Louis Lee:	Hi, so here is the agenda we have today. We'll spend a few minutes just going over what the ASO is, policy, address council, policy development process, what the steps are, because this is different from what most ICANN community members are used to, the ARO update will be given John Curran, IANA update from Elise Gerich, thank you and a few words about the IPv6 – World IPv6 Day that had just occurred a couple weeks ago; policy discussions is basically what's going on for the policy discussions that are going on around the world for both global policy and the regional policies, and some closing questions and answers and on how to participate.
	And please do feel free to ask questions at the end of each section, this would free you up to attend another session if you need to before the end of this presentation. Alright the ASO MoU was an agreement – is an agreement between ICANN and NRO. Paul.
Paul Wilson:	Louie, I'm just wondering, we've got a pretty small audience and –
Louis Lee:	Should we just skip that?
Paul Wilson:	And a lot of people have been before, I'm just wondering how much – how much time to spend on the introductory material, because we are –

Louis Lee: Okay, since these slides I believe are going up now, or are already up, if you need to refer to them, please download them, and we'll take questions right at the end of the session if you need to ask. Old policy, something that requires IANA or another group; main principles, it's an open forum, it's a transparent process, and it's bottom up, consensus-based. We'll feed right through that. Please feel free to come up to the table. Let's see, actually here we go, there were – there are nine global proposals since 2001, six have been adopted, two under discussion and one abandoned, please go to the website for the information on those.

As we get more people in, I'm going to invite you all to come up to the table in front of the room. John, would you like to go into the NRO report?

John Curran: Okay, I'm John Curran; I'm the Secretary of Number Resource Organization. Raul is the Chair but is unable to be here, so he asked that I fill in. I'm going to go fairly quickly through this, we welcome any questions.

So Number Resource Organization is the vehicle for RIR cooperation and representation. It was formed for the purposes of protecting the unallocated number resource pool, promoting and protecting the bottom up policy development process, and acting as a focal point for internet community input into the RIR system.

It was established – we established the ASO – we are established as the ASO within the ICANN framework by an MoU that was assigned – signed in 2004. Next.

Current officers as I said are Raul Echeberria is Chairman, I serve as Secretary and Paul Wilson serves as the Treasurer this year. We have coordination groups which consist of the leads in each of our five RIRs in each of the various departments get together to make sure we're working together in terms of how we implement things; how we make sure that the system acts as one. So that includes an engineering coordination group, Arteruo Servan serves as that; communications coordination group, chaired by Anesto; and registration services manager is chaired by Leslie Nobile.

So I want to talk a little bit about allocations of address base. In terms of address base that's been issued over time, if you look, this graph goes back 12 years, and it shows the allocations of blocks to each of the regional internet registries, these block are /8s or 16 million addresses each. And you can see over time by the colors we've had an increase in demand in all of the regions for address space, and that's caused us to pretty much go through all of IPv4.

The next slide shows the cumulative effect of this on the IPv4 central pool, or the unallocated pool as it went from back in 1999, 107 blocks available with the growth of the internet and the success for our policies, it's gone all the way down and then in 2011, the free pool is depleted.

Based on the global policy approved by the five RIRs and ratified by the Board when we got to the final five/eight address blocks, they were allocated one each, to each of the RIRs, and that occurred on February 3rd of this year, and if you look, you'll see a nice picture of us all.

Next slide, oh, that's it, you got it. That's fine. And so that concludes the NRO update. We are – the – we're the executive coordination body for the ASO.

Elise Gerich: I guess this is real collaboration, thank you all very much. But I can't get to the speaker now – so if I'm – can everyone hear me if I speak and lean this closely, lie down on the table. How do I get the thing to come up?

Louis Lee: Good point.

Elise Gerich: Okay, oh yeah, I know that's – but I want it up there –

Louis Lee: It should go.

Elise Gerich:	Exactly, it should – I could talk through my slides, they're pretty, but they're not dramatic. Okay, ah-ha. Success, it's happening. Okay, great, thank you very much.

So sorry for the slight delay, next time I'll bring all the right adapters et cetera. So my presentation about what's going on in the world of IANA, and some people have asked me well now that you don't any of unallocated free pool left, how are you going to retire. So that is my goal someday, but I'm not quite ready.

So our overview from the IANA today is three major topics, the numbers registries that we continue to administer, the internet number resource certification and IPv6 outlook or outreach. So basically we still have a big, big bundle of IPv6 IP addresses that we take care of.

And at this point in time, it seems unlikely that there will be a lot of further allocations to RIRs in the near term from the IPv6 block. You all have a big block, each of you at this point in time. And the ICANN staff, the IANA particularly Lea Vagoda, who is an expert in this area, as you all know, and your staff are cooperating on clarifying the request and allocation process for IPv6 as we go forward. So that's an activity we're currently engaged with you all.

So it is true that the unallocated space is fully allocated, though you will see a little exception in a few slides later, but that's just a teaser to keep you listening, and we are discussing the details of internet number resource certification with the RIRs on behalf of a

letter we received from the NRO. And I'll talk about that a little bit later too. And Terry Manderson has been working on an internet draft that he will you know be submitting in consultation with you all.

So basically we do have a special purpose address registry and this special purpose address registry is documented in RFC 5735. We have just recently allocated something from that special purpose registry, so it's not like we don't give anything away anymore, we've just registered this one.

And so basically it's probably too small for everybody to read, but this is just a sample of the IANA IPv4 special purpose address registry, and it shows that this new allocation has been recently made on June 10th to this registry.

So this is the teaser part. I said there are a few little addresses that we are still holding onto at this point in time. There are 27/24s that are assigned to the IANA. And at this point in time there is no existing global policy which would allow us to do anything with them except hold them.

And we're happy to hold these in trust, until the RIRs and the NRO and the ASO determine a global policy of what to do with them; and if any other addresses were to come back to us, either by being abandoned or some other – I don't know drop from the sky, something of that nature, we would again, just hold onto to them in trust until we have a policy that we received from you all on how to go forward with these.

