
Julie Hedlund: Good morning, everyone. This is the public meeting of the Security and Stability Advisory Committee. We're going to go ahead and start.

What I'd like to do first is to welcome everyone here; today is Thursday the 23rd of June here in Singapore, and welcome those of you who are on the telephone. We are going to record this session, just so everybody is aware of that, and I'm going to ask Edward to go ahead and please start the recording and let me know when it has started.

Thank you very much; the recording has started. Welcome everyone, and before I turn it over to Patrik Fältström, the Chair of the SSAC, I'd just like to go ahead and do a roll call in the room and also on the telephone for the purpose of the recording, just so that we know everyone who is here.

I am Julie Hedlund, ICANN Staff, and I support the SSAC.

Rod Rasmussen: Rod Rasmussen, the APWG.

Dave Piscitello: Dave Piscitello, ICANN.

Xiaodong Lee: Xiaodong Lee, .cn.

Note: The following is the output resulting from transcribing an audio file into a word/text document. Although the transcription is largely accurate, in some cases may be incomplete or inaccurate due to inaudible passages and grammatical corrections. It is posted as an aid to the original audio file, but should not be treated as an authoritative record.

Russ Mundy: Russ Mundy, SSAC.

Warren Kumari: Warren Kumari, Google.

Steve Sheng: Steve Sheng, ICANN Staff and also support for SSAC.

Patrik Fältström: Actually, would be good if people told if they are members of SSAC or not. Patrik Fältström, SSAC Chair.

Jim Galvin: Jim Galvin, SSAC Vice Chair. And let me just comment, the folks in the back; the table is not restricted to SSAC members. Feel free to step up and join. Plenty of room, and there's power up here, too. Thank you.

Merike Kaeo: Merike Kaeo, member of SSAC.

Vanda Scartezini: Vanda Scartezini, SSAC member.

Don Blumenthal: Don Blumenthal with Public Interest Registry. I'm not a member of SSAC.

Steve Metalitz: Steve Metalitz, here on behalf of the Coalition for Online Accountability, and I'm not a member of SSAC.

Matt Larson: Matt Larson, member of SSAC.

Julie Hedlund: And those members who are in those people who are joining at the table, if you could grab a mike and introduce yourselves, that would be helpful too.

Rick Lamb: Rick Lamb, ICANN.

John Demco: John Demco, Webnames.ca. Not a member of SSAC.

Dave Baker: Dave Baker, .nz.

Debbie Monahan: Debbie Monahan, .nz.

Mikey O'Connor: Mikey O'Connor, worst dressed at the conference, and co-Chair of the DSSA.

Pedro Vega: Pedro Vega from .pt of Portugal, not a member of SSAC.

Brenden Kuerbis: Brenden Kuerbis, Syracuse University. Not a member of SSAC.

Male: (Inaudible), ICANN Staff.

Julie Hammer: Julie Hammer, auDA board member and member of SSAC auDA.
Not a member of this SSAC.

Reinhard Scholl: Good morning. Reinhard Scholl; I am a member of the ICANN Board. I am the Technical Liaison group.

Julie Hedlund: And, do we have anybody on the telephone? I'm hearing no one. What I'd like to do at this point, then, is to turn the meeting over to Patrik Fältström. Patrik?

Patrik Fältström: Thank you very much, Julie; and welcome everyone to this meeting of SSAC, and thank you very much for coming up this early in the morning. Let's see if we can get the slides.

So what we plan to do is to divide this one-hour session in two 30-minute portions. The first one, we're thinking of going a little bit quickly through three different – we have selected three different publications from SSAC that we think are worth noticing you about it and so you have the ability to ask questions. And then on the second half we will have a little bit longer discussions, 15 minutes each, on work that is currently going on, and we'd like to have the ability to discuss that.

If we look at the documents that were published lately, we have Number 47, which are comments from SSAC on the gTLD Registry Transition Process model, which has to do with what happens when a registry is going away; the interaction between registries and emergency failure registry; Number 48, on Orphan Glue, that we'll hear more about; and the same thing with the Zone risk and also the advice from blocking, next slide please.

