SAN JUAN – ASO Session
Wednesday, March 14, 2018 – 17:00 to 18:30 AST
ICANN61 | San Juan, Puerto Rico

PAUL WILSON: …the NRO EC and I think I'm co-chairing this session with Aftab
                         Siddiqui, the Chair of the ASO AC. I'm sure if you don't know the
                         difficult between those, then you will by the end of the session.

                         Would we like to do some introductions? Yeah, let's do some
                         introductions starting with….

HARTMUT GLASER: I will start. My name is Hartmut Glaser. I am one of the LACNIC
                         members in the Address Council appointed by LACNIC board.

KEVIN BLUMBERG: Kevin Blumberg from the ARIN region ASO AC.

RICARDO PATARA: Ricardo Patara, ASO AC member from LACNIC region.

ALAN BARRETT: I'm Alan Barrett, CEO of AFRINIC.

AXEL PAWLIK: Axel Pawlik, Managing Director, RIPE NCC.

DMITRY BURKOV: Dmitry Burkov, RIPE NCC board member, here just as an observer. Thank you.

OSCAR ROBLES: Oscar Robles, CEO of LACNIC.

RON DA SILVA: Ron da Silva.

UNIDENTIFIED MALE: Board.

RON DA SILVA: Board. And Akram [already] sends his regrets. He flew back already. I'm one of the two ASO appointed members on the ICANN board.

CARLOS REYES: Carlos Reyes, ICANN staff support.

FILIZ YILMAZ: Filiz Yilmaz, ASO AC, RIPE region.

NURANI NIMPUNO: Nurani Nimpuno, ASO AC from the RIPE region.

AFTAB SIDDIQUI: Aftab Siddiqui, ASO AC member from the APNIC region and ASO AC Chair for 2018.

[RICHARD LEANING]:   [Rick Leaning] from the ASO AC and appointed by the executive board of the RIPE NCC.

LOUIE LEE: Louie Lee, ASO AC member, elected, in the ARIN region.

PAUL WILSON: Thank you. Let's hear from the back of the room as well.

SUSANNAH GRAY: Susannah Gray, NRO Secretariat.

UNIDENTIFIED MALE: [inaudible] just dropping in from the GNSO.

DAN DAHLBERG: Dan Dahlberg, Technical Director, Research Science t BitSight Technologies.

JOYCE CHEN: Joyce Chen, ICANN org.

ROSALIA MORALES: Rosalia Morales, part of LACNIC board.

CRAIG NG: Craig Ng, APNIC General Counsel.

GERMAN VALDEZ: German Valdez, NRO Secretariat.

MICHAEL ABEJUELA: Michael Abejuela, ARIN Counsel.

PAUL ANDERSEN: Paul Andersen, Chair of the ARIN board.

EDUARDO JIMENEZ DE ARECHAGA: Eduardo Jimenez de Arechaga, LACNIC's legal counsel.

PAUL WILSON: Thank you, everyone. So we have potentially a maximum of two guests who are not actually employed by ICANN or the RIRs. Welcome. Thanks for your interest. Let's give them all a hand.

Okay, the agenda today is a policy update from Aftab as the ASO AC Chair followed by an NRO update from myself. What else do we have? An ASO Review update? Are we doing that again? Take it away, Aftab.

AFTAB SIDDIQUI: Thank you, Paul. We'll try to do something a little bit different. Thank you, Carlos. Who's going to move the slides? Okay, that's good. Perfect.

So we'll start with the policy update. As you know that we have five RIRs and we consist of three members from each RIR, so that makes us 15 in total. We have different tenures, different terms of office, as respect to the different RIRs.

Our responsibilities, the scope is very limited, what we do. And how do we meet? We meet once a year physically like in an ICANN community forum event and then monthly on a telephonic call. Next slide, please.

This is the formation. You heard from most of us. Ten ASO AC members are here at the moment. Two are performing their other duties as we appoint multiple people to different

committees and working groups. And some couldn't make it and they are I guess online on the bridge. So we are here. I have with me two vice chairs. That is Kevin Blumberg and Ricardo Patara. So this is our formation. Next slide, please.

We have a PPFT team, which is called Policy Proposal Facilitator Team, to support the global policy development process. The names are here from every region, one member from each region. Next slide, please.

As I said, ICANN activities, we have appointed two people on the CCWG Accountability Stream 2. That's Fiona Asonga from AFRINIC and Jorge Villa from LACNIC. NomCom, Brajesh Jain. Ethos Award Selection Panel is Kevin Blumberg. And I saw an e-mail from the CCWG Accountability Stream 2 that they have published a final draft and it's under review. And probably their work will be completed in June something as updated in the earlier session.

Anyway moving forward, that's the NRO Executive Council. Paul will explain that in my slide. I don't have to do that. Next slide, please.