But I know there has been some discussion on some mailing lists about these 27/24s and people seem to think that we've been hiding them from the world; we're not trying to hide anything. It's just there's no policy, the most current and existing global policy on what we can allocate is for a /8. We don't have any guidelines for what to do with /24s. So we continue to maintain them for the trust of the global internet.

So the other numbers space that we have that has some exciting things going on are the AS number space, the Autonomous System numbers. And we have one pool based on the global policy that collapsed the two pools into a single pool, we now have one pool of AS number from which to allocate, and there is no distinction in that pool, between – I mean other than the obvious distinction, between the 16 bit and the 32 bit numbers that was the previous policy that we had two separate pools, now we have a single pool.

And some RIRs may have problems with a high rate of return of the 32 bit AS numbers and in this case, that's – I don't know why there's spelling mistakes here, I guess my spell check wasn't working, I do apologize. That could cause a problem if some RIR runs out of the 16 bit AS numbers.

So potentially you could envision, this hasn't happened yet, but potentially that is someone runs out of the 16 bit AS numbers and they have a request from someone who's unable to use based on old hardware or old equipment the 32 bit ASN number, and the RIR itself does not qualify for a new allocation of AS numbers, the

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RIR may find itself between a rock and a hard place or between policy and reality.

So this is not something that's happened yet, but at this point in time, the IANA has no policy on how to help the RIRs or the customer of the RIR who finds themselves in difficulties trying to get a new AS number. So my expectation is that you guys will provide guidance to us at some point in time, and until then, we are anxiously awaiting it.

So let me move to my second agenda topic which is internet number resource certification, better known RPKI. So the technology has been developed in the IETF and there are a lot of documents that are related to this. There are 10 in the RFC editor cue, one in IESG evaluation, and another awaiting the AD confirmation. So this slide just basically lists them and says you know where they are and in which cue.

So this technology which support internet number resource certification which is the goal versus the technology is RPKI, and it's being promoted by the IAB, the IETF, various RIRs and ICANN. So to that effect, we received, we being ICANN received a letter from the NRO on behalf of the ASO and the RIRs, asking us to enter into discussions, us being ICANN/IANA into discussions to – I'm sure you can't read that, but if you'd like I'll read it, it says the "NRO would like to resume discussions about the implementation of a global trust anchor for the RPKI system. As you are all aware the NRO agreed in 2009 to support the implementation of such a trust anchor as a recognized single point

of trust reflective of the global IP address allocation hierarchy. We would like to move these discussions a step forward. The NRO would like to enter into discussions with ICANN conducting also proper talks with IAB, for a global trust anchor, GTA, to be operational in the near future. The NRO would be interested to task ICANN with the management of the GTA as a supplemental technical activity. We look forward to hearing from you about this proposal."

So we did receive this letter in February of 2011, and ICANN has accepted the invitation to enter into discussions and we have had one meeting at an IETF meeting with the technical representatives to kind of kick off ideas of what these discussions should entail and what the planning process should be to progress this activity.

So my final agenda topic is IPv6 outreach. So a number of developing countries have spoken to our regional liaisons that means the ICANN's regional liaisons, and asked for short workshops on IPv6.

So just recently in May, we were a participant in an IPv6 workshop in the British Virgin Islands, so you can see a picture of the participants and Michelle Cotton who most of you know through the IETF or some other forum as our representative and gave the IPv6 presentation in that workshop.

We've also received a request just recently in conjunction with Aaron to provide technical trainers for a workshop in Jamaica in early July. So those are two things that are on our most recent

calendar for working with the community and collaborating with the RIRs to provide workshops on IPv6.

And I want to thank you for your attention and if you have any questions, I'd be happy to answer them, or at least take the questions.

Well, thank you very much for your attention and I'll pass this back to Louie.

Louis Lee: Thank you very much Elise. So moving on, I'll touch on the IPv6 – World IPv6 Day, we were unable to get an ISOC representative, but I've passed this information onto them for what we plan to present.

Here we go, so a couple weeks ago on June 8th, many, many website around the world, more than a thousand including carriers, content delivery networks, participated in a World IPv6 Day. It's a global scale trial for IPv6. It gives you a pointed 24 hour test flight, so this way if you have users that are experiencing problems, you actually have a data track all that information, and it will be okay, because everybody else is doing it.

So there was a technical meeting last week where some of the carriers and ISPs and folks that participated gave their impression of what happened. This is my summary of what the message was from them. So from them, it felt like Y2K after preparations were completed most everything worked very well. From the enterprise,

their message, some of them that participated with IPv6 Day gave us some management visibility and support we needed to dedicate the resource to implement IPv6.

At Equinix we run an internet exchange, actually many public internet exchanges around the world. This was presented in the [Peering Bath], the Birds of a Feather session, where as you can see this is v6 traffic across our multiple exchanges in aggregate. Prior to IPv6 today, it was just a trickle at about 180 megabits per second. And on IPv6 Day you see there's a big jump. Now, the message is that after IPv6 Day, while the traffic did go down somewhat, it stayed up about three times as much as it used to be, so this tells me that many sites that turn on IPv6 for the day, left it in there. They didn't find any problems, so they are now v6 enabled.

So as I had alluded, there was a panel discussion at the [NANO 52] in Denver, Colorado just last week. You can see the abstract and the panel presentations at the link provided there. I should have made a shorter link for everybody to copy down, but if you download the presentation, you can just use the link from there. And as you can see also on the bottom of every World IPv6 Day slide, there is a link to the authoritative information.

Any questions about that?

