

Briefing on IPv4 / IPv6 Transition

28 October 2009

Seoul, South Korea

Janis:

Good morning ladies and gentlemen, let me start today's meeting we have an intensive program today starting with the briefing for IPV 6 transitions from the NRO. We have distinguished representatives for 3 RIR with us and after this session we will have a discussion on amendment of Article 9 of our operating principles relating to elections of the officers. Then Teresa will come to make a brief presentation on ICAN's strategic activities which is related as a result we have a discussion on the GAC work program for 2010. After that we can have a discussion on role of the GAC in ICAN depending on time.

We will break for lunch at 12:30 and those delegations who will want at 12:30 we'll have Dr. Asia coming in doing a presentation on development and Dr. Asia as well as share experience, their experience on treating geographic names and other questions of interest.

Then in the afternoon we will start our traditional drafting exercise, drafting of communiqué. All this long introduction is to kill time waiting until we have a presentation on the screen. Yesterday, in preparation for this session on IPV 6 I sent you a couple of documents related to upcoming ITU council meeting. I hope you had the time to read them through and if you have any questions related to those documents please feel free to ask experts in addressing who are present in this room and will be briefing us on these issues.

Now I will turn mike to...maybe you can introduce your colleagues.

Axle:

My name is Axle (last name) and I'm the Admission Director of the (9:00 – inaudible) as you probably know. To my right is Paul Wilson of APNIC and one step further is John Cohen President of AROIN and we have to send regards from Raul from AFINAC. We also have some Board and staff members from the RIR's in the room.

I have brought the regular statistics presentation from the NRO basically about the number of resources and the status of our allocation there. I don't know if we want to spend lots of time on that. We've seen this before and I do have to apologize this is June's version and we do updates here on a quarterly basis so the October version is about to be out and I'll send it off to Janis as soon as I have it.

IPV 4 you've heard about it and we're running out of IPV 4 address space that hasn't changed. The slide says there are 30/8 left at IANA for allocation that by now is down to 26 and we see the allocation to the RIR's. That is the address space issued by the RIR's to our members and you see halfway through 2009 it looks as it would more or less be very similar to 2008. So no specific news here really. It's going on to be allocated and used.

The run out of IPV 4 address space is estimated at IANA will run out late 2011 and the RIR's probably will run out early 2013 but, of course, those numbers are going to change as things develop. So that overall in /8's RIR's to our members over the last 10 years, you see as last time more or less ARION and APNIC have allocated the IPV 4 address space to their regions and APNIC and LAFNIC are slowly growing and well APNIC not quite a /8 yet and LAFNIC about 3 1/2.

Again, here we see that (11:52 – name) and ARION have done the bulk of their allocations there and assignments and then APNIC and LAFNIC are lagging behind a little bit.

IPV address space you know that former prefix 1/3 has been made available by the ITF to IANA for allocations, that's the global, the yellow big ring that is currently in use. You'll see the multicolored ring on the bottom that are various allocations to the RIR's prior to the October 2006 when the RIR's all got a rather large /12 prefix for the allocation. That is to say then all the regions, all the RIR's regions in the world have roughly the same amount of address space available for allocations based on the needs by the members.

Also here you see the yellow spikes there is quite a lot of, well there is some demand it's not comparable really with IPV 4 but you see within the IPV 6 world there is quite a spike in 2008 and 2009 will be higher than 2008 of course already. So that is an indication for the fact that there is awareness out there that the operators are aware of the fact that they should think about IPV 6 and they do think of it and do request address space. You see a certain increase there and that's also backed up by studies we've done or the EU has done in various regions.

Basically the situation there is the same more or less around the globe. People know of IPV 6, they know they should be doing it and they will do it next week more or less. So they request address space and we don't see much of it being actually in use on the internet but apparently somebody is thinking and somebody is starting to prepare to play with it in case they need it next week.

So overall the allocations from the RIR's over the last 10 years you see in total allocations on the left side and overall yeah in minimum allocation space of /23 is on the right hand side. The pictures are roughly similar. You don't really see them that well on the right hand side because they are relatively small but that was to be expected.

You know our statistics and other raw data is available on various websites and on the ARION statistics page. As I said, the new set will be coming out within the next couple of days I hope and I'll alert you to the fact that they're out. But I don't expect the picture to change significantly. Same as we said last time, IPV 6 ran out, sorry IPV 4 ran out and IPV 6 is being picked up but slowly.

If you have any questions we are welcome, we're happy to reply to them.

Janis:

Thank you Axle and now is the time for questions. Italy Stefano.

Stefano:

How much is the evaluation you have about the users being aware? I'm asking this because at least some of the research networks in Italy but they're not only in Italy there is a transition to IPV 6 addresses here that is made completely...they usually do not realize that but this is a good move I think because little by little this will happen without even specific pressure of the users. I would like you to elaborate a little bit about that.

Axle:

The end user, I think, is not very aware of the fact that there are addresses like that at all before IPV 6 so it doesn't make much difference to the end user. We know that's part of the problem also that there is not much of a market push there. I do know that at least one person in this room has a native IPV 6 connection at home. But again there have been increasing numbers of presentations, for instance, at

(17:05 – inaudible) meetings about the issues that the ISP's face in getting customer premises equipment out to the end user that are capable and willing to run IPV 6 properly.