We have five RIRs, and every RIR has their own policy development process. We do the policy development in the RIRs. In APNIC region, I'll be presenting the update from the APNIC

region and my other colleagues will present the update from their region respectively.

Since Copenhagen, ICANN 58, we had two APNIC meetings: APNIC 44 in Taichung and APNIC 45 in Kathmandu, Nepal last month. These two meetings we had total eight policies. Six were related to IPv4 predominantly. Still in the APNIC region, most of the policies are based on IPv4. Two were related to IPv6, and no other policy was discussed which [caters] any other topic. The status of those policies are four were approved and four are still under discussion. Next slide, please.

These are all the names of policies. As I said, predominantly, it's IPv4 related and talking about the last /8 block in the APNIC region. One was the most important one is now we have put a limit of five years to transfer any IPv4 address space if you have got it from the last /8. If you have received a last /8 block that is a /22, then you won't be able to transfer it for next five years. You have to wait for five years before you can transfer it. This was a major change in the policy in APNIC region.

Returned IPv4 address management and final /8 exhaustion, it was also approved. Some policies are still under discussion, like no need, temporary transfers, final /8 pool exhaustion. The two IPv6 policies were quite simple as it is just a matter of [following]

ICANN
COMMUNITY FORUM 61
SAN JUAN
10–15 March 2018

other regions as well. And that's it. These are the policies from the APNIC region. Next slide, please.

I would like to request Ricardo Patara to get a brief overview of the policies from the LACNIC region. Thank you.

RICARDO PATARA: Okay, thank you, Aftab. This is a summary of some policies that we had in LACNIC 28 – it was last September – and also some of the proposals that will be presented during LACNIC 29 to be May 1 in Panama.

In total, we have ten policies. None of these policy proposals for IPv4. Some of them are for IPv6 and other topics like transfers, point of contact in the WHOIS database. Next slide, please.

These are the proposals. There is one, [two] in discussion presented some time ago. It's to allow inter-region transfer but in the inbound direction. So organizations outside LACNIC region could transfer IPv4 addresses to your organization's side of the region, so coming inside to the region. This one is under discussion.

The next one to modify the resource recovery process, in LACNIC there is a recover process so organizations with some issues, be it administrative issues or [organization] issues, can have their resources recovered. This one is to allow LACNIC to remove the

DNS delegation in case a set of IP addresses is in the recover process. This one is approved.

The next one is interesting in this case, in this scenario in the group. It is to change the last-call period for the PDP. It was 45 days. Changed it to 30 days. So after the policy proposal was approved in the forum, there will be 30 days for last comments in the mailing list.

Modify the initial IPv6 allocations to end users is to allow an initial location for an end user organization to be changed so they can change the prefix. This is considering a case where the initial [plan] was not very good, accurate. So this allows this type of organization to return to LACNIC to request a different prefix in the IPv6 allocation.

The next one, modify the subsequent allocations, was just to adjust some of the requirements for additional location considered in a modification. That was approved in previous forum.

The next one is a little bit complicated because it was tagged as a global policy. This one will be first presented during the next LACNIC meeting. The author is still getting comments from the public, from the community to see if they really want to proceed as a global proposal. The idea is to create a global Internet registry to allow organizations to request addresses to this

organization of the RIRs in the case they are present in more than one region.

Next one, update to merge and acquisition transfer policy [to] block a subsequent transfer after a set of addresses was transferred based on their merge and acquisition.

Next one, IP-based geolocation. The idea of the author is to instruct LACNIC to publish a set of information to allow anyone to identify the geographic location of not only the allocation but also the [sub location], the site of the [block].

Next one, review errors in IPv6 policies, is basically to adjust the text for justification for additional location IPv6. It's the way LACNIC would measure efficient usage of the previous block.

And the final one, registration and validation of abuse contacts, the idea of the author is to instruct LACNIC to have a process to verify the validity of abuse contacts and how to deal with abuse contacts not working properly.

I think that's it.

AFTAB SIDDIQUI: Thank you, Ricardo. After that, Louie Lee will present the ARIN [summary].

LOUIE LEE: Hi. I'm Louie Lee. [This is where we sat up here.] How are you?

The ARIN policies, I'm going to cover the ones that had activity in the last 12 months since last March. We will have a meeting next month in Miami.

We'll cover 11 policies, 5 of which had to do with IPv4 only. There are none just IPv6, but there a policy that covers IPv4 and IPv6 or directly affects the IPv4 and IPv6. And there are 5 other topics. They vary about [park] validation, best point of contact validation, affects how WHOIS is displayed, things like that.

Of these, seven have been approved and implemented or approved to be implemented and four of them are under discussion.

