BRENDA BREWER:	Thank you. Hello, everyone. Happy Valentine's Day! Welcome to SSR2 Plenary Call #60 on the 14th of February 2019 at 15:00 UTC. Attending the call today is Boban, Alain, Laurin, Russ, Norm, Eric, Kerry-Ann, Denise, and Naveed. We have no observers. From ICANN Org, we have Jennifer, Negar, Steve, and Brenda. I do not have apologies. I will be dialing out to Matagoro momentarily.

I'd like to remind everyone that today's call is being recorded. Please state your name before speaking for the transcript. Russ, you may begin the call. Thank you. |
| RUSS HOUSLEY: | Hi. The first thing we want to do is some reminders, so I think Jennifer is going to handle those. |
| JENNIFER BRYCE: | Sure. Thanks, Russ. Hello, everybody. Jennifer here. The first item on our agenda is the next face-to-face meeting location. So, as you recall, we discussed in Los Angeles on the 17th to 19th of May in Europe. We sent some information to the leadership team about this this week and the ICANN [inaudible] has confirmed that the Brussels office is available during those dates. So, given that it's a good place in terms of visa requirements and cost effective to have the meeting at the ICANN offices, we would like to confirm Brussels as the meeting location, so we will be sending that information to the travel team, so please expect to receive those e-mails in the coming days or weeks, as it seems to be |

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lately. Hopefully we'll make sure that you get those quickly. Any questions or concerns before I move on to the next short reminder?

RUSS HOUSLEY: Just thank you for sorting that out quickly.

JENNIFER BRYCE: Okay. And thank you all for your inputs. So, moving on to Kobe, I know there was some confusion about the dates that the review team is meeting, so I just wanted to clarify that [inaudible] face-to-face meetings on the 8th and 9th of March and then a half-day session on the 14th which is the last day of the meeting. That session is scheduled to end at 1:15, so we organized some lunches in case you all want to maximize the time and work through the lunch.

Again, looking forward to seeing you all there because it's coming up quickly, so please let us know if you're having any issues or have any questions or concerns about those dates as well.

With that, I'll hand it back to Russ. Thank you.

RUSS HOUSLEY: Okay, thank you. My memory is we asked once the schedule was out if there were any slots where the team could get together during the week as opposed to just the bookends. We thought we'd be further along with the report when we made the initial request, but if there are times we can get together and sort out open issues or just even work

together on text. Anyway, you said you would look for little blocks once the agenda came out. I hope that's still on your to-do list.

JENNIFER BRYCE: Thank you for reminding me and apologies that I did not mention that. Yes. So, the meeting schedule will be published on the 18th of February, and as you may or may not know, there's always [conference rooms] available that you can book a couple of days before the meeting, so we will take a look at the schedule once it comes back and try to identify a number of slots that the review team can meet and then we'll [inaudible] rooms which I have confirmed with the meetings team are big enough to hold the group. They will be more like working rooms. We won't have the tech setup that you're used to but that's I think fine for what we are looking to do with these sessions. So, once we get those slots identified and confirmed, we will let you all know. Thanks.

RUSS HOUSLEY: Thank you. So, the leadership team took a look at the questions that we have. Note that we have gotten a couple of answers already and we felt that the future challenges workstream had the fewest outstanding questions, so we have a greater chance of making progress on that today. So, I reached out to Kerry-Ann as leader of that work stream and asked her what we could do with that time and she had some ideas, so that's what we're going to focus on today. And despite the construction, we're going to turn it over to Kerry-Ann.

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KERRY-ANN BARRETT: Hi, everybody. So, I have sent to the chair and co-chairs an approach to actually tackling the future challenges work stream. The things that are mandated for this particular part is the potential threat to secure and resilient. I think it's [inaudible] operations of the unique identifier system to ICANN that ICANN coordinates, and a long-term strategy of ICANN to anticipate or mitigate this threat.

So, one of the things I had suggested is that while we could begin as a discussion, based on the topics we've identified, which one we think would be external and internal and then we would begin to do the analysis based on probably a test approach in terms of looking at the environmental and social things that we can actually control within the organization and then the external stuff like technology and some of the political stuff that's happening around in the community that they can control. So, we wanted to put that to the team just to see if that is, that line of thinking is agreeable. And as I said, it's more to identify the [inaudible] external, internal, what [can ICANN] control organizational, internally, within them and the [the things] that maybe can control and they would have to then coordinate with the community to actually address.