Currently, we are working on source address validation. We will continue that work. We are looking at the WHOIS taxonomy that you will hear more about. We are participating in the Internationalized Registration Data working group that will meet, by the way, immediately after this meeting in this very room if I remember correctly. So if you're interested, you can just stay here and the people that managed to get microphones and power and everything, just stay there and you will have it also for the next hour; except maybe me, that is sitting where the Chair of that group will sit, they will throw me away.

We also have our generic collaboration with the ICANN community to where there are the constituencies are asking us questions and want to have a discussion with us, specifically ICANN say that we started again to have meetings together with the GAC. We had a whole meeting about blocking for one hour during this week, for example. We also do internal ICANN work, of course, that has to do with SSAC itself. We have a membership committee that our Vice-Chair, Jim, to my left, is chair of that group where we are looking into the processes for looking at the membership and membership process for SSAC itself. We are also participating in the other ICANN work of course, which has to do with the budget, the strategic plan, etc. We just initiated the work on the strategic plan for 2012 to 2015.

So, if we go into a video presentation of the work, the first one is SAC048, SSAC Comment on the Definition of Orphan Glue in the Draft Applicant Guidebook, and Steve Sheng will do that presentation; so I'll hand over to you, Steve.

Steve Sheng:

Thank you, Patrik. On behalf of the Orphan Glue work party, which includes SSAC members Roy Arends, Jeff Bedser, Jim Galvin, Jeremy Hitchcock, and Matt Larson, I'm giving this update in a public meeting. So, in this work SSAC is considering a very specific issue in the Guidebook. In question 20A of the GAC it states that "a complete answer should include, but is not limited to a proposed measures for the management and removal of orphan

glue records for names removed from the zone.” So this is the particular question that SSAC is considering.

The committee has two general findings. The first finding, which I’ll go over the second one, is there’s no clear definition of what orphan glue really means, and to that extent SSAC proposes a definition of orphan glue in this document. The second finding is there are varied policies regarding orphan glue across the registries. There are at least three types; the first type is direct registration of orphan glue is permitted. So the first type, this is more like the .newzealand, where you can directly register a glue without any delegation.

The second type is orphan glue is permitted until the last association is removed. So there are many domains that refer using that name server, but the glue is not removed until the last association. The last practice is the glue is simply not permitted. The orphan glue is not simply permitted. So the SSAC makes three comments; the first one is the phrase ‘orphan glue’ is ambiguous because no definitive definition exists in this document. SSAC actually proposed a documentation – a definition.

The second one is orphan glue can be used for malicious purposes, but a dominant use is to support the correct and alternate operation of the DNS. This naturally leads to the last comment and recommendation is to mitigate the actual abuse of orphan glue, so they should be removed when presented with evidence. Those are the three comments we have.

So, we submit the comment through the May version of the gTLD applicant guidebook, and these findings have been included in the guidebook by reference. The committee is looking to continue its study of the orphan glue and will provide a complete report that we include a definition of orphan glue, how it comes to existence, how it can be abused, and how it's managed. So that's all. Thanks.

Patrik Fältström:

Thank you very much. So the next presentation is on SAC049, on DNS Zone Risk Analysis, so we talked originally of having Dave Piscitello presenting it, but Jim Galvin will do the presentation instead.

Jim Galvin:

Thank you, Patrik. So continuing in our series of trying to assist registrants and protecting domain name operations and the significance of its use in application, moving from what registrars can do to help protect domain name accounts to what registrants can do to help domain name abuse, protecting their account and access. The next step, of course, is looking at the use of DNS data and your domain name services. So, domain name resolution relies on zone data. This is the set of resource records that define the bindings between your names and your IP address is the most obvious thing, people talk about that all the time, but the DNS can be used for other purposes too, between your services and obviously for certain kinds of aliasing also.

