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APNIC Community Consultation - IPv6 and ITU Wednesday 1400-1530

SRINIVAS CHENDI: Sorry, we just take five more minutes to start the session. Thank you.

OK. We're able to start. It's not a good start for me. I apologise first and I apologise for the delays. Good afternoon, APNIC members, guests, ladies and gentlemen. I'm Srinivas Chendi from APNIC and on behalf of the APNIC Secretariat I take great pleasure welcoming you to APNIC 29 here in KL. So before we start, APNIC would like to thank the generous support offered by our sponsors to this event Telecom Malaysia and PHCOLO. Ladies and gentlemen, please give them a round of applause.

APPLAUSE

We appreciate your support and we look forward to receiving the same support in all of our future meetings. With every APNIC meeting we are providing live video, audio and chat. As well as, as you can see on my left, we're providing the live transcript. Remote participants who cannot attend the meeting can participate in all the APNIC sessions through our remote features. And I'd encourage all the remote people who have joined us to utilise these features, to ask any questions or comments through the Jabber chat room. I'd like to welcome our director general, Paul Wilson, to introduce the session. Thank you.

PAUL WILSON: Good afternoon, everyone. Thanks, Sunny. Thanks to everyone being here at the session. It's a good turnout for what I think will be a very interesting and a quite important session. I'm not going to go in to a detailed explanation of what is to come because that's going to become clear and, of course, there are some details on our website as to what this session, this Community Consultation session is all about. But I did just want to say a couple, make a couple of points. The session, as you probably know, is designed to provide an opportunity for input from this community on some proposals and some considerations, deliberations of the ITU, which are posing with the ITU to become involved in something that's very close to our hearts, in the management of IPv6 address space. This is something that we've seen coming for quite some time and you'll hear all about it.

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But I think the point of the session is that we don't generally, in this community, see enough of our friends at the ITU and in their meetings, they don't see enough of us. And I think this session is really a bridge between those two communities. It's between communities and protocols - two, if you like. So the point of the session is to bring the voices of this community out on some issues that we'll hear about. And to give the people who are concerned with those issues and proposals the chance to bring those forward.

So there will be a formal interaction. There will be a presentation of the results of the session to ITU meetings that are coming up very soon in the coming weeks and beyond. I would strongly encourage those who have something to contribute to do so. But I'd also ask you to do so in the spirit of mutual respect and of trust in all of our abilities to understand each other and to come to agreements that will actually make sense for everyone. So I'm sure that our able chairs will help to ensure that's the case. But I really would like to ask everyone here to see this as a bridge between two communities, who need to actually get to know each other better.

As to the session, I'm very happy to have two co-chairs, distinguished co-chairs here for the session. The first is Masato Yamanishi. He is the deputy general manager of technical planning at Softbank BB in Japan. He leads the team responsible for IP addressing and peering at Softbank. As you know, that's a very major provider in Japan. Yamanishi-san has been actively contributing for several years now to the APNIC policy process and to the ITU's processes through the NGM and IPTV standardisation. Masato Yamanishi knows both worlds. His company is a member of both APNIC and ITU and he's really in an ideal position here to help with the chairing of this session.

The second is a man who almost needs no introduction, I think. Most of us would have known Sharil's work. A Government agency here in Malaysia that does very critical job within Malaysia. He is also the immediate past chair of the ICANN governmental advisory committee and served in that role very successfully for quite a number of years. This is amongst, in case of both our co-chairs, amongst many other achievements.

In the interests of time and moving along in to the real content, I'll pass over to the chairs of the session to take it further. Thanks very much.

MASATO YAMANISHI: Thank you very much for the kind introduction from Paul. Thank you very much for Paul participating in such an important session.

Before starting presentation from the panellists, let me explain a little bit what is ITU. Because somebody, of course may know what is ITU and the activity, but somebody may not. Let me explain what the ITU and the connectivity about IPv6 allocations.

Could you show the chairs' presentations. There are many point about ITU's are duplicated with the first presenters' presentations. Let me skip a little bit. OK, go. OK. So ITU is a combination of International Telecommunications Union and part of the United Nations. And under their umbrella, they have three sectors. The first one is Radiocommunications and the second one is standardisation and the third is development.

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The current topic is standardisation sector and also the development sector. WTSA is a top-level meeting and it is held every four years and last one was held in 2008. The resolution is talking about IPv6 and last ICANN - you can see the last item there for interested members and especially for developing countries. Then, based on this resolution, ITU Council, which was held in 2009, decide to conduct further activity towards implementation of this resolution.

The IPv6 Group was made based on the result of the council last year. Terms of reference in this group includes drafting policy proposal for the resolution of last IPv6 block and related implementations. And also the possibility for ITU to become another Internet registry and a proposed policy and procedures for ITU to manage and reserve the block. And advisability and feasibility of implementing the CIR model for those countries who would request national allocations.

And next step is - sorry, I missed one information. The first meeting of this group will be held in 15 and 16 in next month. And the conclusion of this group will be reported to next ITU Council which will be held on April 13 to 22. Then it goes to WTDC and ITU Plenipotentiary Conference. Now we're standing very important status. That's the reason why this session was planned.

So, before starting presentation from panellists, - I'm sorry, I think many people is also attending through Jabber, through Jabber. So could somebody volunteer for Jabber subscriber for Jabber attendance? OK, thanks.

Then another, another request from chair is please discuss, in this meeting, please discuss ITU and not to discuss or say comment for ITU itself because time is very limited. So we would like to concentrate to ITU's idea.

Another request is, as I said, time is very limited. If you will have a question for clarification from each presentation, please ask after each presentation. If you will have comments or discussion, I will take enough time after old presentation. OK.

Also, I'd like to request each panellist, please finish your presentation in 10 minutes. I'm very sorry I'm limiting the time. But time is 1.5 hours only. So please limit in 10 minutes. OK.

First presenter is Xiaoya Yang. She worked for China Telecom and MRI for China and now she is working in TSB which is a secretary office of ITUT. And she will, she will explain about current IPv6 as a status and some concerns from member state of ITU and also ITU current load map.

XIAOYA YANG: Thank you very much, chairman. My name is Xiaoya Yang and I'm presenting the union. Please welcome the introduction from Paul Wilson and the chairman. And here I'm presenting some discussions, not happening in this group. So if there is something that you are in need for further information, I'm quite happy to answer your request at the end. And I apologise for a lot of appearances in this. I will talk about ITU but I will skip with the slides.

I will talk about ITU and IPv6 issues. And talking about the mandate we received from ITU membership while we're doing this and covered by the chairman and I will come to the conclusions in the end.

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So I will skip this one. Just adding that we have a membership of 191 member states and over 700 sector members.

And also a little bit about the features from ITU because we see important private public partnership in our work. And we are planning to have new membership category for academia university and released fees for industry members from developing countries.

OK, so talking about IPv6 issues. Any talk on IPv6 have to stay with IPv4. So we know the IPv4 address allocation is imbalanced worldwide. Due to historical reasons but we believe it's our IP resource allocation policy. We see the status as of May 2009. The US hosts more than half of the allocated IPv4 addresses.

And the first-come, first-served policy have an early adopter's reward. The US continuously having each Ipv6 located each year. This is the figure for 2008.

Therefore, we are currently in a situation that, for example, if we look at the figures here, our Internet user in the US have about Ipv6 and IPv4 addresses. Well, this number in China is about 0.67. And the same number in India will be 0.23.

Looking at the figures, different people come to different conclusions. Some ITU members, mostly developed countries, believe there is no problem. They believe IPv4 address distribution correctly reflect the development history and the current usage of the Internet.

And coming to the IPv6 deployment, we are considering about its slow start but the justification from this people are this deployment is driven by market forces and it's taking up economically optimum rate.

However, the other groups of ITU members, mostly from developing countries, have different failings. They think paying for IPv6 and they have paid higher prices for IPv4 so far. And they don't have extra Ipv6 in stock. When IPv4 reaches its depletion in the near future, they will be forced to deploy IPv6 when they're not yet ready. And they might have to pay even higher to get IPv4 resources necessary for the transition period.

And also their fundamental concern is will IPv6 policy involvement repeat the history of IPv4? Will we have a scarcity issue again for IPv6 in the future? Because we're having generous allocations right now and because we're also following the first come, first served based on the immediate-needs policy.

If the answer to this question is yes, here I will quote a saying from APNIC meeting. "From a public policy perspective, there is a risk to create yet again an early adopter reward and corresponding late adopter set up barriers and penalties."

The developing countries feel it's very difficult to get their concerns heard and understood in the IP resource policy making process.

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There is a request for Ipv6 management. They want equitable access guaranteed to IPv6 resources now and in the future. And they want governmental involvement in the policy-making process. In addition to that, they want assistance, international assistance to them, to help them to raise awareness of the urgencies of IPv6 deployment and to help them to build up their capacities, in terms of human resources and infrastructure.

Our mandate comes from two resources. The WSIS Principles and outcomes and the decisions of ITU membership. The WSIS here for those of you who are not familiar with it, are there. And I will just mention some key words from this mandates.

The equitable access, as a principle for IPv6 management is enshrined in these outcomes.

And governmental involvement, this is also requested by the outcome of WSIS in paragraph 68 and 69 of the agenda for the Information Society which recognises a need to enable governments equal footing to carry out their roles and responsibilities in international public policy issues.

ITU have a lot of resolutions. They are made at all level of ITU for us to carry out working in this area. I have talking about a host organ. And the World telecommunication standardisation assembly which is for the standard sector and telecommunication development conference also. And the telecommunication policy forum which is the regulators worldwide.

I will skip this one. It's on resolution 64. The tasks are already been mentioned that we were instructed to carry out.

Further to this request was further specified in the IT U-T study group 3 meeting. There was a reason why ITU was requested to be an additional registry for this we were requested to evaluate this proposal and to report its advantages and disadvantages to the ITU Council in October 2009.

Our activities, I would briefly mention the two slides of our experience in the resource management. ITU-T and Telecommunication naming/addressing resources which is already a function of more than 120 years of history in ITU.

And we have key recommendations for telephone numbers, Internet and international mobile numbers and signalling points. I want to especially mention ENUM as an example of ITU and RIR cooperation.

In this ENUM interim procedure, RIPE -NCC is taking a role here. And ITU verifies the holder of E.164 numbers. We have good cooperation with RIPE I believe.

And the second example is ITU-R management of the geosynchronous orbital positions. Here is an example of how ITU are managing spectrums and national allotments to guarantee equitable access to resources.

Someone who is interested in this, we can discuss later. I will skip it here.

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And all this management, roles and procedures are defined in regulation which is a binding international treaty.