Just as a reminder, the topics we identified for the work stream is a coalescence of registry backend operators [on] multiple TLDs. We saw as a challenge [inaudible] or hijacking, [inaudible] in DNSSEC, new usage for the DNS (example, IOT) and alternative naming [inaudible] (examples, interactions, conflicts, etc.).

So, I open the floor for any input.

RUSS HOUSLEY: My only concern is that we are writing about DNS crypto in the DNS SSR section, so I think talking about things like post-quantum does fit future challenges, but it might be easier to just cover those all in one place.

KERRY-ANN BARRETT: Hi, Russ. Which is one of the things we highlight at the beginning of thinking about this work stream is whether or not this work stream would still be [inaudible] from findings from the other work streams, given that when we think about future challenges [inaudible] I think about it in the sense of future threats analysis that we're actually doing and the challenges would be based on the areas that we identify from the other [inaudible], what we think would make the ICANN more resilient or more [inaudible]. I think if we could probably [inaudible]. Is that still the option that we want? Or if we want to just start looking at [inaudible] the work stream could be [inaudible] from other [inaudible].

RUSS HOUSLEY: Yeah. And you make a good point, that what we investigate and then where it ends up in the report, actually, those are kind of two different things. Anyway, maybe we should just proceed and investigate it and then figure out how to organize the findings and recommendations. So, I would say that post-quantum cryptography is clearly something that falls in there.

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KERRY-ANN BARRETT: I made a note. Anyone else have any inputs and thoughts in terms of the approach?

DENISE MICHEL: I'm sorry, I'm in transit, so I'm only on the phone and not in Adobe. Can you hear me okay?

KERRY-ANN BARRETT: Yeah.

DENISE MICHEL: I just wanted to agree with the other comments and reinforce that I think our objective here should be to identify those small number of specific issues that we see, [inaudible] other priorities in terms of future challenges that ICANN has some connection to and address those and then not worry about how to set up the report, how we're going to integrate the various work streams. I think identifying the findings and recommendations first in these work streams and then putting the report together is probably the best approach.

KERRY-ANN BARRETT: Just opening the floor again to anyone else. If there is no other comment, I think what I had wanted to probably recommend is that the areas that we have identified for examination, for investigations, in terms of the coalescence of registry backend operators in multiple TLDs, I don't know if anyone had any thoughts as to where they think we would begin because the questions that we have related to that right

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now is, is there a complete list of backend registry operators? Are there any measurement analysis testing? Is there any [inaudible] report domain? We have at least six questions. Are there any high security requirements backend? Are there any … If so, what are the control mechanisms? I think all those questions are related to internal things that ICANN can actually control and measure that is actually put in place. We have no answers to those so far.

So, I don't know if anyone has any additional questions that they wanted to ask. If we close of the questions in terms of how we go forward … Do we just do an investigation just based on our own recognizance, just checking online and talking to persons within the community just to see if we have any answers or do we continue to just wait for the responses from ICANN staff?

DENISE MICHEL: I think outreach in parallel, just waiting for the information from staff would be a good way to go, particularly in this area. Some of the issues that we're [inaudible] are not fully within staff's remit, so [inaudible] won't be the best [inaudible].

KERRY-ANN BARRETT: So, I don't know what the team thinks, that if both of us were assigned to this work stream, then we probably set up additional meetings to start working on this. I know we would have updated the [person] to put their names to actually start looking at the [write up] for this. Russ, I don't know what you think. I don't know if it will be … We have a

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question from Eric. [inaudible] DNS SSR? Anyone have an answer for him? If someone can look at the chat, Eric has a question.

RUSS HOUSLEY: I see that it's in both right now. If you look at the Google Doc that Jennifer put the link in, currently it appears in both. So, my guess is right now that we ought to be looking at the post-quantum and the future part and elliptic curve in the near term. But where it gets written up doesn't matter to me as long as both topics get explored.