Of the adopted proposals, you can see the four displayed up there. The first one has to do with improved IPv6 registration requirements. While it says IPv6, it's actually about how the WHOIS registration is required for updating. It makes it so that a IPv6 block size used for a network, that you have a IPv4 block size, the requirements match up for WHOIS registration.

Now the second one about alternative simplified criteria for justifying small IPv4 transfers, that one just adds a simple criteria for organizations to do a transfer with IPv4.

The third one, streamline merger and acquisitions transfers, that has to do with both IPv4 and IPv6 in that this policy makes it simpler for an organization to consolidate the registration of a number of resources that come from a merger and acquisition under a single organization.

The last one that was adopted is the change timeframes for IPv4 requests to 24 months. What that does is it extends the time horizon for which an organization may request and receive IPv4 addresses for the duration of their expected growth.

Of course, the comprehensive list is posted online at arin.net/policy/proposals. Thank you. Next one.

We have three policies that have already been recommended for adoption. These three, the first one under the policy manual section 3.6 affects how the annual WHOIS point of contact validation happens in that it clarifies what type of POCs and for what kind of organizations would be validated and by what procedure.

The second one is the amend community networks. What that does then is it widens the definition of community networks so that they can be included for that use other governance or operating models.

The last one that is recommended for adoption is the repeal of immediate need for IPv4 address space. This removes a policy under which an organization may justify for IPv4 addresses because the conditions in the post-runout time no longer exist.

Now there are four policies that are still draft, meaning they're open for discussion. You may participate via the mailing list or attend an ARIN meeting.

The first one is a clarification for initial block size for IPv4 ISP transfers. What it does is it removes inconsistencies for size of IP block that may be transferred. Just inconsistency in the manual.

The second one, require a new POC validation upon reassignment, now this one makes IP reallocation or reassignment, which is usually from ISPs to customers, contingent on the POC validation for any new POCs that were created. It seeks to improve the accuracy of the contact information reflected in WHOIS.

The third one, remove ARIN review requirements for large IPv4 reassignments/reallocations, removes the ARIN reviews of these large block reallocations and reassignments, again for ISPs to customers, because the author of this proposal asserts that the ISPs understand that IPs are scarce and would not give out large blocks that are too big for their customers.

The last one, allow inter-region ASN transfers, now this one adds autonomous systems as numbers, as resources that can be transferred between ARIN and another region.

There is one more editorial change that came about from a draft policy. It's a big cleanup to clean up all the references in the policy manual for allocation, assignment, reallocation, reassignment to match the updated definitions that are easier to us.

That concludes my report.

AFTAB SIDDIQUI: Thank you, Louie. Next in line is AFRINIC, so may I request Fiona to give a quick overview of the AFRINIC policies? And also, if you can give a quick intro of yourself.

FIONA ASONGA: Starting with the intro, this is Fiona Asonga, ASO representative from the AFRINIC region. Apologies for coming in late. I was concluding on another meeting.

I'll quickly go into the update from the AFRINIC region. Over the last one year, we've discussed a total of eight policies: two on IPv4. We've had zero policies on IPv6, and we've had six policies developed on other topics.

The status of those policy proposals are that we have one that went for ratification to the AFRINIC board, we have four still under discussion, and we have three that were withdrawn by the authors for various reasons. Next slide.

If we can now focus on of the policies that we had, the five the are still moving forward. There is one for ratification and four still under discussion.

We have the soft landing BIS policy which is basically a review of our current soft landing policy that is in force. This was to change the way that we're going to handle the location of the remaining IPv4 /8 that is in the region. This policy was sent to the board, then there was an appeal, and I think we're waiting for the direction from the board. So we're putting it "under discussion" because there was an appeal from part of the community. So depending on how the board decides, then we'll know where it will have final position for it.

Then the next is the lame delegations policy proposal, lame delegation in AFRINIC reverse DNS. Basically for those who may not be so technical, this to enable us to remove lame delegation records or records of misconfigured DNS from the AFRINIC database. This is still under discussion. It moved to last call actually, then it went back to the list for discussion.

The next policy proposal is on the root aggregation policy. This policy basically [seeks] to set limits on additional resource allocation for the [LRIs]. It is still under discussion.

The next policy is the Internet number resources review policy. Again, sorry, that policy is also looking at it in terms of IPv4 addresses. So the next policy, which is the Internet number resources review policy also really much focused around conversations on IPv4 [seeks] to allow for there to be investigations or regular controls on how Internet number resources as a whole are used so that there isn't any of what the community feel is stockpiling or other types of abuses on IP address space.

Then we've got a policy proposal that is looking at improving the policy development process. That is also under discussion.

So in summary, that is basically the status of our ongoing policy discussions, and we welcome everybody to participate in these conversations. Thank you.

AFTAB SIDDIQUI: Thank you, Fiona. The last one is RIPE NCC region, Nurani Nimpuno.

