

John Curran: Good morning, and welcome to ARIN 46, the second day of our ARIN virtual meeting. I'd like to welcome everyone back after an exciting day of discussions yesterday. And I would like to go over some brief announcements.

On the meeting, we have attending our Board of Trustees as usual. And they will be paying attention to what's going on, of course. We have our ARIN Advisory Council -- next slide -- who are the ones who administer the policy discussions that are going on.

You'll have various AC members presenting the policies that are being considered before the community.

Next slide. We also have members of the ARIN NRO Number Council who help coordinate global policy matters among the five RIRs and work within the ICANN structure to do things like elect ICANN board members. So very happy to have those folks with us, in addition to the attendees working on the, who will be participating in today's policy discussions.

I want to remind you about some minor logistics items about the policy discussions. For those who were here yesterday, this will sound familiar.

First, we have a chat going on. The chat you can get at by clicking the button in the lower left corner of your screen. And it's open discussion. And it's not for questions for the panel. It's just for you to talk amongst yourselves.

We'll use the chat if there's something that needs to come to everyone's attention. And you should use the chat similarly if we're not noticing something happening during the meeting.

Raise hand -- if you want to be in queue to speak to something happening in the meeting, use the raised hand button and you'll be added to the queue. When it's time for questions and answers we'll eventually do the live ones by pulling people out of the queue as usual.

Then the Q&A button. You can actually, if you want to ask a question and not bother to speak before the whole group, you can use the Q&A button. And whether you're asking a question via Q&A or whether or not you're going to be doing it live by raising your hand, please remember to include your name and your affiliation.

When you submit things via the Q&A button, that will make sure that we have it in queue. And that's one of the things we'll go through is pull all

the written questions before we get to the live speakers.

Next slide. So when we get to the policy discussions, it's easier to have the chair of ARIN, Paul Andersen, moderate the discussion that allows staff to be a supporting role. And I'll turn it over to Paul for that portion.

And then so he will be the one running it -- as usual, as was done yesterday. Again, please clearly state your name and affiliation each time you're recognized to speak. And, again, if you submit something via the Q&A, again, name and affiliation.

The whole meeting is done under ARIN's standards of behavior. If you have any questions, you can find it online or in your Discussion Guide. And it just says be respectful of one another. Please give other people the opportunity to speak. Please keep the discussions relevant to the policy issues, not personal attacks or personal matters.

Okay. Next slide. We are recording and live streaming. And that will let us have a good record of the meeting. The slides will be made available after the end of this, after the end of the entire Member Meeting as part of the meeting report -- as will the transcripts. Because there's transcripts, I ask people

speaking clearly and slowly, including myself. I have a bit of a problem with that.

All the materials for the meeting, including the policies being discussed, the presentations, are available under the ARIN 46 materials at www.ARIN.net, ARIN 46 materials.

Okay. Our agenda today, we have early part of the agenda and the second part after the early part. We'll have us discussing three policy proposals. These are not Recommended Draft Policies. These are policies that are still in development.

And the AC is presenting them in order to get more feedback from the community as to how they should evolve. One includes 2020-6, Allowance for IPv4 Allocation Swap transactions; ARIN 2020-7, gTLD micro allocation definition; and then 2020-8, Clarify and Update the 4.2.1.2 Annual Renewal Fee.

We'll then have a break. And our break will include a stretching exercise as we did yesterday with Erin. And we'll have a trivia contest during the break.

When we get back from the break, we'll have the IETF Report, a classic part of ARIN meetings. We'll have a general update given by Richard Jimmerson. We'll talk about the ARIN Customer Satisfaction Survey that was just completed. A presentation about training and

outreach going on at ARIN. And then our open microphone session for any questions that might have come up or things that people have a burning interest in.

With that I'm now going to turn it over to our first presenter, Owen DeLong, who will talk about ARIN 2020-6, Allowance for IPv4 Allocation Swap transactions. Owen.

Owen DeLong: Good morning, when you guys got on Zoom I cannot see the slides. Is there a way to rectify that?

Zoom Host: Are you saying you can't see the slide?

Owen DeLong: That is correct.

John Curran: In the upper right, you have speaker view and if you select that it may switch, whether you see the presentation or just yourself.

Owen DeLong: In speaker view, I just see you. And in the Zoom view, I see lots of video windows and no slides. I only have two choices. That's the problem.

Paul Andersen: The slides are -- want to try to go through or want us to maybe move on to the next proposal while we figure that out off line?

Owen DeLong: Let's move on. I don't have a way of presenting the slides without being able to --

Paul Andersen: John, I think we might need to move on to the next presenter. If everyone can give us a second, we'll do a dance.

John Curran: Staff will work with you off line and we'll move on. So let's queue up Alicia. And, Alicia, are you ready?

Zoom Host: Just give her a second; we have to move her up.

Paul Andersen: Alicia, take your time to get ready. We apologize for this little glitch.

John Curran: We'll move on to having Alicia cover ARIN 2020-7, which is 4.4 gTLD micro allocation clarification. And I think she's ready. So Alicia, take it away.

Alicia Trotman: Hi. Good morning, everyone. So this proposal is Draft Policy ARIN 2020-7, 4.4 gTLD micro allocation clarification.

Myself and Joe Provo, we are the shepherds. Next slide, please.

So the problem statement for this particular proposal, as stated in the NRPM 4.4 micro allocation. I'm not going to read the entire slide, but the gist of it all was the term "new gTLD" is confusing. It refers to all gTLDs that have been created since June of 12.

Can we go to the next slide. The policy statement reads: ICANN-sanctioned gTLD operators may justify up to the equivalent of the IPv4 /23 block for each authorized gTLD, allocated from the free pool or received via transfer, but not from the above reservation.

So this seemed pretty much like an editorial change at the beginning. But, however, as the process progressed, the reviews that we had gotten from persons in the community may have changed this.

Next slide, please. So the proposal was entered on June 3rd, 2020. It was upgraded to a draft on the 23rd of June 2020. And the language was changed, it was a very minor edit. It just made reference to which portion of the document that the excerpt was coming from. And that was on the 14th of July 2020.

Next slide, please. So here are some comments that came from the PPML feedback. And pretty much the first comment is saying that even if we made this slight change, the entire section of 4.4 needed an update. It's pretty much saying, "today because of the implementation of the gTLDservers.net the framework of this particular policy has become an anachronism. My suggestion would be noneditorial rewrite of the entire section."

So I must mention that it was two particular individuals who really discussed this on PPML. I didn't get a lot of other input from other members in the community.

But these two individuals felt strongly that either we should rewrite the entire section of 4.4 or we could make, the second point it states, we could make an easier editorial change and at some point in the future we could do a more substantive change to the section. Next slide.

For discussion you should talk about should the current policy be accepted as an editorial change knowing that a rewrite in the future would be inevitable, or should we rewrite 4.4 and should it be attempted under this particular policy? That is the end. Questions or comments.

Paul Andersen: Thank you, Alicia. We'll open up the floor. This is not a recommended policy so the AC is looking for feedback at this time on what they should do with this problem statement as a whole and whether or not it's a problem that requires solving. And if it is a problem requiring solving is the approach in the right direction?

There will not be a poll at the end of this, for those who are newer to the forum, so the best way to

get your input into this process is to raise your hand or put a Q&A. And, again, even just saying you support the problem or you support the approach and the Q&A or do not is very valuable at this time.

So with that, we will throw it open to our Q&A -- and I see we have our first Q&A. So let's go to it.

Zoom Host: Arthur Sanchez, no affiliation for him. Is there any way to speed up 8.4 transfers; that would be awesome.

Paul Andersen: As a reminder, I guess as well, people, it's important, especially when you're doing Q&A, that you have your name and your affiliation so that we can have that for the record. Thank you for your comment. I see a hand up. Let's go to Robert Seastrom, please.

Zoom Host: R.S., you should be able to talk now.

Robert Seastrom: Good morning, afternoon actually for most of us in the East. Rob Seastrom, Capital One, ARIN Advisory Council and former gTLD server operator.

I support this policy as written. I believe that it adds clarity to the NRPM. For future discussion I wanted to add a point of information that

gTLDservers.net is only one of several gTLD server operators and that it is an open marketplace.

The particular implementation there shouldn't inform our discussions in the wider ecosystem. That said, allowing gTLD operator to get the equivalent of an IPv4 /23 for each authorized gTLD and preserving that eliminates a barrier to entry for new gTLD server operators.

And like I said, I support this. Thank you.

Paul Andersen: Thank you for your comment there. We have another -- we have another Q&A, but just a reminder. I've seen a few people in chat say stuff like I support or I don't. It's very important that the chat not be used for that because it doesn't get on the record. That input does not get to the AC.so please, if you wish, put that into the Q&A if you can.

So let's go to our last question and I'll ask if anybody else wants to get in that they do so because we do not have anyone in the queue.

Zoom Host: I have Andrew Dul, ARIN AC, 8 Continents Networks, I support this cleanup effort.

Paul Andersen: Last call for any comments or questions on this approach. We'll be closing the microphones in 30 seconds. So please put them in the queue. We see a few coming in but we'll close the

queues at the end of this next interaction. Next caller, please.

Zoom Host: I have David Farmer, UMN, I support this policy as written. He's with the University of Minnesota.

I have Chris Tacit, Tacit Law, also support this policy as written.

Paul Andersen: And we had Joe Pace, also says I support this policy. Again, just a reminder, if you can put in your question and your affiliation so we don't have to guess, we would appreciate that.

Okay. Seeing no other Q&A or comments, we will now close off on this policy. The input will be provided to the AC for their input. Thank you very much, Alicia, for your presentation.

I think we're going to try going back to our man in the field, Owen DeLong. Owen.

John Curran: Yes, that's the case, Paul. Owen, are you queued up?

Owen DeLong: I am.

John Curran: I'll say the same thing, Owen. Introducing DeLong to do Draft Policy ARIN 2020-6, Allocation for IPv4 swap allocation. Go.

Owen DeLong: Good morning, again, everyone. Apologize for the confusion earlier. Next slide, please.

