MONTREAL – ccNSO: Technical Working Group Sunday, November 3, 2019 – 09:00 to 10:15 EDT ICANN66 | Montréal, Canada

EBERHARD LISSE:

Good morning, my name is Eberhard Lisse, I am the ccTLD manager of .na and the chair of the ccNSO Technical Working Group. This is a face-to-face meeting of the Technical Working Group, it's not Tech Day. So, if people come here to participate in Tech Day, they are at the wrong meeting. So we are an open meeting and we welcome everybody to participate in our boring trivia and administrivia.

What we usually do is, for the people who haven't been here, is we go through the agenda of the upcoming Tech Day meeting and then we have got two more topics. We want to draft a funding request for speakers and for the facilitator for the next possible budget cycle. So, I've drafted a correspondence proposal in that regards that I have circulated to the working group, which I want then to discuss.

And then the ISP constituency has approached us again about cooperation, so Wolf-Ulrich Knoben from that constituency is with us. We have started to exchange information, quite a while back. So, he is even on our mailing list so that we can avoid duplication, or, even if we want to, we can do duplication of interesting topics.

That said, I must go and use my clicker and go to the first page of the agenda. Usually I open the meeting with some remarks and then we have a presentation from Benin about DNS hackathon. I wasn't so

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much interested in that topic, but I developed some stuff for analysis and stuff on Raspberry and that's quite technical and that's maybe quite suitable for, as a small country code, or as a TLD, so it's usually often interesting to this internet.

Jacques Latour will give us a presentation about the internet exchange point in Canada. Then we'll hear about some port scamming that happened in Russia, by applications and totally separate from the political, or whatever, aspect currently that is happening there. They are trying to create their own owned infrastructure. The Russian government seems to want to create some infrastructure which can be taken off the main internet if they want to and they call it for security reasons. I don't want to go into any of this, but with that background in mind, it's probably interesting to hear about that.

Ondrej Filip will talk with us about DDoS, denial of service prevention at high-speed. That's probably very interesting, because what you do when you are overwhelmed, how you can still access your servers when your servers IO ports are totally overwhelmed.

Then we'll have lunch, self-catering as we say, because this time we did not have a sponsor. And then, I am in the enviable position of needing two slides for the afternoon presentation, so many presentations we have. We first have got a presentation about RDAP deployment. RDAP, as we know, is the upcoming replacement of WHOIS. So, if somebody mentions that, I'm always inclined to put them on.



Mark Svancarek from Microsoft has given us a very cool presentation about IPv6, introduction of the huge campus in Seattle. So, it's quite interesting to hear, from a technical perspective, what they're doing with WHOIS and those things.

Then we have two presentations about machine learning, one from Qatar and one from Japan. The motivation behind this is different and, maybe different, it's totally irrelevant what the motivation is, it's interesting to see, maybe we can learn from either of them. The hosts here are from Cyberjustice Lab, and so, I've asked them to give the usual host presentation. And if they do some machine learning that they can apply for their own purposes, it may be helpful in having this block of these three things. I brought them in contact with each other so that they, sort of, liaise a little bit with themselves, so that the presentations fit in with each other and don't duplicate.

And then Bruce Tonkin will give us a little presentation about penetration testing at AuDA, always interesting. Then, Paul Hoffman from ICANN will organize a round table. He is basically behind the organization; I didn't put any details on the agenda about early warning for the root servers.

Maarten Wullink, who is here, will give us an update on Entrada, that was the passive DNS analytics. And then we'll hear from ICANN about the ICANN security practices. And then we will have a presentation about the migration from Afilias to Neustar. I was particularly interested, because they also mentioned the words 'communication plan.' I am vice-chairing the PDP, Policy Development Process, on



retirements of ccTLDs and what would happen if a country name changes or country ceases to exist and the ccTLD retires.

A communication plan there to inform the registrars and maybe even the registrars would be quite interested, so we can always be informed of our people's experience. So, I asked him to focus a little bit on this as well as part of him giving his experiences.