BRAJESH JAIN: Yesterday [inaudible].

AFTAB SIDDIQUI: Yes, go ahead, Rajesh.

BRAJESH JAIN: I just to understand, Fiona, this appeal. [inaudible] appeal, what does it mean actually?

FIONA ASONGA: What that means is that the policy went to last call. It went to last call both in the first discussion at the AFRINIC meeting and then on the mailing list. The chairs concluded we had a consensus on the last call, but some of the community members felt that consensus was not achieved and feel that the policy should not proceed and so put in an appeal. But it was already at the next stage, which was for the board to ratify. So when it is on appeal, because we've never had a situation where we have a policy proposal in our region at that level, so as a community we are now waiting for direction from the board. Maybe Alan can add more to that.

ALAN BARRETT: Yeah, let me try to clarify that. There was a proposal. It went through discussion, all the usual process. Right at the end after

the last call, the working group chairs declared consensus. There was an appeal. The appeal committee has published a finding that said that the appeal is upheld, which basically means that the appeal committee says that the working group chairs were wrong. They should not have declared consensus. The working group chairs sent a clarifying message to the mailing list I think it was today or maybe yesterday saying that they acknowledge the result of the appeal process and, therefore, the request for the board to ratify is rescinded. So formally now the policy is back under discussion.

BRAJESH JAIN: Thank you.

AFTAB SIDDIQUI: Thank you, Alan and Fiona, for the clarification and thank you, Brajesh, for raising it.

Now back to our RIPE NCC.

NURANI NIMPUNO: Thank you very much. I have a very brief update from the RIPE region. The RIPE NCC is the Regional Internet Registry and the community itself is called the RIPE community.

This is an update from the last two RIPE meetings. I should point out, however, as described by my previous speakers, the policy development happens in slightly different ways, depending on the region and the policies might vary from region to region.

In the RIPE community, you don't actually need a RIPE meeting to reach consensus on a policy. This can happen on the mailing list. But the update itself is from the last two meetings.

We had not that many policy proposals over the last year. I think the year before there were a lot more discussions, especially on the final IPv4 address pool. So three IPv4 proposals, one IPv6, and one other. And I will describe those on the next slide.

The first proposal was simply actually a proposal to gather all the different transfer policies that had been developed over the last couple of years and put them in one single document. It's very practical but not necessarily a very exciting proposal. So it's a little bit more of a housework really.

What was interesting was at the same time there were two proposals on how to handle the last IPv4 address pool, which were more or less opposing each other. So one looking at a more liberal way of addressing the final IPv4 pool and one that was looking at reducing the initial allocation that you would get as a way of extending the IPv4 address pool lifetime.

There were very heated and passionate discussions on both of those. I find them personally very interesting and entertaining. As a result, both of the proposals were withdrawn, not because they didn't have merit but because it was found that it's a fine balance you need to strike in managing the final pool.

Then there was one proposal on the IPv6 PI sub-assignment, which is in the final stages now. That also generated a lot of discussion. It came down more or less to the principle of PI assignments for IPv6.

So these have different terminologies in different regions, but there are certain policies for what we in the RIPE region call an allocation which means you give a block of addresses to, for example, an ISP and they can then use the to make further delegations or what we call assignments out of that.

Then there's something called a PI assignment which means it's an independent address block that an end user can get to, for example, [multi-home].

So this was an attempt to actually define sub-assignments out of PI, and this is now in the very final stages of the discussions.

Then I thought I would include another proposal. It wasn't a policy proposal, but it was a proposal more or less to look at more regular abuse contact validation. In the RIPE database

where all the allocations and assignments are registered, there's also a field for abuse contacts, as the RIPE database and all the RIR databases are not only used for looking up IP addresses but actually for troubleshooting or, for example, abuse contacts. So the proposal was for the RIPE NCC, the Regional Internet Registry, to regularly validate that address contact.

That was it from the RIPE region. Thank you.

AFTAB SIDDIQUI: Thank you, Nurani. As Nurani said, all these policy discussions are very informative and very entertaining at times. So if you haven't attended any of the policy discussions, I would like you to come to any of the RIR meetings. It will be very interesting, so you are more than welcome.

That's it for the policy update. If you have any questions, please you can ask. Ricardo Patara?

RICARDO PATARA: Actually, it's not a question but I forgot to mention and I think it's appropriate to mention that every RIR has a mailing list that's open to everyone. They can join and watch part of these discussions and get more into the subjects being discussed.

KEVIN BLUMBERG: I really enjoyed the IPv4 and IPv6 little statistics for each of the regions, how much policy is being worked out. I sort of wonder just seeing things, there's obviously a lot of WHOIS policy going on and things like that. Is that IPv4 and IPv6, or is it other? I guess the question is, what do we define as other?