So, there are a number of swap transactions where somebody wants to sell their larger block, but rather than keep a piece of it, they want to sell the entire block but they need some address space to operate under. And, so, they want to transfer in a smaller block and then transfer out the larger block.

ARIN has been facilitating these transactions because they made sense and they're kind of the right thing to do. However, it's not really clear in policy that that's actually allowed. So this policy is intended to bring clarity to that.

Next slide, please. So the policy statement simply adds the following text under the conditions of the source of transfer both to intra-ARIN transfers and inter-RIR transfers. This requirement may be waived by ARIN if the source entity is transferring resources as part of a renumbering plan designed to move more efficiently -- sorry, renumbering plan designed to more efficiently utilize number resources and the classic example that I just cited.

Next slide, please. The proposal was submitted on May 31st, 2020. It was moved to Draft Policy at the AC teleconference on June 23rd.

Next slide, please. No direct feedback was received on PPML regarding this proposal. There was one comment that requested clarification of two hypotheticals in response to staff and legal. And basically the poster was concerned that what happens if the organization doesn't actually follow through and can take the second transaction or behavior that's expected.

And ARIN responded with the second transaction really is a contractual matter between two organizations transferring the space, but somebody who did not hold up their end of the agreement transferred out after transferring in would not be able to receive future transfers or such.

And then the second case was a situation where somebody received waitlist space, and ARIN made it clear that the nontimeliness of the waitlist makes the waitlist inappropriate for trying to deal with these kinds of transactions.

Next slide, please. Staff currently does allow these types of exchanges. But the current language doesn't make it clear. Staff suggests considering these points as a community. Upper limits

for these smaller allocations. And acceptable timeframe within which the organization must transfer the larger block and restricting waitlist space for use in these scenarios.

Next slide, please. This is still a Draft Policy. This means that we've not come to the point where we believe that it is ready to become policy, that there's still further editing work to be done on it.

So what we're looking for today for the AC is, first of all, do you support us to continue to work on this Policy Proposal? What modifications to it would you like to see before it becomes a recommended draft? Do you have thoughts on the upper limits of smaller allocations used in these POCs and timeframe limits as well? And any opinions you have on waitlist prohibition and any other comments.

Next slide, please. That's it. Thank you. And I'll turn it back over to Paul for questions.

Paul Andersen: Thank you, Owen. I'm glad we could get that sorted out. Second time is a charm. Microphones are open for -- our virtual microphones are open, so, again, can we go back to the slide as well because I think there's some good discussion points there.

The AC is looking for feedback on any of these points, so I would ask -- and, Owen, we have them flying in here. So let's start off with --

Andrew Dul: Andrew Dul, 8 Continents Networks, ARIN AC. I do not support this draft as written. If a swap transaction occurs, it should not occur with waitlist space. I would support this draft if the option of using waitlist space for a swap is removed. Anything on that, Owen, that you would like to add?

Owen DeLong: The proposal doesn't specifically call out waitlist space one way or the other. And it's hard to imagine somebody actually trying to use waitlist space for this because if you're trying to complete a sale, you would want to get the replacement space sooner rather than later. I don't think your sale client is going to be willing to wait around while you wait for the waitlist space.

I don't have a problem with adding language that prohibits using waitlist space in this way. I'm not sure what that language would look like, and I would welcome a suggestion from Andrew on how to do that.

Paul Andersen: I'll go to staff for the next question. I'll point out as we answer questions we're getting about a 50 percent hit rate on people

putting their affiliations, which means sometimes we have to add in. So please put your affiliation in. If you forgot just quickly put it into a Q&A and we can add it.

Zoom Host: Michael Burns, I support further work. I've always felt uncomfortable telling clients in this circumstance to open a new Org at ARIN and order, by get around around the policy question. And he has a follow-up, down here -- Mike Burns, IPTrading.com -- sorry.

Paul Andersen: Yes, we appreciate it, Mike. He also points out, should be a /20 max and one year to transfer the larger block. Should not be able to use waitlist space. Thank you, Michael, for that feedback and putting your affiliation in there.

Let's go to Chris Woodfield. Open up his mic, please.

Zoom Host: Chris, you've been given permission to speak.

Chris Woodfield: Hello? Okay took a second for unmute to come up. So I -- this is Chris Woodfield, Twitter, ARIN AC. I wanted to respond to Owen's comment about the waitlist and the practical issues with using waitlist space for the swap in space.

That assertion makes a lot more sense when the average time that a request is spent on the waitlist was measured in years.

That appears to be no longer the case. So I don't believe that's -- at this point, obviously it may change in the future, but currently it sounds like from some conversation yesterday that someone that joins, that applies to the waitlist now isn't going to be waiting a terribly long time to get the space they have requested.

So, while I support the policy as written, I think staff recommendations make sense. And I'm happy to see them integrated into this Policy Proposal.

Paul Andersen: Thank you for that comment.
Next comment.

Zoom Host: Gary Giesen from CentriLogic. I support the problem statement of this proposal, but I think it needs more work. I think my biggest concern is around reasonable enforcement mechanisms. And I believe there should be some limits on the size of the smaller block, maybe a /22.

Paul Andersen: Thank you. Next comment, please. Chris -- okay. Chris Woodfield did say Twitter ARIN AC, I support the policies, (indiscernible) staff recommendation makes sense, the idea of an upper limit

is a good one. But in my opinion should be considered as a percentage of block being transferred out as opposed to subnet size.

So let's go to Robert Seastrom.

Zoom Host: All right. Robert, you have ability to speak.

Robert Seastrom: Thank you, Paul. Rob Seastrom, Capital One, ARIN AC. That was exactly the point I wanted to make, is that a hard upper limit expressed as an aggregate size is probably not appropriate because what would be an appropriate upper limit for someone who is transferring out a /16 is not an appropriate upper limit for someone who is transferring out, say, a /22.

So I agree that as a percentage of the total size aggregate being swapped out and remembering that we're trying to avoid chopping things up and facilitating this, the whole idea is avoiding deaggregation. I'd like to see it kept to a single aggregate.

And I don't know whether one half, meaning half the block size, or one quarter is a better number. I think smaller than one quarter is probably a poor idea. So I'll float it out there that the maximum ought to be a quarter of the total aggregate being swapped

out, meaning if someone is transferring out a /20 they would be able to get a /22.

Paul Andersen: I'm sorry, Rob.

Robert Seastrom: Time-frame limitations, no strong feelings. A year seems fine. Waitlist prohibitions, again, no strong feelings. I agree with Chris that when the waitlist was years and years, that might have made some sense. But given that it's actually fairly short I'm okay with just leaving those out.

Paul Andersen: Okay, let's keep Rob unmuted for a second because! Owen I think I saw your physical hand raised. Did you have a question or comment?

Owen DeLong: Not necessarily a direct rebuttal to Rob, but a couple of comments on the general subject. I want to be clear about the waitlist thing. Are we worried that people are going to use this as justification to get waitlist space? Because that seems to me a potential concern. And I wouldn't have a problem saying this is not an eligibility criteria for getting waitlist space.

On the other hand, once a company has received waitlist space, if they then transfer out their larger aggregate and keep the smaller waitlist space, I'm not really understanding where that's a negative for

the ARIN community. But if people have opinions on that, I'd love to hear them.

Robert Seastrom: In other words, Owen, it should not be a qualification. It should not be a justification for getting on the waitlist, but it should not cause a lock-up of the other space for having gotten space from the waitlist?

Owen DeLong: That's my thinking on the subject, yes. And in terms of the size that people are able to get, the limitation, I believe the way it's written it gives ARIN staff discretion to approve this or not based on whether or not it helps to preserve aggregation in the overall transaction.

So I kind of am inclined to trust staff's judgment on whether the size being received is beneficial to the community versus the size being transferred out or not.

However, if people want to put hard limits or codify them somehow, that's certainly an option you can pursue. And I know John usually likes greater clarity for staff anyways. So that may be the preferred alternative.

Robert Seastrom: Thank you.

Paul Andersen: Thank you. Let's go to our next question, please. I'm not sure which one is next. I assume it's Anthony's.

Zoom Host: Anthony Delacruz, CenturyLink, L3, we support as we have several carved up /16s blocks that we know another entity has some portion of and some different /16s carved up on. If we did like-for-like trades with each we would make a whole bunch of /16s again. But neither side wants to be penalized.

Paul Andersen: Understood. Thank you for that comment.

Okay. I'd ask if you have a comment or question to soon approach one of our virtual microphones. We'll be closing the queues in the absence of any further comments after our next intervention, which will be from Amy Potter, if we can unmute Amy.

Zoom Host: Amy, you are permitted to talk.

Amy Potter: So, personally my issue with the waitlist is that the waitlist is often used by organizations that can't afford to receive space on the market. But anyone that's engaging in this type of transaction is going to be able to cover the cost of the smaller block from what they're making on the sale of the larger block.

So I feel like this is a little unfair to the other participants on the waitlist who aren't able to participate as freely. When it comes to the timeframe limitations, I tend to think that that should be left to the parties that are involved in that transaction.

I think whoever is buying that space is free to set whatever limitations in that contract. I'm not sure that ARIN necessarily needs to get involved in that aspect. But if they do, I would suggest that it be a pretty long timeline, maybe two years max just to give the parties that are engaging in these deals the freedom to come up with a transaction that works for both their needs.

Paul Andersen: Thank you, Amy. Next question.

Zoom Host: David Farmer, University of Minnesota, I support continued work on this policy. I support a /22 or larger, if justified, on an 80 percent utilization basis. And I support Owen's comments on the waitlist.

Paul Andersen: And the final comment, please.

Zoom Host: Joe Provo, Google, ARIN AC, support the concept and further work in this area,

strong agreement of relative sizing commentary from the last several comments.

Paul Andersen: Thank you very much, John. That ends the feedback on this Policy Proposal. So thank you to Owen DeLong for the presentation, and thank you for the input. And I'll hand it back to John because I think he had some comments and also to move it to the next proposal.

