
ABU DHABI – Joint Meeting: ICANN Board & Root Server System Advisory Committee (RSSAC)
Tuesday, October 31, 2017 – 10:30 to 11:30 GST
ICANN60 | Abu Dhabi, United Arab Emirates

KAVEH RANJBAR: Please be seated.

Welcome, everyone. Welcome to RSSAC and ICANN board engagement session. I hope everybody's seated.

Do we have anyone from RSSAC who is not sitting here on this table? Okay. Let's start. I will start by a quick roll. George.

GEORGE SADOWSKY: George Sadowsky, ICANN board.

SUZANNE WOOLF: Suzanne Woolf, University of Southern California.

WES HARDAKER: Wes Hardaker, University of Southern California.

JEFF OSBORN: Jeff Osborn, ISC.

TERRY MANDERSON: Terry Manderson, ICANN org, root server operations.

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CHRIS DISSPAIN: Chris Disspain, ICANN board.

RON DA SILVA: Ron da Silva, ICANN board.

CHERINE CHALABY: Cherine Chalaby, ICANN board.

STEVE CROCKER: Steve Crocker, ICANN board.

TRIPTI SINHA: Tripti Sinha, RSSAC, University of Maryland.

KAVEH RANJBAR: Kaveh Ranjbar, RSSAC liaison to the board.

BRAD VERD: Brad Verd, RSSAC co-chair and VeriSign.

AKINORI MAEMURA: Akinori Maemura, board member.

FRED BAKER: Fred Baker, ISC, RSSAC.

DUANE WESSELS: Duane Wessels, root zone maintainer to RSSAC.

JONNE SOININEN: Jonne Soininen, IETF liaison to the ICANN board.

LARS-JOHAN LIMAN: Lars Liman, Netnod, RSSAC.

RUSS MUNDY: Russ Mundy, liaison to RSSAC.

ASHA HEMRAJANI: Asha Hemrajani, ICANN board.

KAVEH RANJBAR: Thank you very much. Do we have any other RSSAC member who is not on the table? Okay.

One thing which you might have noticed is a bit of change in the way we introduce ourselves. We don't use any letters anymore, and this is a conscious choice just for the knowledge of the ICANN board because we thought that that's misleading. We

represent organizations, and we just name the organization. So we don't say we are from letter X.

Can I have the questions? Yes, I have the questions up. So these are the two questions that came from RSSAC to the board. I will start with these, and then maybe we'll go through the questions from the board to RSSAC and after that if there are any other topics of interest.

The first question from RSSAC to the board is: Has there been any change in the way the community approaches the board with respect to the root server system? And I guess from the board, Jonne.

JONNE SOININEN:

Yeah, thank you, Kaveh. The answer is no. We haven't actually seen a significant change yet. Where we have seen a significant change is in your behavior and in the material you have actually produced. We think that there is at least -- we think we can observe that there is -- there has been an increased interest also in the root server system in the ICANN community and outside of it. But we haven't seen really a change in behavior yet on the way that community approaches us on the questions on RSSAC.

But we do think that the new openness and the new documents that you are providing, those do help people understand much

better what RSSAC is doing and how the root server system actually works.

KAVEH RANJBAR:

So I think -- second question is kind of in a similar script. Has there been any shift in questions toward the board with respect to the root server system? Like, the type of the questions or from which entities they come.

JONNE SOININEN:

Not really. I think the answer is the same as the other one as well, that there hasn't been a big shift on how people are addressing us on this.

But I'm not sure if the -- kind of like, if we are -- the real KPI here to see on this shift. I think the question is that have you seen shift on more interest of people coming to you and talking about -- or asking about the root server system and what is the -- basically -- and how people -- do people know more about RSSAC and are they more interested in that.

KAVEH RANJBAR:

RSSAC, anyone? Brad.

BRAD VERD: As far as interest goes -- sorry, Brad Verd, RSSAC co-chair -- I think interest continues to grow. The caucus continues to grow and add more technical experts.

We -- I think the CTO-sponsored "how it works" tutorials are -- continue to be well-attended. And the -- we constantly see new faces there. And I think the new faces echo the -- we keep seeing the same number -- not number, the same type of questions.

And we continue to inform the community where possible. And I think it's -- and all that is leading into the work that we're doing.

KAVEH RANJBAR: Thank you very much. Any other comments? So may I ask -- oh, yes, Russ, please.

RUSS MUNDY: Thank you, Kaveh. Russ Mundy for the record.