Work to implement ITU resolution, and it includes the two studies, ITU interest to external consultants. We have done two studies. The first study was carried out by Nav6 USM and Malaysia and proposed a Country Internet Registry model. I will not talk anymore because the study will be spoken about later. I will briefly introduce Professor Miller's study. The reason to have the second study is because it was proposed that marketing economic factors might help to improve the efficiency of resource management like pricing, transferring and marketing this kind of mechanics. Professor Miller is an economist and he has done a second study and he come out with the proposal to have our transferable address lease model and will be a set of provider independent blocks, /48 to /32 which will be located to our ISPs, according to at our recurring annual fee.

There will not be any need assessment in managing this resource.

Also, as requested by resolution 64, we're initiating a project to help developing countries, according to their request. The objective of this project is to understand their needs, raise awareness, encourage the deployment and create joint programs between developing country. And the strategy of this project will largely rely on partnership with private and public sectors in national and the international level.

Also, to our resolution 64, we have discussions with the ICANN and RIP E-NCC Secretary and we have reached agreement and joint effort to help developing country in awareness and training and capacity-building. And during these discussions, our suggestion is to have a global policy proposal, which will be drafted by ITU but it will follow the RIR policy process. And to reserve an IPv6 block for future needs of the developing countries and they cannot provide through their RIR's process at this moment because they would like some long-term planning.

The decision of ITU Council is to set up this group, to do this job, as the chairman has already introduced. I will just mention that this group is open to ITU membership which is including industry members. Its first meeting will be in two weeks and all five RIRs, members or non-ITU members are included to this meeting, to this group as well.

So I will close my presentation with the observation and the conclusion. I think there is a willingness from governments to participate and contribute to IPv6 deployment. Individual-based RIR policy deployment process is perceived as open, transparent and is bottom-up. And what ITU can bring to this process as of added value is ITU could help to get all 191 countries involved.

To conclude, I believe that Internet governance needs inclusive vision to address concerns of all stakeholders. International organisations like ITU, ICANN and RIRs can cooperate and contribute according to their respective role. ITU IPv6 efforts try to find a meeting-point for governments and Internet community in international Internet public policy discussion. And we look forward to cooperation from RIRs and the whole Internet community.

In this slide, some additional links provided to those who want more information.

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I guess I have to ask you to keep your questions.

MASATO YAMANISHI: Thank you very much for the introduction about this. And, as I said, previously, any question for qualification? OK. Go ahead. You can go to my microphone without permission from chair.

BRAJESH JAIN: This isn't my personal capacity. What you're suggesting that both Internet community providers today, and ITU keep locating separately?

XIAOYA YANG: I think the detailed proposals that have been done by the consultants haven't been discussed in detail, in ITU. It will be discussed firstly in the coming meeting in two weeks. And I think a lot is still yet to be done by this group. So to your question. I think this is the first chance, and now we're discussing hearing APNIC and we will look for intense discussions here. I'm not going to -

MASATO YAMANISHI: Sorry, next presenter will talk about what is the proposal in ITU? So please do not ask question at this stage? And time is very limited. So if you have question for clarification, please remain at the microphone.

PAULO GERMANO: You used the IPv4 allocation as an example. I'm a little confused, given the much greater address pool size we have with IPv6 that you're using historical representation as an example that doesn't really apply in this case. It's very unlikely we would run in to the same sort of early adopter issues that we had with IPv4 and IPv6. I'm not sure that really, I'm not sure how that backs up the argument?

XIAOYA YANG: I'm presenting some opinions from one group and I think I hear another opinion again from you. I will have no comment on that.

MASATO YAMANISHI: The next one.

LORENZO LOLITI: I saw concerns from developing countries that prices for IPv4 addresses would go up with exhaustion. Are there any details on that? As I understand it, the fee structure for RIRs, but I'm not an expert, was relatively flat. It depends on how much address space you have?

XIAOYA YANG: The current stater. Will there be a scarcity issue of IPv6 in the filter? And will that, the resource management policy will be tightened up and the price will rise because that's already happened in IPv4. That's all what we know for this moment.

LORENZO COLITTI: We're talking about when IP address spaces are exhausted, because the solution to this issue is to move to IPv6. Yes.

John CURRAN: It actually falls the other two questions but it's a clarification of your slides. You know the public policy issue could exist if an IPv6 scarcity issue arises and we've seen the ITU is willing to do studies - you only mentioned two studies. Are there any studies with the ITU regarding the probability of that scarcity of IPv6 arriving, either studies or staff assessments? That would be important to know about?

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XIAOYA YANG: I think that's a very good proposal. Our work at this stage is, as I have reported in this presentation, and this just started last year since February and we reported to the council in October and the council decision is to have this group to further study the issue. So if there will be any further activities, I think it would be a good proposal to propose to this group in two weeks and we can continue.

I think it will be as that gentleman has just asked, all the discussions should be based on real research and this kind of predictions, whether there is a council or not. We're not sure. But we have this concern at this moment.

MASATO YAMANISHI: Sorry for the interruption, there's still four people standing at the mike. May I limit? Any more people? SANJAYA: This is coming from Jabber chat and he said it's question, not a clarification. So it would be more appropriate for later.

BILL WOODCOCK: Something that I'm afraid I don't understand from your presentation - you said that developing countries are afraid that the price of addresses would go up in a market environment, as scarcity becomes monetized. And I believe that you presented this as a problem - is that correct?

XIAOYA YANG: It's a concern.

BILL WOODCOCK: You present Muller's proposal that proposes to do exactly that in the face of the actual bottom-up constituency policy that everyone pays the same price based on need. Are you saying markets are the solution, the problem or both?

XIAOYA YANG: For clarification, first of all, these studies haven't been discussed in ITU membership yet. But indeed in last year in IGF there were the workshop and this proposal was discussed. My understanding, if I can provide more information from you of that workshop is that this study, this proposal was discussed and it was suggested more influence on the routing possibility of this proposal should be added and it should be further studied. That's my understanding. So, as I said, I'm not proposing any solution for the moment, especially that we only have these two studies done by consultants and is not discussed in ITU yet. There are two proposals and we wait to hear from the community - how to improve, whether it's applicable and this kind of thing.

BILL WOODCOCK: I think one thing you might hear from this part of the community is that the ITU would be taking a higher moral position if it came out and said that pricing developing countries out of address space by imposing markets on them would be a bad idea.

XIAOYA YANG: I will not really argue with you about this. It's from the economist's study and he believes that it will provide motivation for conservation. This is his idea.

MARTIN LEVY: In your slides, you talked about the structure and how the ITU would deal with some of this. But I'm wondering, as a case of large operator of an IPv6 network, we have a lot of influence via a voting mechanism within inside this organisation, within inside the equivalence to

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this organisation, whether it by ARIN, RIPE, etc. The policy that comes out of those and the discussion has enormous input from the operations side of the business. That's vital. The Internet, unlike the telephone system, has a global impact. Anything that occurs on the Internet is essentially dealt with at a global level. I'm talking about routing and IP allocation.

MASATO YAMANISHI: I'm sorry.

MARTIN LEVY: I wanted to understand how you would be as open to the community versus the members that the ITU has at the moment? Because that's different. The Internet is a different beast than the telephone system in this regard.

XIAOYA YANG: I'm not sure whether we should open this - this is a question for clarification, really for discussion. I'd like to answer you that ITU is all membership structure. And I think, many people here in this room may not like governments but governments are still there to represent our benefits from each of other country. So if you have any concerns, I believe that the first channel you can channel that to ITU is through your member state. And secondly, we have membership from private sector. We have industry players and/or the big telecommunication companies are our industry members. Any concern from them, like operational concerns, I think it can also be brought to ITU.

MARTIN LEVY: I will leave that for a separate question.

MASATO YAMANISHI: Please do it at the end.

JONNY MARTIN: The 21 countries you mention that don't have IPv6 allocation at the moment s that of concern to you, as in the ITU?

XIAOYA YANG: Sorry, I haven't got your question? Did I mention any country haven't got it?

JONNY MARTIN: Sorry, there are 21. Have the ITU done anything to help those without allocations get allocations now? Because it's not hard.

XIAOYA YANG: I think that's, we are here for that and we want to promote its awareness of the urgency for IPv6 deployment. But before we're doing that, we have first to address their concerns at the same time. They are asking us.

JONNY MARTIN: If they don't have any address space, that's something that can be resolved now. It doesn't need much policy or discussion. It seems a bit backwards the way things are going.

XIAOYA YANG: This is not a concern I will raise in my presentation.

MASATO YAMANISHI: Let me interrupt at this point. Thank you very much. Our next presenter is Sures. And he will present about proposed, a proposed model for in ITU. OK.

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MASATO YAMANISHI: While we're waiting and swapping PC, let me say as a request or question. Please, 1, will you ask a question for clarification. Please point out which part is the target of your question. Otherwise, it is quite long. So please. Do you want to use your laptop?

SHARIL TARMIZI: Whilst technicalities are being sorted out, can I just have a quick check in the hall. How many of you here work or represent some part of government in any shape or form? OK, one gentleman in the back. So it is interesting, when I go to an ITU meeting and I ask the same question, I get completely the opposite response! So, we're talking about communities. How many of you are sector members of the ITU? Anyone here? About ten. Less than ten, actually. Quite encouraging, I would say. See, in times of war, you have the court jester dancing up and down making sure that the people are kept entertained while this is happening. But, can I ask a more serious question. In the - I think there were several points named and as my co-chair just mentioned.

There were some points during the session that I would definitely urge you to keep for the discussion at the end. But I would just like to point out, we are talking about different cultures, different experiences and different people looking at the same issue from different lenses. If I use that term?

There's a government lens, there's a private sector lens. There's a civil society lens, and there's a business lens. So, in our discussion here, I hope that you also keep those various perspectives in mind so that when you come to the question time, this is something that we can engage in a meaningful debate and discussion. Are you good to go? The machine doesn't like you!

Maybe I should also, I think being the only government guy on the panel, as a co-chair. I had a short stint with the IP community thanks to a lot of friends like Paul Wilson, you know, Ray Pawlzak and those guys, and also, a relative stint with the TIU side of the community. So I have some benefit of having been in both worlds. Sometimes I can not help but notice that it is sometimes the story about cats and dogs trying to talk to one another. Again, you know, I don't like to use the term, which is why I keep reminding people about different lenses for different people and sometimes for different purposes.

Governments are quite often used to the idea of a first-come, first-serve policy as well if you would like to know. In the area of spectrum allocation, for example, at the national level, very often it is done on a first-come first-serve basis. Other allocation of resources are also first-come first-serve basis. One interesting point that was raised by, I think John Curran, was the issue of scarcities. That could be the elephant in the room, but no-one is looking at it in a more careful or scientific manner. Are you good to go?

SURESWARAN RAMADASS: Good to go.

SHARIL TARMIZI: I'm running out of stories!