And then, a late addition is, we have recently heard about the Google quantum computer. Maybe a proof of concept and probably not exactly what the hype is all about with regards to the results. But it appears that quantum computers are coming and that means we need to be aware that current encryption, PGP, GPG, and also the DNSSEC encryption algorithms may not withstand a determined attack by a quantum computer for longer than a few minutes, eventually. So, if quantum computers are coming, we probably need to look at algorithms that would withstand an attack by quantum computers.

So, I've seen something on the DNS operating list, Bill Manning made a comment that he also foresees something coming. So he asked me about it, I added it him at the end. We have the room until 18:30, so it's a good problem to have, not having to leave early. Any comments on the agenda?



ONDREJ FILIP:

I just want to clarify; my presentation is going to be more about "What do you do with the Anycast clouds and how quick it is, rather than the real mitigation." Other than that, I think the agenda is perfect.

EBERHARD LISSE:

Thank you. As we always know, I want to have titles that fit on one line, but the extra presentation is not that important in the agenda. It's just that we know who's the next speaker and what they're talking about. And anything else? Who of the members of the working group will stay for the complete Tech Day? Because I need somebody to take notes. Ondrej did it last time?

ONDREJ FILIP:

I think so, I did, yes. It would be nice if somebody else would want to, but if not, I'm happy to continue.

JACQUES LATOUR:

I second Ondrej doing it.

EBERHARD LISSE:

I was hoping for you to volunteer. Okay, if Ondrej does it, what we usually do is, at the end the closing remarks will be given by Ondrej, he will take a few notes, and give the notes to me when he's done with it, and I will write a short report about each presentation, incorporating his notes, acknowledging them, and send to ccNSO so they can publish them.



So if there is nothing further on that, then let's go to our budget request thing. I have emailed the thing to the group, so you have all read it. Basically, what it boils down to is, this is the draft proposal that I have written. This is now not the same line numbers if you are comparing it with your text, this is now in landscape and a little bit larger. What we have done in the past is, we have never been able to have a funded speaker, so if we had a speaker who needed funding, we had to ask one of the bigger ccTLDs to assist us with the hotel room or with the plane ticket and occasionally ICANN has helped us.

But my own travel expenses, I have arrived at the hotel and so I have been taken care of initially by the ccNSO, then for a while by global outreach, but due to budget cuts they couldn't do it anymore. So, it was decided at the previous meeting and through the mailing list that we put a formal proposal in. It's the 40th iteration, this is the 40th Tech Day meeting, we have a large attendance, usually, and it seems to be one of the focal points that draws people to the meeting, who are from a technical background.

So, what we want is, basically, to have, just let me slide through this slowly, to have at least one, perhaps, two, funded speakers. So, if we decide we have a topic, for example, from a developing country, which is very cool, but the guy doesn't have the money to come, we would like to be able to give him a ticket, and put him up in a hotel, and give him the usual per diem.

And also, since I am from a small ccTLD, I also would like to have the facilitator funded in at least some way so that the workload that is put



in by the facilitator can be done by anybody from a small and from a bigger ccTLD and so far this has happened at every meeting. But we would like to have it in a separate budget item so that we don't load global engagement or the ccTLDs with this cost. This is about the keynote speaker; this is about that.

What we propose is that we create an internal committee of three members. One of them should be a staff member, one should be a ccNSO council member, and one of them should be on SSAC. Preferably these should all be members of the tech working group. We have members of the group that fit this criteria, so they should evaluate the request for funding and suggest, "Okay. We can do that." And I or the chair, who is the recipient of funding should not be involved in any funding decisions. That is that. We have circulated it through the tech group. Is there any opinion on that, or any comment, or any errors in the proposal in the written thing, or can I just change it back, undrafted, and fire it off?

ONDREJ FILIP:

I think the proposal is right, the only thing which is a little unclear to me is how the facilitator is appointed. I assume that it is going to be you, like a chair, and you want to name a facilitator in case you couldn't come, for example, that you would appoint another. But you know, mayb, if you can comment on that a little bit.



EBERHARD LISSE:

At the moment I am the facilitator as the chair of the group, but I'm 62, I'm not going to do this forever, and I would like to -- on the one hand, I have been receiving funding to come to this Tech Day, because it's also quite a bit of work and I want to put that on a formal basis and I also want to put this on a formal basis on a continuing basis. So that eventually, I won't do this forever, that when whoever we appoint as the chair, or as the facilitator, or as both, can then carry on, I feel, in the same way.

