

Transcript
DNS Security and Stability Analysis Working Group (DSSA WG)
24 May 2012 at 13:00 UTC

Note: The following is the output of transcribing from an audio recording of the DNS Security and Stability Analysis Working Group (DSSA WG) teleconference on 24 May 2012 at 13:00 UTC.

Although the transcription is largely accurate, in some cases it is incomplete or inaccurate due to inaudible passages or transcription errors. It is posted as an aid to understanding the proceedings at the meeting, but should not be treated as an authoritative record. The audio is also available at:

<http://audio.icann.org/gnso/gnso-dssa-20122405-en.mp3>

on page

<http://gnso.icann.org/calendar/#may>

Attendees on the call:

At Large Members

- . Cheryl Langdon-Orr (ALAC)
- . Olivier Crépin-Leblond (ALAC) (co-chair)
- . Andre Thompson (At-Large)
- . Julie Hammer (ALAC)

ccNSO Members

- . Takayasu Matsuura, .jp
- . Rick Koeller, .ca (CIRA)
- . Jörg Schweiger, .de (co-chair)
- . Luis Diego Espinoza, .cr

GNSO Members

- . Mikey O'Connor - (CBUC) (co-chair)
- . Don Blumenthal – (RySG)

NRO Members:

Mark Kosters (ARIN); (co-chair)
Arturo Servin (LACNIC)

SSAC members:

Jim Galvin (SSAC)

Warren Kumari (SSAC)

Expert:

ICANN Staff:
Julie Hedlund
Patrick Jones
Nathalie Peregrine

Apologies:
Jacques Latour, .ca (CIRA)
Scott Algeier (expert)
Nishal Goburdhan (NRO)
Rafik Dammak – (NCSG)
Rosella Mattioli (NCSG)
Bart Boswinkel

Coordinator: Please go ahead; the call is now being recorded.

Nathalie Peregrine: Thank you (Tim). Good morning, good afternoon, good evening. This is the DSSA call on the 24th of May, 2012. On the call today we have Mikey O'Connor, Andre Thompson, (Keller), Cheryl Langdon-Orr, (Julie Hammond), Arturo Servin, (unintelligible), (Ron Camarie), Jim Galvin, Luis Espinoza, Olivier Crepin-LeBlond, (unintelligible) and Mark Kusters.

From staff we have Patrick Jones, Julie Hedlund and myself Nathalie Peregrine and we have (unintelligible). (Unintelligible). I would like to remind you all please state your names before speaking for transcription purposes. Thank you very much and over to you Mikey.

Mikey O'Connor: Thanks Nathalie, as always a fabulous job. Today was especially complicated because folks that deliver the bridge for us gave us a heads up that dialing in was pretty congested at the top of this hour. I guess they had a lot of meetings starting simultaneously so (Kim) gets a big at-a-boy as always, but especially today.

Just a -- the agenda is extremely simple just like last week. We're really just going to look at the report. So while people are thinking about their

statements of interest if anybody wants to change that agenda, this is a good time to do that.

We'll pause now and check in on statements of interest. Anybody got any changes they want to tell us about. Okay, and then for the recording this week's picture is contributed by (Warren). And I have decided that it's pretty good picture of the way that we do the project planning for the DSSA.

For the project I'm thinking of myself as the fellow on the left in that picture. And I have no clue who's driving, so that's the picture of the week. Julie's in the queue for next week but do - do send them, they're getting better. I like this a lot.

All right, so today we're just going to work on the report. And I think we'll just keep pecking away at it for the rest of the time. I've put down below the shared screen links to all four drafts that are out on the wiki. I apologize for those really long links.

But there are two versions of each. There's the -- a Word version and a PDF version of the report and of the appendices. And as you all notice I'm on Version 9 and you are on Version 8. I'll publish Version 9 this weekend.

And mostly I think today I want to drag you through it because I know at least in my experience that I never have time to read these reports in between. And so, I think it's always a good exercise to just step through them as a group so that I can show the stuff to you and perhaps trigger those reactions that then inspire you to write comments.

Hats off to (Warren) and (Yorek), they are already in with comments and I will drive those into the next draft. I think that protocol should be because this report is pretty big, rather than sending your drafts to the list, send them to me and I will consolidate them and then bring the consolidated version back next week. And we'll start debating the changes that are being proposed.

Because this is a -- I think the file is over two megabytes now which is tough on people that are -- bringing down email over a slow connection. So let's just start at the top and I will pay attention to how far we get today and then if we don't get all the way through it, we'll finish it off next week.