There are three kinds of servers that exist in the system for providing access to that data for the users of your DNS zone data. You have master servers that actually do the publication of the data you put together; there are authoritative servers that get the data from that master, and then the authoritative servers make that available to the rest of the community; and then of course you have recursive servers which will act on behalf of individual users, and they will reach out to authoritative servers in order to get that data so that they can return the information to you. Now it's important to understand these are roles; in fact in some cases, and in some configurations, some of these roles can be combined, but they are actually three distinct roles in the DNS architecture system.

So who provides the authoritative name service? This is an important question because it determines the quality of the risk that you're exposed to as a registrant in providing your DNS services. There's obviously going to be a DNS hosting provider, and the different categories of people that can be a provider; one, of course you could be doing it for yourself. Some people, most large enterprises of course, provide their own DNS services for themselves. But many registrants, probably most, actually use third parties. In many cases, that's even the registrar who, by default, often provides name services for you.

But there are many other authorized third parties who specialize in DNS services that you might use for one reason or another. So down here at the bottom we have the example of a registrar who might bundle registration, bundle DNS services with their

registration services, which is their core service. You could have an ISP who might provide you with some DNS services as part of their core network services; and then of course web hosting providers if they provide a different core service and they might also bundle DNS services. So these are just examples of the different kinds of authorized third parties that you might have providing your DNS service.

So how is it that a registrant goes about publishing this Zone file? How is it they go about getting their data into the master server that's going to make it available to the rest of the Internet? In the first situation here, the registrant might in fact compose the Zone file then serve himself or herself, and publish it on their own master server. In this kind of scenario, the registrant would know all of the resources and bindings that are in their zone file. So they have complete knowledge of what the DNS service is providing for them in terms of what they're providing to the Internet community for access to their zone data.

The next situation is where a registrant might provide some of the data. So, through some kind of out-of-band or DNS hosting provider submission form, you would provide some small amount of data and then the hosting provider would actually provide the rest of the data. So for example, you log into your registrar account, if that's who's bundling your services. You provide them with the domain names, the second and third-level names that you want to use, and if you are a hosting provider, if you're using them also to provide your web services, they'll automatically fill in what

the IP address is. So you have access to some of the data, you might not know the rest.

The problem that we are approaching here with this document on zone risk is to make the specific observation that a registrant who doesn't know everything that is in their zone file is at risk of their DNS services not working, or being interrupted for some reason; and you have no ability to restore that name service. If you don't know everything that's in that file, then if you need to move that service then you just don't have the ability to do that. And obviously your DNS service is critical to your presence on the Internet. It is the way in which everybody finds everything that you have to offer to that user community.

So name service is a critical and essential service. Any circumstance where your name resolution might be interrupted becomes a threat, and you're at risk of not being able to serve your user community. There are some ordinary circumstances under which this might occur, and it's important to keep that in mind. People always think that something malicious has to happen, but you could just have a technical or business failure of your hosting provider; just an ordinary situation that might happen.

The circumstances aren't really important; if you don't have access to the data then you simply cannot restore it. Your account could be compromised, and in this case this is one way in which sometimes hackers can do hijacking. So if they can get into your account they can change your name services and thus prevent you from getting access and restoring your service, too. And sometimes

you can just have unintentional misconfiguration; especially if you're managing your own services, you can make mistakes. Next slide.

So we have here a set of recommendations for registrants to think about things for them to keep track of when creating and knowing about their DNS service in particular. The most important step here is documenting your architecture and its operations. This may require that you need to get some amount of information from your hosting provider; but you should be aware of how the system works and what you have available to you, including your registrar. You want to design for resiliency and active manage your DNS information.

So, you want to make sure that you know where your services are being provided and keep track of what that information is. You want to know even the information that you would not ordinarily provide, which might be defaulted by your hosting provider. You want to make sure that you get a copy of that, too, and keep track of it. The protecting your domain registration, hosting accounts, and monitoring your name services; you know, this goes back to some advice that SSAC has given before in prior documents when we have provided advice to registrants about how to protect their domain name registration.

