
KIMBERLY CARLSON:

Thank you and welcome back to the NCAP Discussion Group on September 23 at 19:00 UTC.

In the interest of time, there will be no roll call. Attendance will be taken in the usual fashion based on those on Zoom. I will update the wiki with the names of the participants as quickly as possible. We've received one apology from Justine Chew. All calls are recorded and transcribed, and transcripts will be published on the wiki. As a reminder to avoid background noise and echoing while others are speaking, please mute your phones and microphones. And with that, I'll turn the call over to you, Jim. Thanks.

JAMES GALVIN:

Thanks, Kim. This is Jim Galvin from Afilias for the record. I will be the leading co-Chair today. We do have Matt Thomas with us today, with apologies from Patrik. Just in the interest of trying to manage this document that we're about to get into and talk about here, I'll always give a little preference here to Matt Thomas if he ever puts his hand up and wants to speak out in terms of ordering and managing the queue.

We have our standard agenda up here. Welcome and roll call. So we got that from Kim already. If there's anyone who wants to update their SOI in this working group, if they have a need to say something, now would be the time to do that. And I'm not seeing any hands go up. So just a reminder, your SOI, when you join this group, according to ordinary ICANN processes—we've been a little negligent about some of these details here—but you are supposed to keep that up to date if there's

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changes and announce it in working groups such as this one if you've made a change.

We don't have any new members here at this time. But the usual please do will reach out and find some of your friends, neighbors, and countrymen, who are otherwise stuck in the house who might want to come join our Zoom call.

So with that, we have one substantive item on our agenda, which is to review the proposed revision for Study 2. Your co-Chairs, we're a little slow but we did eventually get something together here and we have released it a couple days ago. Many thanks to those who have been into this document, made all kinds of suggestions and comments. I really very much appreciate that and do hope that everyone here has had their time to read it and comment. We'll have a little discussion at the end of this, depending on how far we get today in our meeting as we think about how much longer we're going to take to finish this up and put stuff together what the timeframe is.

Now, I have actually scrolled through this and looked at all these comments and I'm going to choose to highlight a few things that I think are substantive as we go through. My assumption here again, being that folks have had a chance to read it and look at it, so those who put comments in here, I want to jump to a few of the substantive things that I've noticed in it. If we move past a comment that you want to talk about, I should encourage you to please raise your hand and it will go back. So I want to try to get through things. The idea here is if I don't bring it up here then I would say the plan is to simply accept the comment and the proposed change. A lot of what's in here is editorial

and I'll pretty much uniformly accept all that. So let's just focus on the substantive things. And again, if I skip something that you think is substantive that you want to speak to, please just jump up and down and raise your hand when the time comes.

So, right at the top, the first comment from Jeff Neuman highlighted on the word "summary," he makes a comment that we really do need to put a timeframe around all this and what it looks like. And Jeff is exactly right. I apologize that that's not indicated anywhere in this document. Part of what's going on is one of the things that's not in this document at the moment is the budget which the full NCAP Admin Committee needs to, and also working with OCTO, Matt Larson in his role is representing OCTO and being the project manager for Study 1, he's going to help us get a Study 2 budget proposal together. While we wait to find a decision here on whether or not the project is going to be funded, he's going to help us with that. The details of that will be exposed, but part of putting together those details is going to require us to be pretty clear about a level of effort and part of that level of effort is sort of the timeframe, how long we think it's going to take to get things done.

So, you're right, Jeff. That doesn't appear here. That's an oversight. We should absolutely have at least included a reference to the fact that the timeline has to come into existence. But I'll just offer that at least, personally, in my own mind, I had expected that a timeline would become visible at the time that we finally were digging into—once we have a clear statement here of what we're doing and we start to think about level of effort, then we'll be able to state what we propose the timeline ought to be, and then we'll have that discussion here at that

time. So I don't think there's anything to say here about that except to agree with you. We'll leave the comment until it's resolved and we actually have a timeline. Any comments about that from anyone?