But I just want to give you a very fast tour. I filled in a few things. This background section is listed straight out of our charter. And the - the key thing in there is highlighted that there's a need for the better understanding of security and stability at the DNS.

I'm going - I'm going to leave the changes for next time. (Yorek)'s got a really interesting modification to that - that I think warrants a fair discussion, but I don't want to do it today.

Because I really want to just blast through the whole shebang and maybe try and touch on the -- the appendices are still very rough. My next big writing project is to go tidy up the appendices.

And I've - I've stuck in objectives and goals out of the charter. I'm going to go through this pretty fast because this is all just charter stuff. But then, you know, we're starting to touch on the fact that we had to really work pretty hard on our scope in really three dimensions.

The first was figuring out what we meant by the DNS, so we did the systems boundaries discussion, and then functional and organizational context. And we've talked about this enough that I'm going to screen through it pretty fast.

But just highlight that - that's its now for the most part in pros rather than in pseudo code stuff the way I was doing it before. So this is our familiar picture, a bunch of observations.

The big thing that I'm proud of is that I learned how to do three columns of things, stop and highlight this part. And also point out that this came in after the call last week where we were starting to say, "Oh, you know, there are a lot of entities in this community and we should really just call some of the out."

And then I had this really bright idea which turned out to be too smart which was to try and array those entities on this chart. And I blew a fuse trying to do that, so if anybody's got a good idea, I'm all ears. But what happens is that each of those entities tends to occupy substantially more than one point on this diagram.

And so, putting them on there as dots we are almost the only one of those that is actually accurately described as a dot on this chart. So if anybody's got a bright idea on how to convey that, I'm all ears; but I don't think it's going to work. So anyway that's - that's where I got on that particular idea.

There's - there's a fair amount of pros in here that you'll want to read fairly carefully. This is where I drove most of that section that I took out. Remember I had a section at the very end talking about a future organization and I pulled that out.

And I took most of the ideas from that and drove them into this narrative which again I'm not going to go through it in a whole lot of detail but just highlight it for you because it's pretty prescriptive.

And we are -- we -- the Ops group talked about this on Monday and we forwarded this draft of the report to both the SSRRT group and the Board DNS Risk Management group and encouraged them to comment on that.

And have been -- those have been received with enthusiasm, but we haven't gotten any comments back yet. So then this diagram should be familiar and I think these observations are pretty familiar too.

I think this is one that is very close to my heart. I think that we may -- the legacy of this effort may well be more in the tools and process that we leave behind than the comprehensive risk assessment. We talked a fair amount about that last week.

Another familiar picture is this one. I don't think this one's changed much. This is the relationship of what we're doing to a more traditional risk management framework.

And the one question that I have for you who are really more experts on security management that there is - there is a more widely accepted view of security management that -- I can't rattle it off because I'm - I'm ashamed to admit that I finally bought my very first information security textbook last week and was reading it.

I'm sort of having the same experience that I had after I ran my own business for five years and finally took an accounting class. I said, "Oh, that's how that really works." There's the whole thing of plan, do, assess, act - I can't even put it in order.

I think it's like five or six steps and I'm wondering whether this picture should be modified to accommodate that or whether we should just leave it like this. This is sort of leaving out the -- Don's got it -- Don's a professor at this. He - he not only reads the textbook, he teaches people the textbook; plan, do, check, act.

And the doing part is sort of missing from this and so if folks feel strongly about that, I'd be open to sort of - or open to sort of redoing this chart because it might be good to get aligned with a more traditional methodology than this one.

So people can comment on that, think about it. If anybody's got a really good example of that diagram, I'd love to see it, etc. You know, that might be one we want to circle back to.

These comments I think you've already seen, the tailoring we've certainly beaten to death. I'm not going to go in to much more on that. The findings part is where I sort of want to dive in - in a little bit more detail.

Is this defensive -- yes we have done stuff, come on we've done a lot of stuff. Just haven't done a lot of findings about risk, but I have driven that in here. This is familiar - this is our five big topic list.

Oh, and this reminds me of a conversation we had last week where I think Julie and Don brought up the question about the optics of having nation states in our methodology.

And I went back and looked because I was wondering where that came from. And it turns out it came out of the methodology. So I'm thinking that if somebody gets really snarky about that, that's probably as good an answer to that as any which is that yes indeed sometimes nation states are security threat sources and point to the list 3800 methodology people really complain.