SURESWARAN RAMADASS: OK, thank you to the two co-chairs for keeping us entertained. I'm going to talk a little bit on the expansionary approach towards the IPv6 address allocation model. And as all of you know, the Internet has evolved from a close based network to a social network

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used by everyone. It has grown now to become the largest economy in the world. USM was April pointed as a consultant to conduct a study to look into the current, to look into expanding the current IPv6 resource allocation model.

The researchers have been researching an expansionary approach scheme that provides greater choices to the Internet community, but still maintains the integrity, sustainability and the refutability of the Internet. Based on our studies, we find that the present system of IPv6 address allocation can further be expanded to meet the growing needs of the Internet community. Our model proposes to maintain, our model proposed to maintain the IANA/RIR, but further expand the system to give ISPs a choice of whom their address block provider will be. This will potentially help to reduce the cost to ISP and ISPs can re-invent the money. To potentially further expand closer participation in the IPv6 activities and policy development by local ISP Internet communities.

To meet the local needs of the ISPs and industry, especially by providing local language content, system and trading. To better achieve conservation of IPv6 addresses as local entities and local ISPs know the local requesting organisations better, and to provide better support and awareness programs to help move the IPv6 agenda, especially for the developing nations.

This is the current model. And this is the current expansionary model. The peer entity could be at the regional or the international level. The peer entity should be a multilateral, multi-stakeholder international body that would ensure close coordination between the CIRs and the RIRs. This is the proposed hierarchy model.

The CIR model really talks about new entities. Would serve in parallel to the current RIRs, thus providing ISPs greater freedom of choice for obtaining IPv6 address allocations. The policies followed by the CIRs would be in close co-operation with the leadership of the local ISPs, specifically to meet the interest to satisfy the local needs of the users. It would adhere to the technical aspects of the Internet, address conservation, aggregation.

The CIR model does not disturb existing infrastructure, nor does it introduce any form of new infrastructure. There would be no additional fragmentation as the research and studies have shown this. Overall, number of prefixes added to the core routing table would be the same as well. As such, the expanded RIR model would not impact nor threaten global Internet stability and routeability.

The CIR being closer to the user. The CIR as an organisation would potentially be set up by an organisation of local ISPs. It would be able to better satisfy the local needs of the local user. For example, multilingual local language support and localised Helpdesks. The ISPs could obtain potentially cheaper, even free allocation of IPv6 addresses and this would really help the developing countries in the region grow their Internet. The CIR, proposed to be headed by the ISPs, would value-add to the RIRs and the Internet users by differentiation of services. The CIR would have equal participation in the policy formation and resource distribution so that Internet resource distribution and decentralisation are more balanced, especially within their own countries. Implementing CIRs would facilitate a more equitable access to Internet resources, especially for non-English speaking countries, providing greater accessibility to the Internet for everyone.

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In conclusion, the RIRs have greatly contributed in the early growth of the Internet. This is valued and appreciated. But we have to move with the time, and in creating the next generation of the Internet. An Internet that will eventually become more open and an Internet where ISPs have a freedom of choice and potentially, a cheaper Internet for ISPs and all users. The proposed CIR model will only work if, if openly and correctly discussed and implemented in the greater interest of the Internet ISPs.

And what do we believe in? I have a little video that shows what we in USM believe in. I would like to show that to you all.

(Video plays)

Thank you.

MASATO YAMANISHI: OK, if you have a question for clarification, please come to the microphone.

OWEN DELONG: I have two questions. On slide 10. On slide 10, you claimed no impact to the routing table or fragmentation of the address space. But I think that that conclusion is very subjective and very dependant on the nature of the CIR implementation and the policies that each CIR adopts locally.

SURESWARAN RAMADASS: We agree and we've clearly stated that they have to follow the baseline models.

OWEN DELONG: OK.

JOHN CURRAN: On slide 9, I thought that I saw a contradiction. I gets the question is, specifically, your policies adopted by the CIRs are claimed to be on the country, and yet it has to follow the RIR. I'm trying to understand from your proposal what happens when a country proposes something outside of the RIR frustrate w. How will global buy-in be obtained? It is not clear from the paper or the presentation?

SURESWARAN RAMADASS: OK, the paper and the presentation talk of what is the fundamental policies that we should be following now. As to the actual implementation and how things will be done, that depends on the body. Purely on technical recommendations.

JOHN CURRAN: I'm sorry, I didn't hear an answer to what you were asking. My question is, are country Internet registries able to make a scope within the RIR that they're working in, or make policies with the routing impact outside of the scope?

SURESWARAN RAMADASS: Not outside of the scope. It should be within the scopes that have already been set within the RIRs.

MASATO YAMANISHI: I think that's an important point to discuss later.

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STEPHEN KENT: I was looking over your report and I see that the IETF is characterised as a resource organisation. Could you clarify why you think it is a research organisation rather than a standards development body?

SURESWARAN RAMADASS: OK, it's a standards development body. Typo.

STEPHEN KENT: Just trying to find out if it was a really large typo or a perception issue.

DAVE CROCKER: Brandenburg Working. I've always understood that a precept in making changes to an operational system is to only make changes that are essential. And I apologise if I missed this, but I don't think that I understand what problem needs to be fixed that your proposal responds to?

SURESWARAN RAMADASS: That is something that you need to ask the ITU. We are a technical proposal group and we wrote a paper based on requirements of resolution 64. So we don't get into the details of that particular for that.

IZUMI OKUTANI: I'm speaking as an individual, not representing JPNIC. My question is related to the question of the gentleman who spoke earlier. I'm not sure. What are the reasons that those countries who feel concerned that they don't, that they're not able to receive address space. I think we should do more analysis on why they feel that way and if it is just simply because they don't misunderstand about the procedure or is it the language issue? Or maybe if it is a criteria? I think we should have more information about these things and analysis before we come up with this as a solution.

MASATO YAMANISHI: Sorry, it is a comment, I think.

IZUMI OKUTANI: Oh, OK, yeah.

SHARIL TARMIZI: Perhaps you can hold that one and put it for a question for further study.

IZUMI OKUTANI: It's a question, so I'm interested to know.

SURESWARAN RAMADASS: Chairman, can I answer that quickly. I think that the question is very good and something that should be further studied. I agree with you.

MASATO YAMANISHI: OK, Lorenzo and John.

LORENZO COLITTI: On slide 9 or 8. You say there is a diagram. Oh, before that still. At one point you said in an answer just recently that the CIRs would operate in their own country in accordance with RIR policies?

SURESWARAN RAMADASS: Well, we believe that the CIR can be a country or a community.

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LORENZO COLITTI: So if it is operating within the policy of the RIR system, why there has to be a separate peer entity within the CIR if the countries can be naturally reconducted to the RIR which they are already a part of?

SURESWARAN RAMADASS: You could.

LORENZO COLITTI: So there's no particular reason, just the way we would choose to do that.

SURESWARAN RAMADASS: That's right.

SHARIL TARMIZI: I think your question is probably about double-dipping and maybe we can come back to the double-dipping issue.

LORENZO COLITTI: No, just a question if it flows through a particular body and then received, so if the CIR is a part of, as regards to policy flow or conceptually within an RIR, why they have to "report" to it.

BILL WOODCOCK: There's a confusing extra box on the slide. There's a confusing extra box on the slide.

JOHN CURRAN: President and CEO of ARIN. I have a question on slide four and am having trouble reconciling the bullet with what you said earlier. This will potentially help to reduce the cost to ISPs and in return, ISPs can re-invest money. I want to know about the scope of the study you conducted. Is it a technical scope? Because as a cost statement, and I guess I'm wondering, is there an assumption that it is lower cost and if it is, why did it come from?

SURESWARAN RAMADASS: It's an assumption that the cost could be local.

JOHN CURRAN: And the assumption is based on the CIR model not having anything to do with the RIRs that it's relying on for global policy?

SURESWARAN RAMADASS: No, it shouldn't. It's an assumption that basically says, if it opens up to that. Basically by opening up and allowing other people to have address, competition may come up and this may help to reduce the cost.

MASATO YAMANISHI: Sorry, let me limit at this point. You can ask your question, but no other people. Go ahead.

BILL WOODCOCK: I had a question that I'm going to defer for a moment, because that last extreme so confused me. So, you're assuming that if a third party, a governmental body sets a price for a service?

SURESWARAN RAMADASS: We didn't say governmental body.

BILL WOODCOCK: OK a third party. A non-RIR body sets a price for a service that they will set a lower price than the students of the service set themselves? That is if other ISPs collectively

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decide what fee to assess ourselves for IP addresses, you assume that that will be a higher fee than another party will decide to charge us?

SURESWARAN RAMADASS: Actually, you're wrong. I said that the CIR could be a collection of ISPs. And should be a collection of ISPs. If you look at it right there. The CIR headed by ISPs.

BILL WOODCOCK: OK, that's what RIR is?

SURESWARAN RAMADASS: No.

BILL WOODCOCK: What is an RIR, if the RIR is not the collection of the IP address stakeholders?

SURESWARAN RAMADASS: RIRs represent regions, CIRs can represent countries and communities.

BILL WOODCOCK: RIRs do not represent users. They represent users within regions.

MASATO YAMANISHI: Bill. Let me say my comment. Also the difference between NIR and CIR is not so clear in my understanding so let's discuss that later.

BILL WOODCOCK: The question I got up to ask originally was, if you're saying that there will be no additional policies outside of the existing framework, that would cause problems like, for instance, impact the routing table, then it seems that this is a no-op. I mean, what will this do if you can't actually do a policy that affects allocation, other than what allocation normally is already.

SURESWARAN RAMADASS: It is a policy to increase competitiveness. That means if I am an ISP, I should have more than one organisation to go for to get addresses. If I have, very simple today, the five RIRs can allocate cross-boundary addresses, this problem is gone. Because you could go to any one of the five RIRs and get an allocation of addresses. If I go to AfriNIC and got my IPv6 addresses it would be free today.

BILL WOODCOCK: Does your study.

SURESWARAN RAMADASS: Let me finish. Since I have to go to APNIC and get my addresses, I have to pay them an annual fee. Now, why the difference? Why can Africa give it for free and why is APNIC charging me for it? And you know what, I'm one of the people who helped to create the IPv6 tender and we paid money to help create it. And now, I have to pay money to get back a block of addresses that I helped to create? Does that make sense? Anyway, well, that's a personal opinion. Next.

MASATO YAMANISHI: Sorry, may I go there.

SANJAYA: I'll leave it to the chair to determine whether this is clarification or for discussion later. For clarification from if the CIR provides all of the services you mentioned, wouldn't those costs need to be recouped in fees to LIRs, therefore pushing cost for IP addresses higher for those in developing countries, in relation to the current model of distribution?

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That's one question. That's one question. And then another question from Matthew Moyle Croft. The proposal seems to try and soften economic problems. If the issue is the cost to developing countries, why not fix that funding to the RIRs?

Third question from Elliot Leer. "Please clarify what is the difference between CIR and NIR?"