I would like to compliment the approach that the RSSAC has taken in their reformation and creation of the RSSAC caucus because for many years, RSSAC was operating really as a very closed group.

And with the creation of the RSSAC caucus, it has allowed a much more effective way of getting input from the broad community.

It is primarily a technically focused group, and I think that is the right focus. But it is much broader in membership than the RSSAC itself which by definition is made up of the current set of root server operators.

And though their role is absolutely critical, their perspective on the world is a little different than what the broader community is. And I think the caucus and the actions of the caucus and how the RSSAC has chosen to use the caucus where a large portion of the work is actually done there is extremely good for the ICANN community as a whole and the Internet as a whole.

And one of the things that as the SSAC liaison I've done is I've encouraged individual SSAC members, if they have time and interest, to join the caucus. And there are several of us that are members of the RSSAC caucus that are also SSAC members. We don't speak at SSAC in the caucus; it's as individuals. But we're bringing more expertise into the advising of the RSSAC role and creation of recommendations.

Thanks.

KAVEH RANJBAR:

Thank you very much. Also Asha had a comment. Okay. Terry, first.

TERRY MANDERSON: Terry Manderson.

Jonne, are you able to categorize the frequency in which the community engages with the board on the root server system? Is it a little, some, or a lot?

JONNE SOININEN: I think it's very little. I don't think that we get a lot of direct feedback on RSSAC or the root server system or its community that would come to the board.

I think that most that we got is when we are somewhere with you guys, and that is where the questions come.

I think that there was -- this week, there was one question in some meeting which Kaveh dealt with which was asking about how to join the RSSAC and which you then said that there is the RSSAC caucus and people should join there.

But I think that's -- it's really quite rare that I can remember that we are ourselves addressed about RSSAC and the root server system.

I don't know if, Kaveh, you have a different opinion?

KAVEH RANJBAR: No. I haven't heard any additional one.

I have Asha and then I might come back to that to give more info.

Asha.

ASHA HEMRAJANI:

Yeah, thank you, Kaveh. I just wanted to make a generic -- general comment, rather, on what I see as improved diversity in the RSSAC caucus. I'm really pleased to see that there are now, for example, four Indians who have joined RSSAC caucus. And that's been a big change over the last 12 months. And I'm very, very pleased to see that. Thank you very much for supporting that.

KAVEH RANJBAR:

Thank you, Asha.

And to continue on what you said, I also -- Jonne, I don't have any specific case which we are not all aware of. But on behalf of the board, I would like to ask also OCTO because they do a lot of engagement and they might have heard of stuff. So if David --

DAVID CONRAD:

Thank you, Kaveh. So with respect to changes in the way the community is approaching the board, haven't really seen anything from OCTO's perspective.

We do -- you know, as staff, we do occasionally field questions and comments related to the root server system. Most of those do not propagate up to the board. They tend to be more in relation to how the community can engage with the root server system, with the root operators.

We do get occasional questions of how do I get a root server. But very few of those questions sort of propagate beyond sort of the anecdotal questions that are submitted to staff.

KAVEH RANJBAR:

Thank you very much, David.

Any other comments on this subject?

Jonne.

JONNE SOININEN:

Yeah. I wanted to actually comment on what Russ said previously, that the caucus and the openness and what has changed is that -- I remember that for many years, we didn't have these meetings at all. Then we had them behind closed doors. And now we are having them in open. And I think this is a very good progress and very good development.

And I think this is also one of the things that also showed people what RSSAC is about, what are the root server operators are about.

And I think that your new system, though, that it might seem a little bit like a gimmick but actually that you're saying who are the parties behind those letters, that is actually quite good. I find that quite useful actually.

KAVEH RANJBAR: Thank you very much.

Liman.

LARS-JOHAN LIMAN: Lars Liman from Netnod. I would also like to add that you see up here the members -- many of the members of RSSAC who they also are root server operators.

I very much welcome -- and I guess I speak for most of the members of RSSAC. We very much welcome interaction. So, please, come and talk to you -- to us. We are here in the corridors. We are listed on the RSSAC Web pages in the ICANN system. We warmly welcome interaction to answer your questions, to receive your input. So, please, keep talking to us. And there's also even an email address. If you have questions

that you would ask -- would like to ask the RSSAC as a group, there is an email address that now Brad or Tripti will recite because I have forgotten it.

TRIPTI SINHA: ask-rssac@icann.org.