(Julie Hammond): Mikey, it's (Julie Hammond) here.

Mikey O'Connor: Go ahead (Julie).

(Julie Hammond): I think the point that we were talking about was that it -- the one place where nation states were mentioned was actually under the title, adversarial threats.

Mikey O'Connor: And I - I did change that.

(Julie Hammond): Yes, so I think it wasn't the fact that - that was mentioned at all, you're quite right. And sometimes they are adversarial but the context in which it - it was

appearing looked like that all nation states scenarios were adversarial with other points.

Mikey O'Connor: Yes, okay, well, I think I fixed that by yanking it out.

(Julie Hammond): Yes, I think you have too.

Mikey O'Connor: Okay, good deal, glad to hear that that's solved. I think this is where we should start -- I'm not going to read these to you there on the screen. But I - I want to start drawing your attention to them because this is sort of the place we left off last time.

And I think the - the big one in this chunk is probably the one-size fits all puzzler. And the thing that I also added is that - and highlighted on the diagram is that some risks are very rapidly moving and some preceded a pretty stately pace.

And think one of the things we're going to want to accommodate in our next round is not - not putting something in place that takes so long to do, that's it's useless for people who are on the frontline. It's certainly something that I'm very conscious of. So anyway that's one to highlight and you can think about that.

The other one that I want to highlight especially for (Mark) is that I tentatively stuck (Vixie) in here as our (anonymizer) and that's why it's in brackets and we do want to drive that one to ground before we publish.

Man: I talked to (Paul) about this and he's all game. He's think he's the most appropriate person for this task.

Mikey O'Connor: Oh, that's lovely - that is lovely. Thank you, thank you, thank you. Can you get me contact information? I stick that into - somewhere in the appendix. I

just want to get the right ones that he's comfortable getting sprayed all over the world, then we're good to go. Thank you very much sir, appreciate it.

Okay, I think the next chunk -- I've smashed together quite a bit of material that was sort of sprayed across a lot of pages and said a number of things about them. So this is part that we'll slow down a little bit on.

This is again -- the first one is sort of the one-size doesn't fit all problem. And then I think the next chunk is another piece out of that future organization part that I deleted where we're sort of describing this dream that we have of ongoing coordinated - not coordinated in terms of the doing but with - with shared results in a form that would be useful to the broader community.

And again this isn't -- at least in my mind -- this isn't all about, you know, sharing their mistakes. This is more about sharing and developing best practices.

And quickly community - communicating especially with rapidly emerging threats, figuring out mechanisms that the news of those threats can be quickly communicated across especially the community of top-level domain providers.

Because that community's going to get a lot bigger than it is right now. We sort of - we may have a scaling problem with the model that we have in place today that this might mitigate. So that's - that's where that sort of is.

Then there's the whining no-no, we're going to finish but I think it is important to set the expectations right. I think that it's unrealistic to see this work be based on very granular real world data and partly because it's so sensitive and partly because I just don't think it's practical.

And so if the community is looking for a juicy report filled with secret details, I think we need to calm them down a bit on that and I'm - that's what I'm trying to do with this.

And I think that one of the other things that we probably need to calm people down on is that we're not going to probably go into a lot of detail on vulnerabilities seems to be imprudent to publish rave details on the vulnerability of the DNS so that the bad guys can read them and use them.

And again I think we need to set expectations appropriately there. This is apparently out of my - my brand new textbook where my textbook says, "You know, it's not smart to publish your vulnerability." I went, "Oh, that's probably right." So we'll figure that out as we go I think.

This is the SSR stuff. I think that this is pretty much old news. I just - just sort of smashed together a little heading for it. So the recommendations haven't changed.

I think it was (Warren) who pointed out I've got them in and out of sequence. I'll fix that in the next draft. You have to understand that part of the reason for that see there's - there's number 14, not quite in right place; but part of the reason for that because I live in a town St. Paul, Minnesota where the numbered streets in the downtown part of time are not in numeric sequence.

We got famous on national TV when our governor commented on that in a pretty un-complimenting way. So fair enough, yes I was just testing, way to go (Warren).

And then finally, this is last part. This is the approach where again we described the go fast which is wrapping up down. I - I did stick in to the go fast part a public comment cycle.

I think we should probably get this report out to PROG and then do a public comment cycle that we then fold back into that while we go ahead and get started on go deep. Partly because as it turns out it's in our charter, be a good thing to abide by that. So those are some of your bullets except for the last one.