MASATO YAMANISHI: I'm not sure that the second one is a question or not?

SURESWARAN RAMADASS: The first one was answered by John when he asked, are we doing an economic study? We're not. The second one, I don't even remember. My memory is bad. The third one was the difference between a CIR and NIR. Is that correct? It's pretty close, both the CIR and the NIR. It's again how it is to be run. But not much difference s between the two.

MASATO YAMANISHI: Skeeve.

SKEEVE STEVENS: My question was, what of the difference between the CIRs and the NIRs. Given the bottom-up that the NIRs do. What are some of the disenfranchised countries problem with that. And if they have a problem with which region they're getting allocations from, the whole RIR process is designed around policy and working together and being able to change the policies within this community. So why can't you just w within the current framework at the moment to create your own NIRs. If you want to create a NIR in India that talks to AfriNIC, you can accept it. And if the community accepts it, there's no issue there.

SURESWARAN RAMADASS: Agreed.

SKEEVE STEVENS: Why are you doing it then?

SURESWARAN RAMADASS: Fear of technical study. Other people were saying that you could go to another RIR and get an address space. You could screw the Internet routing table. This technical study shows that this doesn't do. So thank you, you actually clarified, made the statement that I was trying to make very clear. If we open up to allow IP addresses to be obtained from any of the five. In other words, if I could go to John and get my IP addresses from ARIN, then, you know what, you have then a democracy. You have a non-monopolistic environment. Because currently I only have one. Yes, John.

MASATO YAMANISHI: Go ahead.

JOHN CURRAN: You just clarified. You said a moment ago, that the study shows that it is possible to open up ISPs to additional sources of address space and not destroy the routing table. Is that the summary?

SURESWARAN RAMADASS: Pretty much. JOHN CURRAN: And where you have the multiadditional ISPs that currently go to one regional Internet registry, or they go to five. Because they're truly global in nature, so they have to go to all five. The case where the routing table isn't

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impacted is the case where the global entities don't participate at all in the alternative scheme you're created. Is that correct?

SURESWARAN RAMADASS: You're right.

JOHN CURRAN: Thank you.

MASATO YAMANISHI: Thank you very much for the co-operation of all of the attendants.

SURESWARAN RAMADASS: Thank you.

MASATO YAMANISHI: And the third presenter is Adiel who is the CEO of AfriNIC and he will present about the developing country's approach for IP address management.

ADIEL AKPLOGAN: Thank you, chairman. Thank you very much. I will briefly talk about my experience of running AfriNIC, which basically serves the biggest concentration of developing countries and give my perspective on the issue of IP address management and the Internet development in general. I will start by saying IP addresses are important for the future of Internet development. That is a fact, and that is something that governments and policy makers in developing countries start to understand. And that naturally raises some questions and some concerns and a willingness for them to understand really what is going on behind the IP address management. So for us, it is something natural. For what we have also noticed by walk working very closely with many governments in our region is that the real problem is their awareness of the Internet IP address management system.

That makes them anxious about their future. They don't really understand what they're doing and nobody tells them really what we do. What we are doing here today, discussing IP address management and discussing policy development. How they can, as governments, propose the policy. How they can voice their concern within a process which exists and that's what we have. We have noticed. And we believe that main way of solving this is to work very closely, as technical community, as an RIR, to work closely with Government to collaborate with them and to help them to understand how policies are developed. How they can participate. Hold their hands and talk to them the way that they are used to. I think Internet is a culture. It's a culture based on some technicalities.

But we need, when we are talking to governments, to adopt a language to the political environment so that they understand what we, as technical people, what we say and understand easily. So for me, I think this whole question about CIRs bringing IP address management close to people by creating more local registries is not really the problem. Because I bet to go to many developing countries, government websites. Regulatory websites, where you can find as much information that are available on the RIR websites.

The real problem is to bridge the gap, to create a link between government concern, government anxiety about the Internet future and what is really being done. Nothing prevents governments today and that's something that we're doing with several regulatories in our region. On the local information dissemination campaign so that operators, which are not already LIR, can understand so that they can support already ongoing training and awareness with that to do it today. We need to put more emphasis on collaboration than competition. I understand how competition in the

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allocation of the IP address system will not harm the stability of the Internet. How competition can allow the community to be in charge of policy, to be in charge of defining the rule for IP address management. So I think we need to refocus on Internet for development when we're talking about developing countries in general.

Policy can not be the same in a system which has competition. As soon as you open the door for competition, it will be difficult for you to maintain the same policy because when you talk about competition, you talk about getting to the point where one offers some advantage that the other can not offer, and thank going down that road, you're deviating from some common sense in terms of policy and the stability which becomes subjective. Everybody can see stability from their own lands, can see policy from their own approach.

At AfriNIC, we have, we engage ourselves into our awareness and collaboration with government and regulators. And what we have noticed, as I said before, the huge problem comes from lack of awareness. Lack of understanding of our process. Lack of understanding of multi-stakeholder bottom-up approach in the policy definition. We have been asked several times, the question about not repeating the early adopter issue for IPv6, and we have a simple one for that. Today all of the five RIRs have received an allocation of a /12 equally. AfriNIC, the smallest RIR, got the same amount of that allocation, which we have. Which is already there. So there is for that to happen, is limited. Because the community itself is putting in place policy that allows you to solve the issue. And if governments still have concerns, they can participate in that policy development process, and now is the time for them to do that. So that all of their concerns are addressed. We have not even seen the slash 12 yet. It has not been allocated by IANA based on the current need of our region, but it is a policy that says, this is a new protocol. We need to give the RIRs the same amount of IP addresses.

Those who exhaust the slash 12s will go back and receive more, if in the region, we have not even started to use it. It is very difficult to go and request more. The major concern for governments are sometimes valid. But the solution doesn't always come from a fight for control or a top-down approach in managing resources. We are committed in our region to continue to work very closely with governments. To give them all of the tools that they need to be more active in our community. To continue to share information to create an environment for them to feel at their ease within the technical community, so that together, we can address the issue and they can also understand the issue which are purely technical so that this Internet that we are concerned about, that's becoming more and more an an economical tool continues to be there.
Thank you.

APPLAUSE

MASATO YAMANISHI: Thank you very much for a good presentation. Are there any questions for clarification? It seems not. OK. Let me go to the last presenter. Last one is Save. He was a policy development process manager in APNIC, and now he's working as ICANN's representative in the AP region. So he will talk about ICANN and RIRs. Go, please.

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SAVE VOCEA: Good afternoon, all. I will just read out one of ICANN's comments. Most of this you would have heard already. Where does the demand come from? What we are hearing here is that some countries are concerned that late adopters will find there is very little space left, so I want to make sure that the country has sufficient addresses for its network and that they are not controlled by anyone else. The reality is that to this day, the IANA...

MASATO YAMANISHI: Sorry, are you trying to show something?

SAVE VOCEA: No, no, I'm just reading. The Internet assigned numbers authority has only allocated 0.146% of the total IPv6 address space to the existing RIRs. So there's still a lot of IPv6 addresses to go around for many years, that's like 99.854% left to be allocated. What we believe is that there is no evidence that there is a lack of ability to get IPv6 address. For instance, in the APNIC region, its IPv6 allocation policy allows any member today to receive IPv6 address space. A member just has to send in a request and no proof of need is required at this stage. The main purpose is to provide incentives to get people, entities, companies, to use IPv6 and to promote transition into it.

In the ICANN's multi-stakeholder model where governments are free to participate in the Governmental Advisory Committee, for the GAC, the Number Research Organization and the address supporting organisation do provide update reports and statements to discuss IPv6 matters and that is always welcomed by the GAC.

The RIRs manage the consultation on the global policy which then comes to ICANN. So essentially, they will manage the consensus process. The multi-stakeholder model with its open and bottom-up process affords the opportunity for all to engage and participate, including governments. Existing policies state that if a new RIR is to be recognised, ICANN must allocate a /12 to that RIR. The mechanisms by which a new RIR is recognised are well documented. ICANN believes the bottom-up policy definition process is the most appropriate way in which Internet-related policies are developed.

In the international discussions about these matters, it is important to establish objective diagnosis in the case where there are findings that there are some concerns or even problems. It is important to learn if they can be solved with existing mechanisms, and if the current mechanisms allow for change. ICANN maintains that the current system of allocation has demonstrated strong resiliency and that it is adaptable to change. If there would be a problem in the future, there seems to be enough mechanisms to discuss possible solutions within the current system.

The ITU could play an important role here and should be encouraged by its members to learn more about these processes and to participate in them. Any means of improvement to any system should demonstrate value or additional positive contributions in order to be implemented and prevent any non-intended consequences.

So in ending, ICANN is grateful to have the opportunity to participate in this community consultation and shows clear support for the RIR system, and it will support the RIRs as they discuss these issues with the ITU. Thank you.

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APPLAUSE

MASATO YAMANISHI: Thank you very much Save. Are there any questions for clarification? It seems not.

LAWEWNCE HUGHES: There were two concerns of voice. One is whether we may run out of IPv6 addresses some day and look at unfair allocation in v4. The other is a desire to do jurisdiction shopping, like you're looking for a judge or a jury that may be more amenable to his case. And the second, I don't think is a legitimate concern with the ITU. The first, I think we can address with a quick calculation. Even in the /3 that's been allocated currently for giving out one eighth of the concern address space. If you take the standard allocation block, a /48 and the number of people alive, there's some 5,000 allocation blocks.

MASATO YAMANISHI: Is there a question?

LAWRENCE HUGHES: Is there any danger of a shortage? If there's 5,000/48s for every human alive, are you still worried about running out?

MASATO YAMANISHI: I think it's not a question for Save himself. So let's discuss later. And the chair of the next session and the APNIC Secretariat kindly agreed to extend this session a little bit. So I would like to take a ten minute coffee break, and after that coffee break, let's resume discussion and... the discussion time is still limited in 30 minutes. But please do not leave here. I still have some comments. Can you show the chair's slides.

OK, what was mentioned contained several points so I see what is the concerning point and also, what is the major discussion point of CIR models. So during the coffee break, I will show that slide. So my idea for the discussion is dividing the time for each topic. I would like to do so, if you would agree. But anyway, let's consider based on that.

Also, when discussions will start, I would like to ask how many people would like to ask a question or would like to say comment. No, not now. At the beginning of the discussion! I would like to ask again. So please raise your hand at that time and then I can, I'd like to try time control. To do time control. Anyway, let's enjoy the coffee break. And ten minutes later, please come back here.

(10 minute break)

MASATO YAMANISHI: I'd like to ask discussion in a few minutes. So please take a seat.

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SHARIL TARMIZI: Ladies and gentlemen, Yamanishi-san is having to perform the function of go-getter. So we have two panellists who have disappeared for some reason. Has anyone seen Adiel or Professor Sures? Can we get those guys in, please? Thanks.