KAVEH RANJBAR: Thank you. First of all, I think you are safely talking on behalf of all of RSSAC. That's what I hear. We are all open to questions. Talk to us in corridors. And, yes, we have that address.

And to address what you said, yes, this is a general direction we decided from some time ago. But from almost a year ago, we started acting on that. It's not that we are only trying to open up as much as possible but keeping the board also efficient and global.

Not only in RSSAC, even in root ops, which is a root operators meeting, we have changed a lot. So now, for example, we publish meeting minutes and agenda which is a bit different from what was in the past. So there is a lot of progress in not only ICANN space but in general in root operations. And it has been very welcomed. So we have received positive feedback.

Wes.

WES HARDAKER:

Thank you, Kaveh. Wes Hardaker from USC. One more addendum about the caucus that's crystal clear and everybody is understanding because as Russ said RSSAC is taking input from the caucus. It's more than that. The caucus is what does the technical work now. Our whole goal has been to shift all of the work to the caucus so that the caucus is actually doing technical analysis and generating the reports. And it's not actually RSSAC writing the reports. It's the caucus. So that's -- that's very critical because we want the entire Internet community to be able to participate in the creation of RSSAC documents.

KAVEH RANJBAR:

Thank you. Yes. So we tried to actually keep the RSSAC which is the membership is closed currently to root operators and liaisons and representatives from root operators and liaisons to as much as possible to only administrative work. So mostly we try to do basically everything in the caucus and try -- try to validate within RSSAC. And that's one of the other reasons we are opening up the RSSAC meetings so people actually see that it's mostly administration.

Okay. Any other comments on this subject? If not, may I ask to see the other slides? Board ops, please.

Wendy? Yes. Thank you.

Thank you very much. So these are questions from the board to the RSSAC, which has been submitted before. First one what are the key issues or topics you are currently working on and especially if you need special support from the board on these issues. Tripti.

TRIPTI SINHA:

So I think most of you are aware that we've been -- our primary focus within the RSSAC has for the past two years been on evolving a model for the root server system going into the future. So we recently had a workshop, roughly three weeks ago, I think. And we published our report. Does anyone have any questions about the report? I'm willing to answer them.

KAVEH RANJBAR:

I reshared the report this morning with the board just for additional reference.

TRIPTI SINHA:

It just goes into more depth on the work that we're doing. And I think we're honing in on some good material which we are putting together in the form of advice. And we hope to issue

that in the next six months or so. But do you have any questions? Okay.

And would anyone -- we do have work that's currently with the caucus. You want to give an update on the caucus work? Either one of you.

KAVEH RANJBAR:

I think, Brad, if you can just quickly go through the current topics of interest.

BRAD VERD:

We have a number of existing work parties going on. One that I can think of is the harmonization of anonymizing the root server data. There are periodic data collections throughout the year for different reasons, one of which I can share -- you know, an obvious one is the KSK roll work. Data was collected during key milestones or date boundaries to see the behavior there.

There are a number of root operators given their geographic location that are not allowed by law to share source IPs of the queries where they're coming from. And over the years, we thought it would be a good -- a good idea based upon we've seen how different operators do it differently. Rather than having them anonymize the data in their own way, we said, you

know, we should do a work party and kind of structure that so it's standardized going forward.

This does not have anything to do with the GDPR stuff, but that's an existing work party. We have another work party that's kind of winding down. But it talks a lot about Anycasting, where to -- Anycast catchments. Where to put them. How big they get and their impact.

We have an ongoing -- it isn't really a work party, but we have ongoing work around standardization of tools. And we've created a repository that we're sharing standardized tools between the root operators and the caucus in a git repository. Am I missing anything else? Was there --

DAVID CONRAD:

There's also a work party on packet sizes looking at things like MTU and MSS and fragmentation and that sort of thing. That one is kind of just getting started.

BRAD VERD:

That one is getting started. And I think you can imagine where the source of that came from, again, around the KSK and the packet size concerns as a result of that. So that led to a number of questions that we're working to answer.

KAVEH RANJBAR:

Thank you very much. Tripti, I think -- because the workshop was actually a very fruitful workshop. There was a lot of changes since even the last update we had with the Board. So I asked Tripti, if possible, to quickly give us highlights of the topics of the workshop to see if there's any additional interest from the Board. Thank you.