The fact that there are those presentations and there is exchange that is a good sign but again the end user probably couldn't care less in most cases. There are, of course, early adopters who want it because they want to brag to their friends who then scratch their heads saying what.

Paul:

Stefano there is one whole area of statistics that's not reported in this address status report and that's to do with the actual operational status of IPV 6 and the internet. And there are numerous researchers reporting on both the routing of IPV 6 and the internet and the traffic volumes of IPV 6, not only the volumes but the source and type of traffic. In fact, there is a lot of what you could call clandestine IPV 6 traffic that is coming through things such as peer to peer software and that software is typically updated like a lot of software these days automatically when software updates are available.

So it was quite surprising when one of the major ISP's was able to reveal that a large portion of its traffic was absolutely unknown to the user. Not the use was unknown but the fact that their software that they were using had updated itself and was running IPV 6 and in the case of peer to peer software it was being used to as that software does to negotiate the best and the fastest peer to peer connections that are available and IPV 6 was actually automatically the choice of that software for carrying out its data transfer.

John:

The quest of user demand for IPV 6 is a question which is rather interesting. I think there is a rather enormous user demand for the internet and in about 3 years ISP's will not successfully be able to grow their services without using V-6. There is some work around possible using V-4 and those will work a short time, it's a question of how many months or years you get out of them but you're not going to get very far.

So 100% of the users want internet service and what they're saying is they want it whether it's V-4 or V-6. I think that it's early to ask the users about their need for it. It's probably appropriate to ask the ISP community whether they need V-6 because that's where the realization is really happening right now in the community. The ISP community is waking up and realizing that they can't continue to offer services unless they begin doing it over V-6.

Janis:

Thank you Paul and John, Australia Brenton.

Brenton:

Thanks Janis. I must say I sort of endorse the view that users don't really care what they're getting; they basically just want an address. It has been put to us in Australia by Jeff Houston I think that the market is going to sort itself out on this as we run out of IPV 4, prices are going to increase and the people will be driven toward IPV 6 outcome and out users won't care.

On the question of connectivity, we've done a number of discussions with banks and various other industry users and from our understanding they're pretty well prepared for the changes they need to make to their equipment. They're putting in their upgrades and we've got government actually moving along on a pretty tight timeframe in Australia as well.

So I have to say overall I'm feeling fairly relaxed about this and sort of what sounded originally like Y2K before Y2K is now sounding like Y2K after Y2K. So I'm sort of wondering what crisis here, am I being too relaxed about it?

European Commission:

I don't think a lot of people feel relaxed about it so perhaps you're more calm than called for. It is true this is not an insurmountable task, it's a process. I have the background having run 2 nationwide carriers and one hosting company and the ability to plan now incorporate V-6 in your normal investment curve and in your normal upgrade infrastructure means when you need it, you'll have the equipment and skill set.

The folks who put it off until they hear the consumer ask for it, for example, which they may never hear or the folks who decide that awareness isn't even necessary will find themselves with a lot of other organizations all at the last minute looking for equipment upgrades, expertise and similar. So to some extent the ability to create awareness in the community so they can be prepared for this, particularly in the business community, the ISP community hosting is crucial because it makes the bump we're going to go through tolerable. I don't know if it makes it calm but it makes it a reasonable effort to plan for.

Paul:

One of the questions the Australian government could calmly ask itself is, for instance, whether it's taking the very straightforward steps in preparing for IPV 6, for instance, in the NBN the National Broadband Network initiative in Australia, is it being planned to deploy IPV 6 and have that network ready from the start? It would be a major mistake if it's not but that's the sort of mistake that is being, that could be occurring on all levels on national networks to small customer networks is upgrades and deployments done over the next year.

Anyone who doesn't think about IPV 6 now is just looking at more cost and expense a few years down the track. Again, it's not a disaster, it's not something to get overly concerned about but it is something that needs some planning and awareness and that's the process we're very engaged in at the moment.

Janis:

Thank you European Commission. Michael?

Michael:

Axle you showed the graph there where we find rather globally unequal distribution of the roll out of all the distribution of the IPV 6 addresses at the moment. Is there reason for concern about this imbalance right now? Some of these regions may need IPV 6 to run dual stack and also in the future for availability.

Axle:

No there is no reason for concern here. Basically, we have been allocating and are still continuing with this according to need and to number of requests for allocations that do come in. The rest of the world is just a bit slower.

Now you're aware that there is plenty of IPV 6 space and there is still currently enough IPV 5 space to allocate according to need and to fulfill requests coming in and that will be the case for the next probably 2 or 3 years. So no with V-6 there is plenty of that available and we expect more requests coming in also from the other regions, it's just they're a bit slower on the pickup.

Janis:

Thank you again Commission. Bill?

Bill:

Thank you. I just wondered as we enter the end game for IPV 4, is there any evidence so far of hoarding or inappropriate or unjustified requests for allocations you had to deny because you don't feel that they're justified? Do you think people are trying to hoard?

John:

In the AROIN region, we in preparation for this established a set of policies and practices for validating new address request. This includes requests for addresses from entities actually requiring legal and corporate attestation to the application. So it's not your network engineer sending off a message saying I would like some addresses. An officer of the company literally has to say this application which documents our needs is valid.

We've done this in advance to head off potentially a chance of hoarding. So with that step in place we have seen some applications that have come in, which when we said you now have to legally attest to them have said that's a process for us to do, we'll get back to you. That is perfectly reasonable. I would not at this point say it's a high risk activity because of the steps we've put in place at least in this region.