ONDREJ FILIP:

I understood, but my feeling was that, you know, that it may happen that you can't come to the meeting, but you still want to stay as chair, so I expected that you would then say, "The facilitator of this particular meeting is this guy." for example, or lady, and he or she runs it. How did you mean that rule?

EBERHARD LISSE

As I, as the facilitator, would not be involved in such a decision. If I couldn't make it, I wouldn't claim the funds, rather than who does facilitate the meeting would be entitled to the funds, or if you do it from a bigger ccTLD, or GAC and say, "No, we don't need the funding." that's the one thing I have not thought about. We probably need to think about it and put this into the proposal.



ONDREJ FILIP:

I'm probably going into a different direction. My question was, "Who appoints the facilitator? Who is the facilitator of the meeting?" I expected it's going to be appointed by you, but maybe it should be written, I mean in the role of the chair, it probably should be written.

EBERHARD LISSE:

That's what I was saying. We probably need to think about it and rewrite it in the proposal. Anything else? Okay, I will redraft it, send it again to the working group, and sort of, then we can approve it internally in the working group, if we agree that it achieves consensus on the language, then we'll fire it off. It's not a hurry, it's only for the next upcoming budget cycle, which hasn't, it's not yet. So, we were a little bit late for the previous one, so we decided, I think it was before Marrakesh, "Let's do it in Montreal," discuss it on the mailing list, and then propose it to ICANN so they have enough time to think about it and then decide whether they want to do this. And also, we can lobby a little bit with ICANN head office. Jacques?

JACQUES LATOUR:

So, one comment is, we're going to need a new process to manage the submission, because some are going to be from CC's or people that are funded. We need to classify as, "They will need to be funded," and the program committee with have to figure out. There's going to be two things, right? Who we can fund and who wants to present on that program? So, I think we're going to need new processes inside the group.



EBERHARD LISSE:

That's why I thought we make -- the way I would see this happening is, most speakers come here anyway, but if we find a speaker that wouldn't come and says, "I would do a presentation, but I can't fund the travel," then it would go to the funding committee and they would decide whether it's worthwhile from the technical aspect and also deserving enough to use the funding.

And if we don't use the funding, if we have two or one, if we don't use it for a particular meeting, it falls away, it's not put into a budget for a following meeting. So, I don't want to waste money and, on the other hand, I also don't want to have appointments made because we have a budget and we need to spend it.

JACQUES LATOUR:

I think in the coffer paper, or presentation, we say we have an opportunity to fund some speakers, and my gut feeling is that we're going to have an influx of requests, more than usual, before we used that.

EBERHARD LISSE:

We have in the past, when we had opportunity, we had limited funding, maybe available, it made no difference. But that's exactly the point. We see that there are lots of applications and some of them say, "I can't come because I haven't got funding." If the topic is worthwhile and interesting, then we should have an opportunity to



have a good speaker come and make a presentation, not just because he can't afford to come, we have to reject it. That's why I'm saying we should try to propose this and see what is the outcome.

Okay, good. That's that. Then we have Wolf-Ulrich Knoben from the Internet Service Providers Constituency, contacted us in the past, and recently again, about some cooperation; you have the floor.

WOLF-ULRICH KNOBEN:

Good morning everybody. Thank you, Eberhard. My name is Wolf-Ulrich Knoben, I'm here together with Tony Holmes, he is the vicechair of the ISPCP Constituency. As Eberhard mentioned, we were in contact in the past, since our constituency has already done also some, or developed and performed some so-called outreach event, we call it. And this made us that we had sometimes in some areas, for example in Abu Dhabi, in Hyderabad, it was in Barcelona as well, we had at least a half day with presentations with regards to interesting topics for our membership.

And that is, you know, the reason why we have been, let me say, put together, also from ICANN's point of view, because we have been talking to Chris Mondini, we got some support to prepare those events. And then came the idea, so, maybe there is a combined interest between both groups here, ccNSO and ISPCP, with regards to taking up matters, and presentations, and these things. So, our main intention, frankly speaking, is outreach in the areas. As our



membership is, our active membership, let me say that, is not as large as yours is.