KERRY-ANN BARRETT: Alright. I don't know … Probably the suggestion I'm making is that we probably then, if everyone agrees, [inaudible] probably set up a meeting. Probably ask staff to help us set up another meeting and then we just begin to allocate the investigations for this and then just start to see how basically we could start to write up. And then once it is that we've gotten the results of the other work streams, to see what was identified as some possible [inaudible] that we could include on the future challenges, because I think the future challenges, every time I think about it, it's more referring to what we're asking them to take a look out for. So, I think it would be the thoughts from the team after the fact, having done our investigation what we think are the challenges that they need to start preparing for.

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RUSS HOUSLEY: What you're saying, I think, just to use different words, is watch this space. There might be issues here, so put resources in paying attention to it.

KERRY-ANN BARRETT: Pretty much, yeah.

RUSS HOUSLEY: Okay.

KERRY-ANN BARRETT: What I'm trying to say is how we actually … Whether or not [it's there] or not is if you actually want … Those of us assigned to this, to just start writing because, if that's the case, the areas identified that are in the list of questions as well, we would then have to just start looking at these initially and then wait for the results on the other work streams. So, we can start working on this immediately and then set timelines based on the work that we have [inaudible] accordingly or we just try to stick to the deadline that's there.

RUSS HOUSLEY: So, I think it depends. Sorry. As Denise said, when we need information from places other than staff, I think we need to be figuring out how to get that information. And if we have all the information we need, writing down something even though we don't know where it will end up in the report so that we can start … So that when it is time to assemble it, we have some raw material to pull from would be useful.

KERRY-ANN BARRETT: Okay. So, the reason I'm asking is that the [inaudible] work plan right now is separate [inaudible], which is today. Then, we had 19th of May as the draft summary of key findings. So, that's why I was wondering if we're going to adjust that or we keep the date that is for now, given that it's two months out. And adjust the dates or deadlines for the submission of the answers for the follow-up questions.

RUSS HOUSLEY: Right. I think we will reassess the workplan in Kobe and see where we are, but I don't want to do that until we've had … We just updated it, so as what came out of Los Angeles and we'll update it again when we see where we are in Kobe.

KERRY-ANN BARRETT: I'll probably offer to then just contact staff and see if we can arrange a meeting with those assigned to this and then we can start seeing how we can prepare for Kobe.

RUSS HOUSLEY: Great.

KERRY-ANN BARRETT: Back to you, Russ.

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RUSS HOUSLEY: So, is there any way we can walk through each of these future challenge topics and figure out what external groups we need to talk to or assign somebody to gather information that is not going to be coming from staff? We have the names, but if we know what that information is, then … Basically, I want to make sure we have actions coming out of this instead of just broad discussion of the direction.

So, what information that is coming from sources other than staff do we need for the coalescence of registrars, registries, and backend operators that handle multiple TLDs? Do we need anything or does the team already have all that information? I see a hand from Eric.

ERIC OSTERWEIL: I just wanted to jump back to the crypto systems. I'm happy to go with whatever the group wants, but I just want to remind everyone that there was a big discussion when we were face-to-face about moving the crypto systems out of the DNSSR. In fact, the DNSSR outline document is not in there anymore because they moved it out to future. I'm not sure why it's in [inaudible] but it's not one we were working on.

Just to refresh people's memory, Russ, I think you were the one who basically said the only thing that you thought, if I remember correctly, belonged in DNSSR was a discussion of elliptic curve. In fact, that's the one that's [inaudible], so we pulled elliptic curve out for DNSSR and we punted the crypto systems in general to the futures team.

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RUSS HOUSLEY: But elliptic curve is a crypto system for DNS and that's why I thought it was worded the way it is, but that's fine. As long as we talk about elliptic in that DNS work stream … Actually, I don't care how it's going to end up as long as both topics can investigate it. But I see in the DNS SSR myself and Alain are assigned, and in future, myself and you and Raul and Laurin are assigned. So, that's an aspect we need to figure out who's investigating [inaudible]. So, do you want to update the Google Doc or do you want to move the topic altogether, Eric?

ERIC OSTERWEIL: I don't have a strong preference. I just wanted to bring everyone on the same page. If we want to put some of it back in, if we want to re-generalize elliptic curve back to crypto systems or if we wanted to keep them separate, it doesn't matter to me. But I was trying to [scribe/lead], so I just wanted to make sure that we were on the same page. Whatever the group wants now is totally fine with me.