And then the - these three are the same also with the addition of a - a wrap-up cycle. And here again this is some of the future looking stuff. I think it would be an understatement to say that we did an awful lot of work building things because they weren't already there.

And -- so I think one of the things to ponder and - and this is sort of aimed especially at Patrick, but really at all of us. And that is I - I threw out on the call for the SSRRT -- they had a webinar -- and I threw out the notion that this repository would be a pretty -- that in general resources to do this are important to provide.

It's all very well and good to give people mandates the SSRRT was throwing out an awful lot of mandates especially for ICANN. But mandates without the resources to carry them out aren't just a whole lot of fun.

And somebody on the call sort of immediately piped up and said, "Well, be careful about scoping." And I think that's a debate that's above our pay grade, but I think this repository could be a pretty low impact, low resource kind of effort. And I don't really care who does it but I think it would be really great if somebody did it.

And so that's part of why I think I've still got a lot of work to do on the appendix because I think quite a bit of the appendix could go into that repository wherever it winds up.

So let's see. Then we've got the methods thing which got smashed into a pretty shot paragraph, just all of the different version that we reviewed and so

on is sort of compressed into this one plaintive paragraph where we floundered until we picked one.

But then we -- I think there are some observations that are fairly important. First is that we did this in a hurry and it wasn't really work that we were charged to do.

So the community should not view this as anything definitive. And I think the other is a puzzler which is we only looked at zero cost methods and the only one that was really available that was in any way complete was this 800-30.

There are a bunch of them, including the ISO 27,000 series that are available for pay and this is above our pay grade but it's one that I think the DNS risk management committee should take a look at. And it may well be that there are other methods that are much better than this, much better suited to this work that need to be paid for and then the puzzler is what do you do about a community that's as broad and diverse as this?

Do you force them all to have to buy it? And so it's one that I'm just really calling out here but not taking on. That's above our pay grade.

So then this is -- you've seen this before. I'm on Version 9. You're starting to see some of the changes that are coming in and that gets me to another puzzler left over from last week. Go back to this picture for a minute.

Julie came up with a really good idea. I was sort of whining about how long those risk topics that we've developed are. You know, they're three or four type written pages each, so five of them is like 15 to 20 pages of text.

I yanked them out of this part of the report and have relegated them to the appendix. And Julie said well maybe they can go on some sort of a diagram. And anybody who has got a good idea for what the diagram could look like, I am stuck.

I tried starting from this one and I got to something that's so ugly that I threw it away. So some way to compress those 15 to 20 pages down into something that's preferably about one would tickle me to death. If anybody wants to chew on that puzzler, I'm really interested in that.

I'm going to continue to chew on it but my focus for now is going to switch over to the appendices just to get those into some kind of shape pretty soon.

So that was one I got stuck on. So in this part that worksheet that we built is a much more compact way to convey the methodology than, you know, the methodology suffers from the same problem that our risk scenarios do. That is that when you type the whole methodology out, it's this big, long thing.

I don't know how long but it's another 20 pages of the appendix I bet. And it's very tedious to read it. You know, it's just list after list of table after table. After a while you're sort of left gasping for breath whereas the worksheet is great because you can sort of see the whole thing on one page and then if you want to drill into something you can click on it and then it immediately pops up the list there. So that's going on in this one.

(Warren): So Mike...

Mikey O'Connor: Yes, go ahead.

(Warren): You can -- sorry, this is (Warren). Yes, you can (unintelligible). But I have this feeling that we might be assuming that the audience for this is actually going to care more than I suspect they're going to. And I don't know quite how to word that better.

Mikey O'Connor: Yes.

(Warren): I don't know if people will bother doing stuff like, look, there's a worksheet. I can drill into it. Or, oh, look, there are lots of pages. That must mean that there's good stuff in there. I guess I'll look at it. Sometimes just having a lot of stuff makes people actually...

Mikey O'Connor: Yes, I...

(Warren): Expecting the reader to do something might be more than they're likely to do.

Mikey O'Connor: Well, that's true and so maybe I'm just over processing this. I think I'm still going to nudge them towards looking at it if they're interested.

(Warren): Yes, you definitely would. But if we just like return them a report that's empty, four plus five pages, so, you know, 30 pages long, they're like what have you been doing for the last two years, people?

Mikey O'Connor: Yes, that's true. There is the weight test. We do want to pass the weight test. I think we're easily going to blow through 100 pages in this report with the appendices. I think we do pass the weight test, no problem.