John Curran: Thank you, Paul. So, I'd like to remind people -- before I introduce my next speaker, Joe -- I'd like to remind people keep your discussions relevant to the policy at hand.

We also don't discuss particular businesses or particular business plans. We don't need to do that. We're talking about an industry and how our policies apply to the industry.

So please refrain from mentioning how a policy might affect a particular company or your own company. It just makes things easier. We're a trade association, and we don't want to be making decisions about what's good or bad for any particular organization.

So with that, I'm going to now have Joe Provo present. And he'll be talking about ARIN 2020-8,

Clarify and Update the 4.2.1.2 Annual Renewal Fee. Go ahead, Joe.

Joe Provo: Okay. Here we go. It's asking to start my video. Thanks for prompting me to start my video.

John Curran: Good to see you.

Joe Provo: Autumn in New England, enjoy.

Paul Andersen: You're a little faint. If you could move closer to your mic.

Joe Provo: How is this?

Paul Andersen: Beautiful, thank you.

Joe Provo: We're here to talk about 2020-8, the annual renewal fee section in clauses in Section 4. Next slide, please.

Problem statement -- this was observed in the Policy Experience Report that there's a reference to fees as in the community we do not actually deal with fees within the general policy manual. That is actually -- fees are handled by the Board via arrangements between individuals. And there are not reference anywhere else in our policy. So that was raised by the Policy Experience Working Group within the AC as an issue to address.

Next slide, please. I mentioned a little bit already that the RSA is what covers the fees. And

so the policy statement was that it was to be removed, a few sentences from section 4.2.1.2. Next slide, please.

Paul Andersen: If you could try again, the transcriptionist is having a hard time hearing you, sorry.

Joe Provo: My apologies to the transcriptionist. I'll talk directly into this little microphone.

Paul Andersen: Perfect, thank you.

Joe Provo: So this was the draft text that exists in the policy as currently presented. And on the website and sent out to PPML, merely striking the last two sentences of the clause. Next slide, please.

So the history. Proposal in August. Became accepted as a draft August 20th, and out on discussion on PPML.

Next slide, please. The PPML feedback was mostly in favor, but asking for us to be more aggressive, basically. There was one party that was against the entire concept.

Next slide, please. Sadly, it was only three people. So, that's not really a lot of feedback. But really, as I mentioned, the feedback scene was generally that more needs to go. And we're here today

because we need more input from the community to actually move this further.

Myself and Owen DeLong were the shepherds on this. We're also on the NRPM cleanup working group. So we actually think that the commentary about this not being aggressive enough to deal with the fee reference is good.

So we actually lean to this language, which is first time it's coming out because we kind of hacked on this a bit before the meeting.

So it will be floated to PPML in some form after we get feedback from folks here at this meeting. And we suggest that we eliminate 4.2.1.2 in its entirety and replace it with a definition, It was inspired by Mr. Farmer's suggestion on PPML to merely outline what the RSA is and its relationship with policy.

In no small part this is because Section 4 is really about v4 and fees and policy relationships. The RSA relationship covers the entire set of policies.

Next slide, please. So we'll go back and put that text up when we're having a discussion. But the point is that we're here with some new potential language to try to give community support. Do you support or oppose the intent of removing this from Section 4? Do you agree that putting in definitions is

a correct path? Do you have suggestions for better text? Do you have a better path that we should go down? Or do you have think we've completely missed the issue that needs to be addressed. [Dogs barking]

Oh I have a visitor. At least my weak microphone is not letting you hear the barking dog that came to visit.

Paul Andersen: Oh, we can hear the barking dog. That makes it a Zoom meeting.

Joe Provo: Makes it a Zoom meeting, perfect. With that, that ends the presentation. I don't know if Paul would rather leave the discussion points or the text up, but I'd like to hand it back to him.

Paul Andersen: If I unmute. We'll leave the discussion points up because I think that's great to help field the conversation. So the microphones are open. The same draft. This is your last policy of this Public Policy Meeting.

Now is the time to get your comments out. So I see the first one is from John O'Brien of UPenn. "Should" smells like bad policy -- "should" should be in air quotes -- I support removing or fully rewriting the text. Thank you, John, for that comment.

Andrew Dul, 8 Continents Networks ARIN AC, I like the idea of deleting and adding a section. I'll take it in favor, Andrew.

Celeste Anderson of Pacific Wave, support removal of the paragraph and including a definition. Thank you, Celeste.

Other comments? Few seconds, although I'm not surprised that this might be quiet one. Joe, you're giving us a vibrant non-virtual background, or it's a very impressive virtual background, one of the two.

Joe Provo: It's just autumn in New England.

Paul Andersen: Autumn in New England.

David Farmer, University of Minnesota, I support continued work and deleting the current text and including a definition. Thank you.

And I'll give it another 15 seconds and then the queue will be closed and we'll take whatever we have at that point.

Gary Giesen, CentriLogic, I support the approach to this policy and agree that the references to RSA where appropriate instead of having potentially two conflicting documents. Thank you, Gary.

And Joe Pace, I support the policy change as well.

Seeing no further Q&A, seeing no further hands up, I believe this will end the feedback. So I thank Joe Provo for the presentation and making this an official Zoom meeting. And this information will be considered by the AC.

This brings us to the end of our last policy. So I thank the entire community for all their input and all policy proposals. If you do have further ideas for policy, we can we have our open microphone later.

You can put in the chat room and I'd say go find an AC member at the break. But I guess the virtual code of that would be any of the AC members are happy for you to approach them either on the chat here or by email. And, so, again, if you have an idea or feedback on any of the proposals, they're always happy to take it.

And, of course, there's the ARIN Public Policy Mailing List where this discussion will continue until we meet again in some form in April.

And I will allow, even though it's a little late, I'll just assume it's his slow fiber connection, Louie Lee from Google Fiber, NRO NC, would add he supports the definition. I guess the fiberoptics failed us then.

With that, I'll turn it over to John. I know we're a little early for the break. I think you get bonus material.

John Curran: Thank you, Paul, very much, and thank you to all the presenters.

Because we have a bit of time I'm going to pull something from the afternoon session up. And I'm going to have Richard Jimmerson give us the ARIN general update, and that should get us closer to the scheduled break time. Richard, why don't you proceed.

Richard Jimmerson: Thank you very much, John. My name is Richard Jimmerson. I'm ARIN's chief operating officer. I'll give you a brief update on how things have been going since June inside the ARIN organization in terms of our operations.

Next slide, please. So, as all of you are also dealing with, we're running our operations in a pandemic environment. We don't see an end to that before the end of the year, but here's what we're doing.

Basically, staff entered a 100 percent remote work environment starting in March of this year. We had a lot of background, and we had a lot of experience working remotely inside the organization for inclement weather and for other things.

And we were able to transition into that fairly successfully and fairly quickly with some heavy lifts by several people inside the organization to get us there. And we've been running that way ever since.

Now, in the summer, we did need to initiate a limited reopening program inside the organization for the use of the general office space -- for various different reasons. Some staff, quite frankly, working from home just isn't optimal for them. They prefer to work from an office environment. So we were getting that type of feedback. And there are also some things that are in-person important. We need to have somebody in person to do certain things -- like hands to restart servers or some other processes that we have inside the organization.

So what we did is we set up a limited reopening program with strict criteria on how the office could be used and precautions that should be taken.

And we have about five to 10 staff working from the office at any given day as part of this limited reopening program. The balance of the staff organization continues to work remotely, and it's been successful for us. And we're going to continue to do this for as long as we need to.

We're closely monitoring guidance from our local governments here in the Northern Virginia area, the CDC and the WHO, to determine when we can move back to a general reopening of the office at some point in the future. Again, we don't expect that will happen before the end of the year. But we're hopeful that that will happen sometime early next year. But we continue to watch that.

We continue to focus on customer service to all of you in the continuity of our registry operations. We're putting all of our effort there and we think we're doing a great job providing services to you. You're very important to us.

We're still there over the telephones for you from 7:00 AM to 7:00 PM Monday through Friday as a help desk. We've been running our chat services for you as an enhancement, even during the pandemic that was started. And our billing department is still available. All our services are up and running for you, and that's our focus.

Now, some of our outreach and in-person-specific work has been impacted by this. So, of course, a great example of that is the ARIN Public Policy and members meetings. We're not able to do those

in person right now. And we're here virtually today. And we basically shifted to the virtual environment.

But not only for the Public Policy Meeting. We do quite a bit of outreach during the year. We have the ARIN on the Road events. We participate in other people's events. And we have outreach targets there to help improve our services for all of you. And we've moved a lot of that to a virtual environment as well for as long as we need to do that.

And in fact we've learned so much in this virtual environment this year that I think a lot of this is going to stick. We're going to be doing a lot more virtual things even when we get back to the general reopening and the pandemic is over for everyone.

Our scheduled project work has continued with little impact. We had made commitments to the community on when we would roll out certain new services, like the Routing Registry updates to our RPKI services, those types of things. That's continued on schedule.

We also have some updates coming in regard to the API for the Routing Registry. That's on schedule, with the work to finish by the end of this year and with a January deployment. But work is normal, just in the virtual environment. Next slide, please.

Now, demand for registry services continues to grow, even in this pandemic environment. The demand for our services has not slowed down in any way. What we're finding is we're getting more interaction with people over the telephones, over our chat services. You heard Mark present yesterday that our Whois services are being used more than ever before. The demand continues to grow for our services.

It certainly hasn't slowed down for us, as I'm sure it certainly hasn't slowed down for you in the pandemic environment. The Internet is the reason why business has been able to continue for everyone else even outside of our Internet industry.

And I hope that people recognize that and they see that, but we know that all of you are busy because we're feeling it in our interactions with you.

Again, our Routing Registry launched here in the last four months, since we last had a Public Policy Meeting. API's available in coming months. We know people are looking for that.

And you should expect to see a consultation here in the coming months about the old Routing Registry and what our plans are there, but we didn't really want to release a consultation about changes we would make to the old Routing Registry until you had what you needed

to interact with the new Routing Registry. Keep your ears out for that. You'll see it coming up soon.