RUSS HOUSLEY: I'm going to move the whole thing to futures. Okay. So, I'm not hearing anybody say there's additional information we need for [inaudible] which … Go ahead, Kerry-Ann.

KERRY-ANN BARRETT: I was just checking, and I'm not the best person to know about this. I was just checking, the emergency backend registry operators that was established, do you think that they would have any information that could assist us with this? I was just checking to see if there is someone

that we should consult or see what measures they're actually implementing. Anyone has heard anything in terms of the work that they're doing since they've been established? Hello?

RUSS HOUSLEY: I hear you. I'm hoping everybody else hears you, too. Norm, do you know?

KERRY-ANN BARRETT: There's an emergency backend—

RUSS HOUSLEY: Your name is on this topic.

KERRY-ANN BARRETT: So, I was just checking if anyone knows what they're doing. I see that their function was to the DNS resolution operation of [inaudible] registry data, escrow deposit, maintenance of [inaudible] in accordance to DNSSEC [inaudible]. So, just wondering if anyone heard what—

NORM RITCHIE: No, I do not know.

KERRY-ANN BARRETT: [inaudible].

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RUSS HOUSLEY:
Can we get somebody whose name is on this list of volunteers to each out and find out? Norm, go ahead.

NORM RITCHIE:
Yeah. I'm trying to understand what … I'm having difficulty following what we're trying to find out specifically here.

RUSS HOUSLEY:
So, the first question was what other groups, others and staff, do we need to reach out to for information that Kerry-Ann asked, whether the work going on in terms of back-up would offer some information here.

NORM RITCHIE:
[inaudible] but I'm struggling to see how it would be pertinent.

KERRY-ANN BARRETT:
[inaudible] for this emergency back-up [inaudible] with some of the risk management factors. So, I was just wondering if there was any correlation because the registry data escrow deposit is listed as a function for this group. So, I was just trying to figure out if anyone knows what this group has been doing. Who are these operators? I think we should reach out to them, because [inaudible] falls under their function.

NORM RITCHIE:
Okay. So, we need to get [inaudible] about what they're doing. I can do that.

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KERRY-ANN BARRETT: Because it would help us to actually [inaudible] somebody has [inaudible]. It will help us towards the [inaudible] ask. It's just that it's their function, so I don't know if it's really something that ICANN staff would be able to respond to [inaudible] answers these from, as I mentioned, that ICANN [inaudible] to actually deal with this issue. Does that make sense? Because they're actually functional and actually doing all the functions that they have. That would help us to [inaudible] some of the future challenges, especially from the escrow deposits that they should be keeping a registry of.

RUSS HOUSLEY: Okay. So, Norm agreed to reach out and see if he could find that out. So, the next topic is access to data info, research, on important abuse attack [inaudible]. Who do we need to get information from, other than staff? There's a long list of people's initials here. Some people think that we have all the information we need. Go ahead, Eric.

ERIC OSTERWEIL: Thanks. So, just from our perspective on this, I think … I hope people will agree or disagree if they have thoughts on this, but my two cents is not everything on here necessarily needs us to ask a question. Access to data, info, change on important abuse attack records, one way I would imagine you could write a summary of that [module] and I think for everyone else, is that this is something that needs to be done and there needs to be a plan published to say how would ICANN stay abreast of this in the future. That's obviously a little vague. But I'm not sure that

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when I look at it I'm 100% sure we need to ask questions about this. We certainly could. I'm not saying we shouldn't. But going down the list of these things they may not all need us to ask staff for questions and get responses.

RUSS HOUSLEY: I agree. Some of these may not need information from staff. Some of them may not need information from other sources. We may have experts on the team, even. And if that's the case, fine. I don't want to take an action item for the sake of an action item. But I do want to ask for each of these to make sure that we can move forward. Laurin, go ahead.

LAURIN WEISSINGER: I think there are places we might want to [inaudible]. I feel it would make sense for us in that case to discuss a little bit of background, research and then—

DENISE MICHEL: You're coming in really feint, Laurin.

LAURIN WEISSINGER: Better?

UNIDENTIFIED MALE: Oh, way much.

DENISE MICHEL: Great.