TRIPTI SINHA:

Thank you. So very quick updates on the salient points, takeaways from the workshop. So, as you know, we've been working on evolving or making recommendations on the future evolution of the root server system. And the service itself has been running quite well for over three decades now without any true identification of stakeholders, per se. It's been done from -- you know, to use the metaphor of it comes from our heart. We do it for the good of the global Internet. But, in proceeding down this path that we're proceeding down, it was important that we identify who the stakeholders of the DNS root service are. And we made significant progress in that. And we've had discussions about what does it mean to be a stakeholder?

And so we start from the basics. And we're building up. And we've coalesced around who we believe the stakeholders are.

And then we've had some more in-depth discussions on root server operations. And that currently occurs. And it was just adding redefinition to it, making sure that we're all in agreement as to what exactly it means and how to further add structure and form to it.

And we had floated the idea of a root server association at the last -- the fourth workshop. And we further chiseled away at that and definitely gave it more definition as well. And it's got more of a lightweight approach now in how this association would be used, this entity. We haven't quite named it yet.

Then we talked a lot about a function that we called strategic architectural and policy. And with any service you would need to look into the future at all times. There's always an activity that occurs on what happens 5, 10, 15, 20 years from now. So, clearly, there will be that function that needs to exist. Once that strategy is in place, we would evolve and produce an architecture so that function would go hand in hand with that as well where, you know, you strategize and you architect.

And then from that falls out policy. And policy will probably permeate the DNS ecosystem.

So we would need, you know, that function to occur as well. So we did add some good definition to that function.

And then we moved on to the very critical discussion of designation removal of operators. And, thus far, because of the organic growth of the Internet, there are today 12 operators. But, clearly, that's not sustainable. At some point we will all retire and move on. Time will overtake us. So we need to put a model in place. So we continue to pick at that and peel that onion.

And we're at a very good place today as well regarding that.

And accountability is a big question here, how the root server operators and how is the system itself, the cloud service held accountable to a certain set of operating standards. And we've now coalesced around different levels of monitoring. There's clearly daily more frequent monitoring that we all do within our constellations. And that occurs on a more frequent basis. And, once we go into accountability mode, you would have these larger audits that occur. So we've added more definition around that function as well.

And the very last discussion we had was regarding what we call the financial function. Thus far, the 12 operators have self-financed the service for the past 30-odd -- 30 years or so.

But that, again, is simply not sustainable into the future.

So we've had some extensive discussions about that.

There's recognition within the group that those are difficult conversations but they must be had. And we've begun the conversation.

So I think this was a particularly successful workshop. We're talking about topics that we as a group have been afraid to have for the past many, many decades. So I think we're at a good place. And, hopefully, in about six months we should release some advice.

Any questions? Yes, Steve.

STEVE CROCKER:

Thank you, Tripti. You mentioned at the end of this list about the financial issues.

Without wanting to get into specifics, can you say anything about whether the costs of running the root operations have changed significantly over time? That is, when you talk about non -- is it sustainable, is it because the existing levels of funding are becoming more questionable within the various organizations? Or because the costs are, in fact, rising because of increasing demands? Or some combination?

TRIPTI SINHA:

The answer is yes to both. So we all self-fund the service. And our institutions clearly are looking at this more closely. There's questions being asked about, well, are we going to continue in this mode? Some are not able to sustain that level of funding. So, yes, that's one issue that's at play. But, when you look at the Internet today with over 4 billion users and growing and attack vectors continuing to get more creative and crazy, I think we need to look at the service holistically and see what's the right way to do this. And it costs money. And so we're looking -- so the costs will -- yes, are increasing for both reasons.

STEVE CROCKER:

Let me follow up with really a different question.

Clearly, the large question, sort of the elephant in the room related to finance, related to other aspects is that there may be transitions, change of control or new players coming in one way or another without wanting to get into specifics about how that might come about. Let me pose the question what are the negatives that could happen?

So, in the extreme, we've had a very, very cohesive set of operators who have ascribed to a very specific ethic of serving the content that is provided by IANA and doing a first-class job of that without exception and totally neutral on behalf of the Internet users. Suppose new players come in and they have not

been steeped in that ethic or they come in particularly with a different agenda.

How much work has been done in thinking through what the down side potentials might be, sort of the red team analysis kind of thinking?

TRIPTI SINHA:

So we're paying very close attention to the checks and balances within the system. And we believe this is akin to what ICANN just went through with the transition.

And we are paying particular attention to what we call the ethos. How do we onboard a future operator who has the DNA that the current operators have in serving the data?

And there will be numerous checks and balances in the system before anyone is brought on board, before anyone is taken off board, et cetera, et cetera. So we're treading through that exercise very carefully before we issue advice.