Okay. So from there, I want to move down to—Matt Larson makes a comment in changes proposed. I guess we don't even have page numbers on this document, so here, let's insert some page number so I can make it a little easier for us to figure out where we're going. Okay. So this will be on top of page 4. I think my reaction here to Matt's comment is to agree with him in principle and have to take some time back to think about the right way to do this.

You're right, Matt. I agree with you, at least speaking for myself, and I'd be interested in other comments from folks here about this. This is confusing. There is some discussion about the data repository and the test system. The data repository, we don't properly deal with that. The data repository work was the first 10 tasks that got moved from Study 1 to Study 2. And you're right, we don't properly, in this text, account for the fact that we want to discharge those two, those also, and we're not going to do them. So, there is some clarity here, which has to be brought to this text. Thank you for that. We'll take some time to figure that out and revise it.

So let me try and restate more quickly my reaction to this, what needs to happen. The Study 2 proposal in the OCTO revised overall project plan included 10 tasks that were directly related to a data repository, which had been carried forward from Study 1 as defined by SSAC prior to the launching of Study 1. So we also want to not work on the data repository, and so we need to call out the fact that we're going to drop

those tasks, as well as the specific task of the test system. Hopefully that was clear. Any questions or comments about that from anyone? I'm just going to make a quick comment here. So we have some agreement about this. Okay.

Again, let me scroll down here and find the next comment here which was substantive for me. So I'm down now at the bottom of page 4. Again, Matt Larson had a comment. He highlighted the phrase there, "Study 2, Task 3 is to conduct an impact analysis." You made a couple of comments about this, Matt, so maybe I want to combine a few of your comments together about not fully understanding what we're really proposing and what the difference is. So let me try to respond combining together a few of your next few comments here about this. Thank you for calling out the need for additional clarity. I want to try to offer a little clarity here, and then open the floor for discussion and other comments.

In writing this revised proposal, one of our goals in crafting this was to not make it look structurally very different than what was there before. That's just an important procedural point. That's why the way that this thing came out is with respect to the study tasks that had been identified in the Study 2 proposal, there were five, and in looking at the right way to provide a revision, it seemed straightforward to just drop the building of the test system and to expand on what it meant to come to conduct an impact analysis. So in that sense, we weren't really changing the project, except to provide all of the detail that in principle should have allowed for the creation of a statement of work, which is something Matt references here in his comment. I mean, ultimately, if there's going to be a Study 2 then we need to craft a statement of work

for it. What we wanted to do was simply to say that we just needed to make sure this had enough detail that it would be possible to pull out a statement of work from it. So the real meat of what we're proposing in this document is to expand on what it means to conduct an impact analysis. And we basically are proposing three elements for that because none of this appeared in the previous version of the project plan. This has not been documented before so this is new information. This is the details of what Study 2 really is. We're going to do an impact analysis and it's going to have these three major components in it. And that's the goal.

I take your point that this is not clear to you and you would appreciate some additional clarity. I want to take some time to look through those comments more carefully and we'll consider how best to respond to them in detail. I want to make sure that this is clear. It certainly has to be clear to you, but if it's not clear to you, then it truly is not clear to others.

Jeff Neuman. Are you just in the attendee list, Jeff? You need to be promoted. Yeah. Can we promote Jeff so he can raise his hand and then speak? So go ahead, Jeff, when you're ready.

JEFF NEUMAN:

Oh, thanks. Sorry. I actually didn't have anything. I just wanted to be promoted. I didn't have a question on this part. Sorry.

JAMES GALVIN:

Okay. All right, well, that's, that's fine too. Okay. That's not a detailed response to you, Matt Larson, but I just wanted to take your comments on board and recognize them, and tell you that we will address them. There's none of your comments here. I don't want to dismiss any of your comments. I just don't feel like I can respond to them effectively in real time here. But I do want you to know that I read them all and I'm fine with all of them in the sense that we will find a way to respond to them more directly here in the next version. If you, of course, would like to add any additional color or commentary to this, I offer you that opportunity. Oh, your hand's up. So perfect timing. Go ahead, Matt.