Paul:

I think all the RIR's in some form or other are paying closer attention, I think if only to make sure that we're being seen as doing the right thing. At APNIC we have an isolation process for large requests that get dealt with now in a deliberately more thorough way.

One of the interesting things about one of the chart's that Axle showed before is we're not seeing any land rush at all on IPV 4 address space. In fact, over the last year the IPV 4 address space consumption has dropped in most regions or at least decelerated across the world. We've seen a few track IPV address allocations over the years and it actually tracks very closely to economic circumstances. So as you expect at the moment things are slowing down rather than us seeing any of the predicted land rush behavior that has been feared for the last several years.

Janis:

Thank you Paul and UK, Mark.

Mark:

Thank you Chair. I thought it was interesting comment about ISP's in 3 years times as they contemplate growing their services that would be a kind of trigger point or crunch point for them and that seems to be like the first such trigger in the market so to speak. It would also coincide possibly with the introduction of new GTLD's and internationalized domain names. I thought that was an interesting comment.

I don't know whether you think that will be the time when this whole process of migration starts being less haphazard, less ad hoc and whether you think is there any current role for governments in that. Your point about national strategies is well taken. I think the UK would look to an orderly migration in order to ensure our digital Britain strategies isn't derailed or underachieving as a result of the failure to migrate in the UK internet community.

So I guess a further question there is whether you think governments should have a role in identifying the essential parts of the national internet, if it's possible to talk in those terms, which should help that orderly migration. What would you advise in terms of indentifying those essential elements rather than just seeing what happens in the market?

John:

I'll respond first. It is actually a very simple situation. Government's are a major user themselves of IT technology, they have their own strategy for how they do that and they can show leadership by taking their public facing websites, the sites that address their citizenry and making them IPV 4 and IPV 6 reachable both. That's not a hard task to do but it will serve as a leadership move, it will make sure when customers are connected via V-6 they have direct unfettered access to government resources. It will show demand to the ISP community that this is services they need to provide by providing IPV 6 hosting and transport.

So the simple task is not to worry about planning the ISP transitions. I think a lot of carriers and ISP's would tell you thank you we actually don't want your assistance in the planning realm. But in simply to get your own house in order and prepared by making it IPV 4 and IPV 6 reachable. That one task if everyone did globally we would not be discussing transition since all resources would be IPV 6 reachable. But if just the governments did it for their own infrastructure that would be a wonderful leadership move.

Paul:

The other government, of course, is in procurement and making sure right now any procurement for IT infrastructure services equipment specifies that IPV 6 compliance needs to be stipulated, explained, documented. IPV 6 compliance is something that is fairly well understood in terms of what any particular piece of equipment needs to do. It's a fairly broad term in terms of the internet more broadly. But for equipment procurement, services procurement for connectivity IPV 6 should be on the must have list right now. Again, it's one of those things that if it's not then very quickly down the track it's upgrades and further expenses needed and almost no excuse for that at this stage given what we know.

Janis:

Thank you Paul. Follow up question UK.

Mark:

Yes thanks Janis. Just a quick follow up, what about the position of IPV 6 transition vis a vis introduction of new GTLD's. Is there any comment on that you would like to make?

Janis:

No comment? New Zealand Frank.

Frank:

Just a comment on what Paul said we've initiated an IPV 6 Steering Committee in New Zealand to try and move ourselves forward. We had a very, very successful series of meetings around looking at the issues that people saw with IPV 6. What emerged overwhelming was the need for training for network engineers. In fact, most universities, for example, in their training of new computer scientists have yet to take seriously the need to train those people in IPV 6. Similarly existing network engineers tend to cling to

existing skill sets which are based on IPV 4. So there is some reluctance on the part of the industry to move because they're protecting an existing skill space rather than recognizing the need to expand that.

I'm wondering if there is anything the RIR's are contemplating doing to look at the training issue? That is actually the third issue that governments need to be looking at. Thank you.

Axle:

The (35:11 – name) has started doing on a relatively lightweight scale some IPV 6 trainings. We've been hearing that from some parts of our community as well. Now we are fully aware of the fact that there are plenty of people out there doing courses commercially so we don't want to interfere with them. However, we have been told to do some of this and we did and those training courses proved to be quite popular and we will make e-learning modules available online as well.

The other thing that is not that much training but more advocacy is a website we've been setting up that basically tells about experiences that people have. So it's not training as such but advocacy in the wider sense and that's what the NCC has been doing.

John:

In the AROIN region we are actively working with many education institutions and associations in that area and we've been working on their own infrastructure plus their educational curriculum which they're doing to revamp that. We've highlighted the need for that.

Additionally, outside we've done in the Caribbean portion of our region work with the folks down there to ensure that there is ICT communications, education training for some of the economies in that region. So we intend to do more outreach and more facilitating of educational materials. I do believe the training issue is very significant.

Paul:

I don't think it's recognized that training has been a huge priority at the technical community for 20 years. Organizations like ISOC, like RIR's, like the network operators groups that exist nationally and regionally around the world have been training technicians for years and years and it's precisely because the training of a technician in internet technologies doesn't depend on what happened a few years ago when the courses were written. It depends on what is happening now this year and what is about to happen. And academic institutions frankly haven't been able to keep up that well.