So, what we have, what we are doing is, to raise awareness of our work in ICANN and then to get in contact with people, especially, for example, in the African continent, in continents and regions where we have not so many members. So, that's one of our major goals, and the other thing is to have an exchange, a technical platform, where we can have exchange on technical matters related to ISP matters, to networks, to whatever is related to ISPs charter and our members. So, that is the reason why we came.

The other thing is, frankly speaking, would be, we also need funding for doing this. So, we can't do that by our own and that may be a reason to think about whether we could, in a certain form of cooperation, together with ICANN, also, do the best in this regard, in regards to budgeting and funding in order to save money on the one hand side, from ICANN's point of view. And also, in order to have a benefit from that.

So last but not least, I say we are in a very early stage in contact with Eberhard and ICANN in thinking about how to cooperate in -- we have to, if we do that, we should find a way that both parts are satisfied, you as you, the incumbent here for the Tech Day and we as well, so that both parts could have their own brands showing for those combined presentation days. So that's it for the moment from our point of view. Maybe in the discussion, Tony can also add. Thank you.



TONY HOLMES:

Yes. Thank you very much. Tony Holmes for the record. Just to add to what Wolf-Ulrich has said, we certainly wouldn't be looking to replace all of our outreach activities with the fact that we're working with you. But we have recognized some specific technical issues, which we addressed in the past and that we will continue to expand on. For instance, as part of our activities when we've run what is considered a similar approach on technical issues for ISPs. We've covered things such as, 5G, internet of things, future identifiers used across the whole industry.

Now, some of those things we certainly considered would be of interest to CC's without any doubt at all. So, it's really looking ahead and seeing where there were certain aspects of technology that we would want to cover, that we thought were would also be of interest to your community. And seeing if there was any benefit and synergy from working together in the way we present those things during the ICANN meetings.

So, as Wolf-Ulrich said, it's early days looking at this, but certainly, from our perspective, understanding exactly what you do, how you run your Tech Days, and then looking at whether there's a strong correlation with some of the technical issues which we have a particular interest in. Maybe combining our efforts is what we had intended. Thank you.



EBERHARD LISSE:

Thank you. One thing that I wanted to point out, to stress again, why this originates from the ccNSO and why the group is in this ccNSO Tech Day is actually not intended to be restricted to the CC's. So, we have long, in the past, identified that we should get away from the silo approach that each constituency has their own thing. Because a technical problem is the same for a registrar that works on a G-level. Then, on a cc level, ccTLD has got exactly the same problem as a small gTLD and the solutions arrived at on either side can probably inform the other side very well.

So, we wouldn't really say we're just for CC's. We haven't really had that much ISP stuff, yet. Not because we don't want it, because there haven't been many proposals. I always say, "I don't care what the presentation is about as long as it is interesting." We had stuff like, watermarking videos, you have to prove that it was not edited by somebody from .pr, which was, when I first heard about it, I was worried, it was the highlight of the day, in fact, because it was so cool. So, Wolf-Ulrich, from what I understand, is on our mailing list, so he sees everything we put on that mailing list.

I propose, if we have a Technical Working Group mailing list, to put one of us on as well so that we sort of see what's going on. And then, of course, if there are topics, if there are speakers that are from a particular constituency, or have a particular topic in mind that could be valuable for both of us, then we know about it. And there's nothing wrong with making the same presentation twice to different audiences, or vary it slightly. Or, in the long run, if you need a venue, if



you've got not enough for your own day, but you've got two speakers, we will find a place on this, yeah?

This time I have to go, I had to really squeeze this and usually we have to relinquish the room a little bit earlier than we have it, and we usually book it one session longer than we intend to do, but this time I had to go to the very last minute. We will always find a place for interesting presentations on our side.

WOLF-ULRICH KNOBEN:

Thank you, Eberhard, for that. So, just to make it clear, so we are not that organized as you are, in that sense. So we don't have a committee working on technical matters here. So, we are a small constituency here. When we come here, for example, from us we have usually 20 members here from us. So, we don't have a regular event, like you, for every ICANN meeting. We had it put, in the past, you guys under outreach.

