
COPENHAGEN – Internet Technologies Health Indicators (ITHI)

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UNIDENTIFIED FEMALE: March 15, 2017 at Hall B4.1. Internet Technologies Health Indicators.
13:45 to 14:45.

We have room here at the table, everyone. Please come over. It's a casual session.

MATT LARSON: Hello, everyone. Why don't we get started? I'm Matt Larson, VP of Research from the Office of the CTO, but I'm just your moderator today. Welcome to the Internet Technology Health Indicators Update session. I am going to turn over to Alain Durand from the Research Team. Let him present. All yours, Alain.

ALAIN DURAND: Thank you, Matt. So, welcome. [inaudible] up more seats at the table. So please, come and join us over here.

Today, we are going to have two segments in our session. First one will be an update in our community and the second one will be an update of where we are on the name side.

So, as you may remember, we started this project back in ICANN in Marrakech a year ago and made an agreement with NRO that ICANN from the CTO perspective will lead the definition of identifiers and

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metrics for the name side of ICANN and GNRO will run a similar project on the number side. So, I am very happy to have John today, who is going to give us an update on what has been done. After that session, I will give an update of where we are now following the open public period comment that closes back in end of January and some indication as what will be our way forward. So, over to you John.

JOHN CURRAN:

Okay. I am John Curran. I am the Chair of the NRO. The NRO is the five RIRs working together. You know it within this community as the ASO. The Chair rotates between the five RIR CEOs and I'm the winner, [inaudible], I don't know. This is my year.

So, without further ado, I will give the update and this is on the Internet Technology Health Indicators.

Next slide. Thank you. Okay. You can work on making that work [inaudible].

Okay, as Elena has described, the goal is to be able to have some measure of the health of the unique identifier systems. We were approached about this project, this project that's came out of the, as I understand it, the ICANN Strategic Plan and it is being shepherded by the office of the CTO.

We were approached and said, "That sounds like an interesting project, but we want to make sure we do it in conjunction with our community and our community doesn't really show up here in force. We do have a number of folks who are here because we, they are

appointed bodies but our community actually meets throughout the globe on meetings all around the globe dozen times year and so that's really why we need take this to work to make sure the identifiers represent what they think a healthy Internet number system should be."

To do that, we need to have a place to start. So, the registration staff of the five RIRs has been tasked to develop an initial strategy and graph set of metrics which will be used to kick off discussion in all the RIRs. I'm here to give an update on that.

Next slide. Lovely.

So, we've done internally initial definitions of risk document. We are reviewing that at this point to make sure it's fairly complete and we're planning actually, momentarily, next few months to release that discussion draft to the numbers community for their consultation. Things that they can say, what we came up with the metrics at their own, make suggestions and then we need to go through community consultations that has to at least make it through the RIR meetings to make sure it's gone to all the regions. So, this will probably be something that gets completed in the third quarter if everything happens timely. It will slip to the fourth if we somehow miss an RIR meeting.

Next slide. Lovely.

So, the metrics to include all the Internet number of resources that are administered by the RIRs. Currently they are included in our NRO, its

delegated statistics. What doesn't it include? It doesn't include those reserved for the IANA for technical purposes. So, we are not thinking about metrics that are applied to things like multicast address space or reserved space or similar things. We're looking at the ones that are used by the ISPs and the content provider, the end users for numbering equipment on the Internet.

I'm going to give you a snapshot. It's a little hard to see. Go on to the next slide.

That I-chart up there – in fact, we can make the title go away, slide it down a little bit because we all know what the title is. There you go. Okay. We'll talk about the some of the categories of metrics we are looking at right now. Whether or not the registry data is comprehensive that's covered all the resources. Is it [inaudible] coverage, it's not duplicate. Is it correct? Are the entries in there have correct information and is the information current enough, i.e. is it usable? And, so those are the categories of metrics and we are looking at the definitions, the measurements, what the units would be to measure those, and then what the actual methodology for measuring, what process is used.