MATT LARSON:

Thanks. Yeah. I think my overall comment is that I don't think there's enough detail here to generate a statement of work. I mean, I know that if someone asked me to generate something from this that could be put in an RFP, I absolutely could not at this point because I don't really understand at a level of detail necessary to write a statement of work what's being proposed. So that's my first overall comment.

My second overall comment is that, am I the only one who thinks that this is really not materially different from the first Study 2 proposal? It's certainly no less work. I know that was the main comment from Study 1. It just doesn't seem materially different from Study 2 so I like to know how we're addressing that Study 1 comment. That's all. I will go back on mute.

JAMES GALVIN:

What I would offer in response to it not being materially different is that what's defined here under conducting an impact analysis did not exist before, and so this is why I take to heart your comment that that doesn't represent sufficient detail for a statement of work. Okay. So there's more for us to do to put there, but the material difference is just that now we're saying exactly what we're going to do with this impact analysis and what we need from it. In fact, also we added some detail to the original Task 1, which was to do a root cause analysis, we added some detail about exactly what that means. Again, perhaps not sufficient because you've said it doesn't match what you need and we'll get past that. We'll continue to iterate on this so that we get to what you want. But I consider the fact that we need to do that and that we've expanded on what an impact analysis is does add information that was not there before. That's one point.

And the second point is the Appendix 3 is intended to be some of that detail that you were looking for in terms of the analysis. We may have to organize that a little bit differently so it's a little more clear and maybe it looks a little more like what work needs to be done. I mean, I'll just take on board that comment. But that to me is the material difference, but I'm open for comments there from anyone else about that. So that's at least my response. Do you want to respond to that, Matt Larson? If not, you can take your hand down and we'll just go to Matt Thomas. Okay. So, Matt, Thomas, you want to jump in?

MATT THOMAS:

Yeah. I just wanted to expand on your last comment around the Appendix 3 Draft Study 2 questions. I know this is new material that the

group really hasn't probably seen before, but this was the initial, I think, strawman kind of brainstorming session around exactly what kind of detailed specific DNS kind of questions we want to ask inside of the impact analysis, and they're certainly not fleshed out, Matt. I totally agree that this is not enough here to get you a statement of work. This is more of a placeholder to hopefully have a little bit more discussion here in the discussion group about figuring out exactly what kinds of questions that we want to ask, and this is just an initial starting point based off of the document from Study 1, the academic literature in there, and just also understanding of previous studies from 2012. So I kind of foresee us fleshing out this hopefully a lot more in depth to give you much more controls or ideas around what substance would need to go into a statement of work, and hopefully allow you to flesh that out easier. That was certainly my intention. It's just not completely fleshed out here I think at this point. Hopefully, that makes a little bit of sense.

JAMES GALVIN: Matt Larson, please go ahead.

MATT LARSON: Yeah, that helps. I think ultimately, though, I really am going to need the NCAP Discussion Group to generate the bulk of the statement of work. I don't think the path to success is my synthesizing a statement of work from this document. I would rather have the NCAP Discussion Group take that on, and I'm happy to help and massage text. I don't think it would be best if I alone were drafting the first draft of the statement of work.

JAMES GALVIN:

Thanks, Matt. I appreciate your willingness to work with us. And to be fair to Matt and just so that everyone else is clear, I certainly have no expectation that Matt Larson would be drafting text per se. I really think that we should be providing the bulk of that text, if not all of it, and laying it out. But I do want to absolutely give him the opportunity to review this and make sure that it meets his needs and he's comfortable with it. I mean, ultimately, if this turns into a real project, he would have to hone it from ICANN's point of view, the project sponsor, as we did with Study 1. So it's important that we make this something that Matt can work with.