We have an outreach committee, outreach for that, there are two or three people doing that. And when it comes to the point that we say, "Okay, there is an ICANN meeting in the area, it could be interesting, for us as well, to do that outreach." Then we start talking with ICANN about that, from their perspective of view, that could be also be supported and it turned out, it was three or four times, we did send.

So the question is -- what I have done in the past, as long as I'm on your agenda, I have also circulated that within the constituency, because people come from very different perspectives. We have



people working on the IX notes and other people coming as service providers, just from smaller ISPs, others come from big tele-corps, so the interest is important on that. So, the people, it helps our members participate in your meetings, from time to time, if they have an interest related to that. So, we didn't discount that directly. So, we have to discuss internally how we can better do the link to you. At the time being we cannot give you an email for that. Thanks.

EBERHARD LISSE:

When we drafted this proposal, the request for proposal, I always remembered to make sure that you get a copy of the request for proposal and then you can circulate it to your members. And the agenda that I have always has got the individuals clicked on, if you have clickables. In other words, if you have something on a draft agenda that you find interesting for your community, or even suitable for outreach, you could use that to contact the individual directly and see, since they're coming anyway, would he be willing to participate in some of the things, or an outreach activity, or that.

If you have an outreach activity planned that might be interesting for us to hear of, we usually do our thing on Monday, which is early in the week, so it might be a good idea for that individual to speak, and as I always say, if the presentation is riveting, then a little bit of advertising is allowed. And since it's for a reasonably good cause, even if it's commercial, outreach is always a good cause, I think. There's nothing wrong with making a nice presentation and saying this is initially intended for outreach, I thought ISPs were going to contact, so that



you reach a few more people in the meeting. Jacques had his hand raised and I used up privilege of the chair.

JACQUES LATOUR:

Thank you. Jacques Latour. So, I've got a couple of questions. So, when you say the ISP community, there are members here, you say there's about 20, are they technical people, or are they business people? That's the first part. And the second part is the outreach. Are you trying to educate what ISPCP is or are you trying to have technical discussion on ISP related issues?

TONY HOLMES:

Right, I'll try to answer your question. In terms of the attendance here, there is a mix of people, but a majority are, I would say, come from the technical community of ISPs. The problem that we face as ISPs here, is that for large ISPs it isn't quite so difficult to get to ICANN, but for smaller ISPs it is. I mean, they are very business focused and certainly they have to work quite hard in the community that they operate in. So, they tend to be represented here through organizations such as the ISPCP, and part of the contact we have with smaller ISPs, some of it is direct, some of it is through the ISP associations.

Certainly, where we've had issues which have raised technical problems for ISPs, we get a lot more engagement in that, because it affects their businesses. For instance, one of the things we can point back to is initially when the gTLD space was expanded, there were a lot of problems with the new domain names not resolving. Now,



initially that was laid at the door of the ISPs, that they were actually filtering and blocking those domains, it wasn't the case.

It was the case that a lot of the blockage came from software that hadn't been updated and we needed to get out and outreach to that community to actually get them to understand that top level domains could be more than three characters and they needed to enhance their software to change that. So, when we needed the technical engagement, we had a campaign that helped resolve some of that. So, we do have a fair amount of technical expertise within the constituency and we do have the ability to expand that out.

In terms of issues for ISPs, there's two tracks to this. There is the outreach track, which Wolf-Ulrich has referred to, which is, for us, I think, educating people to ICANN, and what ICANN is, and how it works, and how the community engages in that, to get their engagement. And then there is the presentation side of things, which we've looked at trying to really explore and get some messages through, in terms of future technology, that I would suggest, impacts ISPs, but also the broader community as well.

So, for some of the workshops we've run, the attendance has been fairly broad. I don't think we've been fortunate enough to have much attendance from the CC's and some of those events, but certainly from other parts of ICANN, has been quite broad. And we would look for it to be broad. And I very much agree with the remarks you made, Jacques, that it shouldn't just be for CC's.