Alright, moving on. Global –

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Male:	Yes, Louis, I have one question. You show the graph of v6 traffic there. Out of interest what's that proportional to the v4 traffic?
Louis Lee:	We're on the multi-gig on our exchanges, so 100 gig, so this is proportionally very small, but – yeah, go ahead Kou-Wei.
Kou-Wei Wu:	I'd like to share one more information of yours. Actually my institution monitoring in harmony website, actually turned on the IPv6 on the IPv6 space, and at that time actually I thought it is was one in 19,216, so you see the ISOC is a thousand there, I think that is not just the company but total of the number increase much more than that.
	I think there's a really – compared with you know on the main – I'm checking on the main, actually on the 2000 NG25, so you can see in the IPv6 Day we are almost from 2,825 to 19,000 there is really – I think it's a good experiment and to see it happen.
Louis Lee:	I have a slide I'd like to share from Yahoo, we have – oh boy, let me see if I can change that view better, there we go.
	This is by region, the region that had the most v6 traffic that day was Europe, the bottom two were US and APNIC, this is how Yahoo had broken down their traffic. So by country, for our – it's

France that's way up there, so good job France, yeah! And these slides are available from the panel discussion website.

Okay, alright, global number policy and global proposals. The existing – there are three existing global policies and I'm not going to go over them, in that many here are already very well aware of them, and here's three more.

Now, the proposal that is – had been active for – that we've designated GPP-IPv4-2009 is a global policy for allocation of IPv4 blocks to the RIRs. Right now it shows the status of being abandoned, because it no longer meets the criteria to be advanced by the NRAC to the AC as a global policy because there is revised text substantially made in one region.

For one that is – the next one that had been proposed was GPP-IPv4-2010. This is the global policy for IPv4 allocations by the IANA post exhaustion. This, as you can see from the list in the status that in LACNIC it had been withdrawn and APNIC had been abandoned, AfriNIC did not gain consensus. So this is not looking like it will be a global policy.

The newest one, GPP-IPv4-2011 global policy for post exhaustion IPv4 allocation mechanisms by the IANA, now this also allows IANA to receive addresses from the RIRs and to also allocate space back to the RIRs. There are varying status and this still does have the potential to be global policy. AfriNIC has reached last call, adopted in APNIC, still under discussion at ARIN, LACNIC,

it's back to list for further discussion, and RIPE NCC also under discussion.

This page shows the differences and – between the policy proposals. So in each version, some changes were made to address the issues of that same in the other proposals in various regions. So in the latest one, return to IANA is voluntary, and the eligibility for receiving space equal distribution to the RIRs. This has a sense of fairness, by the authors, so this is under discussion and we'll see what the outcome is.

Next, we'll cover the regional policy proposals, just a few words about them. For IPv4 policies inactive, there are 50 of them around the world. This cover allocation, reclamation and transfer. We're not going to talk about every single one of them. IPv6 address policies, there are six of them, in WHOIS changes seven, and other is five. So in total there are 68 regional policy proposals being discussed.

And next we have Alan Barrett from the AfriNIC region. I'm sorry about that text there. Do you have your source so you can see what that looks like at least? We'll get that fixed for the version that's posted up next. Do you have your version, maybe you can just speak to that. No, I hope it's just that one slide and it's --

Alan Barrett: Do the others have the same issue?

Louis Lee: No.

Alan Barrett: No, they're all messed up.

Louis Lee: Oh, alright.

Elise Gerich: I do apologize; I have a two o'clock conflict, but thank you giving me some time to speak to you all. Bye-bye.

Alan Barrett: Right, okay, so I'm Alan Barrett. I'm appointed by the AfriNIC Board to sit on the ASO AC and I'm going to tell you briefly about some current policy discussions in the AfriNIC region and our process.

So our process is rather similar to most of the other RIRs, there are some small differences, anybody can propose a new policy relating to the work that AfriNIC does, which is dealing with IPv4 and v6 numbers and AS numbers and related issues.

New policies are discussed on a mailing list called RPD, the resource policy discussion mailing list. Discussions have to go on for at least four weeks before a public meeting, and we have two public policy meetings per year; so at least four weeks before the

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public policy meeting, you have to start discussing a new proposal. If you meet that deadline, then your proposal can be discussed at a public policy meeting.

If we achieve consensus at the public policy meeting, then sometime later, there were will be a last call on the RPD mailing list, and the last call goes on for two weeks. There is usually a delay between the public policy meeting and the last call, and the length of the delay is not defined in the policy. Basically – usually either policies have to be edited slightly, because changes can be suggested and approved at the meeting, and just administrative delays before the last call.

Then during the last call if the Chairs of the policy working group decide that the community has consensus for the proposal, they recommend that the Board should ratify it as the Board has several meetings per year, it could take them a month or two to consider and ratify the proposal, and then after that it can be implemented. Next slide.

So recently we've had three proposals approved in the last six months, a proposal about abuse contact information in the WHOIS database, reaching consensus at the AfriNIC 13 meeting in November 2010, and it passed its last call a few months ago, and it was ratified by the Board a few days ago. So this proposal essentially is instructing the staff to add a new mechanism to the WHOIS database so that if an ISP wants to register a special way that they can be contacted to deal with abuse issues, then new database field is available for them, and the point of that is that if

somebody is trying to deal with abuse, like fighting spam or something, they want to be able to look up the records to figure out who to contact at the ISP.

Another policy which has recently been approved is the IPv4 soft landing policy. We've been discussing this for a few years now, and it's finally reached consensus. Essentially, it's providing stricter rules as we run out of IPv4 space. So when we get down to only 1/8 remaining in the AfriNIC pool, then the rules get tighter and the largest amount of space that you can apply for at one time is reduced.

And then there is another boundary when we get to only a /11 left over, then the maximum allocation size gets reduced even more. There's also some space reserved for unforeseen future needs, and it's not defined really how that will be used, but it's just held in reserve in case a year or two or three from now, we discover some new transition strategy that needs some space, we'll have some available for that.

So this has reached consensus at the public meeting a couple of weeks ago, but the last call has not yet started, we expect the last call to start sometime in the next month or two.