Also you saw an announcement, if you're paying attention to ARIN announce in our website, you saw an announcement earlier this month about a general counsel transition. You can go read that announcement if you like, but there's going to be much more about that on Friday of next week when we have our Members Meeting. We're going to talk a bit more about the general counsel transition and the great services that we have there by some great attorneys outside and inside the organization supporting all of you.

So next slide, please. Want to talk a bit about the government affairs. We don't have a government affairs-specific presentation because of the agenda today, but there's notable things we wanted to share with you about our government affairs department.

Now, one of the reasons, of course, I think it's obvious to everyone here, but I'll say it anyway, that we continue to enjoy this industry self-regulated model is because all of you who are in the room today participating in these open-governance processes that we have to keep the Internet running -- not just at the RIRs but at other organizations like ICANN and some others.

Now, when governments feel like that that's not working for them or if it's not working correctly or they're getting complaints from their constituents, that will cause a lot of noise and it will move us away, perhaps, in the future from industry self-regulation.

So what we like to do is pay very close attention to what governments are talking about in relation to the work that we do on your behalf and what they think about that.

Now, our government affairs department does a great job of doing that. They're engaged very closely in all of the countries inside the ARIN region and also with organizations like the International Telecommunications Union, the ITU.

The global geo-political work has shifted online the past eight months, just like the rest of us have. They're doing all their meetings digital. They're immersed in the digital world just like us.

For the first few months of doing that, they felt great because they're like, hey, we can do this; it's working. We can collaborate with each other, even though we're not in person.

However, they found shortly after that that a lot of the work that they do is very in-person-specific, not dissimilar to what you have at a

NANOG meeting. You all like to go to the NANOG meeting and you like to be there in person because of the important conversations that happen in the hallways.

Same thing with governments. Same thing with the ITU. So they're finding that it's not as easy to make decisions in the virtual environment as it was in the in-person environment.

That's something they're struggling with right now. And they're feeling the pressure to go back to an in-person environment to continue their discussions where they can make decisions.

International law, human rights, security are becoming central to the policymaking and regulation of the digital world. And the Internet infrastructure is included. They're having many, many conversations about Internet infrastructure inside the United Nations -- the ITU.

The team at ARIN that pays close attention to governments is increasing their engagement, outreach and capacity, building meetings with governments, IGOs, IOs, law-enforcement organizations -- we're constantly engaged with law enforcement and public-safety organizations. And we're doing this both regionally and globally as ARIN, as well as close coordination with the

other Regional Internet Registries who have a staff engaged inside these spaces.

In the Caribbean, we've had more than 200 people benefit from ten technical community webinars over the pandemic period, and over 50 public officials joined in four Internet Public Policy webinars that we participated in or conducted inside the Caribbean region.

Next slide, please. Just want to talk a bit about the ARIN elections. There's going to be a lot about the ARIN elections in the meeting next Friday at the Members Meeting.

You're going to get to hear from the candidates and we're going to have some forums there. So I'm inviting all of you to tune in. That's a very important meeting for all of you. The governance of this organization is tied directly to the future success of Internet self-regulation by the industry.

So we want you to make sure you participate there. Prior to the ARIN 46 meeting here today, we had a nominations period that opened and closed and a second one, there was a voter eligibility deadline that passed. We had the initial slate of candidates published for you.

There was a call for petitions and statements of support that you participated in. And the final slate was published.

The candidate speeches inform next week again Friday October 23rd. We'd like you to join us there. And the election opens that same day, on the 23rd. And that will run through October 30.

We will announce the results of the election no later than 6 November. We are in a pandemic environment. We're all very busy. I think we're all busier than we've been before, but please take the time to vote in the elections. Very important for the success of the organization. We have a quorum that we have to meet of the number of people who need to vote and we have to meet that.

We know it won't be as easy to contact you. We make telephone calls to you and those types of things. We believe we're going to be finding a lot of full mailboxes at offices and those things going on.

You're going to see a lot of email reminder activity for the elections if you're an eligible voter. So please absorb those. And as soon as you vote, your name gets taken off the list; you'll stop getting the emails the email reminders. So the earlier the vote, the fewer reminders that you'll see about the election.

And you can find more information about elections including the candidate information right here at the link at the bottom of this page. All right, next slide.

All right. ARIN 47 is currently scheduled. So the next ARIN Public Policy Members Meeting is currently scheduled for April of 2021. We do our meetings in April and October each year. Of course, the meeting that was scheduled for April of this year didn't happen in April. And we went virtual for June. And here we are virtual again in October.

And we are planning to hold our meeting the 11th through the 14th of April next year in Tampa, Florida. We are cautiously optimistic about holding an in-person ARIN 47 meeting. And we're going to continue to monitor what governments are saying about the pandemic. And we'll make a decision likely early in Q1. And we'll send a notification out to the community shortly after that.

Now, if it's virtual, it will be very much like this meeting. It might be a hybrid. There might be some in-person elements plus some virtual elements. But we've learned so much in this virtual environment and we've gotten such great feedback from everyone about the way this is delivered in the virtual environment.

We may never completely give up what we do here virtually. And we may strike a hybrid-type meeting going forward into the future. We'll have to see.

But uncertain for April right now, but we're cautiously optimistic for some in-person elements for that event. Next slide, please.

That's it. That's a general update from the ARIN organization, what's going on inside the company right now. And you've seen some of the other information and some of the other reports from yesterday or you'll see that today and then again on Friday of next week. But we're happy to answer any questions that you have.

Paul Andersen: You have one question already.

John Curran: I'll read it, Richard, since it's here before us. David Huberman, ICANN. We've seen this meeting that there is increased demand for ARIN's many services. What measures does ARIN foresee taking over the next zero to 24 months to continue meeting an increased demand?

Why don't you speak to that and then so will I.

Richard Jimmerson: We keep a very close eye on the increased demand for our services. It's certainly going up; it's not going down.

When that happens there are things we do inside the organization just like you do inside your own companies that we can optimize to provide that coverage. But at a certain point it stretches your ability to cover the demand by the community and to have a fair work schedule for everyone. So we're constantly looking at personnel levels and what we might need there to help support an increased demand.

And we're also being very careful to make sure that this isn't just surge-based, the types of demand we're seeing because of the pandemic. So, for instance, you guys might be a lot busier right now than you will be in a year or two. And the demand for telephone calls and other things might go down.

So we're being very careful about that. But we're watching it very carefully.

And, John, I'll turn it over to you for some more comments in that area.

John Curran: If I could speak to the question. It's an excellent question, David. We -- ARIN does have a pretty active planning process.

And we spend a lot of time looking at the metrics that drive the organization.

We look at them on a monthly basis. We actually review them with the Board on a quarterly basis. So we're keeping track of how we're doing in terms of satisfying requests.

And we're going to spend a bit of time, as Richard said, if it turns out we see some issues with being able to keep up, we have the ability to staff up as needed. We're conservative with that because to some extent we have to make sure that the revenues match. So if you guys get busy and we add staff, then we get back into the fee discussion.

We are looking at that. We'll talk a little more about that in the Members Meeting next Friday. But obviously we've got to keep the revenues and the fees somewhat balanced. And there's a number of interesting questions there.

Right now, if we need staff to ramp up in order to meet demand, we do it. We've been able to add significant services, refresh our IRR, refresh RPKI, add more services in terms of support of ARIN online without significant increases. We'd like to keep it that way.

So the goal is add things, become more efficient as we go. But if it turns out that we really

ramp up significantly, then we'll address that when we come to it.

I do appreciate the question.

Paul Andersen: I'll add a little bit as well. John addressed it but from a Board perspective as well.

This has been a major focus. It's been part of our strategic planning to ensure that the organization can scale in both directions -- scale up as demand increases or as some services, not necessarily just from an organizational perspective, just understanding what the services that are offered, what is the -- getting a better understanding of key metrics, as John mentioned. We've been working closely with staff in developing those metrics to understand and try to get ahead of any of those curves because in the end we want to be a service-based organization, and we want to make sure we're servicing the customers for their need of services and all that.

But we're always happy to take community input on where we could do better. We've been guided by a great staff to do that, including -- I'd highlight the addition of our CFO recently that's really helped us get a lot of good modeling and understanding what the cost is to operate these services.

It's going to be a continuing discussion as was kind of teased yesterday and into tomorrow and definitely into next week for how fees and such can be set. Thanks for the question, David.

John Curran: Any other questions for Richard or the ARIN on the update?

Zoom Host: We have a hand up. Kevin Blumberg, you're now able to talk.

Kevin Blumberg: Kevin Blumberg, The Wire. First, kudos on getting the IRR launched in June during the pandemic, keeping it on schedule. It's a critical piece of technology improvement for everybody here.

And so I just wanted to say thank you on that. In regards to the ARIN --

Paul Andersen: Kevin, can I just ask you didn't give your affiliation?

Kevin Blumberg: I thought I did. Kevin Blumberg, the Wire.

In regards to the April meeting, a number of organizations have already said that they have a travel ban until summer of next year. And I would like you to please do a little bit of research and digging on the attendees or potential attendees and the percentage that wouldn't be able to travel irrespective of whatever guidelines, governmental or otherwise, there are.

25 percent of organizations are going to tell you they can't come, you won't have anything. And another 25 percent are waffling, then please take that into account.

As far as when, the sooner the better. First quarter is getting -- it's a big stretch of time. It's going to take months to plan a trip during this -- what's going on, even in the beginning of 2021.

And lastly, I don't know if this is even possible, Tampa is not a hub city. Flights are being canceled left, right and center all over the place. A main carrier in Canada this week just canceled out 80 percent of their flights to the East Coast, for example. Airlines are scaling back massively. So even if I wanted to go, I might not be able to get to Tampa in a reasonable way come April.

So just some food for thought. And good luck.

Paul Andersen: So, I think we were playing -- talked about this in the Members Meeting, and I know Richard and John have a lot to add, but high level, it's very clear that there will not be return in the next year and maybe the year after to what we had before. That doesn't mean we will not have an in-person meeting, to be clear. And no decision has been made.