The policy manuals deal with a lot of number-related things. It would be very hard for it not to be somehow touching IPv4 and IPv6 in the policy manuals. So I just thought it was interesting that the "other" in some regions was very significant, less so in other regions. Maybe I guess it's personal interpretation of what a person feels, but I just noticed that was an interesting little tidbit.

AFTAB SIDDIQUI: Yes, thank you for [defining] that. The thing is when people talk about, people from outside RIR communities especially outside the number community even, they talk about the policies within the RIR, they only talk about IPv4 and IPv6. The idea was to show them there is so much else happening other than IPv4 and IPv6. It's just not the IPv4 and IPv6 we talk about and that ASN. There are other things as well.

Louie?

LOUIE LEE:	Then may I suggest that for next time, since WHOIS is such a significant portion, that we call that out as a category?
AFTAB SIDDIQUI:	Definitely WHOIS because ICANN is also emphasizing on that as well and probably, yeah.
[KEVIN BLUMBERG]:	Well, actually, you brought up the best one, Aftab. ASNs are part of the numbers, and maybe ASN is also more than WHOIS. ASN is actually a specific part of us.
AFTAB SIDDIQUI:	Good. Very well noted. Thank you so much. Any other questions, comments from anyone, from our colleagues or our audience, members of the public fora?
	Thank you. Over to you, Paul.
PAUL WILSON:	Sorry? We'd like to hear me asking Carlos if he has a clicker. Do you mind if I borrow your clicker there, Carlos?
UNIDENTIFIED MALE:	He's testing it.

PAUL WILSON:

Oh, okay. Okay, well, if it's not working, that's all right. I'll just say "next" or "beep" or something.

Well, how many didn't see this presentation earlier today? How many didn't? All right, well, this is just for you then.

Okay, this is an update from the NRO. It includes a few operational issues and also some stats, a condensed set of stats, showing the status of our IPv4 and IPv6 activities.

What is he NRO? The NRO is an informal group of the RIRs, and unincorporated association formed by an MoU signed way back in 2003, the purposes of which were for coordination of RIR system and activities, promoting the multi-stakeholder model and in particular bottom-up policy development, and also to fulfill the role of the ICANN ASO.

We have a number of committees. We have an executive committee, which is the CEOs of the five RIRs with a rotating Chair, and this year I'm it. Alan is Vice Chair and Secretary. Axel is Treasurer. Oscar and John don't have any special responsibilities this year.

There's a Secretariat currently hosted by APNIC and staffed by German and Susannah. Greetings. Susannah has left.

And there are coordination groups, which are staff groups for coordinating communications, engineering, registration services, and also some other areas of coordination less formally on policy and finance and legal and public affairs.

There's quite a number of publications on the website, including a regularly updated statistics presentation. There is a Comparative Policy Overview, which has been a pretty important publication of our providing a matrix style comparison between the policies on specific IP addressing and IP numbering related policy issues comparatively across five RIRs. For that matter, there's actually also a comparative view of RIR accountability available in the same area. It talks in a similar way about the different measures or indicators of accountability and how they compare across five RIRs.

And the Address Supporting Organization is something that you can also find from the NRO and you can work out all about the difference between the ASO and the NRO. The ASO primarily exists within ICANN as an arrangement between the NRO and ICANN for fulfilling that function of the ASO under the ICANN bylaws which primarily includes assigning or appointing members to various ICANN committees including the ICANN board and parsing global policy processes from the regional processes through into ICANN so that those policies can be

ratified by ICANN board and then implemented and carried out by IANA [inaudible] PTI.

NRO finances, we have a proportional sharing policy for the finances. The costs of the NRO operations, we apportion responsibility according to a weighted formula of budget and total IPv4 holdings of the RIRs. When you manage that in a spreadsheet, you get the percentages which are there which show our respective responsibilities for the NRO budget, which includes a half million [dollars] or so in general operations and also an $823,000 USD a year contribution to ICANN. That actually is split between some $600,000 for the PTI services and the remainder being a "voluntary contribution," as we call it.

Where are we? Thank you. [That's probably better.]

We have a stability fund, which is a pledge of over $2.1 million which is available in case of any financial need that might be required in the name of or to support the stability of the RIR system.

The IANA review committee came to us out of the IANA transfer, the stewardship transfer, and it's the accountability mechanism by which we have a committee of people who assess IANA's implementation of global policies and makes sure that their implementation of policies through those services is in line with the say those policies are intended to have been implemented.

ICANN 61
COMMUNITY FORUM
SAN JUAN
10–15 March 2018

It's a little bit like the ASO AC and it has 15 members, 3 from each region, 2 of them elected and one of them being a staff representative appointed to form that committee and represent the operational RIR [of] staff activities, I suppose. And there are archives and minutes online. The review committee has got 15 members that are listed there.