Then there was a global policy, Louie talked about the three global policies addressing very similar issues about v4 space return to the IANA, so the one that's just been passed in AfriNIC is the 2011 version of that, it reached consensus at the AfriNIC 14 meeting a few – a week ago, the last call also has not yet started.

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Other policies which have been discussed but not approved are the 2010 version of the global policy for v4 space return to the IANA, it has not reach consensus, and it seems unlikely that it ever will because it conflicts with the 2011 proposal which has reached consensus, you can't approve them both, because they say different things about the same subject.

And back – yes, okay, and there's been about five other proposals and I'm not listing them all one by one. Several proposals dealing with v4 address transfer, allocation of v4 addresses outside the AfriNIC region reclamation of v4 space which is allocated but not used. And none of these proposals have reach consensus. Some have been withdrawn by the authors; others are still formally up for discussion.

Okay, next. Right, and then if you want to participate, here's how you can do it. You can read about the policy development process. You can read the current policies and you can read any new proposals on the AfriNIC website, just go to www.afrinic.net and near the top of the screen click on policy, it will take you to a page that lists all the policies and procedures. That page unfortunately is not always up to date, but you can usually find what you're looking for, if you click around enough.

Yes, we talked about the top third of that slide, then you can join the RPD mailing list, it's open to anybody you don't have to be in Africa. So again go the AfriNIC website, click on mailing lists near the top, there's a list of mailing lists, look for RPD, and you can read the archives or you can subscribe to the list. And you can

attend our public policy meetings, the next one is in November, it will be in Cameroon, the exact venue has not yet been set, all we know is that it will be in the country of Cameroon. Okay, so that's it. Anybody is welcome to participate. Thanks.

Louis Lee: Any questions for Alan? Okay. Next up we have Andy Linton for – representing APNIC region.

Andy Linton: Okay, I've got a few slides which are sort of fairly similar to Alan's. I'm sure Louise will be very cross, if I don't point out the new corporate identity at the bottom left-hand corner of the slide, so APNIC has rebranded itself. And there certainly has been some discussion about what the two colons in brackets means, you know. I take it read just lots of zeros, but that's just a v6 view of the world, you know.

So and in similar sort of fashion to the other RIRs, we have an open transparent, bottom up process, and we have a similar process to what Alan described, the timings are a little bit different, he's sort of slightly longer before the conferences, and the last call process lasts for six weeks, eight weeks, that's sort of longer than the AfriNIC one. And again we have this idea that we do this by reaching consensus through the policy seg Chairs and Co-Chairs. There's actually three positions there at the moment.

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I'm currently acting Chair because we've had our current Chair resign and so on, so – but that will come back to three – a group of three at the next meeting in Pushon. We actually had a very busy time at the last APNIC meeting. I joined the group of Co-Chairs and I wasn't quite what I was letting myself in for, but we had 11 policy proposals, 6 reached consensus, 3 didn't and one was sent back to the list, and one withdrawn, so you can look at the RL there, you can have a look at all that stuff and follow it through.

I'll go through on the next slide, sort of the main points. It's a little bit small, but the main ones here were a proposal for distribution of IPv4 addresses, once the final /8 period starts, some of that stuff was of course a lot more pressing for APNIC, because we didn't have the luxury of having a long time to wait for this. In fact, we got into the last /8 policy I think two days before the final call process finished, so we were right up against the wire on it.

So the – that first policy was to handle the address space after that, and we had some discussion about other address space that we would get after we got into the last /8, and the agreement was that we would actually treat that all the same rather than have some complicated policy that said, well this block's coming out of the /8 and this one is coming out of another block and so on.

We also did a little tweak to things to reduce the minimum delegation phase, the minimum delegation phase under the last /8 policy in the region was /22, but we recognized there might be a case where some people didn't actually need that much, or didn't need that much straight away, so we've put something in place

where you can come and get a 24 and come back for the other pieces of that /22 if you need them. So we're allowing people to behave responsibly and take a small bite rather than take the whole lot.

And we also – there's been a fairly strong movement in the APNIC region to remove sort of constraints about all this, because we recognize that either we – well one of the things we had the past, is we had the stick of saying you know if you don't behave properly, we won't give you more IPv address space, IPv4 address space and then we have the you know the other side of that coin well we have no more IPv address space 4 address space to give you, so we have no stick anymore, so we thought let's not play this game.

So there's a note there that we reached consensus on a revised text. One of the things that has worked pretty well is that when we get to the policy SIG meetings, sometimes things get raised on the floor, and we actually allow minor amendments to allow us to get a policy through.

So go to the next slide. This proposal 83 was about – some people had come back to us and said you know there are some circumstances you might get a slice 32 from the registry and this looks like you know more space than you ever can dream of using, but there are some circumstances when people need to have more one slice 32 and this and another proposal I'll talk about slightly when we move on were about the same.

There are circumstances when this happens and we should allow the registry staff to make decisions about what's the correct process, and what's the correct circumstance when people could actually apply for an additional 32. All the proposal here was about transfer of space between RIRs, and I suppose in summary what this says is you will – if your RIR will allow transfers to us, we'll allow transfers to you, I suppose is the short summary of that.

Again, recognizing that people will move this stuff around or potentially will want to move this stuff around, and I suppose the big conflict or the big tension for us was at this stage conservation of the address space is clearly an important thing to allow us to use the v4 space to manage that as well as we can, but also the records in the database are really important. So that's sort of making sure that the – we keep those up to date and keep them correct is a really important issue.

And the final one on here is the – as Alan has mentioned the third of those global policies, this was – we actually had the two the 2010 and the 2011 policy discussed at the same time, the clear consensus was that this 2011 policy was the one that was favored in the region; the other one failed because of that. And so we're now waiting for other people to either agree to this one or we go around the loop again and think about you know we're going to deal with this one. So that's life.