Developing a continuity plan is very important. People overlook the significance of their name service, so making sure that you have an archive and a record of all of your zone risk information and keeping track of that; and then, actually, you're going to have

a continuity plan, it's important to exercise that. So you should have that plan, and you should determine whether or not you could actually bring your resolution service back if you need to. Next slide, please.

The usual principles that apply for any kind of third party hosting service; I mean, your DNS service, again, you need to recognize it as a critical internet service and you need to do fairly straightforward things that you would do for any kind of critical service, making your informed choices. Take note of how your data is managed, who has access to it, who can make changes; be sure to check the capacity, your security measures, monitoring. Most providers will provide you with some kind of communication about what's going on. And service level agreements, so that you can ensure that services continue when you need them to. Next slide.

So now that we have this report, this is part of our outreach. We want to share that report more directly with the community. We are sharing it here as a start, and we'll begin to do that more. We'll make presentations to a larger community and we will continue to study specific issues with respect to DNS hosting. This particular document does not deal with DNSSEC too much, and so that's an issue for further study. And I believe that's it.

Patrik Fältström:

Thank you very much, Jim. And then we're moving directly into the next report, which I will do, which has to do with the latest

advisory that we presented Saturday, just a few days ago, which is on blocking. So next slide please. I'll try to do this a little quickly so you have the ability to ask questions in all three of these first slides before moving to the next section.

So the background that we described in the document is that blocking or altering responses to DNS is already happening; and the approach that these kinds of blocking or alteration activities is having is to actually – it has the intent that a certain effect is supposed to happen for the users that actually do the lookup. That in turn is also intended to happen within the given administrative domain; for example, at your own home, inside your own firewall or inside the area of some enterprise that is doing filtering in a firewall scenario or something.

If it is the case that, for example, resolution of a domain name into an IP address is prevented, in that case that of course prevent the immediate connection to the named host but it's very easy to circumvent that; for example, by putting up another record which have a different name that maps to the same IP address or to access the IP address directly.

So what we describe in this document is that the very common engineering principles that are used is to try to come up with a policy that actually, as surgically as possible, solves the problem that it is intended to solve which includes to not only solve the problem but also affect the users and not more than the ones that you intended to have the affect imposed on. So there is a general

concert effort to do no harm to networks or users outside that policy region.

So the general recommendation is to consider the possible harm that the intervention might cause before actually start doing that, and not to affect Internet users outside the organization's policy domain. So the conclusion is though, that all technical approaches to DNS blocking and other kind of alteration of results will impact security and/or stability of users and applications and will have impact on coherence and universal resolvability of the name space, which is talked about in many other documents by the Internet Architecture Board, Internet Society, and other organizations. Those are just examples.

On the other hand, given that this is always happening, it is already in use and there is some legitimate use to actually do this kind of blocking alteration activities. The SSAC cannot draw a good line between good blocking and bad blocking with the help of DNS. Instead, we suggest and strongly recommend people to actually evaluate what approach to the blocking is likely to create the fewest unintended consequences, at least for outside the block domain.

We also point out, as I mentioned quite quickly in the beginning, that blocking on DNS name is not really blocking the access to the information which you access by using the name. That is also something to remember, that quite often people talk about blocking or do blocking to solve a problem, but the actual blocking activity

do not solve the problem that people want to solve; instead, other measures should be used.

So those were the three which we think pretty important documents that we've produced lately and would like to give the ability for people to ask questions about those three; although you'll have to use this microphone so I will run around, okay so Julie will, so if it is the case that you have a question to ask on any of those three documents or any of these four actually, or anything else, please raise your hand and you will get the microphone. And then we'll move into more discussion items. Anyone have anything to ask about any of these things? No, you have to raise your hand, Julie will come with the microphone, and then you speak into the microphone. We have an interesting policy here.

Marilyn Cade: It's a very brave man who stands between me and a microphone at ICANN, isn't it?

Patrik Fältström: That's why we GIVE you one.