Then this is really for us. This is, in a way, for Mikey to remember that there is some thing that I want to do to that worksheet to make it behave a little bit differently and then there is our protocol that is to be developed. There's a picture of it and a quick narrative.

But some observations about it, too, a little whining; people should review this report for whining and if it's getting too whiny we can take the whiny stuff out. It's mostly venting.

And again, this is aimed more at the DNS risk management committee. You know, much of what we had to do we had to do in order to get our work done. But it was outside our scope and then I highlighted the fact that we don't

necessarily all agree that we even need confidential information to do what we're doing.

And, in fact, confidential information presents a lot of very complicated, logistical puzzles. That's why we had to do this whole protocol. I think that's a debate to be had during the next phase.

And then this next major section and the last section is really talking about where we're going next. And the first thing I want to highlight is that I am still very uncomfortable talking about when we're going to deliver this until we get a bit further into it.

And I know that's going to annoy some people out in the community and I will take that bullet but until we have pioneered a little bit further into an untracked forest, I am really uncomfortable specifying when we're going to be done.

One of the other things that -- this is another artifact from that section that I deleted, which is the difference between projects and functions. And what we are is a project that is really doing something that's got a beginning, middle and end and then we're going to drink beer. That's the way projects work.

They are a one-time thing. They make deliverables and then they stop whereas functions, managerial context, are things that go on forever, like payroll or, you know, any operational thing.

And I think it's safe to say that risk management is really a function that ought to continue forever and especially periodic risk assessments. And so this part of the report is, again, sort of speaking -- you know, this is like putting a little message in the bottle and launching it off into the ocean and the hoped for destination of that bottle is the risk management framework committee that will agree that there needs to be some sort of ongoing thing and that risk assessment is part of that ongoing thing and that hopefully the work that we've done will be a useful start. I think it will.

So the other thing that I stuck in here for the board risk committee is they are chartered to not only come up with a framework but they're also chartered to come up with the first turn of the crank in a baseline assessment, which is where some of the confusion between our two groups' role occurs.

And I don't think this is likely, but if they do start -- if they go off and start an assessment. I think we want them to coordinate with us, especially if they get ahead of us. We would just assume retire -- at least I would cheerfully retire from the field and say you go.

I think this is pretty unlikely but, at the same time, I wanted to acknowledge the fact that we do have trains that are running on parallel tracks right now and the ops group is trying to reach out to the board DNS risk committee to coordinate some of this. We have more to report on that soon.

So then there is the famous (Shark Arrow) report. I don't think there's anything that's changed in there, changed in here either. So that's it. That's our report. It ends kind of abruptly. Maybe there should be a little song or a dance or something at the end to say the end but I haven't written that yet.

So sorry to spend 45 minutes of your lives taking you through a report as sort of a narrative soliloquy but, as I say, I won't do that again. But I wanted to drag you all away through it once because I know that a lot of us just don't have the time to do that.

And now, at this point, I'm done and any comments and thoughts are fair game. I'll open it up to the group and we can carry on from there. Anything leap out at people that we should fix?

(Julie Hammond): Mikey, (Julie Hammond) here. I was just wondering it could be that this (mystery) that was discussed at length before I joined the group -- but on (neither) step the charter is still there as a draft document and I was just

wondering why that was, whether there was any intention to try and sort of formalize, make it a final document or whether there's something that prevents that happening.

Mikey O'Connor: You know, I noticed that too. I was driving around and realized that the only copies of the charter are labeled draft. And I -- that happened before I got on the working group as well, so for those of you who were there all the way from the beginning, can you -- Cheryl was saying that should be changed as it has been adopted by (unintelligible).

Cheryl Langdon-Orr: Mikey, Cheryl here.

Mikey O'Connor: Yes, go ahead, Cheryl.

Cheryl Langdon-Orr: Yes, it's been adopted and, in fact, for some reason this happens a lot. If you go through all sorts of the (unintelligible) foundation documents and memorandums and all sorts of things, what seems to be left on the Wiki pages and on the Web archives and access pages is often not the executed documents.

And in this case it's a charter. Admittedly there was no, you know, signing and execution. But there certainly was the clear adoption and so we certainly should be removing the word draft and I would have thought an appropriate cover page should have been prepared by -- I'll insert staff here -- but somebody, the magic goblin somewhere in the system to indicate that during the (unintelligible), which we're all rather proud of, (DSO)s and the (ICE)s all made formal adoption of it and it became a properly co-chartered workgroup, cross community work group.