There is a question that's been typed in the Q&A by Jothan Frakes, asking about chromium resolution traffic. There was also a pointer in the chat room there to the panelists about that. Certainly, I think it's a point of reference in something that we should include and look at. We didn't call it out explicitly, but certainly as we get into our analysis, we'll make this a data point that we have to cover. But I suspect Matt Thomas can say something more interesting about all of that for me. So, Matt, go ahead, please.

MATT THOMAS:

Sure. Thanks. To answer your question directly, Jothan, I think there is an opportunity during this analysis for us to kind of further tease out the effect of that chromium specifically on a subset of the strings. And I think that such set of strings, given the nature of the chromium algorithm, is generally to generate a random one label string. That those

in general are going to be such low query volume that you'll be able to easily just push those aside into a separate bin. But the other ones where I think it gets more interesting is understanding the suffix search list appendage to the chromium-generated strings that are going out. And I think that's where there might be some more useful insights into understanding the other properties, the data coming out of those, either contextual labels or systems or the usage of those strings. While it's not directly an answer on that portion, I think that is going to be maybe an element of what gets analyzed in Study 2 impact analysis.

JAMES GALVIN:

Okay. Thanks, Matt. Just before I go to Jeff here, I want to just let people know there's only one other comment in this document that I considered substantive to bring before this group, just to mention and talk about. So I'm going to let this discussion go on. As long as it's there, the floor will be open for anyone else to bring up any other discussions but that's where we are for today. So with that, we'll go back to Jeff Neuman here. Go ahead, please.

JEFF NEUMAN:

Yeah. Thanks. I apologize for joining late. I got stuck on another call. So I don't know if you already talked about this, but I didn't see a timeline in here. As far as the tasks and how long and all that kind of stuff, I think we should not have it open-ended.

Then the other point is if you look at the chart, and maybe this is because I wasn't as—sorry, the Appendix 1, I think, which is the chart comparing to the Board questions, the outputs. I didn't necessarily see

the same ties to all these. Like #7 and #8, I didn't necessarily see how the Study 2 report will be responsive to questions 7 and 8. Again, maybe that's intuitive to you guys because you guys are in this deep or much more deep, but maybe you kind of fleshing that out, as I saw on the chat, would be helpful not just for me but I think for others that aren't in this every day.

JAMES GALVIN:

Thanks, Jeff. Let me respond quickly to your first question. I apologize I didn't actually notice that you had joined late. But since we addressed your first question right up front right in the beginning when we started here and agree with you about the comment that you put on the summary, I should have left a reference in the document to the fact that we need to have a timeline. The short answer is, it's always been on our mind, but until we get to producing the budget which is going to have some dependence on level of effort, which has some dependence on being clear here on what we're doing, we don't really have a good sense of the timeline and where to put it. But I absolutely agree. There will be a timeline in it and we'll leave their comment there up at the top to make sure that we don't forget to resolve that along the way here so that that gets done. So you're right about that. That's the sequence that goes on there.

With respect to your comments about items 7 and 8 and how it says produce a report of the results of Study 2—Study 2 in general, the overall picture here is that except for the couple of questions which are pretty much wholly dependent on Study 3, as we get to the end of Study 2 and we produce that report, we should have answered all of the

questions that the Board had asked us to do. We should have been able to provide a measurable response to that. So the way that I look at 7 and 8, 7 and 8 in some ways are probably the most substantive thing that we're going to produce here, which is guidance to the Board for how to manage collision strings, how do strings get on and off that list, and criteria both about getting on and off that list, managing delegation or un-delegation. And then of course there's a relationship to managing mitigation measures that might be born into existence at different points in time there. So that's why that says, "Produce a report on the results of Study 2."