Marilyn Cade: My name is Marilyn Cade. I'm the Chair of the Business Constituency, and my question, it really is a question, but it's probably somewhat naively posed. Most of what I do with my time is travel around the world and work with governments who have certain concerns about the impact of a number of activities online –

let me use that term, rather than on the Internet – that are affecting their citizens. Blocking looks like, as you know, particularly you from the technical community, blocking looks like an easier solution and a quicker fix to some of the complaints they get. Does the SSAC have an idea in mind already about; so yes, you issue a paper and people can read the paper, but is there another layer of activity that might develop that involves factual information that can be digested by policymakers?

Patrik Fältström:

There are some activities going on, and discussion that also we had ICANN also, subset of SSAC members having that kind of discussion with law enforcement agencies and specifically Dave Piscitello, raise your arm so people know who you are, is working very hard on trying to find a way of interact with the people that actually do the real work in the world, so that in a future description is possible to describe more precisely on how to do.

One thing that we had, as I said, a one-hour discussion with GAC on specific blocking, so this presentation that I did now, I did a 30-minute version of it and then we have 30 minutes of discussion, and this was one of the questions that came up. So if this stupid, what are we doing, etc? In the discussion what we came up is that we recommended from SSAC or what we talked about is that first of all, if it the case that for example a government or a policymaker talked about, well we should block using the domain names.

The first thing that we said at the meeting as an informal advice is to absolutely separate between the two cases where one, the string itself is sensitive and the policymaker want to make it impossible to actually use that string, and the second case where the policymaker want to make it impossible to access the information which is referred to with that string. Given that you first of all have made up your mind on which one of these two cases we talk about, then it is possible to move into more fine-grained discussion on what to do, what kind of things can be done to create the least harm.

What the reaction that I personally got at the meeting, and when I talked to policymakers around the world, is that to start with the policymakers and the ones that are pushing for filtering a DNS; to start with, they're not even there. They have not even done the separation between whether the string is sensitive or whether they want to prohibit access to the information the domain name is referring to. So I think, to answer your question was a very long explanation but I think the discussion has started. It is not done in only one location, but it is very, very early in the process.

On the other hand, we do have good discussions between law enforcement agencies and ISPs and others, which are doing blocking on various layers in the protocol stack to solve the actual real problems we have on the Internet and I would like to hand over to Dave now. Thank you.

Dave Piscitello: Dave Piscitello, ICANN. Marilyn, there is actually a technical paper that is probably not what you're looking for; but I just wanted to bring people's attention to the fact that it was written by Steve Crocker, Dave [Dagon], Dan Kaminsky, Danny McPherson, and Paul Vixie. The easiest place to find it is [Cresson Security]. You have read it? It sounds, if I understand you correctly, you're looking for something that is a little bit more instructional to people in governments and business and in the political arena, that perhaps is not as technically in-depth as that paper, and that is something you might want SSAC to pursue?

Patrik Fältström: Let me, I can repeat what Marilyn said, for the recording. You said "digestible". Wait, wait.

Dave Piscitello: But again, you're specifically suggesting that SSAC try to find that digestible piece of literature? That's fine, I just – you can ask us. We can say no.

Patrik Fältström: One way that we are working in SSAC more and more is that we are, while Julie's running around the room; you will get good training. One of the ways we work in SSAC, which we also told GAC very explicitly, is we don't mind have informal discussions just like this one, just like the one we had with GAC, but we see a big difference between formal discussions and when we actually

give advice, like these SSAC documents. To be able to produce the advice, we would actually like to have an as precise question as possible. So if you want us to work on something, please try to phrase it in a question, because then we also know when we think we have answered it. Thank you.

Steve Metalitz:

Steve Metalitz; I think, Patrik, that maintaining the distinction you just cited between the informal discussions and the formal papers, such as the advice that you just described, is extremely important. I think it's worth emphasizing; my understanding, because of the way it's addressed in the SSAC 50, that the paper that Dave referred to is not an SSAC paper, even though it is authored by the long time Chairman of SSAC, among others.