Mikey O'Connor: So if we rummaged through the minutes of the various (ACE) and (SO) meetings and (unintelligible), we should find those...

Cheryl Langdon-Orr: Mikey, the shortcut here is I don't think we need to rummage. I think that you'll find the staff support for each of the (ACE) and (SO)s should be able to respond in an email with an exact link to the particular meeting. For example, whilst I can't give you exact date, I can tell you it was a Thursday meeting in (unintelligible) that the (ILAC) endorsed it.

Mikey O'Connor: All right, I'll get that.

Cheryl Langdon-Orr: ...date it is in (unintelligible), in (unintelligible), which happened to be a Thursday. That's when it happened. I'm not sure about the other (SO)s but we did all manage to do it.

Mikey O'Connor: Yes, I'll take an action to tidy that up.

(Julie Hammond): Julie here again, Cheryl. Do you recall -- I'm looking at the document that's currently there and in its annex work called annex a schedule it's got two columns with that date, (end) date, all of which is TBD and I understand and agree that you don't necessarily want to set dates for those things.

But do you know where the dates were put in there in the final version or was that just accepted as a TBD? And if so, do we want to leave it like that or tidy it up?

Cheryl Langdon-Orr: Well, in fact, it was left with a TBD because it was the operations group of the workgroup with the new co-chair situation that was born out of the co-chartering that was to do that part of the planning.

I would like to rewrite a document as such. I think leaving it as the TBD is fine that (unintelligible) imitated and I think -- I'm pretty sure I saw something which flushed out some approximately date (unintelligible) that process. Mikey, I'm not in some sort of dream world, am I? I'm pretty sure we did.

Mikey O'Connor: Oh, I don't know. I kind of like leaving you in a dream world. It might make my life a little easier. No, you're absolutely right. What we did early on with the ops crew was a sort of work planning effort and raised a few eyebrows because we left a few of those TBDs, TBD. In fact, the final one is still consciously being left undefined because, you know, because of this first time through the wilderness.

But I think it's -- I'm with Cheryl on that. I think it's fine to leave the document as it is, as accepted. And but I think it is also a really good idea to circle back and nail down the dates and meetings where it was approved by all the respective (ACE)s and (SO)s and that seems like a fairly straightforward thing to get done. Thanks. I'll take that one, get that underway.

(Julie Hammond): One other query I had, Mikey, in at the beginning of your Section 4, within your Section 4, you used the terms go fast and go deep, which are well understood by the working group within Section 4.

But where you really sort of define and explain those terms is at the beginning of Section 5. I think they intuitively understood before that explanation but I just sort of raise that point in case you felt that an earlier explanation might be useful.

Mikey O'Connor: Yes, let's see. I could see -- I could refer people to Section 5 for the definition.

(Julie Hammond): Yes, that would work.

Mikey O'Connor: Let's see. I'll put that in square brackets and fix that later.

Cheryl Langdon-Orr: Mumble, mumble.

Mikey O'Connor: Well, I have to do that once. That's the honorary once per call Cheryl mumble there. Okay, that was a good catch. I'll take that -- I may also back this down

a little bit. Some of this was written late at night, you know, and some of this was written very early in the morning.

(Julie Hammond): Well, sometimes you cut and paste and that's fair enough, too.

Mikey O'Connor: Yes, yes. Okay, other thoughts? It sounds like from a content standpoint, we're pretty close to the (glide) path, which I am glad to hear. But if there're big content issues, we still have time to change this a lot because we have, you know, several more weeks to go before we really need to finalize this and push it off with (ACE)s and (SO)s to take a look at.

So if people are -- hopefully people are really comfortable and that is great. But if there is something that really bothers you when you've -- now that you've been drug through this kicking and screaming, do fire it in as a comment to me in this week because -- and especially helpful would be to get your comments into me before Sunday evening because I'll push out a draft on my Sunday evening schedule this week.

And so if you want to get stuff into the draft, the next couple of days are a good time to do that because otherwise you'll miss a whole cycle. But other than that, I got nothing. Maybe we'll end a little early. What the heck? Unless there is something else on people's minds and then we've got a fair number of comments already in and we'll start going through those next week and working those into the draft.

I'm not hearing cries of anguish, so Nathalie, why don't we turn off the recording and call it a day and we'll see you all in a week.

Nathalie Peregrine: Thanks, Mikey. Thanks, everyone.

(Julie Hammond): Thanks, Mikey.

Woman: Bye.

Mikey O'Connor: See you later.

Woman: (Unintelligible) recording.

END