LAURIN WEISSINGER: So, this is the first time I'm dealing with ICANN [inaudible] to comment. It doesn't have as many options. So, essentially, I agree with Eric. I think we should do some base research and I think we all know the variety of groups where we could reach out to, but it would make sense to have some preference, some ideas before we do that.

RUSS HOUSLEY: Kerry-Ann?

KERRY-ANN BARRETT: Yeah. I was going to say that I agree as well. I think especially for this one, it's things that we've already identified as something that needs to happen as just a best practice in order to stay abreast of what the [inaudible] are. So, I agree with Eric.

RUSS HOUSLEY: Okay. So, in the new crypto systems, we already have some questions out to staff. I think that they will give us information about what plans exist and I have already written up a little thing about the post-quantum thing. I sent that to Alain. I'll send that to the other people on the list here, now that we've merged these two sections. I don't think there's any further questions to ask. What do others think? Go ahead, Eric.

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ERIC OSTERWEIL: One of the things that … I hope this doesn't sound like I'm contradicting myself, and if it does, let me know. I think when we go through these things, like you said, Russ, there are probably some SMEs on the team for various aspects of any number of these different things. I think what we may wind up coming back with is after we get done doing a pass with [inaudible], we may omit a question. So, we might say something like … Post-quantum, for example, is a good example of a number of us who spent some time looking at that, so we might have some perspective and we might come back with something saying we think ICANN should do "blah" and we might want to, before we write that in a final report, say, "Hey, by the way, ICANN, are you doing anything like blah?" So, some of this stuff may have to mature a little bit among the team before we can omit a question, right?

RUSS HOUSLEY: Sure. That makes sense. Once we're getting closer and we have some text in front of us … Anyway, there's huge impacts on the DNS if we have to use a post-quantum signature for DNSSEC.

ERIC OSTERWEIL: And from the crypto system.

RUSS HOUSLEY: Indeed. Elliptic doesn't have an issue post some of the hash-based signatures, for example, do.

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ERIC OSTERWEIL: Yeah, but [brist] is like a drop-in replacement for that.

RUSS HOUSLEY: If that ends up getting consensus, but yeah, great.

ERIC OSTERWEIL: Indeed.

RUSS HOUSLEY: I'm not hearing anybody advocate for reaching out to any group. People who are interested in this, last month the National Academy of Sciences put out a report. Anyway, a pretty nice summary of where we stand.

So, new uses for DNS such as IOT. We have Laurin and Kaveh and Eric assigned to this. Is there any other groups we need to reach out and get information from that we know of right now? Laurin, go ahead. Laurin, if you're talking, we can't hear you.

LAURIN WEISSINGER: No, I haven't started yet. Can you hear me now?

RUSS HOUSLEY: Yes, I do.

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LAURIN WEISSINEGER: Okay. So, I think this is essentially the same one where we should [inaudible] our own research first, come up with a number of issues, and then come back to either ICANN staff or members of the community, etc., depending on what we find. So, at least from my perspective, we are not at that point yet and we probably have to have a sit-down and go through this.

One of the things that is slightly possible is actually Kobe. We have smaller rooms, we might be able to some of that and hopefully [inaudible] calls, but I don't think there's anything right now to contradict what I've been saying if I'm on the wrong track here.

RUSS HOUSLEY: I'm not seeing any hands, so I guess people are agreeing with you. Alternative naming systems – is there anybody we need to reach out to at this point? Seeing no hands, I'm assuming that people who are on that will take a cut at where we are and they could do their own research first.

Okay, root server system protection. This is about assessing the threat space. Is there anyone we need to reach out to here? Okay, seeing no hands.

The last one is privacy protections. Is there anyone we need to reach out to at this point? Go ahead, Kerry-Ann.

KERRY-ANN BARRETT: The only thing for this one, I think once we've gotten responses from staff, is to [inaudible] see how ICANN Legal is actually dealing with this

across the community, given all the challenges they've had last year with implementing the GDPR and just to kind of talk to them to see not just … I mean, I'm going to try to address [inaudible] later. Regulations are regulations. [inaudible] regulations. It's whoever it is that feels [inaudible] but how does this really affect them in terms of future, we could probably go beyond GDPR just to kind of talk about [inaudible] agenda, involvement of what privacy is looking like globally, just to [inaudible] thinking about [inaudible]. And to see if this is really a challenge for them and how it would be a challenge. Is it a challenge operationally? Is it a challenge for their documents? Is it a challenge for their …

So, I think we probably just need to [inaudible] a little bit just to go a little bit beyond them implementing since that is something that is being … The [inaudible] is being developed constantly still and some persons are skeptical as to how long this will be around and if it will change to something else.