Okay, these three are still on the discussion on the policy SIG lists, so they're basically carried over if you like. This proposal 87 in a sense falls into the one that was on the previous page, I think it was

83, which was the about you know are there other circumstances in which you need more than a /32. And that one is still running and it probably will surface again at the next meeting, but we'll see how that goes.

The frequent WHOIS update – information update one, the person who proposed this didn't turn up at the meeting to sort of talk to and so we've held it over until a future time.

And again the maintaining demonstrated needs requirement and transfer policy, that one didn't reach consensus, and it's sort of gone back to the list but there's a little bit of a dilemma here in that we have now gone into the last /8 policy and we are now allocating addresses out of that, so if we – under a policy that doesn't have this transfer in, it's not quite clear how this this one will work, if we've already done some transfers or done some changes without this policy, can we retrofit it and so on. So these are the ones that are – didn't reach consensus, but there we go.

Again, like Alan's last slide you know our process is open, people can come, they can take part in the process, and we're always keen to sort of have other people's views on this. So that my set of notes.

Louis Lee: Thank you Andy. Do we have any questions? Okay. Alright, I'll present the ARIN policy and proposals.

Of course like many other – like all the other RIRs, there are several ways to participate, nameless, attending the public policy meetings, and you can also attend via remote. This is open to everyone. And as you see on there, there's the link to the policy proposals and to the PPML mailing list, where the discussion happens.

Recently implemented policies, there are three here on this slide; waiting list for unmet IPv4 request, IPv6 subsequent allocations and rework of the IPv6 assignment criteria. Okay.

Now, with that first one the waiting list for unmet IPv4 requests, the ARIN will make allocation assignments as a single continuous range of addresses, or you can wait in line. Unused space must be returned to ARIN.

In the IPv6 subsequent allocation, subsequent allocations will also be considered for deployments that cannot be accommodated by nor were accounted for under the initial allocation, for instance the 6RD.

And the re-workup IPv6 assignment and criteria, this is done on nibble boundary assignments based on site counts, so for instance it starts with /48 and 41 to 12 sites, then /44 for 13 to 192 sites. And so a site is a discrete location that is part of an organization's network as defined by this.

We have a number of policies under recent discussions, awaiting Board review are the four you see listed here better IPv4 allocations for ISPs. Reserved pool for critical infrastructure,

shared transition space for IPv4 address extension and returned IPv4 addresses. These were covered in our last session, so I won't continue on but that John has input.

John Curran: I just want to say just for people tracking those – all of those were ratified by the Board except ARIN 2011-5 shared transitions space for IPv4 address exhaustion. That particular policy looks to have ARIN allocating something which might be considered a specialized technical reservation, and we're in the process of getting the IAB and IESG's view on that particular one before the Board moves on it.

Louis Lee: Okay, I appreciate that update, thank you John. There is text being revised by the ARIN advisory council for ARIN 2011-1, the globally coordinate transfer policy, this is allowing a needs-based transfer to and from the ARIN region basically and inter RIR transfer policy.

There are more than 15 new proposals on subject matters of – mostly on subject matter of transfers; you may see those on the link provided.

And in October we will have an ARIN meeting in Philadelphia, this is a joint back to back meeting with the [NANO] community, the Network Operators Group of North America. Any questions?

Thank you, moving on we will have Francisco Obispo presenting from remote for the LACNIC policy and proposals. Francisco, do we have you?

Francisco Obispo: Yes.

Louis Lee: Thank you.

Francisco Obispo: Alright, well, I would like to apologize for not being able to be present at that fabulous location. But this is going to be a short presentation on the LACNIC policy activities.

So I can't see what you guys are seeing, so I'm going to be through my slides, and I'm going to be asking Louie to switch slides eventually, so I should be – you guys should be slides 53 with the title LACNIC updates.

So first of all LACNIC has the similar policy development process as many of the other RIRs. So I did not want to repeat and be redundant on the same information, but yes, it's very similar and the information is – it's available on the website. So let's go the next slide.

Under LACNIC meetings, well LACNIC meetings –

Louis Lee: Okay, we're on LACNIC meetings now. Thanks.

Francisco Obispo: Excellent. So LACNIC meetings are very special in the sense that they go in parallel with several other meetings that take place in the same venue.   So LACNIC is very generous on providing facilities and accommodations for many, many of the internet related organizations in Latin America. So for example LAC TLD which is the organization that manages that group – the ccTLDs in the Latin America meet during the – during the same week as LACNIC.

So we have the LACTF which is IPv6 Task Force, we have the Latin American IPv6 forum, we have the Latin American security forum, LACNIC recently started inviting governments to also participate in the policy development process, so there is Latin governments meeting, there is original interconnection forum and also recently the LACNOG which is the Network Operators Group.

So I can definitely say that this is the most important internet-related event that happens in Latin America. And I'm happy also to say that it's gone from one meeting per year to now it's several. And if you go the next slide please, you should be on a slide that has a fabulous picture.

Louis Lee: Yes, LACNIC 15.

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Francisco Obispo: Okay, LACNIC 15, so as you can see that's not a picture from a magazine or anything like that, that was actually taken from my hotel room. So that was in Cancun, Mexico from May 15th to the 20th, there were 297 participants from 32 different countries, and LACNIC is also very focused on having also workshops happening during the same week. So we had those workshops that you can see introductions to IPv6, RPKI, DNS and operations, and CSIRTS.

So as you can see there are several things going on, and although you can see that beautiful picture, people are usually very busy, so unless they put some time either before or after the meeting that is the closest you can get to the beach. But it's very fun. So next slide please.

Okay, so regarding policies in LACNIC 15, there were several proposals that were discussed during the public forum, but these were the ones that reach consensus. So we have the LAC 2011-01 which seek the elimination of technical restrictions and IPv6 prefix de-aggregation, and pretty much try to remove some of the technical things that – or technical requirements that were imposed by LACNIC to – to members – or members that had IPv6 blogs assigned to them, so yes, that's kind of a way of being coherent with the IPv4 policy that's currently active in the region.