The other thing that has come to us out of the IANA stewardship transition is under the new bylaws the Empowered Community is something that we participate in, of course. And there's a bunch of procedures which have been just about adopted. They will be finalized this week and published for various different Empowered Community actions of approval, rejection, director removal, and other Empowered Community activities are also codified under a set of procedures.

Okay, the ASO Review. Well, the ASO was formed by an MoU with ICANN, as I mentioned, some 15 years ago. It had a review conducted in 2011. It has had a second review which was completed last year. So in August last year, we had a final report published of the ASO Review. It's available like everything else on the NRO website.

It had 18 recommendations, most of them fairly straightforward and easy to implement, the last one being Number 18 is a recommendation for a set of regional consultations among the

RIR communities to deliberate on the future structure of the ASO.

So the NRO EC and the ASO AC have collectively approved and accepted the recommendations, all 18 of them. As I say, the 18th is the one whose implementation goes on, and it might go on for a year or two or more in the regional consultations which have to come together on some agreement before they could result in any significant change or adjustment to the ASO structure.

A few technical projects include the RPKI, the Resource Public Key Infrastructure, is a set of services that we offer some changes to the trust anchor arrangements that were implemented last year.

We have participation in the ICANN ITHI, Identifier Technology Health Indicators, project. We had a consultation over that last year about what our community members across the regions felt or whether they wanted to comment on the indicators, the metrics that were being proposed for identifier technology health indication in the numbers space.

Okay, some statistics. This is just an extract of some of the statistics. They're reported in full with the whole history of these reports on the NRO website. In fact, these stats are being revamped at the moment, so some time in the next quarter or so of this year we should be seeing a revamped set of these stats.

But we have a report here on the total division of the /8s of the entire IPv4 address pool. As I said before, the RIR responsibility for funding the NRO is based partly on this proportionality of IPv4 holdings and in addition on the budgets.

We're in what we call the exhaustion phase of IPv4 allocation in all of the regions. Most of us have some form of soft landing rationing policy in place which has left us with an IPv4 supply which is being consumed quite slowly. The one outlier there is ARIN which didn't have such a policy and has run out. When it ran out, it ran out completely and quickly with their last allocations of IPv4.

APNIC Labs is one of [Geoff's] charts, a regular live chart that's published showing the runout in each of the five regions of the remaining IPv4 address pool. And it shows on current projections that those pools are all going to run out in the next two to three years or even more quickly in case of AFRINIC there.

IPv6 likewise we can report on the proportionality of IPv6 allocations around the five different regional Internet registries. Something I've reported on also this morning for the interests of the ICANN board is the fact that if you look at the recent rate of IPv6 activity growth around the world, it's really growing very rapidly. The measure of end user capability of IPv6 went up from

7 ½% to 17% last year. Likewise Google's chart of IPv6 volume is going rapidly upwards.

So I think the point of this is not so much in reporting RIR activities as reminding the world that IPv6 is definitely on a growth path, and that's something all the RIRs have been working to promote for quite some time now.

Now who would like to hear about ITHI? [Geoff!] Oh, boo hoo.

Okay, Identifier Technology Health Indicators is an acronym used by ICANN for a project that they have in determining what's the best way to measure the so-called "health" of different identifier technologies. They're working primarily on DNS-related identifiers.

The RIRs collectively offered to plug into that by finding through community consultation what would be a meaningful set of indicators for the health of IP addresses and related Internet number resources in terms of their registration health, if you like.

We participated in that through one of our coordination groups, the Registration Services Coordination Group. They drafted a document late 2016 which spoke about metrics about definitions, risks, and consequences of those particular metrics. It was published in 2017. It was released to community

consultation toward the end of last year, and we've completed that community consultation and will have an approved draft of that document in the near future which represents what the numbers community has felt are the most important indicators of the health of the IP addressing identifier system, if you like.

The metrics that we have are defined. They're grouped into three different categories representing "comprehensive, correct, and current" resources registrations. Those can be broken further down into a total of five different more specific metrics which have to do with the completeness of the record, the uniqueness of the records to avoid overlapping or clashing, the correctness of the records in terms of correspondence with official records for instance of companies that are represented in the database, the correctness of the services in terms of providing a functional and useful set of registration data, and then currency is also the need for that data to be regularly reviewed and updated as needed.

So there is, again, more on the NRO website about ITHI. Thank you very much.

AFTAB SIDDIQUI: Do you want the chair?

PAUL WILSON: Are there any questions? Okay.

UNIDENTIFIED MALE: One small question on ITHI is all RIRs agreed to collaborate with the ICANN measurements. So I'm just trying to understand that all the RIRs are already invested a lot in the measurement which makes a lot of sense to the numbers community. So what else was needed out of this ITHI project to add something to the numbers side only? DNS side, okay, fine. That makes sense which ICANN is doing, but why from the numbers side?