And so we have got the draft that covers this, and as I said in the next page, a couple of little notes, there's questions on, for example, how detailed of contact information is sufficiently detailed to be considered valid? Is it a legal address, a phone number? What does it mean for the address? Is it useful to measure whether the address is

correct versus whether it is reachable? Because those are two very different concepts.

We also have to worry about how often to measure these metrics to make them useful because they change. These are some of the things we have been discussing in the RIR meetings when we go through this. Recently, contacted and updated recently, if a contact sent an e-mail into us, is that an update. They didn't update their record but we see they're sending us e-mail. It could be.

So, we have a few details to work on and but I do think it will converge relatively quickly. We're happy to support the project and that's it. Next page. Questions?

UNIDENTIFIED MALE:

Thank you, John, so I would kick off one question. [inaudible] was saying, "This is quite impressive work," and I really thank [NRO] to come here and present what we have done. So, my understanding is this is in the new category of accuracy. Some of the problem areas that we're discussing in the name space also cover abuse. I was wondering if the Number Committee will also be looking at metrics related to abuse or do you consider this to be out of scope.

JOHN CURRAN:

Yes, we are very clear in the Internet registry. We have a registry that shows who is assigned rights to the number resources in the registry. How someone uses them, doesn't use them, uses someone else, we don't control routing on the Internet. That's ISP. So, to really measure

and decide what the right definitions are, you would need to bring a very different community in and get them engaged. So, we'll be focusing on the registry accuracy that doesn't cover the usage, how those [inaudible] are used. Just what parties have the rights to run.

UNIDENTIFIED MALE: Thank you very much, John.

UNIDENTIFIED MALE: Okay. Go ahead. One question here.

UNIDENTIFIED MALE: Hi, John. [inaudible] [.PR]. Do you think those indicators already proposed would capture situations where an ISP designated an address range for one user because that user had the connection but then the user moved providers but the IP address still show the allocated? Do you think those indicators will capture this?

JOHN CURRAN: That's a great question. That's actually a great question that the community is going to have to face because they need to decide what level of information should be recorded and visible. We have ISPs who believe every record that they do on every sub-delegation should be infinitely visible and then there is ISPs that they are like they are on the entire block, why are they showing individual sub-allocation. So that's going to have to be worked out in each region in their feedback and then we have to harmonize it because it doesn't do any good to

have metrics for the system that have different definitions in the five RIRs. So, that's an open question right now, I would say.

MATT LARSON: Any other questions for John?

ALAIN DURAND: Well, if no further questions, thank you, John. And I want to extend a standing invitation for you to come back anytime that we have a meeting here, so that we can collaborate on this and [exchange things].

[MAGGIE]: Alain? I'm sorry. [Maggie]. Hello, John. Was it the I-chart a list of those indicators? I'm sorry. I'm new to this topic. I just got –

JOHN CURRAN: Yes. Those are the proposed metrics, the draft that we put together for discussion that we would be sending out to the five RIRs for them to use as an initial input. So, I don't know what comes out the other end, whether it resembles, but we had the staff put this together so they have something to at least mentally start from.

[MAGGIE]: And, Alain, this presentation will be uploaded in the schedule. So, we can refer to it. I could not read any of those speeches.

ALAIN DURAND: Yes.

[MAGGIE]: Thank you.

ALAIN DURAND: All the documents that are submitted here will be made public. Adiel?

ADIEL AKPLOGAN: Just one clarification question. Are those metrics, will they be measured by the RIR themselves and provided to the ITHI as inputs?

JOHN CURRAN: The reason we had the registration team start with it was because it was useful to say what is it that we think we could measure. Not good to have a metrics definition if you actually can't populate it with data. So, obviously, we would actually measure what the community converges on.

ALAIN DURAND: Alright. Any further questions? Alright. Thank you. So, let me talk now a little bit about where we are on the name side. So, next slide, please. Make it a bit smaller. Yes. Thank you.

Following the ICANN meeting in Hyderabad, we made public comment period requests for definition of problem areas which we call “disease”

at the time. And, we received a number of comments. We published to the staff report those comments. I'd like to go over with you on our analysis of some of those comments and then I would move to some kind of a way forward.

Next slide, please.