So, Denise, I don't know if you have any thoughts [inaudible] maybe do we change how we think about it a different way in terms of privacy protections as a future challenge? Is it really a future challenge? Or how do we phrase it to make sure the [inaudible] keep track of. How does it really impact them? That's the only thing in terms of … I don't think we need to reach out to anyone else, but I just wanted to add an additional thought to it.

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DENISE MICHEL: Yeah. I would agree, Kerry-Ann. It's both a current [challenge] and an ongoing challenge.

KERRY-ANN BARRETT: I think, Denise, they are the ones who are among the [inaudible] probably get to this is probably to flesh out and be very precise and not end up in the same vagueness that we don't want to end up in because it could be pretty big if we don't write this up properly. So, I just want to flag to the team that whoever writes that, if we ended up writing ourselves, to kind of be critical that way, to make sure it's not vague and we're very precise as to what we mean by a challenge for privacy protection.

RUSS HOUSLEY: Okay. So, I see Naveed put in the chat that he agrees with Kerry-Ann. Any other things to be raised here? Naveed says it's also current which is true of most of the future things. There is a near-term aspect as well. Eric, I saw a hand.

ERIC OSTERWEIL: No, I'm sorry.

RUSS HOUSLEY: Okay, then we move on to the any other business aspect of the call. Does anyone have anything to raise? Kerry-Ann?

KERRY-ANN BARRETT: I know this has been my life for the best year, so I just wanted to apologize again in advance. For Kobe, I've gotten … I should get my visa tomorrow. With a confirmation from Brenda with dates, I won't be able to be there the weekend [inaudible] memorial service is now on the 9th of March. My aunt has set that this week. I had missed my uncle's [inaudible] and this is his son, so I won't be able to miss the memorial. But I'll get my visa tomorrow. If it is that we do have sessions planned, I'm prepared to travel the following all week. If we have sessions planned for smaller groups to write, I'm volunteering that I'll stay in the room and just write the entire time. So, just let me know from leadership what you recommend and then I'll work with ICANN travel next week to book my flights accordingly. That only came to me yesterday, so I just wanted to let you guys know. It's been a really rough year for my family. I don't know if any of you know, I had like two cousins die last year and an uncle. It's been a doozy. Just to let you know that. I'm still prepared to travel the following week. I could leave on the 11th and I could be there for the entire week including the half-day session that we have on the 14th.

RUSS HOUSLEY: First, condolences. I'm sorry you're going through such a tough time. Jennifer, we will know the agenda by the time we have the leaders call on the 20th, so let's get back to Kerry-Ann at that point so that when we know how many additional writings times and such we will have.

KERRY-ANN BARRETT: I just felt really bad because I've missed almost all the face-to-face recently, so I just wanted to make sure that you guys know that I'm still available to write whenever you need it. I don't want to seem [inaudible] anything. I'm just being dead honest because I know that we're crunched on trying to pull the report together. So, just so you know that I'm available.

RUSS HOUSLEY: Thank you. I appreciate that. Any other any other business? Okay, over to you, Jennifer, for the action item review.

JENNIFER BRYCE: Thanks very much. So, a couple of actions on today's meeting. First of all, Kerry-Ann to work with staff to arrange a meeting with some of the volunteers of the future challenges work stream to progress the work. The team made the crypto systems topics to the future challenges and DNS SSR work stream, so I'll update the documents and make sure they are all aligned. Norm took an action regarding the coalescence of registrars, registries backend operators to reach out [inaudible] on that one. Then, for the rest of the topics, the volunteers from the team decided to do some more research and there was no other people to reach out to at this point. Then, I added to the leadership agenda on the 20th to discuss opportunities for writing sessions in Kobe. So, as always, let me know if any edits, additions, and back to you, Russ. Thank you.

RUSS HOUSLEY: I think we're done. You get 15 minutes back. Thank you.

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KERRY-ANN BARRETT: Bye, everyone.

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