PAUL WILSON: Well, the RIRs absolutely share and have always shared an interest in the correctness and the quality of our registry databases. So you could track through all of the RIRs over history a whole variety of different measures which have been taken in order to collect good data, to have that data checked and corrected, to have through policy processes for the community to advance the policies which ensure the correctness and the quality of the data.

But the five of us have really operated in a way which is in parallel and loosely coordinated and moving in the same direction, but we haven't actually ever sat down together and said how we would actually collect measure or express our

sense of the quality of that data in a way that could be compared across RIRs and tracked consistently over time.

So I guess we can give credit to ICANN for inspiring us to get together and do that work [because so far it had to be done]. So I think it was a useful think to plug in also to something that potentially provides a consistent set of measures or possibly terminology with other identifiers that are part of the ICANN system. So I think it's probably about global consistency of approach and ability to track consistently over time how our health or quality is improving. Okay?

UNIDENTIFIED MALE: Okay, thank you.

AFTAB SIDDIQUI: If no other question or comment, then I'll ask the same thing what ended the board meeting in the morning where I presented the – okay, everybody was there. That's good. So I won't bore you with the same content. I'll just give you just a quick background which Paul covered mostly that why there was a need for the review which part of the bylaws every supporting organization has to conduct a review by an independent entity.

The first one was in 2011. The second was 2017. It took six months to conduct that review. They reviewed the ICANN

bylaws, the ASO MoU and our meeting minutes, NRO EC's meeting minutes, and multiple interviews with all the existing board members, previous members, existing ASO AC members, previous ASO AC members.

[By the way], the report is already published. It was published last year, 2017 August. So the details are there. If you haven't read it, it's very interesting. Very, very nice. Read 70-odd pages, something, it's good.

So in January, the NRO EC and ASO AC did the joint response on the review, and there were 18 recommendations. We agreed to implement those recommendations, as suggested by Paul that it was pretty straightforward.

The first 17 were very well defined and they were very practical to implement. They can be implemented by doing some administrative changes in the procedures, some documentation. Of course, it require some update to the MoUs and which a little bit [reflected] in the bylaws as well. That's why we requested the ICANN board in the morning for their support, which of course they will provide moving forward.

The most important one is the Recommendation 18, which I will talk about only. All the other recommendations are in this presentation for the sake of record, but I will move to Recommendation 18. As I said, the first 17 are very well defined

and they can be implemented through the changes in administrative procedures and documents. But 18 is different.

It says, "The NRO should initiate a public consultation, involving the five RIR communities, to determine the future structure of the ASO."

Again, as part of the joint statement, we agreed that we will initiate the consultation within he RIR communities. The first region was APNIC where the consultation started last year in APNIC 44. As a result of that consultation, we formed a working group on the ASO Review. The charter of the review is very specific. The scope is very limited to review Recommendation 18 only.

We had our first meeting for the working group in last APNIC, that was 45, in February in Kathmandu, Nepal. As a result of that meeting, the community supposed the non-status quo option. Three options were presented in the ITEMS review report. One was the status quo, don't change anything; non-status quo, changing and clarifying the role; and then then third one was a little bit changing the structure in a [two-house role].

The community had a consensus on one thing, that in APNIC region we will support the non-status quo option and move forward on that. So that was the only thing that came forward. And working group session is still open. If anybody is interested,

they can join the working group mailing list and they can share their views on the mailing list as well. We have some very active volunteers from the community who are working on the proposal and discussing things. You can join them.

ARIN started the discussion in the ARIN community on a mailing list as well. Would you like to add something on that one?

UNIDENTIFIED MALE: Yeah, ARIN's process is open. A number of e-mails have gone out, and they've also extended it out beyond the April ARIN meeting to allow for discussion during the April members meeting as well. So there has been a little bit of discussion on the mailing list. Obviously, we would love more. But it's also allowing for in-person discussion. I believe they said there will be a talk there first and then community input.

AFTAB SIDDIQUI: Thank you. But just to give you an idea that when the report came out, it concluded one thing, that the core mission and administrative task for which the ASO was set up remained largely unchanged and there is no pressing need for organizational reforms. But at the same time, it recommends a call for communitywide reconsideration of the role and function of the ASO within ICANN.

EN

So that was the conclusion from the report, and on the basis of that we are consulting with the respective communities. It's an ongoing process. It's going to take some time, of course. We cannot conclude in a few months. It has to happen in all the RIR region and everybody has to agree on the same principle that what is going to be moving forward. So hopefully by next year we should have something concrete to share here.