Staff have been working very closely with the Board. Our focus was to get through these two meetings, which even though it may not seem, it requires huge amounts of planning, first, to pivot off the in-person meeting and devise this.

But I think it goes without saying that our expectation is that there will be an ability for people to come in like this or something similar for meetings to come, because it could be, as you say, we don't have a crystal ball and it could easily be that travel can be difficult for months or even years to come.

John Curran: Thank you, Paul.

Paul Andersen: I'm sure John has more specifics.

John Curran: As you heard Paul just say, and as you heard Richard say earlier when he mentioned a potential hybrid approach, if we do a face-to-face meeting -- and we're planning to do it and make arrangements to do it -- we're trying to be optimistic in this regard.

But even if we proceed with that we'll have a hybrid approach. We recognize that even if we're able to have a meeting, it's quite likely that not everyone will attend because of whatever circumstances they have.

And I also -- Joe Pace put a question in very similar. Ironically, myself and Paul and Richard are all answering the same question in different modes with the same answer, though. If we can have a face-to-face meeting we will. But we'll maintain this type of capability so that everyone's available.

We have one more question, I believe. Someone from the audience. Go ahead.

Zoom Host: Yes, Louie Lee with Google Fiber, NRO NC. Please make sure that the staff is polled on how they feel and how their work from home environment needs to be upgraded for them to be more effective.

John Curran: I'll answer that one directly. Because we've actually spent quite a bit of time keeping track of how our staff are doing. ARIN, while we prioritize our customers, our members very high, I don't think that people live their life to do work.

I think people live their life for their family, for their immediate family and the people they care about. To that end, there's no reason to ask people to work if they're worried about what's happening at home in their day.

We have unusually high flexibility, as the staff will tell you. We accommodate everyone's

circumstances, and we'll continue to do so. That's always been ARIN's motto. I don't expect that to change.

But we're definitely taking care of the staff. And the staff, you can ask any of the staff and the staff hopefully will echo it. Certainly if I've overlooked any member of the staff who is hearing me now, let's make it clear. We make sure people take care of themselves and their family.

Paul Andersen: So we have next our senior vice president of government affairs would like to speak. Go ahead, Anne-Rachel. Anne-Rachel, you had your hand up. Are you there?

Zoom Host: Anne-Rachel, you're permitted to speak.

Paul Andersen: You have to unmute if you want to speak.

Anne-Rachel Inne: Good morning, everybody. Sorry, Paul, this was just I think a mistake. I miss clicked. Thank you.

Paul Andersen: It's good to have you at an ARIN meeting. (Indiscernible) Anne-Rachel doesn't always make it to our meetings because she's heavily booked in-person at those meetings, so good to have you here.

Anne-Rachel Inne: Thank you, Paul.

Paul Andersen: John, over to you. I think we're out of questions.

John Curran: Okay. That ends -- if there's no more questions, I'd like to thank Richard for the ARIN update.

And at this time we're moving into break. So there's going to be a break. Everyone know that we have the meeting will resume at 1:40 but if you stay around during the break, you'll get a chance to participate in both our upcoming stretch, much like yesterday, with Erin. And we have ARIN trivia coming up. Test your knowledge of ARIN arcana. We'll go to break. Stick around and share the break if you want with everyone else on the conference. Thank you.

[Break]

John Curran: I'd like to welcome everyone back to our ARIN 46 virtual meeting. At this point hopefully everyone has stretched their arms and their minds with our yoga stretch and our trivia contest.

At this point I'm honored to start out our afternoon with a presentation that's fairly common at ARIN meetings. ARIN arranges to have someone participate at the IETF, monitor the activities that might be relevant to the Internet number resource

community. And we refer to that person as our IETF Reporter. I'd like to introduce Cathy Aronson, our IETF Reporter, to give the IETF Report for this meeting. Thank you.

Cathy Aronson: Hi everybody. I'm Cathy Aronson and I'm here to give you the IETF Report. So this presentation, like I said in the past, this one covers IETF 108 and 107, a couple of interim meetings that I attended that weren't during those meetings. And also there's a little bit from the last in-person meeting, which was last November.

Not in depth. It's even less in depth than it has been in the past because I only have 20 minutes. I hope you enjoy it. I'd love your feedback. That would be awesome.

Also I have some extra slides past the very last slide that I'm going to present that are things that I don't have time to cover, but you might be interested in. So take a look at that.

This is the first ever totally virtual IETF was 107. I don't have as many crazy photos of people to choose. I do have a couple of virtual IETF photos.

I did take these out of the other ones at IETF 106. And the other highlight is there's a virtual hum tool. In ARIN we do a show of hands. At IETF we do

a hum. I wasn't in the working group that used the virtual hum tool, but I'm excited to see how that's going to work out.

The other really funny thing is the Meetecho in IETF 108, the first couple of days it ended the meeting right on time. It literally shut down at the meeting at the end of the meeting, which actually makes the working chairs a little bit more prompt.

This is what happens when you have virtual meetings and your kitty cat really wants you to not be in a virtual meeting.

And this is what I call the Meetecho tunnel. At the beginning of IETF 108, the beginning of working groups, we'd have this sort of vortex. And when the meeting got started somehow they made it go away.

So some interesting data on virtual IETF 107. There were 701 individuals that participated from 39 countries and IETF 108 with the Meetecho and more formal announcements, had a lot more people. I'm really interested to find out if there are countries that are participating or people that are participating that couldn't in the past because they couldn't travel, and this is more equal for participants to participate.

So the IEPG slides are from the November IETF, the last in-person IETF, but I included them

because I think you'll find them interesting. And IEPG is the network operating group that meets before IETF. And it's met since the '90s even though people don't seem to know that it exists.

So the FORT project is a LACNIC initiative. It's an RPKI validator. And I thought -- it's open source, so right now it's focused on the LACNIC region. But you could go and get it and use it in your regions wherever you are to verify the RPKI. I thought it was interesting. There's a URL there.

So Geoff Huston gave this really interesting talk about NO in the DNS. If you issue a query for something that doesn't exist and you get a NO back that it doesn't exist, you would think that you wouldn't continue to query. But on average, if you get a NO back, you still issue 2.37 queries for the nonexistent domain, which is kind of scary. And if it does exist, then you still issue, you get a YES, you still issue more queries. If it's signed it takes a little bit longer so you issue even more queries. I think sometimes I'm amazed that the Internet works at all.

So v6 operations is the group that deals with the v6 protocol being deployed and interacting with v4. So this was my very favorite talk of all of these virtual meetings. [\[Jen McCova\]](#) has a v6-only network

and she made a v6-only SSID and encouraged folks by offering a raffle and contest and prizes for folks who found bugs.

They were looking for the percentage of users that really need IPv4 as a dedicated fallback network required, how much space could they save, various other things.

A lot of bugs were found. Five percent of the users went back to v4, which is just a small amount. And a bunch of things broke. The treadmills all broke because they only use v4. The Spotify app broke. StarCraft II, which I'm sure is mission critical, broke. They saved a bunch of address space. So the lessons they learned. Just turning off v6 isn't super helpful because eventually you're going to have to go to v6.

If you keep v4 on all the time it masqueraded, hides a lot of the problems, like early on with cell phones we found that you could -- the software update would happen over v6 but you couldn't request it unless you had v4. So until you turn off v4, you don't really see what the problems really are.

A couple of years ago, Jen had the IETF turn off IPv6 during the v6 operations working group and it was just -- it was really horrible. A lot of stuff was broken but a lot of bugs got fixed.

Most people don't ever really say I need IPv6. But -- and they don't really care what the ROA is made out of as long as it works. If the SSID works, then they're going to use it.

So this is v6 deployment in China. They've got a lot of v6 going on there -- 160.3 million active users are all on v6. They have problems with CPUs, transition of content, the things you would expect. And the measurements from outside of China look lower than their internal reports, which isn't a huge surprise.

I'm not really sure about this car but I had to take a picture of it. It was in Singapore.

So v6 maintenance is the group that deals with the nitty-gritty changes to the protocol specification itself as opposed to the deployment of v6.

So this is -- they're trying to improve the robustness of stateless autoconfiguration, how long a prefix should be valid, what multiple (indiscernible) of timeframes and those sorts of things.

This exists because Homenet never really happened. So they're looking at how do you make a subnet work autoconfigure when you connect to it the network, because you can't really buy a Homenet router and have your home configure itself. So this isn't a

standard, working on trying to solve that problem because Homenet really didn't solve that problem.

This is more extension headers. I talked about this before where a lot of packets with extension headers get dropped, but they still keep making extension headers. This is extension headers kind of on steroids. They want to be able to insert them and remove them while the packet is in flight, which breaks, like, a whole bunch of things.

We talked before about Igor's draft where attackers were doing port scans of v6 address ranges and it was basically a denial of service attack because a lot of things broke when you scanned that many hosts. A /64 has 1.844 times 10 to the 19th addresses, and that's, like, a regular subnet.

So what this draft is looking at is a way that you can know which hosts are on your network. So you can test them for vulnerabilities. There's an idea of a collection point where the router advertises a collection point in the router advertisement.

And when a host gets it it says, there's a collection point. I need to send it my address. So the network administrator then knows, oh, these are all the active addresses on the network, so I can look to see if they're vulnerable.

It doesn't really prevent somebody trying to scan all of them, but at least it lets a network administrator know what's on his network.

When I travel I really like to go to foreign grocery stores and this is a shot from Singapore.

SIDR operations is all things secure interdomain routing, BGPSEC and validation of routes.

Okay. So the reason I've included this slide is because I always look for things that would affect the RIRs directly.

And this draft requires all of the RIRs to publish Origin AS0 for any unallocated or unassigned address space in order for the protocol change to work. And that would be a ton of work for the RIRs.

The good news is this isn't popular, but I still thought I should raise it with everybody and let them know that this is being proposed so that the RIR community would know.