Has anyone seen Professor Sureshwaran? Where is Adiel? He's on the way somewhere. OK.

MASATO YAMANISHI: Even though one panellist can not come back, since time is limited, we would like to restart the session. Now it is 4:52. So we would like to finish this session until - anyway, until 4:22. I'd like to, I'd like to try - people can say their comment as much as possible, but maybe some people cannot say, cannot take a chance to say some comments. So for such case, you can send your comments to IPv6@apnic.net before 9am of this Friday. So Adiel has come back. So let's go back to the discussion.

Sorry to show my personal review for this topic, but I think there are two concerns exist as a background of this topic. First one is concerns for current IP address allocations, as were presented. And the second R second one is concerns for economics of IPv6 address. And then proposed model includes also five major points, I think. The first one is the web-based allocation policy. So current ways to request the allocation, it's growth-based address partitioning algorithm. And the second one is we talked in previous session with NIR or CIR - the difference between them is not so clear. So I'd like to discuss this point in the session. And the third one is RIR scheme can only or competition between parallel policy or parallel organisation. Both aspects should be included in the topic.

And the fourth one is ITU will become one of registry. Some people made concerns for neutrality from regulator. So I think this is one topic which should be discussed. The last one is policy decision process. Actually, both side stays open. Member state is a little bit different. The discussion in RIR is community based. So everybody can attend a discussion, even though their organisation is not a member of RIR or NIR, like that.

However, discussion in ITU, yet if discussion in ITU is member state or sector member based. So, if your organisation are, is not sector member, you can't attend a discussion of ITU. And also in some meeting, only member state can attend to the discussion. So, actually, policy decision process is a little bit different. OK.

So is there any major discussion point?

OWEN DELONG: Do you think attempting to run through these points in some sort of order may artificially constrain the discussion and prejudice it and that could be to the detriment of the community?

MASATO YAMANISHI: Very useful comment. What I'm trying to do is, since we have 30 minutes, so if you will agree, I'd like to, I would like to spend 10 minutes for background concerning points. Concern for current IP address statistics and economics at the basic address.

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SHARIL TARMIZI: Thank you. I think as my co-chair said, this was sort of a very quick attempt at trying to distill the issues. But I think it certainly is not exhaustive and not intended to be. But if the participants, all of you are keen for a more free-flow type discussion, with hopefully with some measure of a structure at the end, I think we're quite alright with that. I think the idea is to get a sense of what this community feels about the proposals that have been put forward and also a sense of what it is that we think is lacking in the current thoughts around the issue? Whether, for example, we heard quite a few commenting about whether there really is scarcity being a real issue or is that a 50-year-away kind of question as opposed to something that needs to be looked at immediately?

Perhaps maybe we can invite some of the panellists to comment on some of the other presentations that have been made here to sort of kick-off the discussions? Many of you had very, very good points, I think you raised. So I think we have to stop you there because the earlier part was over about clarification. But now is the time for the discussion. So can I invite any of the panellists who had initial reactions to any of the four earlier presentations, please?

XIAOYA YANG: I think Save, I'm not sure I'm pronouncing your name correct, talked about the ICANN document submitted to ITU as contribution. It talked about, it - whether scarcity is an issue was the question? And also Sharil has mentioned this. The difficulty I perceive now is it is very difficult for anyone to give a yes or no answer for this moment. This is just my observation. And I think as the proposal, and the other gentleman has proposed, it needs to be further studied. If anyone can come out with a concrete study and convincing the other opinion that whether there is a problem or there is not a problem, then we would like progress to solve this whole mess here.

And, also, I have another comment about Adiel's proposal. And Adiel, I think he's very good in summarising his experience in AfriNIC, and his cooperation with the governments. And I think he mentioned the policy process is very important to have dialogue between the governments and the Internet community. And also the chairman mentioned in the slide, the last point, there is the issue of policy process and there is a kind of counter confliction between the two camps and between the way they work. But I would just like to call to the attention of the meeting here that each has their own unique constituency. And even though the governments, we might not like them for this and that reasons at national level, the Internet level, it is still important to, they're an important entity to represent the concerns of the country.

It's very important. I also want to mention that a fact that it's very difficult for government representative to participate in the Internet policy discussion. Because, as you could acknowledge if I'm representing our government, I cannot speak on my individual behalf.

And, also, when we challenge, there is a gentleman's question about how we can get expert participating in the ITU process or something, a question like that. It's more for opinions, than a point for clarification. It's also about a point that although ITU have a private partner with experience for so many years, there is still a lot to be researched to open up those sovereignty-based voting procedure, to individuals and to the civil society.

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We have to really work out a solution and work together for that. And I think that again comes back to the same conclusion as Adiel, we have to keep in dialogue and you have to have the willingness to cooperate from both sides. Thank you.

SHARIL TARMIZI: Any other reactions? OK. Any - I think for that comment. I just wanted to sort of kick-off and start some discussion by maybe sharing with you some of my own perspectives. I now work for the government. I'm the chief operating officer of a regulatory body which is independent but has policy direction from a minister, within the ministry. The functions that we undertake, we manage scarce resources on a daily basis. In the traditional sense of governance, which is managing spectrum resources, which generally I think is accepted as scarce. And manage numbers - E 1 6 4 numbers and are generally accepted as scarce. And we manage the local coordination, as well as international coordination, of orbital slots, together with countries that we have to have bilateral arrangements with through the ITU and so on and so forth.

That's one part of the experience I bring to the table. The other is I also have been engaged with the Internet community since the year 2000, almost from the early days of ICANN, right up to the chairing for about four years. The earlier point I made about looking at things from different lenses and different lenses for different people is something that I need to articulate again because, let me share with you a problem I faced as a government official during one of the World Summit processes. I'm an accredited Government official to those meetings. I had occasion to deal with one of the UN representatives. I will not mention his name. It's related to the IGF at that time, if some of you have reported. And I said to this person the GAC represents the opinion of a large number of governments on Internet-related issues, particularly the DNS.

The response that came from this government official was, "Oh, you people in the GAC, you are technical." Now I can assure you nobody in the GAC was technical. But they said, "Oh, this person who is a diplomat said you people in the gap are technical. And we, the people at the UN, understand this issue of public policy." So you can imagine what my reaction was when we had an eclectic collection of government officials in the GAC. We had an interesting mix which is nowhere else compared in any part of any governmental organisation anywhere in the world because we had government people who were scientists, government people who were economists, lawyers, who came from different ministries.

Contrast that with an organisation like the ITU, which largely, traditionally have people from the telecommunications ministry. You may have heard comments made by the keynote speaker to the APRICOT meeting about IP versus telecommunications. A lot of it is again maybe approaching the same coin from different sides.

So coming back to this official from the UN who said to me, "I wasn't government enough," from his perspective. This is what I mean and I try to describe by the layers of complexity of governance and the different lenses that people apply.

Coming from a developing country myself, Malaysia, switching hats now, a lot of thinking that we have here in Malaysia is actually around the areas which is engagement, capacity-building.

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Governments don't know what to do. And they fear what they don't know. How can this community, for example, help that? Help them overcome some of that? Adiel at AfriNIC have done a bit about that. And Paul Wilson around APNIC has done quite a bit of that. He attends Government meetings and so does Adiel, in and out, just to build capacity. From my own personal perspective, it's not question of whether it's a SIR, NIR, RIR scheme, ITU, this, that and the other, the more pressing need for developing countries is if we need to move from a v4 situation to a v6 situation, how can we get there?

So let me just sort of try to kick-off for the discussion, for the debate, just so you're all full of it. But now it's a bit slow.

MASATO YAMANISHI: Thank you very much. I think it's good chance to hear voice from the community. So I'd like to take a time as much as possible. Is there - oh, before starting, could you, I would like to count how many people want to say some comments for these topics? So could you raise your hand if you have some comments? Actually, it is less than I expected. it's good. Maybe less than 20, I think. Let me limit one minute for each person. And also there are many non-English native speakers, including me. So please make your comment very slowly and clearly and simply. OK.

So I'd like to separate discussion time a little bit because there are many discussion points. So I'd like to discuss these concerning points which were shown. Is there any comment or question or something for these concerns behind this topic? OK, OK, no - I can't use the pointer. As I said, I think there are two concerns behind this topic. OK. First one is concerns for current IPv6 statistics from developing countries as to how they are presented. And the second concerning point is economics, or pricing, about IPv6 address which somebody mentioned in the previous discussion time. OK. Let's go to microphone freely. DAVE CROCKER: The two questions you present are reasonable but might not be the best ones we could pursue. Let me explain why.

There is nothing that is going to change the IPv4 allocations in enough time to be useful. And it appears to be clear to me, at least, that history of IPv4 allocation speaks to the past and that IPv6 allocation has enough differences to it, so that past could be misleading for the future. The question on the economics clearly is relevant to the future. But I frankly think the single most important suggestion that we've heard was the one we just heard, which was that what people should be focusing on - because it is urgent - is how do we get to v6? And it has a special challenges for people from developing countries. Based on my own experience, what I do know if something is urgent, that creating new infrastructure administrative mechanisms does not help. And, so, perhaps the question that ought to be on the table is within the existing structure of RIRs, how do we facilitate getting developing countries up to speed with v6 as quickly as possible? This is a completely different topic than this session has been designed for but I suspect it's the only important one.

MASATO YAMANISHI: Completed topic means out of scope, you mean?

DAVE CROCKER: I believe it's in scope for what we should be talking about and out of scope for the way the topic has been designed. And I think I understand how the design of the topic has developed over the years. It has a very interesting history but let me suggest that we may need to change the nature of the discussion.

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OWEN DELONG: The greatest value of the Internet comes from its ability to democratise all levels of types of societies. To democratise communications across all levels and types of societies. A bottom-up process for policy development is key to that nature and that ability and that value.

Second point, the view that CIRs would be run by the country's ISPs is not how the ITU has operated in other areas traditionally and my concern would be that the CIR process would devolve to be much more similar to the CCTLD process of history. And I think that if we do that to the address space, it's pretty ugly.

Third, regarding scarcity, everything that's been currently allocated is from 1/8th of the total address space roughly. If we run out of that in less than 50 years, the simple change of eliminating stateless auto configuration and going to 96-byte standard prefix for the remaining 7/8s of the multiple space would multiply the number of networks by four billion in the remaining database. I don't think there's a scarcity in IPv6. I think it's artificial.

MASATO YAMANISHI: Before asking answer for the panellist, it seems many people have commented for the whole picture So I change my mind. In this time, please ask the question for whole picture, OK, not each topic. OK. Is there any comment from panellist for previous comment? No? OK.