So we had the initial IPv6 – 4 address allocation and assignment policy modified, and that basically means that we are going to start

or the LACNIC region is going to start asking IPv6 plans if you are a newcomer as asking for IPv4. So this is a way of encouraging new ISPs and new organizations to also deploy IPv6.

And as Louie already mentioned, the go policy for post exhaustion IPv4 allocation mechanism by the IANA was also reached consensus, so I – it's currently on the mailing list – on the – it's back for last call on the mailing list. So next slide please.

So you should be seeing a list of policies that outreach consensus?

Louis Lee: Yes.

Francisco Obispo: Okay, thank you. So we have among them, yes, well some policies that basically did not reach consensus due to either conflicts with other policies that were around there or that were not – basically did not have enough support during the – or enough discussion. So those were back to the mailing list, and we hope to see them mature in the near future. So next slide.

There is an upcoming meeting next meeting in Surinam in the Caribbean and just recently LACNIC also announced their LACNIC 16 meeting which is to happen in Buenos Aires, Argentina, and this happening also in parallel with the LACNOC meeting, so I look forward to being there and if you are interested, please go to next slide.

You will see the link to LACNIC and also how to participate on the mailing lists. So if you guys have any questions, I'm happy to answer them. Thank you very much.

Louis Lee: Thank you Francisco. Any questions? Okay, moving on Hans Petter.

Hans Petter Holen: Thank you Louie. I'm going to ask a question to the audience first. Raise your hand if you have been to a RIPE meeting in the past? Raise your hand if you have not been to a RIPE meeting in the past? So okay, a couple people, interesting to know. Next slide.

First here is a slide presentation of the community it's a slightly larger interpretation of Europe. We can actually go onto the next slide, which is the core of the policy proposal – policy process, which is slightly different than the other regions because there is no requirement for a physical meeting to take part in developing a process. That's one of the features that we have put together on purpose, so that it's actually possible to, in a clearly timely manner, the minimum time that you can run the process is 19 weeks. I'm not sure that has ever happened, but it was designed so that it would be possible for the community to do adjustments quickly if needed.

So the process is a discussion phase with at least four weeks, then there is some time for documentation after the discussion phase, a

review phase is then coming up, kind of a last – before determining whether it's a consensus by the working group chair, then there is four weeks of last call, and then it's determined whether there is consensus for this policy. And there is no role for the Executive Board in the policy process, in the RIPE region, the final decision on consensus or not is done by the working group chairs, not only for the working group handling the policy, but all of them. So it's by design not linked to the management of the RIPE NCC. So that's the difference.

The sort of difference between the RIPE NCC process and the other regions as I understand them, so if we move onto the next slide, yes, thank you.

There is a very old proposal there from 2006, and I did some research to try to figure out what happened to this one with PI Assignment Sizes, and it seems that the last significant discussion was in 2009, and the proposal has been passed back to the author, because there was no consensus on this and there has so far not been any response from the author. There has been some discussions on the meetings, I think on that – yes, it's really a good idea, but the wording in the proposal was bad, so this needs to be followed up.

If we then move onto the PI – let me scroll down in my notes, here. The certification policy, which is an initiative to make sure that a holder of address base can get a digital certificate from the RIPE NCC in order to sort of document electronically that yes, these are

my addresses. This has actually been concluded and awaiting a decision from the working group chair for consensus on it.

Then there is temporary internet number assignment policies which is basically addresses for experiments or conferences or things that have a temporary nature, and that is also in the same phase, awaiting decision from the working group chairs.

Then there is a policy which is kind of interesting in nature, because it's about removing multihoming as a requirement for wider independent space in v6, and it's actually to take away the whole notion of provider independent versus provider aggregatable and in unifying those two and saying that well you need address based document, and you need and get the addresses, and we really don't have any sort of restrictions on how you use it.

And then I'll touch the last two ones at the same time, because yes, you have –

Louis Lee: Yes, I think I'm going to stop importing – hesitations, I'll let somebody else do the work, because it's not working quite right.

Hans Petter Holen: Okay. But there is an original policy for post depletion before recycling which it tends to define better hold address management of the return before address space will be performed when the final /8 policy comes into effect, and that's actually out of discussion phase right now, and awaiting documentation.

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And then there is of course the global policy for post-exhaustion IPv4 allocation mechanisms by the IANA. And this is the third, or fourth, or fifth, I can't really remember variation of yes, you see it's kind of hard to reflect and this is actually the pure global part of that policy, which has what IANA should do with addresses once they return and not addressing what the RIR should do with those addresses.

And hopefully we have global consensus on this. And this actually had the discussion phase that ended on the May 19th, and it's awaiting documentation according to the RIPE NCC website. So that was the brief overview of the proposals, any questions? No. Next slide.

So how to participate? Well, you will find information on the website, there is a description there on the policy development process, it's in the third documented version according to the number of RIPE documents referenced there and there are a couple of historic versions of it before that, so we're probably on version 6 or 7 of the development process, saying something about maturity of it.

You can find all the archived policy proposals there and the RIPE NCC has a policy development officer, Amelio who helps the working group chairs with the logistics of this, and he can be reached both by email and by Twitter. And maybe there is even one more slide.

Louis Lee:	Sorry, no.

Hans Petter Holen:	No, so the last thing I should say then, the next RIPE meeting is in Vienna starting the last day of October and continuing into the first week of November. So I hope to see you all there. Thank you.

Louis Lee:

Thank you Hans Petter. Any questions for him? Okay, just some closing comments, questions, answers. So please watch the ASO AC website for news about the new global policy proposals. We have a table on there now that summarizes the active proposals that you can just go to and link to the discussions that are going on. And this will help you participate in the policy discussions in your region, the global policy proposals are discussed on the mailing list, and on the open policy meetings.