So, you're right. It seems kind of a big leap. But keep in mind that that really is the bulk of what we're producing here is to look at what the data allows us to show. One of the reasons for doing the case study in the .corp, .home, and .mail in particular, and then we'll have to do some tabletop analyses ourselves and discussions about what it all means, part of what we have to figure out is what data will the Board have available to it when it's trying to decide if the presence of collisions is an issue or not, and what are the parameters around evaluating that data that the Board can consider as it makes a decision as to whether or not to delegate. Again, there are some detailed questions in some of the other eight that are out there. But 7 and 8 are kind of the bulk of what we're up to, and that's what we should get from that.

So I take your point, Jeff. We should provide more detail. I think you're kind of piling on to Matt Larson's comments about the text in general, not being obvious to him how it all comes together, and so that's fine. So, yes, thank you for the comment. We'll take another pass at this and try to do a better job of organizing this and structuring it and adding

some additional text, in particular, explaining how the questions are going to get answered by each of these things as we put here. So we'll add some more explanatory text around the matrix. That's what I'm going to take away from your comment. In fact, I'll insert a comment here at the top to say that to ourselves. We should explain how to use this matrix and what it means.

JEFF NEUMAN:

Perhaps it's not even just in the matrix. In fact, I would put it higher like in the text itself where you talk about answering the Board's questions, it's how will doing this work, how will that provide the data you need to answer those Board questions. In other words, once you set up this data repository, it will help you understand more about—I'm just making this up—like, what is it that you hope the data tells you that will enable you to then say, "Ah, okay, so to establish risk of name collisions in the future, looking at this data..." You have to draw the connection there, especially for Board members that are going to have to approve funding for this. How is it that this specific set of tests or data gathering, how will that give you what you need to answer the Board questions? Right now you basically say it will give us that data but you don't explain how or why.

JAMES GALVIN:

I'm collecting a thought here but let me pause. Barry has his hand up. Let me go to Barry. Please go ahead, Barry.

BARRY LEIBA:

Yeah. Thanks. I've had this question before, actually. When we look at questions 7 and 8, I've gotten the impression from some of the conversation that we're kind of looking for ways to categorize strings rather than evaluate on individual string and say that, "Well, this string falls into that category or this algorithm, sort strings into that category, and strings like that will be collision strings and should not be delegated or that sort of thing." And I don't really see that happening, and so I'm kind of wondering if that's the direction that we're looking to go or if we really do think that some group of people is going to have to evaluate each particular string and decide whether it's a collision string.

JAMES GALVIN:

I'll offer my personal reply to that, Barry, and certainly we would be interested in points of view from others. My model going into this is that both of the alternatives that you just suggested are on the table for consideration. I really do think that it's part of this group's responsibility to figure out which mechanism we want to offer to the Board as its decision-making process. So I think that deserves discussion in this group and it deserves a full discussion as we sort that out. My personal view is that we're probably not creating categories of strings. Personally, I don't imagine that. I really just imagine that there's only one situation that exists. You're either a string, which manifests collisions, or you're not, and then all we're trying to do is put boundaries on what it means to be a collision string or not. And we're going to have to think about what data we can use to help identify those boundaries, and then give that to the Board to decide how to evaluate that. This is at least my picture of this. So to make it a little more concrete instead of vague—and I'm not suggesting that this

actually is going to work but it's always an easy thing to use as an example just to understand things—maybe what we do is we say, if you have an X domain entries in the root at root servers, then that automatically means you're a collision string. Maybe the criteria is as simple as that. And then based on that, we have boundaries that say, "If you don't have more than this many queries at this rate then it's okay, you can still be delegated. And if you have more than that, then you can't be delegated without a mitigation strategy." So there's a very simple guideline that we could give to the Board and say, "That's the answer to all your problems." Now, I personally don't think that that solution works but it's a concrete example of where I hope we're going to get to. I don't think we're creating categories of strings. I think we just need to evaluate it. We got to figure out what data to use and where to get it from. That's what I think.