SANJAYA: Question from the room from Tim McGuinness from the Jabber room. Given I as an IP address user can participate in RIR policy development policy in an open way, how could I participate in CIR address policy processes without paying IP sector fees? Second question is probably related to the economics of IPv6 from the same person as well. "Given that the TABL study specifies a higher price than RIR costs at least initially for TABL blocks, could you clarify why this mechanism would be useful for developing countries? "

MASATO YAMANISHI: About 30 seconds. Go ahead. OK. So you have a comment for second question?

XIAOYA YANG: Yes, I think the second question is about the TABL model. And I think we need to further discussion it as it is discussed in IETF. It's a concern that the routing sustainability issue should further be studied. And, also, the pricing model, how to set, how we initially set is also a question. I cannot remember the details of that study but I believe in answer to your question is a need to be trial period to find out who the right price and for developing countries, this is, it is more for conservation of IPv6 resource in the long term and it may not directly solve the problem of development country issue, for solving some of their concerns.

MASATO YAMANISHI, Sures, if you have any answer? Go ahead.

STEPHEN KENT: This is a question to Xiaoya Yang. You sided ENUM as an example with the IETF and the ITU have worked together and ITF transferred responsibility for ENUM to ITU. Just again for sort of level-setting, do you characterise the ENUM work and development as a success? So far now ITU is responsible?

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XIAOYA YANG: I don't think I will say any comments about ENUM implementing itself. This is indeed the initiative from all over the world, from this community. And I'm saying that this is a good example for ITU to cooperate with one of the RIR. This is experience. I think ITU is satisfied with this experience in collaboration with RIPE-NCC.

STEPHEN KENT: I will be satisfied with that.

JOHN CURRAN: I understand the chair, we're now on the general topics, not the specific items. I don't know the time limit but I'll keep my comments as succinct as possible. People have spoken about conservation and I do believe a study would help, or at least someone to show up with one hypothetical example that indicate a conservation issue is even theoretically possible, which it may not be today. I actually believe that Sures's reference in his paper, a reference of 1% utilisation over 50 years using very, very generous numbers. I haven't seen anyone show up with a theoretical usage of IPv6 that gets us past single-digit percents in any time frame. This is about as theoretical as it gets until someone can show up with a counter-case. That's conservation.

Regarding policy and useability, we're not talking about addresses. Addresses are just numbers. The most important part about addresses are the ability to actually make use of the addresses in the Internet. And that means they have to actually be routable. And it turns out address routable between a magic process that everyone knows but doesn't really discuss. The ISP community trusts the RIR community to implement policy in a participatory, wide-open fashion, not a membership, no requirement, any participation is allowed. So that at the end of the day the ISP community is willing to accept the consequences of the globally developed policy in each of the RIRs on the routing table. This has huge implications and it's not assured by any other process. We do not know whether or not the CIR local policy process, or an ITU process will be seen as participatory enough by the ISP community.

And the fact of the matter addresses assigned by a CIR won't necessarily be usable for anything unless this is the case. No country could regulate or community and force global ISPs to follow their policy. So essentially we've set up a system where in order to make good policy, you have to have global interoperability bottom-up policy setting, which was expensive, last-item cost. The cost of doing that policy discussion, which happens among the RIRs, including between the RIRs, is very expensive. In order to have addresses usable, on the Internet, that discussion will need to occur. And it will need to be borne by all the registries that are involved. To this extent, when people are looking at the cost, of alternative registries for IPv6, I don't know what number they're putting down for those registries' participation in the global policy process but they'll need to participate if they wish to be routed and that participation will have cost.

If all we do is duplicate this process, it will become very expensive for everyone and there will be no lower costs. I don't think we have lower costs coming with this, I don't think we have aggregation, conservation coming with this and those are the three principles of the RIR system. Thank you.

APPLAUSE

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MASATO YAMANISHI: Thank you very much again. Again, please make your comments shortly otherwise you'll miss the social event.

RAPHAEL HO: I'm a concerned individual and very happy that there are people on stage looking after the concerns that we're going to run out of IP addresses in the very distant future. I, as a concerned individual are very concerned about running up E 164 addresses. Would they delegate a model that we can assign the E 1 64 addresses ourselves?

XIAOYA YANG: E' 164 doesn't have a scarcity problem, it's flexibility lens.

BRIAN CARPENTER: I live in New Zealand and I'm speaking as an individual. This idea we've been discussing since late 2004, in early 2005 I became chair of the IETF and my very first discussion who was the director of ITUT at the time was about this exact topic where I explained a number of reasons I didn't think it was a necessary idea. And I think the idea had gone away until quite recently, by the way. I simply observed since he told me it was an essential mechanism for the developing countries in 2005, AfriNIC has been created and has been given a /12 and I don't understand what the problem is?

KUO-WEI WU: I'd like to mention one thing. Since the last we're, we started monitoring the CCTLD new server, the v6 operations and I can give you a number. More than 100 CCTLD new servers do not have a v6 turn on. How you can make the v6 running and second, even for loads of the turning the v6 on the CCTLD server, some of them is not stable. It's up and down. So I think we didn't like to make a v6 assessment for this and they ask, "Those member states, make sure your ccTLD new server turn the v6 on. "

PAUL WILSON: It's Paul from APNIC. If it's OK with the chair, I'd like to address the NIR versus CIR question, with some clarifying remarks.

MASATO YAMANISHI: I'd like to take a time for that topic later.

PAUL WILSON: OK. I'll come back.

AXEL PAWLIK: I have an uneasy feeling. We're having a great session and I really like it. Lots of brain cycles go in to discussing quite concrete proposals, studies, papers that seem to address a problem which I don't understand. I'd like to take a step back and ask the question - which problems are there that we are trying to solve? And if that is not clear, then we should do some research in to that? If we are seeing problems, then I think everybody in this room and the whole technical Internet community and loads of people are very committed to help keeping the Internet run smoothly. So I'm sure if we see problems, we are happy to help. But the question is what is the problem? If there's no problem potentially, then I'm all with Dave and Brian, saying then we need to talk to each other more.

And we do as RIPE NCC, we do regular round tables with governments and regulators. We do feel it's difficult to get to them, to find them, the people who have the concerns. So maybe there's some way of interaction between the ITU and ourselves? If you go and get your regional offices to get the regional governments together who have some concerns, then we're happy to fly around the world and do outreach and capacity-building. Absolutely. That's what we really want to do.

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MASATO YAMANISHI: Thank you very much. That's the reason why I asked? May I limit at this time. There are three people remaining for the general topic.

KENNY HUANG: It seems like we're heading in to two different directions. One is going for the research and the other direction is actually stepping in to the action for calling policy development process. Basically, the two directions required to two totally different practice. If you are going for the R for research, it will need require, validity and significant testing. That's regarding to doing the research, what people doing research in general. If we are heading in to making policies, that somehow they need to demonstrate significant interest from the stakeholder of, even coming from the stakeholder. That. That was shown in the recent report.

MASATO YAMANISHI: Adiel has a comment. Go ahead.

ADIEL AKPLOGAN: My comment is trying to refocus what we're doing here. I think this whole meeting comes from the fact there is a working group set up by ICTU which will be meeting in two weeks from now to discuss about few issues among other, for the outcome of the two reports which has been presented today and the possibility of the ITU to become a RIR to take care of some of the concern of the developing countries. We're seeing the two studies doesn't actually solve the issue of the developing countries. CIR, now the trade-based allocations of those issues. So the issue is more about, for me, from what I did, is more about creating, creating an environment where the technical community and the Internet community and government from ITU can discuss concerns.

Discuss issues seen from both sides. So how can ITU help in that? In one of the presentations of ITU, it says that how ITU can help bring the 191 members, the government members, how can we do this. It can probably be discussed and bring time that meeting. Saying the issue is not about fearing about scarcity. The issue is about raising awareness more efficiently. Bringing, building the bridge between the two communities. How can we do that efficiently? Because if we will spend time here addressing different aspects of IPv6, which is why, and we know from the technical community we have a lot of issue for adopting IPv6 for deploying IPv6. And that is, and that's a huge issue pointed out by many speakers.

We would rather focus from that and trying to solve something that doesn't really exist, then we are wasting more time. And that's my concern. I will come back again to the awareness issue. In our region, we have had several government regulators asking us during meeting if in their country, there are IPv6 already in use, why in their country there are many model 10, even ISPs, already having IPv6 allocation or even announcing and having trouble on IPv6. That means there is a disconnect again between regulators looking at telecommunications side and the IP side. If we take solid numbers, there are 5,000 more IPv6 address allocated in African region than IPv4 allocations in the region, even though those IPv6 allocations represent 0.06% of ISP having their own IP address.

So there is stuff happening but people need to be aware. They need to be aware of the right information, and they need to be put in the right environment where they can address the issue.

MASATO YAMANISHI: Thank you.

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DESI VALLI: Most of us are replicating the fact there is no issue of scarcity in IPv6. Coming from a developing country which is India, I think there is an issue of economics. Even on IPv4, we have raised a concern as members, as from different organisations, about the economics of the IPv4, taking the same existing IPv6 also and there must be a study to be done based on the ground reality of individual countries rather than having a uniformed pricing model and most of the time the reason which is given is APNIC has a cost of operations which is based on Australia's economy. So I think these cannot be a reason for setting the price of IPv6 or any IP for IPv4 or IPv6. So economics strategy must be done before setting up a price model for IPv6 which is based on the ground reality.

LORENZO COLITTI: Speaking as one of the few networks that have deployed IPv6 routing tables. We have measurements to show how much IPv6 is out there. We know it's very small but at the same time, having looked at the internal economics of the transition, I -k say getting the address base is a trivial part of the transition. It's not getting the address space that's the cost of the transition. We obtain address space in 2005. We didn't do anything with it for a couple of years and then we started work. So it's a tiny amount of work. Also, I'd like to follow-up on Axel's question. Axel was asking what the problem is? I also don't understand what the problem is? I understand concern but one thing that might be useful is if we somehow were able to agree on what the problem is or more likely if we can agree on what would be a problem. If we think if we have given out one 256 of the address space which is what's currently allocated, or if we have given out half of that, then we need to start thinking about whether it might be a problem. So if we could agree on what would constitute a problem, I think that would be step forward.

MASATO YAMANISHI: Thank you very much, Lorenzo. Even though time is limited, if you have some comments for each point in the model, I mean, - yeah, as Paul had some comments for NIR or CIR. Or if you have comments for request allocation policy or competition between different schemes or ITU will become a registry. A decision process. Please come to the microphone.

PAUL WILSON: Thankyou very much. The question has come up quite a number of times as to whether or not the proposed CIRs to the extent that we understand them are the same as NIRs and I wanted to just clarify a couple of very important points about NIRs to answer that question or at least to clarify it. The NIR system in APNIC has been the subject of community policy-making and consultation over quite a number of years to ensure it's a system that's consistent with the technical and operational needs of the network. And the model has arrived at a couple of particular features which do support that. So in particular, the NIRs in the APNIC region are absolutely part of the one regional community, and in particular in terms of policy, NIRs contribute to policy making in partners of policy-making in the APNIC policy process and they abide by policies. That's absolutely fundamental. So there is no question in the APNIC NIR model of a policy divergence or fragmentation between the regional registry and the NIRs or amongst the NIRs. That's number one. The compliance with a consistent regional policy framework.