I think, some of the technical issues, we do need to be aware of, and explore, and engage other parts of the community. So, that was our initial look towards having a dialogue with you, to see how we could explore that, particularly where there are clearly issues, which we would like to raise that needs to be much broader than ISPs. So, I very much welcome your approach on that. I hope that has answered your question.

EBERHARD LISSE:

Does that answer your question, Jacques?

JACQUES LATOUR:

Yes. Because there is one topic, for example, finishing the migration from IPv4 to IPv6, eventually, you know, before the next thousand years we need to get that done. And I'm trying to find a home for that, for example, and it's not in SSAC, and it's not, I don't think it's with us, because we don't play with numbers, and so, where would IPv6 fall, I think, is within the ISPCP, maybe, with numbers, or, I don't know. I think we need to broaden our scope and that's a good opportunity.

TONY HOLMES:

Yes, thank you, I'm pleased to hear that, because that's an issue that's very close to our hearts. And you're absolutely right, it's essential for ISPs to engage in that. And that is one of the issues that we've covered before, in terms of our workshop, looking at that move from IPv4 to IPv6. And also, the association we have within ICANN with SSAC, the



way that we tend to work with that group is, that from time to time we will have a slot with them as part of our open meetings at ICANN.

And then, we try and focus on what issues that they're dealing with and have an interest in, which are specific for ISPs. But some of those are much broader and certainly the IPv4 or IPv6 is absolutely essential. The same as we became quite engaged when there was the KSK rollout, was another issue that was obviously important for us, but important for the broader community as well.

So, I think it's -- our intention is to try and focus down on issues which we would like to advance, which are far broader than the ISPs. So, one of the things we've, I was going to say suffered from, it's probably the wrong expression, but one of the things we've been aware of is that sometimes the days that we've focused on to have our presentations clash with your Technical Day. And when we look back, we think, "It would have been good to have shared that with the broader community," so working together seems to have resolved that.

EBERHARD LISSE:

And to be honest, I thank they have an established week now, 40 meetings, we can try and use that also to assist, the idea is that we learn from things. In other words, if we can assist the ISPC, or the members of ISPC in that sense, through some other way, I'm all for it. I'm not so much -- we have ISPs in Namibia and small countries too, so it doesn't matter that we have Tech Day for registries, registrars, cc,



gTLDs, it doesn't matter. We have rarely had some ISP related stuff on, but we don't play much with numbers.

But IPv6 is coming and that's a topic that I'm thinking of, sort of, putting it in the invitation request for comments for our next meeting, that we start thinking we want to have presentations about the switch to IPv6. And if some of your constituents find their way to Cancun and have something interesting to say, we can use that. And then, if you can contact an outreach with the same people, you have killed two birds with one stone.

In the end I must say, this is all about cooperation. I'm totally against these silos that we say, "Okay, a g registrar is different from a c registrar, and ccTLD registry is different from a small gTLD registry. In the operations, to you are yes, but in fact are no. Sometimes we use even the same registry software for smaller gTLDs that we use for small ccTLD registries. So, while we don't have to send in the reports that are generated, you can read those reports, and therefore the problems are the same.

TONY HOLMES:

Thank you for that. I believe that the early focus towards IPv4 and IPv6 is something that we would welcome as well and look to engage in. Thank you.



EBERHARD LISSE:

Alright, anything else? Thank you very much. Anything else for our broader meeting? Okay, we'll do this tomorrow at 10:30. We usually suffer that we wait for the opening ceremony to be finished, even though most of our people don't go there. But I think it's the polite thing to do, especially in Canada, where they are so nice.

JACQUES LATOUR:

Normally we talk about the next session topics, if there's anything special we want to talk about.

EBERHARD LISSE:

I don't really have anything special on my mind for next time, but we will put the move from IPv4 to IPv6 again. Patrick will, as usual, engage with the regional guys for LACNIC. I will speak with our LACNIC representatives, we have the colleagues from Chile sitting over there, so that we can get some locally interested topics, interesting topics that are interesting for the locals but also for the general community. And if something comes up on the list before we send it out, we can put it in the request, as I circulated on the list before hand anyway. Alright, that's it. Thank you very much and I'll see you tomorrow at 10:30.

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