So you may subscribe there is no membership requirements and just go ahead and state your opinion. By no membership requirements, it even refers to whether you live in the region or not. It doesn't just mean whether you are some sort of official member where you are paying dues. So if you live outside a region, and you have a viewpoint, go ahead and state your opinion.

Of course, again, there is no membership requirements for that, and you may also attend the RIR meetings, both in person for a nominal fee and remote which is free. Okay, this concludes the presentation. Are there any questions? Please go ahead.

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Hervé Rannou:	I want to thank you for this specific topic. I'm aware that the reason is a review underway. Could we say a few words about that?
Louis Lee:	Sure. Sitting next to you right here are the representatives of the group that are conducting the ASO review. They are here interviewing various folks that have a view on the numbering world. So if you'd like to address the group?
Hervé Rannou:	Maybe just for present, to present ourselves and everyone \who ITEMS International. And I'm in charge of the SS Review; last year we have carried out the ccNSO review and we are proud to have been chosen for this review. We have met a lot of, a part of the people around here, and we are open to have all the discussion and with all us. We are supposed to deliver first a draft of our review to the next ICANN meeting in Dakar and to end this job in November. I don't have… Dom is in ITEMS and I think everybody knows that Ramundo Baccak is with us for this review, thanks.
Louis Lee:	Ramundo.

Ramundo Baccak: Let me add one word on the methodology we're using. We are making a personal interview to a number of persons, here about 80%, 80 people to interview. We have then this week about 40, and we're thinking want 50 this week, and the other ones were to take place in Dakar or we are also going to visit the five RALOs in their meetings from now till the end of the year.

We have one problem with LACNIC, because LACNIC makes ones meeting a year, but they have a LACNOG, so we are going to attend their LACNOG meetings. And our final report will be provided by the end of the year, two year in a row. And of course what you know now, just real fast, anyone in the room may contact us and say that they have to have something, okay.

Louis Lee: Did you have a question down there?

Andres Piazza: Yes, this is Andres I just want to point out that just a little bit of a thing. Since last year, LACNOG meeting also face – they're also held with their policy forum, so when a policy forum in LACNIC, it's developed, it's unofficial LACNIC meeting. So now we have two each year. But it's a very technical issue, okay.

Louis Lee: I appreciate that. Thomas did you have –

Thomas Narten:	Well, not much more to add to that, apart from that this meeting and that the other meetings that we'll be attending we will carrying out the kind of interviews that we've had with some of you here, that is to say face to face interviews.

Another aspect of our review is that we will be conducting an online survey which will in many ways – it will cover the same themes that will have been covered in the face to face interviews, but is an opportunity for you just to – well, and well rather an opportunity for us to collect data in a more statistical way, which we can then present in the form of grafts and things like that in the report. That's really about it for me.

Apart from those of you who have already been interviewed by us, know who you are, but there are lots of others sitting around this table, and if you could – if we could possibly ask you just to come and see us at the end of this meeting, so that we can fix up an appointment before we leave.

Louis Lee:	Paul?

Paul Wilson:	Thanks, yeah, I've had my interview with the review team, and it was quite an interesting process to be asked to articulate thoughts about performance of the ASO and the performance and structure and so on. I would encourage one with an interest – with a genuine in the ASO to get involved and help with the process.

One of the difficulties that I think may have with the ASO review and which may – which the review team may also have is just to be clear about the distinction between the ASO and the NRO, the fact that the ASO is the function of ICANN within the ICANN process that is performed under an agreement between the NRO and ICANN, and it's the performance of the ASO that's under review here.

It's not the performance of the NRO, and all of the various activities that are NRO activities, the RIRs run a bunch of coordinated technical activities and communications activities and so on, and none of those fall under the ASO MoU would probably make the review team's job easier to sort of see a clear picture of that. But I'm sure if we need to we'll – those of us who have an interest will try to – try to help further, where we can.

Can I change the subject, Louie?

Louis Lee: Just let me ask if there is any other comments and questions about this. Go ahead.

Andres Piazza: I want to congratulate you because apparently interviews can be conducted in French, in Spanish or in English, is that correct? Well, that's a real improvement.

Louis Lee:	And if there's no other comments about this, we'll move onto another topic, Paul.
Paul Wilson:	I was wondering Louie if you would be interested in any perspectives from APNIC as the first of the RIRs that exhausted the supply of IPv4 address space in our region.
Louis Lee:	Yes.
Paul Wilson:	Yes, okay. It's been a – it was a matter of a huge amount of speculation and a huge amount of thought and inquiry and prediction and so on as particularly as APNIC approached the end of our IPv4 supply and that happened – well the order of events of course was the final IANA allocations in February and at that event, although the final allocation was an allocation of 1/8 to each of the five RIRs, it was triggered by an allocation request from APNIC for two further /8s as a standard – as a standard allocation, so we left that meeting with three new /8s in our hot little hands, we then went and over the next couple of months had you know managed – continued to manage that in – according to the same policy process as we always have.

We did – we did actually go through a staged process administratively in approaching the end of that – that pool, because we found that as we approached the end and we had a cue of IPv4 |

requests waiting for us then we had the potential for all sorts of dispute obviously, particularly as we reached the end of that cue and would start to actually deny the address space requests.

So we took some measures internally, we reported these to the community in quite a lot of detail but to summarize very briefly, we ensured that every request we received was strictly serialized, so we no longer received requests and dealt with them in parallel by different members of staff, or different teams which would allow requests to come in and possibly some to be dealt with faster than others, et cetera. We strictly serialized all requests, we reviewed all requests by a team of host masters who work together, so the entire team worked together and formed a consensus decision on the – or a decision according to their method on each request, the – the response time to every request that we received was also fixed at a five-day response time, so whether or not the response to be given was one of approval of an allocation or denial of an allocation or a request for more information, we also strictly serialized – strictly structured the time to a five-day response.

And again if you – this takes a bit of thinking about, but if you think about the interleaving of requests and so forth, it is also the fairest way to do that, even to manage that interleaving of requests and responses if the response time from the registry is fixed.