The first comment we really got was about the use of Latin names. Clearly, that was not well received. Comments were along the line of, “Well, we already have many languages in the community and English is sometimes a struggle. So, turning this into Latin will be a little bit too much.” So, this [inaudible] was really clear. So, we have decided to drop this Latin terminology altogether and only using these names. And, hopefully that will help people to understand what this is about. So, thank you for the feedback and we're listening.

Next slide, please

The number of projects that are looking at data within ICANN. One of them is the GDD Marketplace Index. It used to be the Marketplace Health Index and because health was in both names, the number of persons were confused between the two projects. We want to make clear that those two projects are different and address different sides of the issues. Marketplace Index really examined business-related metric. The ITHI initiative that we are leading from the office of the CTO is examining technical metrics.

I have personally very little experience in business metrics. So, I will be very, very badly qualified to say anything about that but we hope that

bringing this community, we can [have] some good inputs on technical metrics. There might be things that will be at the edge of the two and we would work very hard to make sure that there is no overlap. If it varies, please bring it to us and then we will address it.

There were some questions about the scope of ITHI with regard to ICANN Bylaws. So, it was also noted in some of the comments and John referred to it. This initiative is framed by the ICANN 2016-2020 Strategic Plan. That Strategic Plan has been grandfathered in the Bylaws. So, there is no question that this initiative can actually fit within ICANN Bylaws.

Next slide, please. We'll talk about Number Community participation.
Next slide, please. I'm very happy to have John here today.

Another comment that we received was, "Not everything can be put into metrics" and that is true. We have to recognize that and be humble enough to think that we cannot just put a number to metrics to summarize everything for absolutely everything. That being said, there are enough areas that we can measure and the numbers that will be useful to the community but we think it's [inaudible] going forward at least focusing on those areas that we can measure. And the idea will not to be focusing on the actual number that we will get but focusing on the variation of this number year over year, and the score of 725 or score 123 doesn't make much of a sense but if we can compare that with the score of may be 64 from a year after, there is a decrease. Now is the decrease good or bad? I'm sure there will be a lots of community discussion to understand what it means.

There also will be lots of committee discussions to maybe correlate these numbers with some other things. As you will see in some of the metrics that we are thinking about, some of them will be daily measurements. And maybe, other people will take on [for] to correlate or try to correlate [it was] daily measurement with other things that are happening on the Internet, like outages or promotional campaigns, domain names or any other spike in phishing or malware or botnet or spam activity that could be detected somewhere else.

So, yes, we have realized that not everything can be put it to metrics but at least we will try that and if anybody has any suggestion on what to do about the things that cannot be measured, I would like to hear from that.

So, next slide please.

What's the way forward? Next.

As I mentioned, we decided to remove the Latin names, we also decided to remove the word “disease.” One other feedback was, “Well, this is really a bad connotation and we don’t want to be associated with such a bad connotation.” So, right now focusing on what we call the “problem areas.” Let me change that again. I also received some feedback more recently that maybe we should not talk about health at all. [For] simply indicators of what is happening. Is it health or not? Maybe they're just a wrong discussion. So, if you have any feedback about this suggestion on renaming this whole project, identifier indicators like 2I or II instead of ITHI, which nobody really understand

what it means. I am talking about acronyms. So, let's make something we want to do.

So, the five problem areas that we had initially maybe difficult for us to address at the same time and in order to make progress and really best use our resources, I like to propose that we focus on two areas. First one being data accuracy which is not unlike what John has presented on the number side and abuse.

About data accuracy, we have fundamentally two ways to address this problem. One is direct measurement by looking at the actual data and this is very much in line to with what John presented. There is a difference, is that in the number [work], the entire data set is owned by the RIR in the name side, in ICANN side the data is owned by the registrars. And there is a public side of it which is in the WHOIS database, and the two may or may not exactly be the same. For example, the privacy proxies that hide some of the data or some of it may or may not be visible.

So, that's one area that we can try to measure. Another one is an indirect measurement, that is proxy measurement essentially. We can look at complaints that are received by ICANN's Compliance Department – Maggie here – and look at how many of those complaints actually result into or related to WHOIS information and result into some kind of action. So, there are lot of caveat and to do that, we have to be really careful on what exactly we measure but that's an avenue that is possible to explore.