STEVE CROCKER:

2 1/2 years and \$25 million.

KAVEH RANJBAR:

Thank you very much. I have a queue. Ron.

RON DA SILVA:

Thank you, Kaveh. Tripti, thanks for this update. Certainly, the scalability of the root server system is very important to the overall stability of the Internet. And I'm delighted to see another update on this initiative by the operators to address a number of concerns regarding scalability just from an infrastructure standpoint, scalability from a security standpoint addressing new attack vectors and being in front of that, scalability from a financial standpoint.

And then, relatedly, is identifying amongst yourselves service level agreements, you know, metrics with respect to how the -- all the participants in the operating community perform and then what to do when performance isn't met.

These are all very important governance questions. And I'm very happy to see that the operator community has taken this head on and will continue to look for updates and status on how this progresses.

Certainly, from a sustainability standpoint, the ability to introduce a new operator or to, you know, continue to help support amongst the operators each other's operations, these are all very important. And I continue to think about that and you know what happens when somebody's unable to, you know, maintain the right level of service or financially is unable to

continue to make the investments necessary and what do we do. And I'm really happy to see that you're focused on that and looking to answer those questions before we actually have a crisis situation.

TRIPTI SINHA: Thank you, Ron.

KAVEH RANJBAR: Thank you, Ron.

Russ? Okay. Good.

Any other comments from any other operators or board members?

If not, we will go to the next one.

The second question from the Board is: "What are the concerns of RSSAC regarding GDPR and how best to mitigate possible outcomes?"

So, basically, I can give a quick brief answer. And, if there's any additional -- we asked the RSSAC the question, circulated the question. And, basically, the answer we got is, no, it shouldn't affect us. That's what we discussed. And that's what I heard and read on the list. But, if there's any additional comments from RSSAC members? Because we don't think it directly affects us.

At least from my organization, we didn't do a detailed legal analysis yet. We will do. But, to my knowledge, the level and the quality of the logs we keep -- and because we don't share them, at least not without very restrictive details, it doesn't affect us. We are committed to do one before end of May, which is the effective time of GDPR within my organization. But for the rest, I think it's up to each operator. But our initial assessment was none. Liman.

LARS-JOHAN LIMAN:

Lars Liman, Netnod. Yes, I fully agree with Kaveh. The thing that leads to that assessment, in my mind, is the data we published is not produced by the root server operators. It's produced by IANA through the root zone maintainer mechanism. So the data we publish we receive verbatim from someone else. And, because of that, the role to ensure that the data aligns with the GDPR is -- we see that as sitting with the IANA and the root zone maintainer. The part -- the data that comes to mind is the actual addresses name on the root name servers. And with those specific small, small details, I don't see a problem. The area where there might be a problem is, when we do the data collections used for research -- because there is a connection there between the source IP address that sends the query and the content of the query which domain name is being asked for.

And that's where we come into these discussions about anonymization that Brad told you about before. So there's already work underway to make sure that we are in a good position there. Thank you.

KAVEH RANJBAR: Thank you very much.

I have Goran.

GORAN MARBY: Just a comment. As I have greatest respect for engineers, if any of them want to reach out -- and I have a meeting with RIPE actually today to talk about things like that, about who are legally a data controller, regardless where the information actually comes from, we're here.

And we would love to have that conversation. Because in a system like this where we are so interactive, we are part of the same IANA functions, root servers -- and together with VeriSign as a company, we are interacting with each other. And I am welcoming to have that discussion. I don't have any answers, but we probably need some lawyers.

May I say for your own protection.

KAVEH RANJBAR:

Thank you very much. Sounded like a public safety advice.

Any other comments on the GDPR? Okay. If none, I would like to ask Steve for a quick and brief update about the Board Technical Committee. Because, as you might have been aware -- and it was mentioned in Steve's blog -- the Board has started a new committee, the technical committee. And yeah. Steve? Please.

STEVE CROCKER:

Thank you, Kaveh.

Over a period of time, we've incrementally improved the technical capacity and focus across the organization. So pieces of that have been the establishment of the Chief Technology Officer and then his office and set of people under David Conrad.

The -- along a separate path, the Technical Experts Group that meets and now more recently within the Board a Board Technical Committee, which started out a short while ago as a less formal group but more technical group. And we've now formalized that into the Board Technical Committee.