So particularly, I think, in a developing region like the APNIC region we see one of the absolute primary challenges being accessibility of human resources to build networks and keep them running securely and efficiently. The difference in security and efficiency, the cost efficiency between a network that is well run and a network that is badly run is huge. So this is something that has been a priority for years.

IPV 6 has come along as now a major training demand in the Asia Pacific. I know it's something we've been rolling out for quite some time now. We've also been aware though that we have to go out through institutions to make sure the right stuff is being taught. That also has been an ongoing challenge for quite some time, teaching outdated technical material and information in many universities actually is something we've seen for quite some time. So it's an ongoing challenge and one that is ramping up at the moment.

Janis:

Thank you, Netherlands.

Thomas:

Thank you Chair. One thing that I think is in line with what Frank from New Zealand asked about the training aspects of IPV 6. In the Netherlands, the same company whose scalability survey for ICAN, T & O the scientific organization also set up a test for IPV 6 and it's not the solution but I think it's one of the many tools you can use to smoothen the transition.

I think in this case they focus more on the small and medium enterprises which are probably not the first introduced but it helps. Let's say companies with not so much engineering capacity can go there and test their IPV 6 implementation and probably other countries have the same but it's worth mentioning, thank you.

Janis:

Thank you, Malta, Joseph.

Joseph:

In Malta, we follow a similar course to New Zealand, we set up a Steering Group as well as a lab facility in order to try and get a sense about the implications of this, costs, and what have you. We have the makings of a strategy in this and it's also because it's a small place, I think there is recognition that government has to lead always in this case.

I think what has stumped us is, there isn't an incentive to make the transition and we don't want to be the first to make the move. This is where we're looking at possibly if there were some guidelines relating to this, some plan coming from ICAN but this is where we feel we're stumped. I think that we're fairly well prepared to make the transition but we're hesitating to make the move.

John:

I think there are 2 different transitions people need to think about. One is manageable and potentially an area where everyone can act unilaterally and end up with a net common good and one is much harder. The first transition is looking at what is on the public facing internet. Truly it's for ICAN, it's the ICAN website, for the RIR's it's our services and our website, for governments it's your websites predominantly, mail servers and websites.

Right now you can transition those to be on IPV 4 and IPV 6 both without coordinating with anyone, without worrying about impact and that's what many of us have done, many of the public websites used to be a fraction of a percent and now it looks to be about 2% are both IPV 4 and 6 enabled. So that transition is something that I think everyone can do completely independently in their own economy for the benefit of the internet. It doesn't have an impact and it's a very small amount of your IT infrastructure is actually the portion which is publicly facing.

The second transition is the one that a lot of organizations get concerned about, which is much more difficult, which is how do I make my national networks, my internal infrastructure IPV 6 enabled? That's an area where it's much more complicated and difficult. But it is not necessary for that second transition to occur for the internet to have moved to IPV 6. If we move the public resources the internet has moved to IPV 6.

Janis:

Thank you John, Denmark.

Julia:

Thank you and I just wanted to share that in Denmark we have an action plan on introducing IPV 6. It is a public and private partnership and also in the public procurement we have put in a requirement for IPV 6 into the IT systems.

Janis:

Thank you Julia. I would like to ask a question related to the documents. I sent yesterday to the GAC mailing list and you certainly are aware of them. I'm referring to the document report by the Secretary General of ITU on IPV address allocation and encouraging development of IPV 6 which is prepared for IT council meeting taking place tomorrow in Geneva.

In this particular document at the end where there are recommendations, the Secretary General of ITU recommends that further studies of possibility for ITU to become another internet registry and proposes policies and procedures for ITU to manage a reserved IPV 6 block. Would you like to comment from your perspective whether that is a clever move or that will bring benefit for developing countries as it's suggested in the document?

It is important in my view for us to understand this position because ITU sometimes is perceived as a Secretariat but in reality that these are ITU members including those member States who are sitting around this table. For us it's important to understand where is the danger if there is one or where is the benefit if there is one that we can liaise with those people who are sitting in ITU and try to explain or raise their hands in favor or against.

Axle:

That is an interesting document isn't it? Yes we, of course, are aware of the fact for a couple of years that there are ideas like this around from the ITU. This has taken on some considerably more formal form. I seem to understand that this is based on the understanding that there are some issues with allocations of address space to some developing countries. I frankly in Geneva I've asked Malcolm Johnson the Director of ITU what those problems were and he said there were no problems. Oh great solved, thank you. But apparently there is the understanding by some member States that a reservation of IPV address space would be beneficial for later on when we are running out of IPV 6 address space in some countries who didn't get their share yet.

Personally I think that's unbased, there is so much V-6 space out there. On the other hand, I don't know what to do about this. As you've seen in the paper, I've talked to him and said the RIR's processes are open for anybody and everybody and if some member State's of the ITU or the ITU Secretariat perceives the need to do something about this as resolution says they should study allocation, then you're more than welcome to come to our PDP processes or develop and craft policies and put them into that process and we see where that goes. We're open to that.

I don't think that this is really needed. I'm absolutely not sure that it would be beneficial to the internet to have a parallel allocation forum and set up there. I don't know what this would be doing to the routing on the internet and whether that is beneficial. I very strongly doubt it.

