implications of a particular plan or path that you may find yourself moving down.

So those are some of the things we have in our to-do list currently. Any questions on that before I move on? We'll certainly ask for inputs for other ideas as well at the end here. So if you think there's a technical topic area, SSR related area that you think we should be working on, think about that right now because we will be asking that question here shortly. Next slide.

I'm going to hand it over to Julie to talk about our membership. Please.

JULIE HAMMER:

Thank you, Rod, and thanks everyone for joining our meeting. Just wanted to share a little bit of information and a bit of outreach to you all regarding SSAC membership and how that works. Next slide, please, Kathy.

We actually have a fairly detailed member skill survey that all of our members undertake and our potential new member applicants

undertake to give us a good feel for the types of skills that we have within our group and these are the top-level categories that we have defined in much greater detail on our skills survey. If you want to look in more detail of our skills survey, I've just put the link to our public webpage in the chat and it is available to be downloaded from that.

We use the skills survey for a number of things. We use it to identify what skills various members have to encourage them to be involved in particular types of work and to identify new types of work that we might be advised to spend our efforts on.

But additionally, we use it for identifying where we might have some gaps in our skills and wish to do some outreach to seek new members that might be able to fill those gaps. Next slide, please.

We've recently reviewed the skills that our members have and we've identified a range of skills, expertise, and background that we'd like to attract more members with to both supplement our existing skills and fill some skills gaps. These are mentioned on these slides. I'll quickly go through them.

This is skills in ISP operations, large-scale measurement, large-scale registrant operations, cloud hosting experience, browser development and testing, mobile applications development and testing, low bandwidth resource constrained Internet connectivity—and that one includes IoT devices. Red team experience and law enforcement experience.

And to enhance our diversity, too, we are also seeking increased representation from the Africa, Latin America, and Asia-Pacific regions and also additional members who have an academic background. We do have a couple of members who have an academic background that we've identified and need for some more there. Next slide, please.

This is our annual program for our membership outreach, and as you can see, we try to do our outreach from about October through to the end of March each year and we try to consider new applicants all at the same time rather than individually at the time they apply, so that we can better make judgments on where the applicants might fill our skills gaps.

So, we are coming up to a period where the 2022 membership committee will be considering applications in the April-May timeframe. So now is a great time if you are interested to contact us and seek information about the application process which involves doing our skills survey and submitting a range of other documents and then potentially having an interview with the membership committee.

As Rod said at the beginning of the session, all SSAC members are appointed by the ICANN Board but that happens on the recommendation of the SSAC as a whole, which also puts through that recommendation after potential new members are proposed by the membership committee.

So, great time to look at applying. Please do contact—next slide, please. Contact either Kathy, or Rod, or myself and use that

ssacstaff@icann.org or Rod or my own personal emails. Any questions?

Okay, I'll hand back to you, Rod.

ROD RASMUSSEN:

All right. Thank you very much, Julie. I took the opportunity while Julie was talking to take a look through the 66 participants, and besides the SSAC people and some familiar faces, I see a lot of unfamiliar names. Welcome to all of you. Julie just went through the list of particular items we're trying to fill in from both a skills and geographical diversity perspective. If you yourself feel that some of the things we've been talking about today would be interesting to work on and you've got that background, please I encourage you to join yourself, or if you know somebody else, especially in some of the regions where we've been a bit more challenged, especially without having meetings—physical meetings, that is—we'd love to get recommendations there as well because sometimes some of our members come from recommendations others have made. So, please, even if it's not for yourself, if you know somebody who would make a great member and could bring a different perspective to the SSAC, we really would encourage you to either have them reach out to us or perhaps send a lead over and we'll reach out to them.

So, let's move on to the final slide here. We reached the end of the prepared remarks, as it were, and now is the time for us to ask you what would you like us to consider as work items that we didn't cover today and you didn't see on the list or things you'd like us to comment on in general or any other questions that came up during our discussion so

far. So that I'm going to put out to you, and please feel free to raise your hand if you have something you'd like to bring up or put into the chat what the question might be. We will give it a few minutes here. Or I don't know about a few minutes but we'll give it a little bit of time here to see if there's some interest in any other topics to discuss.

I am not seeing any hands or additional questions in the chat. SSAC members, is there anything that you would like to bring up or discuss before I adjourn this meeting that we did not cover today?

Okay. Well, then we will bring this session to an end. I note that, for those of you who have interest, SSAC will be meeting with the Board in I believe about 50 minutes. Yes, at half past the hour. So, a little less than an hour from now.

We'll be talking largely about going forward process stuff and not necessarily diving into what you saw here today. So, you guys got the cool technical stuff by coming to this particular session.

Please feel free to reach out if you have technical issues or something that you think should be brought to the SSAC's attention. We love to get questions and ideas from the broader community because that allows us to inform the community where there may be issues that they need some background information on to make good policy. So please always feel free to reach out on that.

With that, I will bring this session to an end. Thank you very much for attending.

KATHY SCHNITT: Thank you. This session is now concluded. Please stop the recording.

[END OF TRANSCRIPTION]