So we actually – in addition to that we also have had – had over the last, at least year, an escalation process so the larger request would actually be handled by more senior teams of ICANN staff. So with all of these things combined, we had a pretty structured

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approach. In the end, we – that was quite transparent, too, in terms of letting the community know exactly what we were doing, what changes were being made, they weren't been seen, and we certainly didn't see them as policy changes, but instead as administrative implementation changes in the details of how APNIC was dealing with the requests.

We saw, as you've seen in the charts of address space consumption, we saw this rapid growth in APNIC address space allocations, but that's a growth that has been occurring I'd say exponentially over several years, such that in 2010, APNIC did allocate around 50% of all of the IPv4 addresses allocated in the world. We account for 50% of the population of the world, and we account for much more than 50% of the actual growth of internet networks in the world, because we've got some large network communities starting off a much smaller base, and a much shorter timeframe of growth.

So I think it is entirely reasonable to see the rate of consumption that we – that we experienced and demonstrated. We were very sensitive of course to any potentially fraudulent or curious address requests and evaluated those accordingly, but I really would assert that in the scheme of things and according to the scale of our operations, what we saw was pretty much a continuous rapid growth that took us to the end.

So as of a couple of years ago, that end point was not the final, final end point of our IPv4 address supply. We have a policy in place for the final /8 block to be reserved until it was needed, and

so at that point of what we call the end of the standard IPv4 supplied APNIC which was the middle of April, we then switched into our final /8 policy.

And the final /8 policy means that any organization that requests it, whether it's a current member or a new member coming along now or in the future, any organization worth say one and one only request of between a /24 and a /22, and so a /22 is a really small number of addresses, it's 1,024 addresses, and so out of our last /8 we've got some 16,000 of those allocations that we can make.

So at that rate, we expect that those allocations to go on if needed, for many, many years at the current rate, they would go on for at least – at least up to 10 years. And the whole idea of that is that that supply of addresses lasts longer than it takes for the IPv6 transition, because if the transition is not complete and someone comes along to APNIC, and as a new ISP and wants to join and establish a network and unless they can get the IPv4 address from a reliable supply then they don't have a provision for the transition technologies to be used.

Interestingly, and I think this is probably the important part. We had very, very little dispute or complaint of any kind through this entire process. We ended – we hit that last /8 point with 180 something requests in the cue, so we immediately had to say no, or sorry to 180 or so requests, and offer them instead the /22 allocation, no matter how big, or how dire their need was.

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We had a total of six objections, and they were of the nature of I've been sick, I've been traveling; I've been wanting to put this request in for a long time. I wasn't able to get back to you, et cetera, et cetera. I mean the requests were pretty trivial, there were some questions as to really why you know certain things happen in the request process, why we couldn't respond to them earlier, et cetera, et cetera.

But to our knowledge, all of those things have been dealt with really with a small number of transactions, a small amount of dialogue, and so we have no pending objections or – let along legal – legal issues or problems.

We did go through this process very thoroughly in terms of informing the community using both – using both the policy process in terms of the last /8 being implemented, an open explanation of our administrative process in terms of explaining to the community through at least a couple of our meetings, exactly how we were going to proceed, and then also the – just the communications, letting the community know what was going on and when the most difficult part of that in fact was not being able to predict somehow as the authority for address space in the Asia Pacific, we're also expected to be able to predict the future, and you know it was quite – it's quite a challenge to be able to explain that we cannot predict the future and so there was always an uncertainty with how long the address space was going to last.

But as I say, nevertheless, it came together pretty well in the end, and I think the lack of disputes actually demonstrates that the

whole – the whole situation is in some ways is kind of a once in a lifetime business as usual opportunity to just see a change and get on with continuing the work as we've always expected. So I don't know if there are any other questions about that. But I thought it may have been worth just giving – giving you the first-hand account of the first RIR to hit that point.

Louis Lee: Thanks Paul, I appreciate that. I think I'll incorporate some of those account details in my Friday morning report to the ICANN Board.

Paul Wilson: Certainly, thanks; happy to help – if you want any help with any of the facts about that, I'll help check the numbers with you.

Louis Lee: And my apologies to ICANN staff, I'm not probably going to be able to finish writing that report before the end of today. Thoughts on that or other topics? John.

John Curran: Just a minor note, while Cancun, Hong Kong and Vienna are beautiful cities, I want to remind people that Philadelphia can be a beautiful city in its own right, and to attend ARIN's upcoming October meeting, thank you.

Louis Lee: Awesome.

Hans Petter Holen: I'm not trying to certainly get the last word on this John, but I didn't actually remind of the APNIC meeting in Korea.

Louis Lee: I'm actually going to give the last word to Miwi.

Miwi Fujii: Thank you, right. This is my first time to participate in the preview session. It was quite informative and interesting. And it's nice to know ICANN community is as whole interested in IPv6. I just talked to Andres before we started this session, I think it is quite important for us to identify with stakeholders approaching with message and target message. If it was targeted messages for targeted audience in the recent IPv6 transition, it would be quite important.

And I've been working from APNIC's field point of view, constantly trying to approach the AP TLD and other people, but still it is quite challenging. So it would be nice if we can cooperate in the future more proactively and systematically approach to the registries and registrars and those people and if we can provide more input from the ASO point of view to the NSO group, that would be great too. Thank you.

Oh, and of course tomorrow IPv6 session is open from nine o'clock, ten-thirty, so if anyone who want to pass this post card which was developed by our great communication department people, Lois here sitting, she made this just in time. So please pass around this document – this postcard to everybody who you know and invite them to come. Thank you. It's a multi-stakeholder approach. So thanks.

Louis Lee: Thank you. I may have prematurely cut off comments from the audience. Any questions from the audience. No. Alright, well, thank you all for coming, and doing this.

[Applause]

[End of Transcript]