This, I can speak from my 12 years of experience with ICANN, there's often been a very blurry line between the activities of the SSAC and the activities of some or a group or subset of SSAC members, and who's speaking for whom. I think that that's always been a problem, and I think it's going to become a much more acute problem in the years ahead.

If you heard so many references on our opening day to the importance of very clear disclosure and ethical rules and really making clear who's speaking on behalf of what, I think the SSAC 50 paper is a very good contribution and will be very helpful; but I would really caution against SSAC taking on what Dave referred to, which is to take a paper written not on behalf of SSAC and

somehow build on that, mark that up. I think I would be very careful with that.

Patrik Fältström:

Allow me to answer on behalf of Dave. I don't think that was Dave's intention at all. One of the reasons why we do feel comfortable referencing that paper, of course, in this discussion, is because as part of the work with SSAC 50 as you see, in the document we do reference that document, which means that SSAC has made a conscious decision to reference that document, which means that even though we have not authored it or written it, we have made a decision that we think that is a good background document. So it has reached that level at least, but you're absolutely correct, it is not an SSAC document.

[background conversation]

Patrik Fältström:

But you're absolutely right, but on the other hand, this is sort of the process we're working with, just because SSAC so far has produced only four documents a year, we have been sort of lucky and worked very hard to produce four documents for this year; we don't want to stop the informal discussions, because sometimes those are needed as well.

But you're absolutely right, we need to be – we can always be more clear in that way, on which statements have...yep. Anyway,

we have 20 minutes left, and I really would like to give time to the two work parties that we were thinking about discussing, and we'll start with the Source Address Validation and Merike, please.

Merike Kaeo:

Good morning everyone. So the Source Address Validation work party is chaired by me, and has been ongoing for a while. So what actually is Source Address Validation? Primarily, these are techniques to verify the source IP address of packets submitted to the internet are valid. What is meant by that? First off, that they're not assigned from private address space, and also that they fall within the range of legitimately advertised prefixes for a given origin.

There are many developed techniques, and this is not a new issue, so bogon filtering is one thing that is primarily used by ISPs, or unicast reverse path forwarding. Why is this actually important? It's very important because these techniques mitigate spoofed IP packets, which are very commonly used for many attacks; so denial of service attacks, spam campaigns, and impersonations of originating host. Now these were extremely prevalent about a decade ago, but we decided to resurrect this issue to see whether or not there were any new nuances that we needed to look at. So there's a slew of prior work.

In IETF there's a best current practice 38, which primarily specifies how to do ingress filtering. There was a very early SSAC document, SAC004, and then a bunch of other documents that

have been written to numerate the usefulness of doing source address validation. So the current SSAC activity surrounding this is we're studying existing prior work and we also realize that sometimes there's a confusion in terms of tech terminology. What is actually meant by the terms egress or ingress filtering?

We were taking a look at filtering that is actually being done by ISPs on starting new developments and source address validation techniques, so in the IETF there's actually specifically a source address validation working group that was formed. Also we want to debunk some myths, because about a decade ago, when people started utilizing some of these techniques, there were bugs in code, there was complexity that wasn't clearly understood. So we wanted to kind of get a level set of are people using these techniques? If not, why not? And should they be using them? So we want so study the costs and benefits of a holistic approach.

So where this working group primarily stands right now is that within the SSAC, we've been discussing while we realize that these techniques and the document as it currently stands really would benefit ISPs mostly, how is it relevant to the ICANN constituency? And one of the things that we've been trying to do is address specific problems that the ICANN constituency has. So we're now at the point where we're trying to ask the questions when people such as yourselves, represented here, to see how is it relevant to any of the work or policy that you're creating, and what is it that you may need from this kind of work, this source address validation?

Patrik Fältström: Yes, Marilyn please.

Marilyn Cade: Thank you for that great presentation. You actually probably just created a lot more work for yourself, since I'm going to want to invite you to come and greet the business constituency. But maybe we could do that jointly with the ISP and we might be able to do it with the three constituencies, across the commercial stakeholder group.