BARRY LEIBA:

Yeah. I think I agree with that. But I also agree with Jeff Neuman on what he said in the chat that we should have this discussion and not have any preconceived notions as we start the study.

JAMES GALVIN:

Right. I see Jeff's comment in there and I'll let you speak to this if you want, Jeff. I'll say it out loud, though. There are levels of impact of the collision strings. At least for me, speaking personally, that's part of the mitigation strategy discussion that we need to have. We need to think about the idea that given that name collisions are going to exist, is there a way in which we might evaluate the quality or the impact of the

collisions, and, thus, it might be possible to address them with mitigation strategies? We're just going to have to have a full discussion about that and walk through it. I don't want to create a really complicated system. But we'll have to figure that out and see where that takes us, Jeff, go ahead, please.

JEFF NEUMAN:

Yeah. I was starting to agree with you to a point, and then I stopped. A simple solution in this case is not going to be the best solution. I think that there are going to have to be decisions made. And I don't think it's all about mitigation either. Something may have some collisions in the root, but maybe it was only started two weeks ago, or maybe it was someone who was just experimenting, or whatever it is. You can't just classify everything as a collision string and then expect the Board to just make a decision on whether it should be delegated. Maybe I'm wrong, but when I think of mitigation, I think of mitigation as only a decision you make after you decide that you can delegate it first. If you decide you can't delegate it, then who cares about mitigation? If you decide that, yes, we can delegate it, that's when you need to figure out, "Okay, but now, do we have to take steps to mitigate the potential harm that could result from delegating it?" So I don't see that as Study 3 or mitigation. I see that as definitive criteria to see whether mitigation steps need to be taken or not. Does that make sense?

JAMES GALVIN:

Yeah. It does. We certainly will have to have a fuller discussion about all of this. I think my only comment to you is I don't think those two

decisions are as independent as you're presenting them because I think it's possible to come into the process that says, "Well, gee, if collisions are present, you can't make a decision on whether or not you can delegate it until you know whether or not you can manage those collisions."

There's sort of two kinds of criteria I think that are in here. It's possible that there are collisions that might occur. Maybe we'll decide that there's some class of collisions, if you will, that will simply negate any option for delegation. But past that, I think that you can't just ignore the presence of collisions. So whether or not you choose to delegate might depend on, can you manage the collisions that occur? So then you have to have a mitigation strategy before you make that decision. And it's possible you could be doing that as part of the application process right up front, as opposed to waiting to have somebody say to you, "Oh, you've got collisions. We can't delegate you. Now you got to come back and give us a strategy." I don't know how this is going to play out. I think there are options here and we're going to need to work all that out.

JEFF NEUMAN:

Well, I agree that there are options but you're almost closing off options. Because one option is that the Board could decide, "You know what, this is an alternate root that wants to screw over ICANN," they've already said, "We don't give a shit about what ICANN says." And again, not all roots are like that. There are some that are much more responsible than others. But there are some types of collisions that may be caused where ICANN does. "You know what, tough shit. We are going to ignore it because these are—for whatever reasons." I don't

think we should be closing off the notion that all collisions need to be mitigated because that's just going to result in a whole host of problems, potential gaming, and other things. There may be collisions that we are willing to live with without any mitigation.

JAMES GALVIN:

Fair enough. I agree. The first thing that I said was, I think we need a fuller discussion of all of these options and what they mean and how they affect the processes. I fully agree with you. I just didn't want to get stuck in a place of absolute miss about decisions have to be done in quite this order. I think there's a relationship between mitigation and delegation and we just need to be careful about that. I just didn't want to close off that option. That's all. I see you saying yes in the chat room so I appreciate that.