So there was some hijacks during the summer of 2020 where somebody takes a valid autonomous system number and masquerades as it. And in that process they discovered origin validation isn't sufficient.

When these attacks happen they use a real AS number and not necessarily a prefix that's used by that

ISP. So when they try to validate it they get "not found."

And most not-found routes are actually used in the route selection. So they've proposed this ROAs exist for all prefixes. As an ISP, I can say I have a ROA for every one of my prefixes. If you get a prefix from me that doesn't have a ROA then it's invalid. It gets marked as invalid and it's not used, which helps with these sorts of attacks.

This is a relying party measurement presentation that wasn't presented at the meeting but when I was looking through the slides I thought they were interesting. It can take from a minute to an hour for the relying party to synchronize on what's out there and what's validated. And they don't look at all the certificate authorities. So they don't necessarily have a complete view of the RPKI.

Lost in translation. That's all I can say about that.

Global access to the Internet for all is where all the community networks hide out.

When I was on the ARIN Advisory Council we wrote policies for community networks. And we were always trying to figure out are community networks going to use this? Do they exist? This is where you need to

find them. If you need to find a community network, you go to this working group.

This is information about a rural South African network. They operate on a very, very small budget with a lot of people and they are right now dealing with fake news about COVID and they have a lot of things that aren't in their native language.

So they started asking people to provide their own stories of their experiences with COVID so that they have stuff in their native language that's real and what's going on.

And most of these people live on \$1 a day, which is -- this is a network in North Macedonia that's looking at the soup to nuts, the energy that's required from making of the hardware to running their network and how they can sustainably run their network.

I don't even know what to say about that hat. But this is more IETF background noise.

So human rights on the Internet, I started going to because I didn't really understand that protocols - human rights -- don't know, I just thought it was interesting to attend and check it out.

Right now in Ireland they have an app to do COVID tracing. They have to require that you can freely opt in and opt out. Still they had a million downloads

in about a day, and 60 percent of the users in Ireland are using this tracing app.

So, SHMOO, Stay Home Meet Only Online, is their work that's being done for -- how do you decide if there's a meeting in person or not in person? What are the criteria? When it's worthwhile? The number of participants you need to make it worthwhile.

And I would really like to see all of us start talking about what happens when some people can meet in person but not everybody -- maybe you have a health problem, you're older or whatever. How do we make parity because we all know remote participation exists, but it's certainly not equal to meeting in person.

The Meetecho that the IETF uses for the meeting, it's really great. It's more orderly. The room's never too hot or too cold unless I make it too hot or too cold. It's hard to not see everybody but it's actually easier to hear, easier to see. And how do we continue that going forward?

The Mailing List for SHMOO is manycouches, makes always me laugh.

They're looking at rethinking the meetings. The other thing they're thinking about is do they have a

meeting in San Francisco and a meeting in Europe and interconnected somehow.

Meetecho has a virtual lounge -- you have a little Avatar and you walk around and you can meet people and virtually sit at tables, which is -- I don't know, I didn't get a chance to use it. I went in and checked it out.

So they're also talking about technology requirements. Should we use Jabber? Is it outdated? What other things can we do? There's a lot of talk about dog food, which is basically the IETF using IETF standards, like using these steps and turning off v4, that sort of thing.

The IETF meetings have started doing these deep dives of technology. I've talked about some these before. This one was a DNS one. And although Geoff didn't talk about his NO talk about this, he did talk about how to make resilience in the DNS, how to engineer it. Joao talked about the different software solutions that are used for DNS and root resolvers and all that sort of thing.

Next slide. Dispatch is a group I don't really ever go to. But I did because I had some spare time. And it's the overarching working group for the applications and real-time area. And they're talking

about forming a group for email security because email is still the number one service on the Internet and hacks are apparently at an all-time high. So that's something to keep an eye on. I'll probably keep following that as time goes on.

So if you're going to go to an IETF, these are some good places to look for more information about laws and upcoming agendas and those kinds of things.

I don't think I said it in the beginning, some of these slides are from interim meetings or the in-person meeting. And if you're looking it up and you can't find it, let me know because like v6ops was an interim meeting and some of the stuff was from November in person.

There's a video you can watch that tells you how to be a good newcomer at IETF. And if you're a woman attending your first IETF, the Systems group is really supportive and super helpful.

So if anybody has any questions, that would be great. And remember, past this slide in the deck that will be online are slides that I didn't cover, a lot of the stuff is redundant that we covered before with just updates and those sorts of things. Thanks a lot.

Paul Andersen: My special thanks to Cathy. We had to ask all presenters to shrink their time down and to present two and a half updates in half the normal time. Appreciate her squeezing that in.

John Curran: So we do have some questions in queue. Cathy, I know -- I believe you're out there to answer them. So, I'll ask them and you can respond.

First one is Azael Fernandez. What has happened from the IPv6 only experiences during the last IETF meetings? Has it improved, less broken things, following every meeting?

Cathy Aronson: Well, they don't generally turn off v6 in working groups and make you only use v4. But there are v6-only SSIDs and people use them and they seem to work.

I think going forward if we are meeting in person they probably should turn it off, turn v4 off and see what else breaks, but it is getting better.

I also wanted to mention real quick that if you are interested in the next virtual IETF, which is in November, that maybe you don't have a sponsor to pay the registration fee, which is -- early bird is like \$230, maybe, you can -- there's a fee-waiver program and they're pretty lenient. So if you're interested check

that out on the IETF.org website. I don't know if there's other questions.

John Curran: There's one more question -- more of a statement from Owen DeLong, who is with Farsight Security and ARIN AC. He just notes that ASO zero policies are already being circulated in all of the RIRs, so the IETF work will be no op by the time it comes to fruition if it does it anyway.

Cathy Aronson: Yeah, I kind of figured. It wasn't super popular at the IETF, but again anything that makes the RIRs do anything is always something I'm going to put in the slides because that's why I'm there. So thanks, though.

John Curran: Do we have anyone in queue? Want to see, might have someone speaking. No? I don't see any speakers. I don't see any questions. Paul, did you want to say something?

Paul Andersen: No, I was just saying there's no hands raised.

John Curran: In which case I just want to say thank you, Cathy. Little round of applause for Cathy.

(Applause.)

And we'll now resume our program. Thanks, again, Cathy.

So next up we've covered the ARIN general update. We had Richard do that earlier in the day. So we're going to have Joe Westover come up -- sorry, John Sweeting, to give the Customer Satisfaction Survey results. Take it away, John.

John Sweeting: Hello, everyone. We absolutely miss seeing you all in person, and can't wait until that happens again. As you see from the slide, I'm John Sweeting. I've been around ARIN for quite a while, both as an AC member and ASO AC member, a CRISP team member, and I'm currently the chief customer officer for ARIN.

Next, please. We do a customer survey every three years, which is a pretty in-depth survey. It takes about, anywhere, 15 to 20 minutes to complete.

We had very good results this year considering there was the pandemic and everything. We actually were concerned that if we could even run this and get enough people to participate to validate it and make it useful to us. And we did. We far exceeded actually the participation from the survey that we conducted in 2017.

We use an independent contractor called Rockbridge Associates, and this is their expertise,

doing these surveys. We've used them for the last three surveys that we've done.

Most of the questions have remained consistent because you've got to have that consistency from each year of the questions in order for the right conclusions to be drawn out from the survey as to if you've improved or you've gone back.

We did add a few different questions this year and we changed one or two around. So there's a couple of spots where there's no comparison to the last two.

So, the reason that the -- the objectives of the survey of course is to determine the members' expectations and needs from ARIN and how we actually meet those expectations and needs to assess the current satisfaction to find out if there's any unmet needs that we have -- sorry, I just realized that my video had gone out -- determine any unmet needs that members may have, identify and prioritize areas for improvement, and to identify opportunities to better engage the Internet community in terms of outreach, education, training, fostering participation and other ways that we can actually interact with our community to meet the needs and expectations.

Next, please. The methodology that Rockbridge uses, they went through, they record all the perceived performance and expectation data across 34 specific attributes grouped into nine dimensions. And those are policy development, registration services, engineering, financial services, communications and outreach, ARIN meetings, customer service, and Internet governance -- and also security.

So for each of those 34 questions, community members were asked two questions. One was the expectation, which the expectation is how well does that question describe an excellent Internet number registry organization on a scale of 1 to 10. And on performance, how well does ARIN stack up to those expectations?

And so that's how it will be laid out in the survey as we go through. I'm not going to cover the whole survey. It's very summarized in what I'll be covering today. However, the whole survey will be put on our -- will be available on our website soon. And we'll send out an announcement to let you know when that is actually up and viewable.

Okay, so the expectations to the performance methodology is, actual success is defined as the gap between the expectation and the performance.

In other words, if it's a security question and it asks you what is your expectation of excellence from a RIR, you would say possibly it's an eight. And then it would ask you to grade ARIN on how they meet that expectation. And it could be an 8. It could be a 9. It could be we exceeded it. Or it could be a 5, 6 or 7, which means we did not.

So Rockbridge advises the following for performance expectation gaps. There's more than a 10-point gap, that means that we really have a great opportunity to improve in that area and to remediate the issues there. If it's fewer than a 10-point gap you're doing good. If it's fewer than a 5-point gap, then you're doing excellent.

Next, please. So the way to read the scored results -- and this will help you when you get into being able to see that whole entire survey because the survey itself is about 60 slides, and I'm only presenting about 10 slides here.

So if you look there, the overall example for each of the areas, you're going to see that this covers all three of the survey years -- 2014, 2017 and 2020.

This is just examples. These are not our scores. And on the attribute one and attribute two,

you'll see the broken line, the broken line box there, the outline. That shows the expected, the expectation of what you should get from an RIR. And then the solid colors are the percentage of how ARIN performed in that, for that attribute.

And then over/under, the points from expectations, the points that are listed there are the difference between the expectation and the performance. That's where you get into if it's greater than 10, then that's an opportunity; if it's between 5 and 10, it's good performance; if it's 5 or less it's excellent performance.