Number two is the fact that NIRs do not receive a pool of addresses. They draw when they process and approve address space allocation requests. They draw the address space from a common regional pool of addresses and they do that with full autonomy. Once an NIR has decided

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to make an address space allocation, that's their decision but the address space comes from the common pool. That's to avoid fragmentation of the address space. So the NIRs under our model avoid the two types of fragmentation which I think have been observed about the CIR model, as I say, to the extent that we understand it, which is the danger of fragmentation of policies and fragmentation of address space. So I think it's important to understand that those differences, it's important to understand that NIR model is a fully supported and operational model in the Asia Pacific region.

We field fairly regular inquiries about the establishment of NIRs. The number of NIRs that are established is only at quite a slow rate. And that is according to decisions and choices of the communities who are expressing interest in the first place. The latest NIR that has been approved by the APNIC EC is in India. And that understandably, given the size and scale of the operation there was not a rapid process, but I'd like to stress the establishment of an NIR is a serious question for all concerned in the economy country, economy and at the APNIC level. While I say that NIRs are actually designed and actively designed to satisfy the technical and operational needs of the network, I think it's not clear what CIRs are being proposed to do exactly in terms of the problem that they're intended to solve, what the details of the CIR proposal or the actual implementation of CIRs could be is really unclear.

What I'm afraid of is that the CIR model, as it's described, would satisfy one thing that I've heard numerous times in discussions, particularly at the governmental level, which I will say this is not, on the surface, it's not an unreasonable desire or requirement. What I've heard multiple times is a country wants its own address space to do with what it chooses. That being, one, to characterise one motivation, very bluntly, one motivation that I've heard expressed. And I'm afraid the CIR model satisfies that directly and I'm absolutely sure that CIRs, if established, would be in most cases run responsibly. But the risk is of any responsible or divergent behaviour coming out of that model through that idea of having our own address space to do with as we see fit, which could mean any number of different things, of course.

Thanks.

MASATO YAMANISHI: Thank you. Good explanation. Bill, you have a comment?

BILL WOODCOCK: Yeah, a very quick one, which is that I'd like to dispute the notion that the RIR system fails to represent some people, particularly in developing countries, that are represented by the ITU. So I just went through the ITU's website and checked the list of countries that are members of the ITU and found 18 generally diplomatically recognised countries that are not members of the ITU that are served by the RIR constituency. And, you know, this is hundreds of millions of people. I also checked and many of those have received IPv6 allocations already. All of them have IPv4 allocations. OK? So, the idea that the ITU can represent developing countries better than those countries and their constituents were able to represent themselves in the RIR system I think is one that can't stand unchallenged.

MASATO YAMANISHI: You have a comment?

DESI VALLI: Based on experiences of going for an NIR in India, we took on, we took almost two years to decide upon the principle approval of making an NIR in India. I think these process, delays and is creating some sort of doubt upon the functions of the RIRs. I think if these processes are

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transparent, must more transparent, and the speed is has been implemented or addressed, based on the needs of the local community, the need of it may not be. Thank you very much.

MA YAN: Look at the history. I know Internet takes an important function and that became the global and social infrastructure and we also look at the history and the government take a very important role in developing the social and economic in the order for all countries, not only including the developed, but also the developing economies. When we talk about the CIR and NIR model, I'd also like to see making a policy that will be sustainable development for the current and for the future. The policy then, we will not only talk about the possible approaches in the policy but also more concrete, more feasible, including the technical process. The technical abilities and the impact and the future ones, and I appreciate if the research report could be publicly available, then more comments would be more helpful to target the problems and solving what we have been really go to.

That would be helpful.

MASATO YAMANISHI: Thank you very much. Any comments for NIR, CIRs?

MARTIN LEVY: I will speak slowly. This is to do with the CIR issue and it's simply some statistics that are as useful as they would be at any point. 26 countries or territories presently within the RIRs, collective RIRs IPv6 allocations that are not listed, they don't have allocations today. And of those, six are ITU members, the rest are not. Now there are a few that aren't listed that don't actually make sense. That's just a country code disconnect between the UK versus GB. That's a simple one. And I apologise for that one. So there are places that I will email this in. Yes, sorry, this is a disconnect from Woody, but this is a reason. Woody's list is very good. This contains such places like Antarctica, and other islands. But we get to places like Guinea or Somalia, Chad, etc, that are members.

So I want to make sure we understand what the scope of this requirement is, because not taking any territory or country and saying it's insignificant and shouldn't have addressing, I'm not saying that, but there are certain countries that are only 40 kilometres long and just off the coast of Antarctica, so the statistics have to be taken carefully. I'm just stating in reality out of this list, these are places that, at the moment, sometimes don't even have v4 allocations. As I said earlier, some of them don't even have penguins.

LAUGHTER

There aren't that much, yes, sorry, I was talking about the live version of penguins. Make sure when you look at this, you understand the true scale of this, because most countries are already connected or have allocations ready for connection. That's all.

MASATO YAMANISHI: It seems you're going back there, I'm afraid. Not actually related with NIR.

MARTIN LEVY: Yes, you're right.

MASATO YAMANISHI: It's OK.

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ADIEL AKPLOGAN: I have one comment again on CIR versus NIR. And I just want to make a recommendation. I think the proposal in that regard needs to be clarified because it's very confusing. The gentleman from India say something about if it is a CIR, the process will have been faster than if it is an NIR, but we have spent a couple of minutes explaining that in the policy level, the policy will be the global policy and if I understand well, the NIR set of policy is a policy defined by the region. So it has to be clear how the CIR will be set-up, will give them the legitimacy, how will that come from? Because if it goes through the policy, the policy development process which is bottom-up, it will go through the same model as the RIR are using today. So I think that the information in this study or the outcome of this study is confusing in several aspects. Even we saw it in the graph presented today we have an additional NIR receiving only the CIR in the graph. Those are the way people are seeing the outcome of this report. If that's not the case, I think it needs to be clarified, because the whole work of the working group set up will be based on that. The conclusion may be wrong from what was explained today.

RANDY BUSH: Randy Bush. I've spent over 20 years working in some of the countries we speak of in the third person in our technical colonialist view from Europe and America. And in my experience, there has not been one case where they have been unable to get an IP address allocation that they needed. But there have been many cases where they, if they got an IP allocation, the colonialist monopoly would not route it. OK. This is the digital divide brought to you by the same people who brought you the analogue divide.

APPLAUSE

MASATO YAMANISHI: Sorry, Sures has a comment there. Could you say?

SURESWARAN RAMADASS: It's in reply to Adiel's comments. They were well taken and they have been open to comments on the paper that has been put on the ITU website. It's probably been about six months now and we've not received a single comment on it. So we welcome comments on the technical aspect. Please don't ask his comments on the political or governance aspect because that's not us. Anything on the technical aspect, anything regarding technicalities, you're welcome to give comments, you're welcome to give feedback, you're welcome to visit us, sit with us and discuss. Some of the researchers are in this room, and if you wish to meet them after this, you're welcome to sit down with them and have a discussion with them. But, unfortunately, till now, I've not seen anything in that manner coming to me. Everything seems to be all on governance, which that's ITU. OK. So we are purely on the technical side. If you have a technical issue - for example, a good thing that Adiel says, one of the clarification points, we can sit down and go through that and it will be nice. Thank you.

JOHN CURRAN: I have a question for the panellists and I believe it's a technical question but I have to admit I don't know regarding what's intended with the CIR proposal. In the paper, is routing considered technical or governance? It's technical? And the paper also discusses the ability of a country or a nationality to have control over the resources - is that technical or governance?

SURESWARAN RAMADASS: That's closer to governance. A possible model.

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JOHN CURRAN: When you're talking about the address space issue and you're talking about the liability of CIR and they're available without routing impact, are you presuming the CIR model will allow addresses to be issued that are globally issued and routed globally?

SURESWARAN RAMADASS: Of course.

JOHN CURRAN: So back to the simple question, now that I know what's in scope and what is not in scope. Your paper doesn't outline how it is that those allocations get globally routed and that would be a useful clarification for the community to understand?

SURESWARAN RAMADASS: OK, John. Send me an email on that.

JOHN CURRAN: Yep.

MASATO YAMANISHI: OK. Actually, we already exceed 30 minutes more. So I'd like to make your comment as last. Then we would like to discuss what is the next step? Go ahead.

JOAO DAMAS: First regarding this and you have asked for comment on it. There is one thing that I did miss when reading the paper. There is a lot of background and conclusions but I missed the model that you used to simulate the impact of different scenarios. I assume you had the model and that model had some degrees of freedom that you could see and the values you put in to the model and generate the predictions and therefore the conclusions of the paper had some documented assumptions. I missed all that background in the paper and it's very hard to be able to weigh the correctness of the conclusions, if in the absence of the description of the model and the parameters used to simulate the different scenarios.

Also, being an academic there's a simple question - I was a scientist in a previous life, I had a few papers published in quantum mechanics. Was your paper peer reviewed?

SURESWARAN RAMADASS: OK, the answer to the first question, please email us on it and I'll get the guys that worked on it to give you a reply. And the second to the second process, it was peer reviewed by CISCO Internet engineers.

MASATO YAMANISHI: Thankyou very much. Time is limited. Time is already over. So even though Mr Sures said this background problem is published almost almost six months but it seems communities have several views and several concerning points. So I think we need to input our comment to next IPv6 meeting. So does anybody have some suggestion to next step? OK.

JAMES SPENCELEY: It occurred to me, as we were discussing the issue, that this is an incredibly long transcript to read over. I thought it might be beneficial to type up a brief summary. I drafted what I think is a positive statement and I'd like to ask the chair after I read it to see if the community supports this view and we present it to the ITU so the introduction is that IP address management is fundamental to the ongoing Internet stability. Over the past decade the Internet has become fundamental to the world's economy. The Internet is truly global. What happens in one part of the

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world affects the rest of the world. Changes in address management could affect billions of devices globally, irrespective of the country where they are located.

The importance of an open environment - the Internet has become what it is today because of open transparent bottom-up processes. This has been used in protocols and in management policies. Everyone is encouraged to participate. RI R decision-making has no barriers to participation. Anyone, including Governments, can have their say. This has made transparency by our public archives, the decision-making process, mailing lists, video and meeting transcripts. The operational stability, security and efficiency of the Internet relies on a single consistent address management framework. The introduction of competing address management systems is not desired by us, the network operators. It carries the strong risk of fragmenting address management policies, fragmenting the Internet itself and comprising the Internet security and its stability.