Paul:

I think it's fair to say we're all very mystified by the real basis for this proposal. It is said there are developing countries who have problems receiving IPV address space but I think as you all know there is no case and there can be no case of a country with a shortage of IP address space. IP address space is allocated where it's need, when it's needed regardless of the country. There is no rationing, no country based division whatsoever.

So to say there is a shortage or difficulty on a country basis is to talk about something else that is going on. There are certainly cases, for instance, where there may be a less than competitive open competitive regime where dominant ISP's make it very difficult for smaller ISP's to grow at all and therefore seriously constrain the demand for IP address space, but that reflects the serious constrain on any competitive network growth at all and that sort of situation certainly exists. But I think everyone would agree it's beyond the purview of RIR's.

As to the effects of parallel allocation scheme I think that's also something of great concern. I have heard it said often enough that the intention and desire is for a certain country to have its own address space to manage as it wishes to manage it, which is clearly an understandable desire. But it has to be recognized that the internet exists as a single globally cohesive end to end network or network of networks because of a common address management framework.

We have 5 RIR's but the 5 RIR's coordinate really closely mostly through the communities themselves and through structures like the ASO and the Address Council to make sure we do have cohesion in national, in the regional policy framework. That will become much, much more difficult at a national level particularly with assertions of independence and so forth. I think it is absolutely inevitable that there is a fragmentation of the internet along the lines of those national allocation pools because of the I'd say impossible task of coordinating a cohesive global framework for addressing that will allow the cohesion of the global network to actually be maintained.

I have to say from my point of view there seems to be, there is a very serious risk from the implementation of a scheme like this.

John:

I'd like to pick up on what Paul said and make it very plain. Successful internet operations today is dependent upon the activities of the largest ISP's and carriers globally which have to carry unlike with telephony world have to carry routing for every possible internet destination in every backbone router they have. This is a very different world than the class 5, class 4 phone switch world.

Every router requires every route and what this means is that because we assign addresses through the RIR system and we assign a single block to a multi-national backbone, an organization that might serve a portion of a continent or an entire continent or multiple continents, that all ends up aggregating to one route for that one block, unless the carrier wants to divide it for his traffic purposes.

So the internet routing table and the internet architecture that we know how to keep running is predicated upon a hierarchal address plan anchored at the internet provider at the top. We literally do not know technically how to keep the internet operational if a multi-national is told to use address space from multiple countries and where it might have had one set of routes to have to instead carry 100 times or 180 times those number of routes.

So this is a situation that we're at the early part of a process that we need to be very careful about because it is possible for us to irrevocably break the network if we don't keep the addressing plan in line with the routing plan.

Stefano:

It was not a surprise the fact simply that there was an organization that proposes to add new RIR. But the surprise is ITU with their logic because this is connected to pre-history of the telephones and so the real point and then the idea that each State has a block and then replicate the model of the telephones and what is worrying is also if this proposal goes on, then how about the security and stability? Certainly a number of discrepancies, a number of possible ambiguities comes out and so I think that when you presented the proposal someone of you say maybe that they should at least making a convincing proposal that assures there will be no harm in security and stability and we doubt strongly and perhaps this is the message we should convey to our partners that are going to ITU.

Jeff Houston has been mentioned several times and he made a good report concerning the proposal that was made back in 2004 by Mr. Zau. Thank you.

Janis:

Yes let me clarify there are different aspects to this paper and this proposal. The one I've discussed with Malcolm Johnson was about the reservation of address space for the need of developing nations later on. We didn't go into much detail there and I assumed and discussed with him that those allocations from that address space at some point in time, 50 years on maybe, would be made by the RIR's if they still exist then.

The other proposal or other idea is indeed actual allocation by ITU in a parallel allocation structure. That is something I certainly do not support.

Paul:

I think the issues of security and stability on the internet is absolutely tied to the issue of complexity and there is no doubt that the complexity of the internet increases very dramatically with this kind of additional constrains, for instance, that John described.

One of the other factors there that I don't think is well recognized is that we know that the internet routing table is currently 300,000 or so and continuing to grow. There is speculation that it's not really well tested but we could go to a million or 2 million routes on the internet without any problem and that's certainly true. But what you need to understand is in order to achieve that you're talking about a router that doesn't sit on a table, it's a router that sits in a big rack and costs millions of dollars and is not a green machine by any stretch. It's a major piece of equipment which is very different from the requirements of today.

So the fact is, as John mentioned, that everyone who wants to be connected to the internet as a peer ISP into that global network needs routers of that kind. If you're accelerating the requirements on your basic internet service provider infrastructure from what might currently be a \$100,000 machine up to multi-million dollar machines in every corner of the internet in order to be properly connected to the internet, then there is clearly a huge digital divide potential there, which is also really unexplored.

And to say there is a developing country advantage to this proposal when, in fact, there is that kind of threat and risk is really strange.

Janis:

I will take 3 more comments from the GAC side. Heather, Thomas and Brenton and I think then we should wrap up this session. Heather.

Heather:

For those who don't know me, I'm the Canadian GAC representative. I will be brief. I just wanted to express appreciation for your efforts today in providing information about the nature of the internet, the role of version 4 and 6 and putting it into a framework of really what is best for the internet and these issues we really need to think carefully about in making decisions around governance arrangements and this sort of thing.

It seems to me it's really important that we seek fact and good information in order to advance these discussions; otherwise, it's simply not possible and so I really welcome the efforts of the RIR's to provide us with this information so that governments can be better informed around the nature of the role that you perform, where it fits in and how it impacts the internet most importantly.