I think many of the attendees, the people from our constituencies who come to the meetings, they won't necessarily be the right person to interact with, because it's not the enforcement teams who come, but the enforcement teams who are dealing with these kinds of problems, of course are interfacing with whoever is coming to our constituency. So I think what we need in order to be responsive is going to be a one-pager that describes what the purpose of the interaction is, and the kind of information that you're looking for, that we could distribute.

Maybe arrange an online interaction with more of the technical teams back home, but probably both the ISPs and the BC members, particularly the large ones, who have typically more complex teams embedded in the corporation. Would that be maybe a good way to start?

Merike Kaeo: I think that would be wonderful, because one of the things that the working group also has really wanted to do is do the outreach, and see whether or not there's a real problem that needs to be solved. So I absolutely welcome that.

Patrik Fältström: Anyone else have any input on this topic? In that case, let's move to the last discussion point.

[background conversation]

Patrik Fältström: So the last presentation on the WHOIS taxonomy, which also might move us in an interesting way into the next session. Jim, please.

Jim Galvin: So obviously, WHOIS has been talked about a lot in the ICANN community, and it's being talked about a lot more these days, because of the WHOIS review team. SSAC, itself, has over the years issued five advisories that say something about WHOIS, and WHOIS information, WHOIS data, protocol, that kind of thing. One of the questions that comes up a lot is what is WHOIS? This is a very important question, and really the primary driver and motivation for this short comment on WHOIS, that we wanted to put out there. It's a single term, but in fact it has multiple

meanings. The first and most obvious meaning, of course, is for the protocol. WHOIS is actually the word which is used to describe the technical protocol that's used to access the information that's out there, and that is collected.

The second thing that it's used for of course, is the information itself. The conceptual database of that domain registration data; people talk about WHOIS data, WHOIS information, WHOIS database. They don't always put that extra qualifier on it, which is part of the reason why this confuses. And then of course, domain registration data that is collected for ICANN accredited registrars and registries, you're obliged to make it accessible to the public, and most of the ccNSOs and their corresponding registrars also make some amount of that information available too, although they're not obligated to in the same way that the accredited counterparts are.

So the main point here is that this ambiguity leads to confusion in discussions, and of course it hampers any kind of consensus that might come from these discussions. Another part of the GAP analysis in considering this issue that we did was realizing that there are varying implementation strategies, so this means that from the user point of view, you get very inconsistent experiences. Some of this is related to deficiencies in the WHOIS protocol itself. You have no standards to signal message encodings, this prevents any kind of presentation of internationalized information, no standards for signaling errors; it's kind of an on or off. There's no gray, no opportunity for additional information.

The data displays vary depending on the service provider. Different registries, different registrars, don't do exactly the same thing. Accredited registries and registrars are obligated by contracts, but it turns out that it's different even for registries and registrars in those contracts. And of course, there's no support for access control, which gets us into all the discussions about whether the data should be public or not. Different communities have different needs of that data, and the fault at the moment is it all has to be available in order to serve these varying needs.

Then there's the question about what exactly is WHOIS data. What constitutes registration database, the data model? There are at least three definitions of WHOIS model. The EPP, Extensible Provisioning Protocol, has its own definition included as part of that protocol specification in the IETF. ICANN accredited registry and registrar contracts separately include a definition of WHOIS data. That's the specification of which you have to collect.

And of course, nothing addresses the lack of internationalized registration data support. There are a variety of uses of the WHOIS protocol. This gets to the directory of services issue, here. There are different communities that have different reasons for needing access to whatever registration data turns out to be. You have operational issues, where you want to get technical contact; diagnosing registration difficulties and sometimes, for law enforcement and intellectual property reasons, you just need to associate an identity with a domain. There are different rules and legislation and laws that come to bear in different regions.