Okay. Let me come back to Jeff's comment earlier. If you could scroll up to the bottom of page 5, I'm going to leave my comment there in the Appendix 1 about we need to explain what this matrix means and how to use it. I added a comment for the moment to try to be responsive to you, Jeff, about iterative analysis. You're making the comment about tying exactly what we're doing and how Appendix 3 or Annex 3—that was one of those editorial things that somebody grabbed us about, we'll pick one and use it. I simply made a comment there. I added to all of that text there about we need to say more about what this analysis actually is, the how, and the what we're doing, and how it ties to Appendix 3. That's what I've come up with at the moment. Yeah, okay. So I'll copy those words in as a response to my comment there and put it in this document too so as not to lose that. Okay. All right.

Any other comments or questions about anything before I jump to the one last comment, which I think is a little less controversial than everything we've been into so far? I'm not seeing any hands. Okay. Clearly, we have a revised document to get to. Let me get to the one other comment here. Now, I forget where was. Let me scroll to it here. It was from Julie Hammer. Bottom of page 4.

There's a paragraph there which says, "The top end strings identified in the 2012 data." She asked the question, "What does N come from?" We have actually talked about this in the Admin Committee when we were putting all this together. We'll have to sort this out. I'll say a little something here right now about at least what we talked about. And you're right, we should capture this in this document here. We'll have to capture it in there so that we know. But the idea here is, Matt Thomas, , one of our co-Chairs here, he actually does do some work with Verisign's root server data and he has access to certainly the people who do a lot more study of all of that. So we have at least one source of looking for these things. And of course, prior studies, all the 2012 studies, all the stuff that was done in preparation for 2012, certainly had a set of strings that were there. So what we're thinking is we don't want to do a full-on study of all strings. But even if you recall, going back to the Jazz data and the Interisle data and looking at that, N is kind of an obvious number when you look at the data and you look at the counts. I mean, there's sort of a nice, gentle, sloping curve of counts of names that are interesting at the root zone, and then a precipitous drop off with a super long tail. The idea is—and Matt Thomas was not sorry to call you out on all this. Maybe I'll let him talk since we talked about this—but we believe that we could figure out what that N is looking at

current data, and then we would add that in this as a last-minute thing that we're doing. Let me pause there. Let Matt Thomas talk.

MATT THOMAS:

Thanks, Jim. I think you hit most of the points I was going to make. Most of the interesting strings that the roots that are persistent and high query values, the strings follow a typical, like pro rata distribution. So, there's going to be a handful of them where they're receiving a large amount of query volumes, and then it's going to be the long tail. So I think it's pretty easy for us to be able, or at least for me to go back in and quickly take a look at A and J for various different points in time over the last several years, or we can just look at the current status and calculate what that curve looks like using different metrics, either total query value and distinct number of source IPs, issuing a number of unique sub-domains or whatever the criteria is, and we can slice and dice that and look at it as a group together. Hopefully that would get us to scope something to N. But I don't envision N being an insanely large number here. It's definitely something very feasible.

The only other thing I wanted to make a comment on about the iterative nature that you were talking about earlier, Jim, is that we can obviously try our best in Appendix 3 to flesh out very specific questions and understanding of it. But as we already discussed in the group, in our technical gap brief analysis, we'd mentioned there's been some large changes in the DNS hierarchy and infrastructure, and even the protocol since 2012. So I think understanding what kind of impairments we're seeing currently in the data is a very important step for us to really flesh

out some of the questions in our ability to better answer some of these Board questions.

So, for example, I can tell you, “I just blogged last week on executing minimization, where we’re now seeing at A and J, 50% of the queries are all single label versus two years ago, it’s at 30%.” So how does those kind of protocol changes and differences in the DNS queries going to either the roots where they’re recursives impact our ability to conduct these kind of measurements and risk assessment. I think it’s almost somewhat of a precursor into fleshing out some of the rest of this work and answering these questions. Thanks.