On the Abuse side, a suggestion that we have is to somewhat tie this to an anti-abuse project that is led by the Office of the CTO at ICANN which is looking at a number of feeds coming from anti-abuse list. And, the suggestion here is for every TLD or registry or registrar or all of the above, every single day look at all the domains that have been registered. After a certain period of time, look at how many of them actually showed up into any of those anti-abuse list. And we can calculate the percentage that it represents. So, then we [can't] use this as a score for that particular day. And, we [can't] do that every single day over year and that provide a histogram with regard to that particular TLD registry or registrar.

So, there are lots and lots of questions on how this can be done. For example, sometimes people who want to do abuse on a name will register a name and not use it immediately. They will leave it dormant for a while and then start using it. So, let's say we want to count 30 days, counting 30 days after registration may not mean anything. Maybe, we have to count 30 days after the first time the name actually shows up somewhere on the Internet.

So, there are lots of details that need to be understood and made right. But, we hope this is a promising avenue and we would really like to engage the community to help us define this. I have noted a question. I would like to go into the next slide before answering. Can you let me go into the next slide before? I think it will explain a lot.

KATHY KLEIMAN: And I just want to ask. So, anti-abuse I thought in this context – I don't know if David Conrad just sat down or just left – but it was malware, botnet and phishing. But you mentioned spam, and I am just reading from the ICANN compliance page, spam is unsolicited commercial e-mail complaints about spam and outside the ICANN's scope and authority for these types of complaints please refer to one of the other option. Is anti-abuse a spam or are we tracking spam now?

ALAIN DURAND: We have seen a number of reports that are showing that spam is usually a precursor to the other abuse and is also an indicator of over abuse coming in. So, what was proposed in the definition that we had in the public comment period, and it was discussed in other workshop, not to leave the M3AAWG workshop that we had in Paris in October was to actually include spam also in this definition.

KATHY KLEIMAN: Is copyright infringement and trademark infringement allegations also a part of the anti-abuse that we're tracking?

ALAIN DURAND: Those are not.

KATHY KLEIMAN: Let me just share since I wasn't at whatever workshop you are talking about. I work with non-commercial organizations that get on spam list

a lot and they're not spammers. There is a counter there, there's a problem.

ALAIN DURAND:

So, I take your concern. I think that is an important concern which is essentially boils down at the end to, how do we make sure that we don't have false positives in those anti abuse list?

If I may go to the next slide, I may address it. Please.

In all of those projects, the [devil is really into] the details. We need to get all those details right about what is measured, how it is measured, and how to make sure that we don't really run into false positive or false negatives, right?

For example, let's say that we have a number of feed, let's say, five feed or ten feeds of data. If the domain shows that in all 10 feed, that may be some indication. But if that shows up only in one feed, do we consider this to be domain that has been impacted by abuse problems or do we consider this as just a false positive? Do we need to have some kind of an election system among the different feeds or do we need to consider that if we have a threshold, maybe three feed out of ten showing it positive and becomes as a positive, which brings to the question of how do we evaluate the quality of those feeds and how do we select those feeds?

The plan for us to move forward with these ideas will be to, to all the series of workshops like we did before and invite the community to help us define those things. Because the last thing I want is to have to

define it myself. This will be certainly full of errors if I were to do that and build some type of a prototype with this and potentially show some preliminary numbers at an upcoming ICANN event – I’m not sure it will be in one in June or the one later in the fall.

So, Peter, you had a question.

PETER KOCH: Yes, thank you. Peter Koch, DNIC. I have two questions from me. If you go back one slide, please? Or maybe two slides. No, that’s the one – abuse for every TLD and so on and so forth.

I’m a bit new to this so maybe I missed the scoping here. I wonder since you mentioned compliance and everything when you talk about every TLD, is that every TLD in scope and which of the TLDs would be in scope?

ALAIN DURAND: All TLDs.

PETER KOCH: This is a bit worrying.