I also note that that the Internet Society has been developing materials that I think are useful particularly for policy makers because they're looking at it from a policy perspective and have I guess a degree of removal from the RIR system that I think is also useful and informal. Thank you.

Thomas:

Thank you Chair and just one comment on the ITU paper. I think we're not a forum to judge of course, this is something which has to be dealt with the member States and associated parties. One thing which I would say from the Dutch point of view is that we were not let's say content with the way it's proposed. I think very much I echo what Axle said and I think first you have to assess the real problems if there are any. Then you can talk about alternative models.

Then again from a Dutch point of view we very much endorse the self regulatory system, which now is in place. It is a sound system, it's been recognized and there are many factors and arguments which plea for the existing systems. So in principle the Dutch position is whenever there is a problem it should first be solved within this self regulatory system and if not, then of course you can think about the other things. Thank you.

Brenton:

And I'll be brief as well, just picking up again on the ITU issue and would like to endorse Thomas's comments. It's still an active discussion within the ITU and we shouldn't consider it a *faire de comple* but I think your comments before about the coordination issue is extremely valuable. I was just wondering whether you've actually published those comments, had some interaction with the ITU or some reference point we might be able to draw on for those of us involved in the ITU process. I think what you were saying before is extremely valuable information as to how we might set our positions within government. Thank you.

Paul:

I think we're very interested in collaborating and cooperating with those who are interested in the issues. I think we're very wary of launching headlong into a dispute in an arena we're not experts in by any means. I think the process we're in at this moment is one of hopefully sharing information with those who may be more qualified and more sophisticated in how you can deal with the situation in your arenas. But I think at the moment we're preparing for publications of various kinds to address the factual issues we've heard before and in particular to explain in as rational and objective manner what the considerations and implications of this thing is.

It is according to the scenarios and the way things may pan out and it's really quite a complex set of documentation and information.

Janis:

Thank you and I think this latter part of the discussion is very revealing. I think it will be our duty to get in touch with those people who will be traveling tomorrow and participating tomorrow in the Council meeting to give them the information we've received today. I would like to draw your attention to one document I sent to GAC list which is named ICAN RIR IPV 6 Fact Sheet, dated 09-10-21.

At the beginning, the first sentence of this document says, "actual paper prepared for and endorsed by the CEO of ICAN and all the original registries, October 2009." I think this is a 4 page description of problems and argumentation of RIR's in this respect. I would like to encourage those who want to do that, please forward that document that would be helpful for the delegates in ITU to better understand the complexity and hopefully they will be able to find a compromise solution which would not harm the internet in the end.

So by saying this I would like to thank Axle, Paul and John for entertaining us. It is usually very interesting and informative. Thank you very much indeed and I'll see you in one of our next meetings.

Now I would like to continue our session with a discussion on the proposed changes in the by-laws, particularly Article 9, Elections of the Chair and Vice-Chair. You have hard copies of the document in front of you. The proposal has been distributed to the GAC mailing list about 3 months ago. I received no comments but one from European Commission and I think almost all of your proposals will have been taken into account.

I would like to see now whether we are in the position to have a quick read of the document paragraph by paragraph and then adopt it.

Bill:

Thank you Chair and thank you for taking most of my comments into account. I still have one issue I would like to share with colleagues. It's an issue I've raised before actually and it's about the implications of having effectively a secret ballot or a ballot in a box where the organization of that ballot is made by the GAC Secretariat given the future possibility that the GAC Secretariat would be provided by ICAN staff. It's not a major concern but it seems a bit odd actually that we would rely on ICAN to determine the validity of the vote actually and no GAC officers would be responsible for that.

I think I've mentioned it before and I didn't actually hear anyone strongly arguing for a secret ballot in various discussions we've had and I didn't hear anyone objecting to a show of hands for candidates. I mentioned before that I think that would be in keeping with a request to ICAN to become a more transparent organization. This is a certain irony that we've then moved to secret ballots, when in fact we've never had an election in the GAC. We normally elect our Chair and Vice-Chair's by consensus which I think is a system that has worked well.

But the fact that we haven't had an election means we haven't had any problems with the current procedure, which would be a show of hands amongst members if necessary if there are more than one candidate. Now I don't particularly want to cause a major problem by it, I'm just aware that when this has been discussed before nobody has asked for a secret ballot. And given the implications of the current proposal that would be ICAN's staff who would supervise that, so to be blunt we could end up in a

situation where we're not sure who has voted for who but the ICAN staff will tell us who has actually been elected as our Chair.

I have certain reservations about that still. And given that we haven't had an extensive discussion on this before, I would very much welcome the views of other colleagues whether they have any objections if we continue to proceed in a manner where we would elect our Chair by either affirmation or show of hands. Thank you.

Janis:

Thank you Bill. I think until now the discussion on this issue has taken place between us and I am adamantly opposing election of the Chair in case of competitive election of Chair by showing hands. This has never been a tradition in any organization, in any including I don't know there is no voting in the European Commission but in any organization which competitively elects any Chair that that would take place by showing hands.

That means the person who is elected subconsciously will be harming those who would vote against him and that's human nature. I'm not sure the mere fact that we never had competitive elections in the GAC should lead us to change century old traditions and I'm adamantly opposed to that.

Austria?