Next, please. I'm not going to go into the individual attributes under each one of these sections. I'm just going to cover the overall section score itself. And as you can see, overall ARIN scored, this year, 80 percent out of 90 percent. So the expected score was 90 percent and the rated score for ARIN was 80 percent, which is 10 points from expectations, which shows we have some areas for improvement.

Now we're listing down how we did on each of the separate departments, overall for each of the different sections.

Security -- the asterisk means that the question was changed this year, so it's not really

comparable to the past years. 2014, we actually didn't have any security questions. 2017, as you can see, we are one away from expectations and this year we're one from expectations as well.

Meetings, seems that we have improved. We've gone from 12 to 4 to 3. And although the 71 percent is less than the 77 percent that was rated last year, the expectations for meetings also went down.

So that could be due to the pandemic. It could be due to a lot of different reasons. Like I said, we did have a lot more people participate this year so we had a lot of new perspectives within the survey.

Policy development, again, another good area. We were five points from expectations on that this year.

And financial services is good as well. We were within six points of the expectations on that.

Next slide. Here we go into the last five areas. Internet governance, the expectations have gone up and our performance rating was a little bit less but we still stayed at that seven percent or seven points from expectations.

As you can see the last time we did this survey we had -- an 80 percent was the expectations, and

it's now 90 percent. So that tells us the community is expecting us to participate a lot more in Internet governance and to make sure that we keep track of what's going on there and that we also have a voice there as well.

Communications and outreach, there was a couple of questions there that were revised. So it's not a strict interpretation to the last two. However, the expectation was 84 and we performed at 75 percent.

Customer service, the same, expectation stayed 90 percent -- points. Our performance fell a couple of points. So there's some room there for improvement.

Registration services, there was a question changed in there as well. And we have that ten points from expectation, so there's definitely an opportunity there.

And I believe the attribute that hurt that the most was the timing of getting resources -- approvals through and the resources out to the customers. So we're working on that. We actually have some initiatives going right now that will cover that.

And then in engineering, the expectations have, again, risen. And the performance has gone down,

stayed steady a little. But of course there's opportunities there for us that we are also looking into and have some initiatives ongoing to help correct that.

Next. This slide here is just talks about the overall loyalty metrics. As you can see, loyalty has gone up. We're up to 84. Satisfaction with meeting needs has gone up. We went up to 79 percent from 76 percent.

Satisfaction with value for fees has gone up as well to 75 versus 69 last year. And the likelihood to continue using ARIN has risen as well to 77 percent versus 73 percent versus 68 percent.

As you can see, it's the highly satisfied, somewhat satisfied and dissatisfied. So it's really that dissatisfied, seeing that go down is really good.

Next. Ongoing feedback methods, this is just the slide to emphasize with the attendees and the community that we have several forms of receiving feedback from you. We have a feedback button that shows up anywhere on our site, on every single page. And you can click there and provide feedback. We do transaction surveys for every transaction that is opened and is processed through our Registration Services Department.

We send a transaction survey with that. There's no requirement to fill it out. But the more

feedback we get, the better we are prepared to tweak the services and make sure we're meeting your expectations.

We document feedback from our telephone calls and tickets. We have a feedback channel in Slack where if there's feedback received from a telephone call or from a ticket that we need to get into the development process to be looked at, the staff will put that into that Slack channel and it will be discussed and possibly turned into a story.

We have the ACSP which I hope most people are familiar with, where we review and consider processes for formally submitted feedback.

So the ACSP, when we get the formal suggestions through this program, these have an SLA written around them of how quickly -- that we do have to respond. We do have to tell the community we received this suggestion and here's what we think and here's what we're going to do with it, or possibly we may have a consultation to ask the community what we should do with it.

We do have strict guidance that we will not just close a suggestion without getting specific feedback from the community. If we're going to take it and move forward with it, we can just -- we'll let you know that we're going to move forward with it. But we

cannot close out any suggestion without getting some kind of feedback from the community, whether it's a consultation -- usually we use consultations, but we could have a roundtable possibly with the organizations that it most affects.

Then as well this meeting here, we get direct feedback from these meetings, all that feedback goes back and gets sifted around and discussed. And anything we need to do in the engineering world gets turned into a story. And anything we need to do as far as processes and customer service and registration services will be looked at and processes maybe changed and implemented.

And then, again, we do have our Mailing List and social media. Next.

Okay. So, as we said, the survey results are along with other ongoing feedback collections are critical for ARIN to better understand the value that we provide to your customer experience and successfully target effective improvement opportunities across our products and services.

We have a lot of work going on with that. I'll leave it at that. And if there's questions I'm sure John will be happy to expound on some of those things or myself.

John Curran: Are there any questions regarding the customer survey for Mr. Sweeting? Now would be the time to put them into the Q&A section. Thank you.

First one, Louie Lee, Google Fiber, is there an understanding on what part of the feedback on expectation for more activity? Is it really just a gap in education about what's already going on?

Actually, Louie, that's a great question. I would have -- I was hoping someone would ask it. We're actually going through the detailed survey now because there's a lot of material underneath and a lot of information to try to figure out.

We note that expectations have gone up, which we think is a good thing. Our performance dropped a little bit and so the combination shows that we're not matched up with what people expect.

We have to go through and look where those areas are. Our performance still beats what 2014 was in terms of how we perform, but since your expectations are higher, we need to do better.

The good news is we have people saying we're satisfying their requirements. So it's generally in areas like the amount of detail we ask for processing requests, the timeliness of the requests.

It's also true that we're in a year of COVID. And some of the responses are related to some of the issues working with us during that.

So we're going to go through it in detail and we'll report back to the Board a list of gaps that we see in action items. Our intention is, of course, to bring up all the areas that have a substantial gap. So, yes, thank you for that.

Can the policy -- and our second question is Owen DeLong: Can the policy development details be provided to the AC?

Owen, absolutely. We will drill down and pull out the portions that the AC can help on because this is a team effort.

Okay. Any other questions or any participants waiting?

If not, thank you, John. I'm now going to move this to the next session and that's going to be training and outreach at ARIN. And I have Hollis come up to give that. Go right ahead.

Hollis Kara: Good afternoon, and thanks, John.

Speaking of areas where we're continuously trying to improve, a great lead-in, I just want to take a few minutes of your time at the end of the day. Thank

you for your patience, sticking with us. I hope you're enjoying the meeting.

I'm Hollis Kara. I'm the Director of Communications. Next slide, please.

I want to center the conversation on the point that everything that we do, as ARIN in general, but in communications in particular, has to pertain to our mission statement. And particularly when it comes to training and outreach it comes to those last six words of that mission.

Next slide. All right. So training highlights. Some of you may remember that in spring of last year, which seems a million years ago at this point, we first introduced our training program coordinator Beverly Hicks to the community when we brought her to our meeting in Barbados. Yes, Barbados, I think that's right.

And what she did at that point was some data gathering to find out kind of what the community was interested most in seeing ARIN provide training on. We are a community-led organization, so we wanted to let that be the driving force behind our first steps.

As a result, we moved forward as a team in a lot of ways, which I'm going to briefly go over with you now. And I encourage everyone to either take advantage

of these opportunities personally or refer folks that you think might benefit from them to utilize them.

We are now offering webinars. Webinars that are -- if they've been presented live, a lot of times we'll make them available on demand afterwards so you can watch those and digest them at your convenience.

We also have been producing many how-to videos for ARIN Online. And we'll continue to do that as our services continue to develop and mature. We've been going through a lot of improvements in technical services. And now that the UI has kind of settled out and those things are live and in use, we'll be creating more how-tos to help customers utilize them.

We also have a variety of materials that are available for you to use for your own education or to share with others to help inform them about the work at ARIN.

Next slide, please. All right. So our virtual training. This has been pretty exciting. We've been able to stand up a number of live webinars over the last year. And we've had really great results. And I wanted to share a few numbers with you because I think that's helpful to kind of get a sense of where we're going.

One of the first things the community asked for was training on IPv6 address planning. We ran that seminar six times. And now it is available online and as on demand. And that attendee number includes folks that have registered and participated live, watched it as an on-demand or who elected to register for the event and then watched the video when it was sent to them after the session because, yes, we can tell when you do that.

So we've had almost 460 people complete that training. We ran our Leadership Development program. And that one is a very targeted outreach that is designed to train folks that are interested in running for the Board or the Advisory Council or the NRO Number Council about what the responsibilities with those roles are.

So it's a smaller program. We ran two live sessions over the summer or late spring, and we had 38 attendees participate in that, which was great.

Most recently, as you heard referenced in the trivia game earlier, we conducted our Getting to Know IRR-Online seminar, which was wonderful. It had a great response. And it shows you how wonderful the uptake on that has been. And we had 193 folks that have participated in that training thus far.

Next slide, please. As I mentioned, after we run a session live, either at the conclusion of a series of presentations, we'll pick the best one. Or if it's one-time presentation we will take the recording from that and we will post it on our website. The URL is found on the slide deck of training webinars. And then that's available to you to use at your leisure.

And we keep track of the views. So that's good to know how those are being viewed. But we have one on policy development. And, again, the three that I mentioned with the previous slide.

Move to the next slide, please. All right. One of the things that we had to scramble to do last year was to update all of our training libraries.

Basically one of the side effects of moving to the new website, which hopefully everyone is enjoying, was that the UI change, which meant that we needed to go through and recreate -- because it isn't very helpful to have a help that doesn't look like what you're seeing on your screen -- so, we recreated all of our basic helps, and those are available to anyone who needs them for setting up accounts and putting in requests. And we'll be starting now that things have stabilized with the UI and some of our other areas like

RPKI and now with IRR we'll be starting to create those as well and building out that library.

If there are topics that you'd like us to build a self-help for, to create a guide, please let us know. We would love to hear from you.

The next slide. All right, outreach. Outreach has been crazy this year. So let's take a little look at what we had planned and what ended up happening and where we're going.

Next slide. All right. We had a great plan coming into 2020. We had everything mapped out, tons of appearances, tons of engagement. We were super excited to get in a room and talk to you.