JOHN CURRAN: So obviously, the context of new TLDs we have access to appropriate data. In the case of ccTLDs, we don’t necessarily don’t have access to the data and it’s on a voluntary basis. So, where CCs are willing to provide us with the data we need for this sort of thing, then we’ll

include them in the statistics, otherwise there's little we could do. We could rely on [inaudible] DNS and other sort of stuff but that probably not worth the effort.

PETER KOCH:

If I may follow up, the allow mentioned incorporating or aggregating feeds from the various blacklist so on and so forth and there is little influence that the TLDs have for being on there or having second level domains on there. So, that could happen but it will still be worrying. If you aggregate the various lists and then judge the TLDs whose second level domains are on those lists, then I would come back asking what the scoping of the project is actually.

JOHN CURRAN:

So, obviously, we don't have any control about what domains get listed in a feed, right?

PETER KOCH:

That's true. Question is what do you include in your reporting?

JOHN CURRAN:

The feeds and the methodology by which we include data would be published for community input. The intent of this is not to massage data in any way, the intent is to provide an authoritative set of data, that people understand the methodology and people can agree that, yes, this is reflective of how DNS abuse is occurring. We're not making up data, right? This is data that anyone can gain access to.

PETER KOCH: Yes, I guess so. However, by accessing the data and processing it in some way, you're adding weight to it. I know that some of these lists are very well used and may be sacred in certain circles but they have sometimes very questionable governance models and I would be worried again if they were aggregated and used and get their own reputation increased by ICANN making use of them without a very, very, very strong statement that neglects any endorsements and so on and so forth.

JOHN CURRAN: Okay.

PETER KOCH: And this is part of how it is communicated, right? Everyone can aggregate these feeds. If they are ICANN blessed, we know. We know that. I mean, our TLD, the whole TLD, has been on one of these famous lists for reasons of say, diplomatically misunderstanding. I don't know how to tell –

JOHN CURRAN: Another aspect of this is, we're not relying on a single data feed, right? So, we're relying on an aggregation of a large number of data feeds in order to minimize the risk of a particular idiosyncrasy of one of the data feeds impacting the statistics that are being gathered.

PETER KOCH: Yeah. Without turning this into a dialogue – although we do – how do I get Peter’s feed on your list of things to be aggregated?

JOHN CURRAN: That’s part of the criteria that we work out with the community on the methodology.

ALAIN DURAND: So is back to the point I made earlier about when we have multiple feeds saying different stories, telling different stories, which one do we believe? Which feed do we select? And this should not in my perspective been a decision that I will make. This should be [the result] of a community process. And that’s the consultation we’d like to start now. Question?

MATT LARSON: Well, just to manage the queue, the gentleman at the end was first.

ROLAND LAPLANTE: Yes. Two quick things. It’s Roland LaPlante from Afilias. On the slide that talked about details of getting it right, I would like to suggest a couple of additions to that.

What is measured, how it is measured – I would like to add why we’re measuring that thing and even more important to that is: what are we going to do with the findings? Because most of us that are in the business, we know who the crooks are, we know the bad guys are but

nothing seems to get done today, and I don't know whether the purpose of this is to create more awareness and pressure and so forth so something gets done. But I don't know if something can get done in an environment different tomorrow when we know this more publicly than it's being done today when we know it but less publicly.

JOHN CURRAN:

Right. So the intent is to provide information to the community to help inform policy discussions. Right now, ICANN has – the ICANN organization has limited mechanisms by which we can address DNS abuse, one form or another. The idea here is to provide additional information that will help inform the discussions related to policy to enable the community to make decisions about whether or not ICANN should have a slightly different role or approach that we take in dealing with DNS abuse. So, this is part of the input into the community discussions and some of those discussions may suggest that in particular cases ICANN may have additional recourse to address DNS abuse that's a crime.

ROLAND LAPLANTE:

So it's one thing. We are all required to take appropriate action when we find something that's evil and maybe that discussion can focus around what appropriate action actually means.

MATT LARSON:

Okay.