So we want to make a couple of specific findings, which we are going to document in this soon to be produced document. First of course is to recognize that the WHOIS services, as defined today by the protocol, do not meet the needs of the various user communities of WHOIS. And then of course, the taxonomy of the elements of the domain registration system is essential in order to scope and focus discussions on what to do about WHOIS, and what we do going forward.

We believe that this is the critical element that will help us to come to consensus, is being able to separate the various kinds of discussions that need to occur about WHOIS. So two specific recommendations; we need a taxonomy. We identify three things for this taxonomy; the data model, the directory service which is what we normally think of today as the WHOIS. The presentation of the data and the access to that data, and then of course the underlying protocol that provides all of that. And we more specifically are suggesting and recommending that solutions for each of these be developed separately, and in fact, in a priority order numerated above.

So the data model needs to be the first thing that's done. It drives everything else. And the last slide, we put a collection of the various references; in particular here are just the documents, the five prior documents in which SSAC has actually made WHOIS comments. I just wanted to put them all in one place, and they'll be included in this document too, when it's published, with an explanation of what's in them. I believe that's it, so thank you.

Patrik Fältström: Thank you very much Jim. So we have a little bit more than five minutes; or people might want to be in time for the next meeting, if you don't stay, but we have some time for some discussion on this WHOIS works. Does anyone have any question, or input to the team?

Steve Metalitz: Steve Metalitz, I'm a member of the working group that's just been presented, and I think what's just been presented is very useful. Taxonomy and clearer definitions will help; as someone who's been involved in these issues for many years, I'm not sure that's what's blocking consensus or making it impossible for us to achieve consensus, but it sure can't hurt, if we talk more clearly about what we're talking about.

I'm also a bit concerned though, that we need to make sure that we're keeping track of all the different trajectories that are in play here. We have this working group, we have in the GNSO, there's a WHOIS survey drafting team. There was a document generated by the staff a year or so ago, and now that's kind of been the basis for a survey.

You had a slide about needs and who uses WHOIS, and we're trying to ask what features do you want to see in the service, or do you think are essential for the service; so that's going on. And then of course there's also reference in the budget and operating plan to ICANN developing a protocol, and shepherding that

through the IETF, as I read it. So I just want to make sure that all of those moving parts are in coordination with each other. I think it tends to add some confusion, when what we're trying to get here is more clarity.

Jim Galvin:

Thank you for that Steve, and I agree. We are trying to pay attention and look out and see what's going on. You're right; there has been a lot of activity. I think those particular activities that you mentioned are information gathering activities at the moment, and those kinds of things are always valuable. Ultimately, we do need to have a focused discussion about what we need to develop, what we need to provide. We're making a specific suggestion here, and I think those activities will contribute to any future actionable items that come from this. So we're hopeful, but thank you.

Patrik Fältström:

Anyone else have any input or questions? I think the point that you made is extremely valuable, as Jim said. One of the things that we are trying to always improve and work very hard on at the moment is as I said earlier, make sure that what we are saying in our reports, in the actual reports, but also in the informal comments, are useful for the community; not only technically correct.

We can sit there and polish our ebony or whatever voices or something, but the important thing is that the advice we give is useful, and that means that both the content must be useful and digestible, as Marilyn said, but also that it comes at the right time.

So the timing is also important, of course, and that's also why we are trying to communicate earlier in the process and communicate with the ones and stay in contact with the ones that are part of the target audience, to ensure that we actually are not wasting our time writing things that are not useful to people anyway.

We have also, by the way, I can mention though I didn't mention earlier, we also started a product where we're trying to find a way of knowing or measuring afterwards whether our reports have been useful or not. Everything from just looking at how many downloads there are, but also simply by interviewing people and asking people what they think.

So at the moment we are listening very carefully on the input from people of what they thought about our documents. So please let us know, both when you think you liked documents or when you have suggestions for some improvements for future work that we do. If there is nothing else, in that case I would like to thank you all for coming, and Julie, is there anything else?

[background conversation]

Patrik Fältström:

Good point. If there is anyone on the phone that has any questions, please speak up. In that case, thank you very much, and I close this meeting.

[End of Transcript]