Austria:

Thank you Janis. I heard what Bill just said and I can understand his concerns and somewhat share his concerns and I understand your arguments Janis. But what we are not is an international organization as the ITU or any other organization is, so the GAC and ICAN is carried on a more informal basis, so I think there is room enough for elections of show of hands.

But if we say we have a secret vote then I missed something procedural here in the provisions. For example and maybe I'm wrong but, for example, we had to define a minimum quorum of people present, of people voting because as the text stands here a vote wouldn't be relative if only 2 people were voting. So if we want to have it that formal that we have secret votes, then we should make it a really clear procedure in the form and I'm missing that here.

Janis:

The formulation provided is very soft and says, "If there is a need..." so until now there hasn't been a need. I'm not sure we need to enter into legal disputes but not legal disputes but legal formulations. In that case, we would need to rewrite all operating principles because they are not written by lawyers. All of us, we know we don't want to open operating principles for review as such. We agree if we change something then we change only one paragraph related to Elections of Officers, which formulations does not provide clarity when nominations start, when nomination ends that provides interpretation and so on. And the only purpose of this proposal is to clarify when we start the process, when we end it and how we do it.

Austria:

Thank you and sorry for taking the floor again. Maybe my thinking is spoiled as being a lawyer, I think in such terms. I think it would be enough with who has the majority is elected. What we can say is the election is well if half of the GAC representatives are present or so, that's half a sentence and nothing

really serious. I think it is really; really important because my experience and I've been in this business for quite a long time, in my experience these are the simple questions that make it most complicated.

Usually if something goes not the way somebody wants, then one starts to discuss the procedural questions and I think with half a sentence we could solve the whole problem.

Janis:

I have no problem to add sentence that Chairman or person is elected if half of the GAC members cast a favorable vote. It is no problem. We may run up into a situation that we will never get elected officers if we can't reach this threshold of 50% but anyway we can certainly add that sentence. There is no question about that.

Bill:

Thank you Chair and thank you to Austria actually, I hadn't picked that up and I think in many ways that's the most substantive problem then the one I raised. That is an absolute prerequisite that we have an indication of the quorum that is required for the election of the Chair and Vice-Chairs of government committee. Yes, so thank you very much Austria.

I just take slight issue with you when you say that this is a completely unprecedented idea that we would have a show of hands because the GAC have had this for 11 years, Janis. This is the procedure that is in the current operating principles. I have to say I'm still a bit mystified actually about why we're trying to solve a problem that doesn't exist at the moment and we haven't had a vote.

Finally, I point out with some regret actually because I pointed this out I think in the Mexico meeting or perhaps the Cairo meeting that if we're going to have new text now with the addition of this, which is essential, then the current operating principles require that it is circulated 45 days with certain provisions actually before we can adopt the change. So we wouldn't be able to adopt the document at this meeting. Thank you.

Janis:

Stefano?

Stefano:

I'm participating in other similar quorums and some are connected to the Internet Society. The problem is normally to find a candidate or candidates for the post that we have. So we are in a similar situation as in the GAC where we never had to vote. But just in case we have to vote the votes are secret just for the reason that Janis said, in any case the one that prevails will be elected and there is no possibility to count who voted against and so on. This is more fair to my opinion for this reason. And I'm in favor of keeping the proposal like it is. But I realize in the end we should raise the point of where to find the majority here if we go this way.

Janis:

Thank you Stefano. Frank.

Frank:

I'm a little torn each way in terms of whether we have a show of hands or anonymous ballot. I don't see a problem with an anonymous ballot personally. It is entirely up to the GAC to select a scrutinizer if there is a problem with ICAN staff doing the job. So I don't see that as being a problem either. I just point out in terms of there is a quorum requirement and so certainly it would be the majority of those present because we don't have GAC meeting we don't have a quorum. The quorum being 1/3rd of the current membership. Thank you.

Male:

I'm indebted to Canada for pointing this out, Canada actually has a copy of the Article that's very good.

Janis:

The document under discussion has been posted to the GAC mailing list right after the Sydney meeting about 120 days before and comments or proposed amendments were not posted during 90 days after posting but 2 weeks before the meeting Hugo made substantive amendments and now you're arguing this has not been posted 45 days in advance. I'm slightly puzzled.

Bill:

Yes you're probably not the only one. I'm quite puzzled by this procedure. I did make proposals to changes and they haven't all been taken into account actually and I certainly didn't propose a vote ballot box actually. So that is new text. My point was that we under the current operating principles and I can find you the Article if you want if you give me 5 minutes there is a procedure that the text to be adopted has to be circulated within a certain timeframe, 45 days or 90 days or whatever.

We're now operating with a new text that was only circulated, I think, 2 weeks ago as you said and we have a proposal for another change. I was just pointing out that if at the end of this meeting we have agreement that text would then need to be available for adoption at the next meeting. That is my understanding of the current operating principles in force today. Thank you.

Janis:

Thank you, any other comments? Australia, Brenton.

Brenton:

I'm not sure an argument that says this is the way we've always done it is a good argument as to what we need to do in the future. I think the GAC is changing, I think it's changing quite dramatically and I think it's growing quite rapidly and it is inevitable as part of this process that we're going to have to put in a few more formal structures as part of this development.

So I don't think we should be afraid of putting in place new arrangements into the future and I don't think we should live entirely on the processes of the past. I think we need to come back to the actual principles that are involved in the actual issue of a secret ballot. I think we all would recognize that secret ballots are basically standard practice in most of the Democratic countries in the world, it's an absolute standard.