The equitable distribution of addresses is already in place in the current IPv6 management system and addresses are being deployed actively and effectively throughout the world. Each RIR already has the same size block to distribute within their regions. So I think what we'd like to propose is some actions that parallel address management system involves significant risks and requires a clear problem statement. Complete explanation of its details and a thorough risk analysis of the consequences. Nav6 paper satisfies none of those requirements, therefore the Nav6 proposal, the paper can't be considered as a substantial basis for discussion at the IPv6 working group. Since concern about potential IPv6 exhaustion seems to be one of the fundamental concerns about the ITU's studies, we think they should conduct a study on this.

And we ask the group to follow the example of the Internet community and the IGF process and make its documents and records available publicly. So that all Internet stakeholders can participate in deliberations which can have global ramifications. We ask ITU member states and sector members to recall the Tunis agenda, called for a multi-stakeholder approach and call on the ITU to call upon the current stakeholder assessment. Chair, would you be interested in presenting that to the floor?

APPLAUSE

MASATO YAMANISHI: Thank you very much.

SHARIL TARMIZI: Thank you. James, was it? Hi, Sharil. You sort of jumped the gun. I was going to try with my co-chair here too, try and sum up the sense of what we got around the room. The lady standing at the microphone, were you going to object violently if I say what I need to say first?

JUDITH DUAUIT VAZQUEZ: Not at all.

SHARIL TARMIZI: It's the elephant in the room thing and Axel knows this very well coming from me. I'm trying to sum up the sense of the discussion around the room. I think we recognise that everyone has a role to play here - governments, the RIRs, the ISPs, the ITU - the question is what? In order to do that, I think there's also some consensus around have clarity on whether there

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is really a problem? I think there was some good input before. Is there really a problem? If there is a problem, what is the problem? The two themes that keep coming up seem to be one, perhaps something we can deal with immediately, is on the issue of capacity-building. Especially for developing countries and what is it can we do to help? How can we engage governments better - regional and national levels to improve understanding? That's on the one side. And the other on the issue of scarcity of IP addresses - do we really have a scarcity? Perhaps we should have further study on that.

Saying what I also see a sense around the room just now, was perhaps instead of spending all this resource, all these brains around the room, all these brilliant people talking about whether it's RIR, CIR, LIR, NIR, I have no idea. We should focus what it is that we do in a concrete manner to help developing countries who feel disenfranchised, how they can help to move from a v4 situation to a IPv6 and maybe one of the things the technical community can do to help is to look at having sort of a migration guidelines, a how-to guide, Idiot Books of some sort? I'm sharing the sense of what I get around the room, and I think you shared some of that in the statement. But I'd sort of try to see was fat a fair assessment of sense.

RANDY BUSH: Why do you think we organised APRICOT? Why do you think these people are idiots? Why do you think the engineers of these developing countries are idiots?

SHARIL TARMIZI: I didn't.

RANDY BUSH: You used the term 'Idiot Book'.

SHARIL TARMIZI: It's a particular book. I'm sorry we offended you.

MASATO YAMANISHI: Use the microphone, Bill. It's 40 minutes exceeded now.

BILL WOODCOCK: Is there such a developing countries? Is there a developing country that feels disenfranchised, to use your words?

SHARIL TARMIZI: I don't know. Based on the information available from the gentleman from Hurricane, I think it was, there doesn't seem to be.

BILL WOODCOCK: We have a room full of people here to help.

MASATO YAMANISHI: Discussion time is already over. So if you have some comments, for James's suggestion, please say now. Please do not step back the discussion.

JUDITH DUAVIT VAZQUEZ: I thought ladies come first. There are haves and have nots in each developing nation. I'm a gold sponsor, of PIKOM, and I'm happy to pay APNIC my membership fee. Some can't afford to be a member of APNIC. It's this have not group that's the concern of ITU today? So the question is how can an ITU member country help? A parallel structure is not the answer. It is not. But how a member country can help is truly to be that member pay the fees and it's not really much for a government and subsidise the have nots, ISPs in its country. And I'm

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sharing this with you because it is my plan, with my allocation to actually provide address blocks to the poor ISPs in the Philippines. And I'm doing this as a Filipino. Thank you.

JAMES SPENCELEY: I didn't want to get involved in areas outside of what I've discussed today, but they're providing obstacles to ISPs, training and etc. I was trying to summarise the discussions on topic today via that statement. And then really just see if that represents a view that we can present in a concise form to the ITU. That's what I was hoping to achieve.

MASATO YAMANISHI: Sorry, you can say.

XIAOYA YANG: It's the first time I heard this statement and here you see the government manner of doing things. I'd like to ask this meeting to understand, I'd like to restrain from any statement to this, because it's the first time I heard it and I might agree most of it, I still might need time to consider it further. So if it would be submitted to ITU as the conclusion of this meeting it should be clarified ITU has no point here. Thank you.

MASATO YAMANISHI: We're discussing what should be the input for ITU IPv6 group meeting. We're not discussing the conclusion of the IPv6 meeting. OK.

JOHN CURRAN: I want to comment briefly on James's statement and the statement of the co-chair that followed. I think there's a lot of things that could be done between the RIRs and ITU in the area of capacity-building, improving v6 deployment, there's a wide range. You noted some of the things that might be helpful - but I think a statement back, I just don't know whether that would be responsive since the ITU has given us a set of terms of reference that's very specific on one very specific set of questions. And I would hope whatever comes out of this group, even though there's a lot more that might be done between the RIRs and the ITUs, but the terms of reference was it might be good to be fairly specific in the response of the findings of this group so it's applicable to the people who have to go to that meeting, like myself.

MASATO YAMANISHI: I'm afraid we're going back now. To Sharil's comment. I think we need to create some input in to ITU meeting, then in that meeting we can list a different view if community has different views. I understand it's - so what James did, I said. Let's step back to James's statement.

SUMON SHABIR AHMED: I'm from Bangladesh. We are getting resolution for APNIC but we are finding it very difficult. But I think ITU can really play a role here, that is that regulators, Bangladesh and Pakistan, they're coming from the incumbent telcos and they have a very good relationship with ITU. And if any ITU comes, but if we find APNIC people or even ICANN people in Bangladesh, we couldn't get the regulators to bring them here. Two years back, the regulators have been talking about APNIC, what is it? Everyone knows ITU. ITU definitely has a huge impact on the regulators.

MASATO YAMANISHI: A comment for all. Please say your comment for James's suggestion?

SUMON SHABIR AHMED: Next meeting, I think I can really help out to bring up the regulators to know our constituencies. ISPs know it very well and, OK. They're using it happily.

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MASATO YAMANISHI: If you have more comment, please send to email address so we can catch up your comment.

RANDY BUSH: Randy Bush. It's not an initiative, it's Japan's oldest ISP. I believe James stated the consensus of the room. I second it. And I wish the chair would call for consensus.

APPLAUSE

DAVE CROCKER: Part of the challenge in forming a response to the ITU is that the ITU posed the question. We need to be careful that the response is a useful response, a simple response to the question might not be the most productive. If the premise of the question is itself a problem, I believe that the sense of the room is that the premise of the question is a problem. I think James's draft following on Sharil's comments suggest we need a response which is a bit more broad than, than we have been asked. And that the draft and the additional comments form a very good basis for making this point.

MASATO YAMANISHI: OK. The deadline of contribution for ITU meeting was, was this Tuesday.

This will be extended. We need to try and capture all comments as much as possible.

DAVE CROCKER: I'm suggesting an editing pass. If they're folded in, and I don't have immediate suggestions, but it felt to me that the added comments enhanced the draft a little bit. I'm only suggesting that there be some private effort to revise the draft which is a quite good draft but there be an editing pass to perhaps flesh it out just a little bit. I'm not suggesting that take place during this meeting.

JAMES SPENCELEY: We have limited time to present this. So I think the part of this draft that wasn't covered was potential other options for assisting ISPs with funding. Perhaps I could, you know, also additional add some part to that?

MASATO YAMANISHI: Use microphone.

JAMES SPENCELEY: I'd like to get consensus - on the screen.

MASATO YAMANISHI: We just discussed at this session, I'm afraid the drafted statement is already by you or not. So if everybody agree to take consensus in this session, I can. Everybody agree? OK.

PAULIE GERMANO: I did want, I want an academic question for the co-chair. I'm just curious, there's been a lot of mentioning of disenfranchised countries. Do we have a list of those, because it's not clear to me?

SHARIL TARMIZI: Maybe let me clarify. This disenfranchise, because I started telling the stories about layers of governments, they're government ministries and agencies that don't talk to each other. The Idiot's Guide I was talking about is for governments how to move to its v6. Very often

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the technical community in some country are completely different from those who go to the ITU So they end up doing shopping. If you ask me for a list, I don't have one, but I can point to you a few that I know personally, who have a, you know, there's two camps, especially, nationally, domestically, who have different views on how things should be done. I don't know whether that's helpful in any way to clarify your question?

BHADRIKA: I have a comment from Jabber who says the notion some ISPs can't afford the APNIC fees, and the first place developing countries get a 50% discount on APNIC fees, and secondly IP address distribution should be done on a cost-recovery basis so that ISPs or LIRs should charge their customary fee that covers their costs. He says the cost issue is a red herring in my opinion, and many ISPs use IP address as a profit centre.

MASATO YAMANISHI: In, yeah, even though your company organisation is not paying APNIC fee, you can attend a discussion of APNIC region, at least. Anyway, -

RANDY BUSH: Just one thing, can we not word smith on this. Can we not word smith this and start trying to rewrite it? It either is the consensus of the room or it isn't? That's a long rat hole.

MASATO YAMANISHI: Yeah. How many page do you have, James?

JAMES SPENCELEY: One page.

MASATO YAMANISHI: That's fine. OK, our director of word smith - so I'd, may I ask strong objection for each - is it a good way?

LORENZO COLITTI: There's likelihood we'll be able to agree on it with general principles.

JAMES SPENCELEY: Would everyone tell me when they've finished the first page?

MASATO YAMANISHI: Let's go to the end of this document. Actions. Are you reading? Is somebody still reading the first part? Somebody still reading that paragraph? OK, let's go to actions. That's it?

JAMES SPENCELEY: That's it.

MASATO YAMANISHI: It seems many people are still reading. May I ask consensus for - I mean, generally, proposed. Why are you raising hand? OK. OK. Does somebody, does somebody difficult to raise your hand if - you're raising your hand. Anyway, let me ask, we can reach consensus. Is there any strong objection for this proposal proposed text? Seems not. OK, so OK. Still we need to do some editorial task for this text but basically we'll propose a contribution for next IPv6 meeting for this proposed text. Sorry for extending almost almost two hours. But thank you very much for your cooperation and very useful comment. This session is adjourned. Thankyou very much.

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