[CHRISTINE]:

Thanks. [Christine], Amazon registry. I just want to make a couple of points. One, somebody mentioned the aggregation of feeds would make better data but I am going to submit that it would make worse data. Because, instead of having a feed with 10 abuse situations and 20 and 20, you now end up with 50 registries that are maligned rather than a tighter number.

Second point is going to be is that, I understand, I keep hearing about the intent of the use of this data but we all know the intent is not necessarily where things end up. And, what we are going to end up with essentially is a list of registries that are sort of labelled as “bad actors” by a list of third party often private for profit companies that may or may not have registry, an understanding of the registry operations.

Third, I submit that the gTLD registry operators are required to do their own malware monitoring under Spec 11 3b. And per our audits, we are required to send a list of all of our reports. We can say these were false positives, these were cases we quarantined, these... and we can explain it and tell you about the data and you can get that data but if you just [pull] reports without knowing if there are false positives or if there is anything else that’s wrong with the data, you’re just going to be painting a bad picture of certain registries I think. So, I think independently going after the data without using the stuff the registries submit is going to give a really poor picture. Thank you.

ALAIN DURAND: So, I would like to address the first point. It depends on how we aggregate the feeds. If we simply say, “Oh, if a name shows up in any other feeds,” I think you will be totally correct. If we decide or the community decide to go to a system of voting in between the different feeds, then the likelihood of this happening is much, much lower.

Now, I would like to also address the last point that you made, would you suggest that before this data is published, let’s say we compute an index for a particular day that there is a round trip with a particular registry or registrar or TLD to provide an opportunity to that party to validate that data?

[CHRISTINE]: Obviously, I am not here to speak about on behalf of all registries. But I think that that would be something we would definitely want to talk about is the ways we would validate it. We are already doing it. We already monitor our zones, and we already validate all of the complaints that come through.

ALAIN DURAND: So that may be something we want to build [into] this.

[CHRISTINE]: I think, we want to talk about it for sure.

ALAIN DURAND: Yes, thank you.

JAY DALEY: I'm Jay Daley from .nz. I'm getting the impression that as registries, we might need to start publishing our own feeds to say the things what we've done and I think it's merged with other feeds. Sounds fun.

MATT LARSON: Can anyone in the back of the room – I want to make sure – any questions? Okay. Yes.

UNIDENTIFIED MALE: [inaudible]. The first part of my comment will be on behalf of the Registry Stakeholder Group since we [fill the] public comment responding [this]. That we don't agree that the Bylaws allow for including things outside ICANN's remit. The fact that the strategic goals were grandfathered would simply mean that violating the Bylaws then is still violating the Bylaws now.

So, we don't agree with that and we are probably looking to challenge that, but anything this part that was on behalf of the Registry Stakeholder Group. I have two comments. One is, most of the – least that were mentioned as the possible candidates for inclusion usually mention all websites that are contaminated with some security threats, including compromised websites. And, compromised websites have nothing to do with malicious domain registrations which are far smaller than compromised websites. If those feeds indicate that, let's say, a lot of the .in websites are compromised, it's just that it's not the .in registry is not looking to, responding to

security threats. Their users are suffering security compromises and almost no registry will take down a domain just because that was compromised by a third party, a domain that was registered in good faith.

So, we should be careful in using feeds that don't discriminate between compromised websites and malicious domain registrations. And, the problem is that there are very few feeds that make such a difference. I have some other [inaudible] but I feel David is about to respond.

The other thing I was going to mention is keeping spam in those statistics still doesn't make sense. In our experience in .pr, you don't see any correlation between spam and spam volumes notably and other security threats. Even the ones that use spam as a [inaudible] tool. Let's say, "Oh, click on this website to update your banking information." Those ones use unsolicited e-mail but most of the spam volumes still come from the known spammers. They keep spamming, spamming, spamming, spamming, spamming, and most of what Spamhaus will call the ROKSO spammers, that are large industry spammers in scale and most of these can come to that. This does not show correlation to security threats. So, keeping it in the mix is still outside ICANN's remit. It was the first point and still have no actual usage in dealing with security threats. Thank you.