I think we also have to recognize it's actually quite widespread among most of the UN based organizations; my understanding is that the ITU, the UPU, the United Nations Economic and Social Council, the World Health Assembly and other UN based organizations all put this in place.

Then there was a question I think perhaps we should be like these other international organizations and that we should be different because we're part of ICAN. But my understanding is that secret ballots are also part of some ICAN bodies including the GNSO and ALAC. So I think one of the questions we're going to have to face if we don't endorse this approach is not so much why we should change but perhaps the question why you haven't changed what appears to be something like a standard and quite sensible practice in other places?

We haven't had competitive voting in the past but I don't think any of us would predict that we would never had it in the future. Thanks very much.

Janis:

Thank you Brenton especially now when the role of the Chair of the GAC is growing in importance I may imagine there might be some interest to carry on the duty. UK, Mark.

Mark:

Thanks and just briefly coming in on that last point and reflecting on the fact that the membership is steadily increasing and we all hope that we will go past the 100 mark and as we all engage in outreach efforts to those governments that don't take part. It is obviously in the hope that they will recognize the value of this committee and its procedures.

I think I'm coming down on the side of the argument that it's best to put in place a procedure for secret ballots because we can quite well entertain the prospect of competing on nominations. I think the argument you described Chair at the beginning of this discussion was a really valid and fair one. I think I'm okay with the text as you've circulated it. I haven't consulted legal experts, I'm not a legal person and I would probably have to do that. I note also the contribution that Austria has made to this discussion in terms of establishing a proper and respected quorum for a vote. Thanks.

Janis:

Thank you, Portugal.

Portugal:

I would just like to join my voice to the 2 last interventions in favor of introducing this possibility because it's better to prevent a situation that might occur then handle it when it appears.

Janis:

European Commission, Bill.

Bill:

Thank you and thank you for the comments from my colleagues. One of the reasons I raised this is because we haven't actually discussed this before. That worried me a little bit that we would have a substantive change to the operating procedures without having views from the members. It has been illuminating.

I would clarify that I'm not against changing the operating principles or against the GAC modernizing. One of my major concerns and I think it was highlighted yesterday Janis when you yourself outlined with a lot of support from members actually the important need for the review panels to be completely transparent.

For them to be video conference, for there to be full transparency in the spirit of the AOC and the organization we're part of.

I just thought it was a question of timing actually. Is this really the right time when we're asking for full transparency from the rest of the ICAN organization to be taking a step which at the moment, at this point in our history appears to be unnecessary. But I'm not going to die in a ditch as we say in English on this. I want you to have the discussion and I personally didn't understand why out of all the issues we could be dealing with at the moment, including other parts of the operating principles, this seemed rather archaic to me referring to faxes and pigeon posts and things like that.

Just why this was on the agenda? Why there was a problem? I didn't understand actually and not sure I still do understand but I'm glad we had the discussion and I take note of the comments of colleagues. Thank you very much.

Janis:

I can clarify why this is on the agenda. I remember the difficulty all of us faced 3 years ago when the current Chair was elected. It was not clearly understood when process started, when process ended and happily we had one candidate nobody contested the elections.

I remember Cheryl drafting together with the Secretariat, the timetable of elections and it wasn't easy to agree. So that led me to think that maybe some clarification with a clear and understandable deadline of beginning of voting or submission of candidates and so on should be put in place. For the first time I suggested this change in the run up to the re-elections of the Chair a year ago. I didn't follow operating procedures outline and operating principles and some members objected to this way of procedure. So I took this question, I withdrew my proposal saying that I would submit it for the next meeting, which I did. I submitted it right after the Sydney meeting for comments and no comment were received for a long time and then you came in. I still believe that it is necessary to clarify procedures for the election of the Chair which is coming up. Next year is the re-election of the Chair and that is why in my view it's needed, this clarification is needed that we understand when we start the selection, when we end selection, how we vote, if there is a vote or when we clap hands.

So that's the only reason. It is for our benefit not for other benefit. It is just for our benefit to make sure how we elect our officers and that there isn't any misinterpretation or possibility of misinterpretation in different directions. So that's the only reason for our own benefit.

Any other interventions on this subject? European Commission.

Bill:

Just a clarification Janis, will there now be an amendment made to the text to include the provision for a quorum? If so, I just wonder whether I can also take the opportunity to follow up on a suggestion I think maybe made by New Zealand that maybe we should decided on who should organize the voting when we actually have a vote, rather than specifying the GAC Secretariat here. And that's merely a provision to take account of the fact that there is a realistic possibility that the ICAN staff will be doing that in the future.

It seems to me it would be not difficult for us to decide when we have an election actually what the situation is there and who should organize the vote. Thank you.

Janis:

I think in this situation and for the sake of time I don't see a possibility to continue this discussion. I think we should move this question to the next meeting and in the meantime I would like to invite members to make their suggestions including Austria if you could formulate your proposal on quorum, if you could Bill formulate your proposal on whatever you imagine should be doing counting and organizing and we will take up this question during our next meeting in Nairobi. I don't see any other possibility.

So thank you very much. Let's take a 10 minute break and resume at 10:40 with a presentation from the staff on ICAN's operational strategic planning and that discussion will be linked with GAC work program for year 2010.