JAMES GALVIN:

Thanks for that, Matt. You’re absolutely right. That’s why this third bullet here talks about iterative analysis. We’ll have a starting point with the case study and some questions in Appendix 3, but then the idea is as we start to look at that data, consider what it means and think about what to do with it, we’ll probably have other questions. Going all the way back to the first comment about needing a timeline, one of the things that gets interesting here is—the cliché is don’t let perfect be the enemy of the good enough. And so there’s going to be a little bit of that. We want to be iterative and we want to allow some flexibility for things to go on “as long as they need to,” but in some sense, you kind of have to say, “Well, you’re done at this point. You’ve gotten all you’re going to get. Let’s move on.” Managing that is going to be one of the tricky things that we have to do here in this study. But the ability to work with someone to continue to iterate over the data and ask additional

questions and consider what they mean is an important part of this process too.

Okay. At least of all the comments that I saw in this document, those are the ones that stood out for me as substantive and needed attention. I was starting at one point to go through and accept the editorial comments that are in here, just to clean up the comment thing a little bit while we were listening to discussion. Does anyone else have anything that they want to add here now or say? Otherwise, we'll just talk a bit about logistics about what's next.

Oh and I forgot, I want to acknowledge Matt Larson's comment in the chat room. I did see that comment in the document there, Matt. I didn't mean to dismiss it by not acknowledging it explicitly but I really was trying to take all of your comments collectively earlier. So, including that one.

Okay. I guess the next appropriate action here at this point is just to say that we need revision here. So this document is going to continue to exist here. I do want to encourage folks to continue to read through it. Please use suggest mode to add things to it if you want to. Feel free to add a comment if you have a question. Let's continue to work through this. The primary pen, your co-Chairs, with the support of the NCAP Admin Committee here, will take on the task of providing a revised document that we can look at next week. We'll make an announcement on Monday, I would say, as to when we will stop making changes to it so that you can then look through it again and prepare for next Wednesday. We'll meet again at our usual time next Wednesday.

I'm not quite sure exactly how we're going to do this here. I don't want to make a document that is so red lined that it's unreadable but I also don't want to not make it obvious what's changed. So we may clean out red lines and highlight text or something that's been substantively changed or added just as a way of calling it out to people because highlighting is easy to add and remove when the time comes. So that when you're doing your review next week, you know where to focus attention. But I think that's what I would offer as far as how we'll go forward on this document. So we'll announce on Monday when we're done making changes that we're going to make. Hopefully next Wednesday, lots more good comments from folks here and review the document again and see where we are.

In terms of the budget issue, just to keep you up to date. So we are looking on the on the back end, between OCTO and SSAC's Admin Committee, we're looking to get some support from a consultant who will help us to lay out a budget and get all of that documented. So we may be able to have a short-term consultant that we can hire who helped us out the last time. Since he's already familiar with what's going on, that'll be a pretty good deal. We can get him again to help us and doing this. So the detail will be done by the NCAP Admin Committee. We won't expose the detail to the group at large here. Just so to remind folks, that's an important consideration from the point of view of ICANN contracting that we can't do that. But we can certainly expose the final dollar amount to the committee to this group at large, and so that can be there and it'll be in the open document. But the actual details of the budget will only ever be shared up to the Board. And the reason for that is to ensure that anyone, even if you are part of the committee, if it is

true that the work is going to be funded, if you want to submit a proposal and respond to an RFP, you would be allowed to do that as long as we keep all of that data private and confidential. So this allows people to be part of the group and contribute, whether they are a contractor or not. So, okay.

Go back to the agenda, Kim, and I think that takes us to the end of discussion of this document. Move to Any Other Business. Okay. I'm not seeing any hands. No one's jumping up and down. We will meet next Wednesday and have a revised document for you to look at. Matt Thomas, you went off mute. Please go ahead.

MATT THOMAS: I was just going say thank you, everyone, for coming and giving some time to review the document, put your edits in there. We look forward to talking to you next week.

JAMES GALVIN: Okay. Thanks all. We're adjourned.

MATT THOMAS: Thank you.

BARRY LEIBA: Bye all.

KIMBERLY CARLSON: Thank you. Bye.

[END OF TRANSCRIPTION]