And then things got weird. We were off to a rip-roaring start in January and February. We had held our first two ARIN on the Road events in Memphis and San Antonio. We had a wonderful time getting to know our community there.

We even did a few outreach events that were by invitation to do ROAthon training with individual organizations, which was wonderful. Helped those folks get bootstrapped into RPKI.

And we had help desks at a number of events. And then we got to March. Next slide, please.

And we hit the pause button, as did everyone. We had to kind of look at our role, work on undoing plans, figuring out alternatives. And we decided to take advantage of it as an opportunity to really stop and think about what we were doing well, where we could improve and what opportunities were available to us in a virtual environment that maybe we hadn't taken advantage of before.

And that's kind of spun out into three key areas which we're really excited about and that we are continuing to gain momentum on.

First off was our initiative to develop stronger relationships with our industry partners. And what that means is that a lot of these organizations where we have similar communities, we've made a point of going to their events in the past and exhibiting, things like that. All that went away.

So what we did is we started to do -- create opportunities with those organizations to take tailored information to their membership through their channels. That's been great and we're looking forward to continuing to build on that.

One of the things that we were really sorry to have to put the pause on were our ARIN on the Road and ARIN Launch By the Numbers because they're a great

way for us to get in touch with people who are part of the ARIN community but not necessarily involved and invested in coming to the meetings and trying to encourage them.

So what that's kind of turning into is virtual outreach. And for right now we're going to start this up focusing on our new customers, and we're planning to roll this out in November. So if you're new in this last year, you'll be hearing about it. Everybody will be hearing about it but it's going to be by invitation to new folks. And this is basically that onboarding, bootstrapping, getting them familiar with all the things that they can do to get value out of their relationship with ARIN. So those are going to be great.

And then the last thing was to have a functionality to allow us to have virtual help desks. What we're seeing more and more is that organizations are adapting to the digital environment and they're trying to make their events available virtually. And that includes trade-show kind of expo kinds of things.

And the question became how can we continue to provide the great service that we provide with our RSV help desk in that environment. And that's something

we've figured out and now we're just waiting for the opportunity to utilize it.

Next slide, please. So this year's been all about rising to the challenge. And I just want to give a shout-out to the team real quick. I couldn't be prouder of all the hard work everybody's done figuring out how to pivot and adapt and make things work and come up with new ways for us to show and continue to live into our commitment to the community at ARIN. We're here for you and we're here to work with you.

I'd like to wrap it up with an ask, if I can have the last slide.

Our real sole goal is to help you and all of our customers to optimize their relationship with ARIN, to get the most value out of that experience, whether it's attending an event or using our online services. And part of doing that is hearing from you.

So please, please, please, training@arin.net is the email. Beverly and I both get all the things that come to that address and we want to hear from you if there's topics that you think we should be addressing, if there are audiences that you think would benefit from hearing from us, any of it.

So, I want to thank you again for being part of the community, and I hope that we can continue to partner together to continue to grow ARIN's strength.

And are there are any questions.

John Curran: Any questions for Hollis?

Okay. Hollis, thank you very much.

Hollis Kara: Wonderful. Thank you.

John Curran: At this point we are actually done with the presentations for the day, and we're going to move into the Open Microphone session.

I'll invite folks to now approach the microphones. And if you have anything that hasn't been discussed -- policy, how we work -- now would be the time to raise them.

We always do an open microphone to make sure we're hearing from you. My esteemed chair, Paul Andersen, is standing by, and we're ready to take anything you might have.

Paul Andersen: Stump the CEO. It's going to happen sooner or later.

John Curran: Everyone's just dying to get done and go make cookies.

Okay. Last chance, if there's any questions for us, now would be the time. It's been very nice having you for these two days of policy discussions.

Paul Andersen: Just a reminder that while you're waiting --

John Curran: I do see one. Here we go. If we stump the CEO does he have to make a stump speech, obviously?

Paul Andersen: Ha, ha, ha. Speaking of stump speeches, I would remind everyone, yes, obviously we're going to deal with elections next Friday. But you can go and review the website and see the candidates, write shows of support. It's a great activity to do in advance.

John Curran: I see we have another question.

Paul Andersen: We have Aaron Hughes, 6connect, update on the NomCom. What's being done about the lack of transparency updates to election process? I think I could use a little bit more on that question, but I can answer generally by saying the nomination committee, if anything, we've tried to increase by posting more about its internal processes.

We've tried to use more consistent approaches in terms of how the NomCom analyzes candidates. The guidance from the Board is published publicly. I'd encourage anyone to read it. And it's

always something that we open in sessions like this for feedback.

But more generally next week we will give an update on our governance working group, which has been looking outside the box. We asked our more newer and outside ARIN members of the Board to lead a process that looks at our governance, not just from how other Internet organizations do it but just how organizations do it as a whole. So we'll hopefully get more on that.

Louie Lee asks, as we prepare for a hybrid meeting approach please let the vendor know of your requirements.

I know staff -- Aaron, you can take your time and type. I think that would always be, staff works very hard with all their vendors to make sure they can match the capabilities.

John Curran: We have a plan where, as I said, we have to plan for the possibility of an in-person meeting, but clearly the need to support people who will not make it for whatever reasons needs to be included in that.

We've already had discussions of what those requirements are and the two virtual meetings we have done inform that process. We'll be doing the planning coming up very shortly as to what we do.

But you'll hear about it in early January. I think that we've shown we can handle virtual. We know we can handle face to face. The question is do we make the call one way or another. Do we try to do hybrid? Hybrid is a little different. We need to see where we are in January to have a really good call as to how important that is and how viable an in-person meeting is.

Paul Andersen: I think you will have -- again, it's a feeling -- you'll have great remote participation, something like this, it's just really a matter of can we, I think the only real question is can we host any kind of in-person.

I think there's been great strides over these two meetings, just seeing the improvements on how smooth and well this works between the April meeting, April -- the May meeting, I forget which month, I think we had it in May eventually and then the fall meeting.

So we're hopeful that by spring it will be even better.

John Curran: As noted, we have to consider not only the ability to meet but the ability for people to return to their loved ones after the meeting in a timely manner, which may actually be the problem depending on what's going on.

Paul Andersen: Owen DeLong, I assume from Farsight Security, asks how does hybrid differ from previous in-person remote participation in meetings. I don't think we can answer that. Board direction and honestly, I think, staff requested that it will be different. But I don't think we can commit to anything now until after we understand -- I think the general goal, Owen, people who are remote participant can feel more like they're at the in-person meeting, or maybe it's that the people in the in-person meeting will feel they're part of the remote participant meeting. It's hard to tell.

I think just trying to bridge them, I think some people have said our previous remote participation, which is really a live stream, which there was sometimes lag in delay, and typing questions was the only fashion.

People didn't really feel like they were there. So I think it will be a mixture of technology and a mixture of activity, making those cookies, baby.

John Curran: It's clear that we're capable of having a meeting like right now that has a much more dynamic, much more feel like a live meeting even though it's entirely remote participant. And so we want to retain that.

So I don't expect we'll be going back to our old mode. The question is can we and is it worth, does it make sense for us given the circumstances that will be present at that time, does it make sense trying to take what we have right now remote participant and add an in-person component. We really need to make the call in January because there's a lot of factors that are going to shape that.

Paul Andersen: Cathy Aronson asks, like I said in my talk, I'd like there to be parity between in-person and remote, and I think we agree, because it leads to the next comment, Martin Hannigan use the Internet, shocking. I think we agree, I think the entire industry and others have woken up that we've done a lot of work to build up the Internet, maybe we should make more use of it.

John Curran: For years we've all commented how it's ironic that we're spending all our time on planes, seeing each other in airports and that we really should do more use of the Internet.

This year's proven we can indeed do that. So, yes, I think we need to get in person because we really see the value and that's something that we'll be taking into consideration come January.

Any other questions?

Paul Andersen: Aaron Hughes 6connect says, normally we get a Caribbean update. How are we doing with outreach in the Caribbean? Still cannot find any ISPs with v6 adoption, and have started to reach out directly to end user reach, and how is the ARIN effort going?

Quickly to say, you're correct we have to condense bit of the presentations. Part of the Caribbean stuff was covered in the earlier presentation and we'll cover it next Friday, but we can certainly make sure just in case that it's highlighted. And we've -- the Board, for sure, has been meeting on several efforts and ideas on how to do that and staff as well.

John.

John Curran: We actually are in the process, ironically. We're about to brief the Board on a revised Caribbean engagement strategy. And that was something if it weren't for this -- usually in October we would have a face-to-face meeting and that would be part of the activity.

As it turns out, we're going to be doing that also. We'll see if we can try to do that at the same time as we brief the community or about the same time.

But we've been doing, we've had a very nice pivot to -- we had a number of ARIN in the Caribbean activity scheduled for this year. We pivoted to an online seminar series that's been very well received.

So let me see if we can at least get an update set for next Friday we'll wedge that into the schedule somewhere to give you an update.

Paul Andersen: I think Owen's comment can be a question. So thank you for that. I think we're out of questions.

John Curran: Very good. At which point if there's nothing coming in and there's no one with their hands up, then I'll end Open Microphone. Three, two, one. Thank you, everyone.

And now closing announcements.

I'd like to thank everyone for participating in ARIN 46. We're two-thirds of the way through, as I said, our Member Meeting is a week from tomorrow. We'll do one more online session.

I'd like to thank you for this. Please complete your meeting survey for today by October 30th to get a chance to win an iPod Air, at the end of the meeting. I'm sorry.

Next slide. There's no next slide. We'll get back to you on 23 October. That will be ARIN

elections. And what we'll have is we'll have -- at that time we'll have not only an election update but we'll have Board candidate speeches. We'll do Advisory Council speeches.

We'll have a forum for the candidates. We'll have the Board of Trustees Report and then Members Meeting with another open microphone. So it should be very exciting. Thank you all for participating today.

I look forward to seeing on you the 23rd of October. Bye-bye.

. [Meeting adjourned at 2:39]