And of course if you follow any of the RIR policy meetings or the discussion mailing lists, you'll get more information. But this is what it is at the moment on the recommendations. We have already released a joint statement two months back, so you can review that as well.

So on the basis of these recommendations, if you have any questions, probably as ASO AC we can answer that. All good? Okay, or I can go one-by-one and read the recommendations. What do you want? Well, all right, good. I can read all the recommendations.

Anyway, this is just a quick update on the recommendations, where we are. We presented in the board meeting in the morning. So that was it from the review update side. So that's it.

PAUL WILSON:	Okay, no questions for Aftab? Any other questions or contributions? Because that's the end of our agenda. Yeah, please.
UNIDENTIFIED MALE:	Would you like me to come [inaudible]?
PAUL WILSON:	Yeah, come and sit.
UNIDENTIFIED MALE:	[inaudible]
PAUL WILSON:	I'm sorry.
UNIDENTIFIED MALE:	[inaudible]
DAN DAHLBERG:	As I mentioned before, my name is Dan Dahlberg. I work at BitSight. I noticed or heard you mention that you're obviously very much interested in the accuracy of the WHOIS information and the registrations assignments and allocations and things like that. And that's actually something our company is very

much interested in understanding as well given the nature of our business, which I can explain now or after as well. But we do a lot of research in that area. We're particularly interested in also the accuracy of specific assignments, whether or not they're reassignments or allocations, especially when it comes to service providers and various other aspects like that.

I guess my question is also going to be, is there any particular group or individual maybe that's here right now where there's potential to collaborate or share information in terms of the research that we do at our company?

PAUL WILSON: Can you tell us more? What's the company and what do you do?

DAN DAHLBERG: Oh, sure. Sorry. The company is BitSight Technologies. We're basically a security ratings service. The easy way to explain it is similar to how the American credit ratings measure an individual's performance to manage debt. We measure a company's ability to follow security best practices.

But one thing that's a little bit different is we use public data, so we have a corpus of our malware threat intelligence, for example, that shows individual infected machines because of using technologies like [inaudible] and whatnot. And the other

dataset that we use actually describes what assets a company is responsible for, so the IP addresses and the domain names. And we can join these together to actually create security reports. And the target demographic of our product is third-party risk management, which has been significantly growing over time.

In the process of doing that, we're working with our customers in terms of representing how an external person, external company would view their resources on the Internet in terms of their map, like that IP addresses that are in use particularly to this conversation. And of course oftentimes, they often run into situations where they encounter stale records because of the former contracts from a service provider left those registrations or reassignments in place within the WHOIS directory and we've been working with them.

So sort of anecdotally as well if you happen to for some reason received or noticed a higher number of companies reaching out to each RIR indicating that they have stale assignments, that might have been in part because of some of the effort on our behalf as well.

PAUL WILSON: Well, I think all of RIRs are interested in and I'm sure provide some mechanism for reporting incorrect data. We certainly do at APNIC and I guess there's a mechanism somewhere to do that.

EN

So if it's a question of getting back to us with known problems, then I think we're all very interested in hearing about that and being able to act on reliable reports of problems. That will be a different interface for each of the five RIRs.

On the [inaudible] [site], we have all deployed our RDAP now as an API-based mechanism for getting access to WHOIS data, which has enabled us to provide a single unified and programmatic interface into the five different databases. So if you're doing programmatic access, then obviously that would be I guess the way to do it.

But in each case, I guess the five RIRs have got different interfaces into the staffing folks who are looking after things internally. So I guess it depends on where you want to start, and there's not a bad place to start.

UNIDENTIFIED MALE: I'm from the community in the ARIN region. There's as an example, and it's worth definitely checking each region's websites, because in the ARIN region right now as an example we have an open consultation which is not policy development but consultation related to the IRR, the Internet Routing Registry database that ARIN currently has and what could be done there.

And feedback from the community, especially with your skillset and your specific kind of skillset, would definitely be useful in shaping what the next IRR would look like within the region. And that's an open consultation right now.

So just as an example, it's not just about sometimes [pulling] but being able to give information in terms of the best practices that you would feel would be appropriate, things like that. It would definitely maybe not benefit you today but it might benefit you 6 or 12 months from now and the community as a whole.

PAUL WILSON: Any other RIR folks have any remarks about this? Okay.

DAN DAHLBERG: Cool. Thank you.

PAUL WILSON: Well, [inaudible]. Let's exchange some business cards.

DAN DAHLBERG: Okay, thank you.

PAUL WILSON: Thanks for that. Anything else? If not, then I think we can adjourn this session and get ourselves ready for whatever the

evening's entertainment is going to hold for us all. Thanks, everyone. Thanks for coming. Thank you, Aftab.

AFTAB SIDDIQUI: Thank you, everyone.

[END OF TRANSCRIPTION]