This is a -- now a standing committee within the Board that is focused on, as I said, very technical issues to prevent -- intended to provide capacity to look at the more substantive issues of things that come to the Board where putting things in front of

the whole board and then having a detailed discussion is ungainly and awkward. And so it's a good fit.

The Board Technical Committee is also the natural interface to the various technical components of the entire ICANN community, including, of course, RSSAC, SSAC, the Technical Expert's Group, et cetera.

Kaveh, who is your liaison to the Board, turns out to be remarkably good. So thank you very much for making a first class selection.

And, in recognition of that, we gave him more work, namely, to chair the Board Technical Committee.

And we had a quite excellent meeting a few days ago. Committee's off to a quite good start. You will see the usual stream of documentation of agendas and results and so forth.

So I'm very pleased to mention and socialize the fact that that committee is now in operation. And I leave the Board with a somewhat more relaxed sense of -- than I might have had with respect to where our capacity is and where our instincts are with respect to analyzing and reacting to the technical underpinnings of some of the more contentious issues that come before us. Thanks.

KAVEH RANJBAR:

Thank you very much, Steve. And thank you for the good words. That sets the bar so far, but thank you. You're so kind.

Just to mention and repeat again that the Board Technical Committee is not a decision making body. So there's no decisions going to come out of that. The decisions would be to the Board as usual, the full board.

But that's an input mechanism to collect and gather policy -- so there are three distinct work streams within the Board Technical Committee. One is getting the input from different SO and ACs where technical or technical advice is needed. Compile that and send it to the full board.

Another one is to help the Board fulfill their fiduciary responsibility of making sure the ICANN organization is running smooth technical operations.

So high level of -- being aligned at high level with, basically, office of CIO and the IT projects they're running and making sure that it's in line with -- and, finally, looking at the future, like what emerging technologies and things like that, which is mainly working with office of CTO.

So that's summary.

STEVE CROCKER: Let me just comment. So Kaveh's ticked off the main bullet points that describe the charter and sort of standing agenda or sort of categories of the agenda for the Board Technical Committee.

But he mentioned the board technical committee is not a decision-making body, that it makes recommendations. So I'm reminded of something which all of us technical people know, that the difference between theory and practice is even greater in practice than it is in theory. And so you will see over a period of time things like the board has taken the following decision upon the recommendation of the board technical committee which is polite speak for, you guys made the decision and we're just kind of rubber-stamping it. So there will be a little bit of fuzziness between that, though.

KAVEH RANJBAR: Thank you, yes. So with that, we go end of the pre-defined questions. Is there any additional question or comment or topic of interest? I have an example of SSR2, but if people have questions from the board or the other way. Chris?

CHRIS DISSPAIN: I'm sorry, Kaveh. What was the question? I was busy with my plug.

[Laughter]

KAVEH RANJBAR: No basically, is there any other subject? I mentioned I could -- from the board to RSSAC or other way around. Any subject we didn't discuss or any interest to discuss. If not -- oh, I have Rinalia.

RINALIA ABDUL RAHIM: Thank you, Kaveh. It's about SSR2. And I -- so from yesterday's public forum essentially we clarified that the SO/ACs need to pay attention to that, to figure out how to solve the problem. And I know that Patrik Faltstrom is trying to address the problem and trying to get action from the group of SO/AC leaders. And I just want to convey the message to the leadership of the RSSAC, please, respond to him and help him. Thank you.

KAVEH RANJBAR: Thank you very much. If there are no additional comments, then I will close this meeting. Oh, sorry, yes. Brad.

BRAD VERD: I will make one that I forgot to say earlier when I was talking about the caucus which is, there is a caucus meeting later today where there will be a call for work. So we were talking about

what the current items were. We'll be meeting with the caucus later today in an official capacity, and we'll be asking them for new work items.

KAVEH RANJBAR: Thank you, Brad. So I'm closing this meeting, but this will be the last one that we will -- last meeting we will have with Steve, so on behalf of RSSAC, I would want to really thank you for all the support during the years and, yeah, wish you pleasant journey forward.

STEVE CROCKER: Thank you very much. It's been an ongoing pleasure to work with all of you over a period of time. I had the opportunity to join you a couple of weeks ago at your retreat and was taken by surprise with the rather heartfelt thank yous and recognition. And for a moment I was afraid you were going to try to repeat all that and so I'm glad that we can escape here with a very simple thing. But you guys are, you know, a premiere operation, I mean, a real jewel. And there's not much more to say. Thank you.

KAVEH RANJBAR: Thank you very much. And the meeting is adjourned.

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