MATT LARSON:

With regards to the question of ICANN's remit, two points that I would make. One is that the genesis of this particular project was complaints

from various registries about misrepresentation of DNS abuse and attributed to registries with – how do I put this politely – shall we say a bit of suspect methodologies done by companies with an agenda. One of the common examples was the Blue Coat report that occurred couple of years ago that showed in their report that most of the new gTLDs were essentially 90% to 100% abused. And as such, Blue Coat would tell you technology that would allow blocking of those TLDs.

So, a number of registries had come to us and said, “Fix that, go and make them stop doing that.” And, the plan was to come up with a set, an open methodology by which rankings could be done to ensure that if there is some assertion that new gTLDs or TLDs of any nature are the source of all badness on the Internet, we can actually provide them with accurate and vetted by the community statistics.” So, that’s one point.

The other point is that the context of – it goes without saying that ICANN, the organization, will not act outside its remit. So the question is whether or not ensuring or working to develop a metric to measure abuse among other things is a part of the remit particularly in the context of ensuring the security and stability of the Internet system of unique identifiers. And, I think that that is a discussion that we should probably have. My personal view is that it’s difficult to be able to ensure something if you don’t measure it. And part of the ITHI project is specifically to measure the state of the Internet, to be able to determine if things are getting better in terms of security and stability and other aspects, or worse.

The other point – with regards to whether or not spam should be included. My knowledge and experience the operational security community is actually a 180 degrees away from yours, that spam is associated with particular forms of DNS abuse and registrations that are occurring specifically for the purposes of spamming. That's something we can explore, particularly in the context of folks of M3AAWG and APWG and [OSOIN] those folks. And, I am sure that if the registries have interest in that space, we are obviously interested in listening to their experiences, their information. But to be clear, spam – we're basing the primary drivers for these indices on the GAC identified DNS threats, which are phishing, malware, and botnets. The use of spam is purely as an indicator of potential threats and not heavily weighted.

UNIDENTIFIED MALE: Any other questions?

UNIDENTIFIED FEMALE: Just a flag on the workshops coming up. It sounds really nice. I asked Goran a question yesterday about something that the Non-Commercial Stakeholder Group kind of wanted to see in the ICANN process, a function that needs to be filled. He looked at me and said, "Put it in my budget and I can do it." I just want to let you know, my budget doesn't have workshops right now. So, there might be an outreach factor as well after the workshops have come to some of us may not be in the inner core of what's happening here but we can tell

you about some of the abuse of the abuse indexes but we probably, we may not be there at the workshop.

So, I just want to let you know we're out here. We'd love to talk to you but our time is dedicated to other PDP working groups and it's already allocated. So, our volunteer time. So, thank you.

ALAIN DURAND:

Your point about outreach is well taken. Last year, we thought of an outreach toward M3AAWG Community and they really participated in the definition in helping us to precise the definition of the problem areas. We need to do more of that. I was thinking about having a workshop, maybe similar to the one we had in September in the ICANN, D.C. Office. Maybe a workshop again in collaboration with [inaudible] organization that is really... like APWG looking at this. But we may also have a workshop at an ICANN meeting. And that may be a way to get the community to participate, because when it is already here, right, and that may provide the logistics to help people to really participate. So maybe the first initial workshop is to just to do the leg work, but the actual work will be done maybe during a meeting, if that helps, we would be very happy to organize this.

UNIDENTIFIED FEMALE:

And, feel free to issue invitations so we actually know it's coming. It's easy to miss things now that ICANN has gotten so big. I don't know if you want the list to go around. I've got paper.

ALAIN DURAND: We have a mailing list. It's ITHI@ICANN.org. If you go to the website ICANN.org/ITHI, all the instruction on how to join the mailing list. There's very little traffic on the mailing list, so feel free to join and send your comments to the mailing list and that's the best way, a good way to get this discussion started. And whenever we have a workshop, we will announce it to that mailing list.

MATT LARSON: Any, any other questions? Alright, Alain.

ALAIN DURAND: Well, I think that conclude our session today. We are a bit early, which is good. I can give you 10 minutes back of your time. Don't use it in just one place.

[END OF TRANSCRIPTION]