KATHY SCHNITT: Welcome all to the SSAC EVO of RESO Work Party Teleconference, on Thursday, the 26th of January 2022, and Russ, I'll hand it over to you.

RUSS HOUSLEY: Okay. Thank you. The first thing I want to do is back up a little bit to section 6. We spent a fair amount of time on where to put this in the document on the call of last week. And so given that there's a fair number of people here who were not here last time, I just wanted to spend a couple minutes so that the people who work here can catch up to where we were.

So maybe we could just spend a few minutes reading section 6. We think it's pretty stable at this point. And just spend a few minutes with it either on the screen or on your own copy. We know that things around this are going to move, but we spent so much time on section 6 of the separate document and then imported it here. But, anyway, I just want to make sure that this direction is understood by everyone, and we have a chance to raise concerns or comments before we move on as, okay, that one's kind of settled.

And then we'll move on to the homework that Andrew did on section 7. Steve is with us today instead of Andrew, but he'll take the notes for whatever we come up with. So let's start there. One of the things we know is that the title will probably change as we sort out the rest of the document, but the point is the meat of section 6.

GEOFF HUSTON: I like it. You want me to say more?

RUSS HOUSLEY: That's because you were here last week.

BARRY LEIBA: Because last week we packed that out, but to the people who were not here last week, does this resonate with you. And part of the issue also is as we look forward, how does this fit into the flow of the document and what do we put to do for it in that case? But that's right.

RUSS HOUSLEY: Maybe you could scroll down a little for those who are reading it on this screen as opposed to in their own copy that they pulled up from chat or whatever. All right. There's not too much on the next page.

WARREN KUMARI: So I suspect that a lot of people disagree with the first sentence.

RUSS HOUSLEY: With what sentence?

WARREN KUMARI: [00:04:20 -inaudible] for example.

BARRY LEIBA: I'm hearing a lot of background noise from somebody.

WARREN KUMARI: Is it me?

GEOFF HUSTON: Probably. Are you walking in the snow?

BARRY LEIBA: It seems to have gone away now. There was sort of a shuffling or crunching sound. Yeah.

WARREN KUMARI: Okay. Anyway, I suspect I'll repeat myself. I suspect that a number of people would be fairly surprised/confused by the first sentence. I think that ICANN would do themselves as the centralized authority for the DNS. So I think that we need some more.

BARRY LEIBA: No. But what what's always said about DNS is that it's a massively distributed system in [00:05:20 -inaudible]. So the centralized authority is an issue with the root servers. But beyond the route server system, we have a distributed system. And I think the purposes guidelines--

WARREN KUMARI: But what's said by technical people is that the DNS is a [00:05:43 - inaudible] coherent distributed system. I don't think that that's something that most ICANN attendees have ever heard.

BARRY LEIBA: Maybe. But, I mean, I think it's true.

WARREN KUMARI: Oh, no. I don't disagree. I think you're correct that there is no centralized authority. But keeping in mind who the audience of this is, I think we need to put a few more riddles around this.

BARRY LEIBA: Still, are we enlightening them with this sentence? Or what is your suggestion in rephrasing in this?

WARREN KUMARI: I don't think we're enlightening them because I think they will just be confused. If we added something in there, like, may be a footnote or a link to something that explains the DNS [00:06:34 -inaudible] blah, blah, blah, blah, that would help. But I think if they just read that, they're going to go these SSAC people don't know they're talking about. Clearly, there's a centralized authority. I was at the meeting last week and I had cookies.

BARRY LEIBA: Okay. So you're suggesting leaving that sentence and putting a reference at the end of it that explains what we're talking about.

WARREN KUMARI: Yeah. Or maybe there's no centralized authority, and then parenthetical, although there is an organization which helps determine what goes on, or I don't know just something to add a few more words. Because I think many people reading that would see that sentence, and like, just their heads would explode. I don't think it's wrong, but I think it's very important.

BARRY LEIBA: Yeah. Okay. Steve, can you take that comment?

STEVE SHENG: Sure. I'm going to separate note section. Yeah. Please continue to discuss.

SUZANNE WOOLF: The other way to approach that is nobody tells your ISP or your company IT how to manage their zones or what DNS names work for their services.

RUSS HOUSLEY: Or which resolvers to use.

SUZANNE WOOLF: Exactly. So that's kind of possible.

RUSS HOUSLEY: I mean, that could be a footnote, right, to say those things if we can't find a good reference.

SUZANNE WOOLF: Yeah. I mean, it's worth having examples or metaphors or something to show people what we mean by decentralize. Because Warren's right, people get confused. Oh, there's somebody in charge of well, yes and no. Did that help you out, Warren? Warren is muted.

BARRY LEIBA: Warren unmute, but he's still not saying anything. Warren, you're still unmuted, but we don't hear any sound.

WARREN KUMARI: Is that better?

BARRY LEIBA: Yes. Thank you.

WARREN KUMARI: Okay. Good. I changed to a headset instead because something, something. Anyway.

BARRY LEIBA: And so does what Suzanne said help you out there?

WARREN KUMARI: Yes. I think so. Thanks. And again, like I agreed, like, the sentence is correct. It's just confusing, I think, to people. So cool. Thank you.

RUSS HOUSLEY: Okay. Let's go to the next page. Unless warren has something else on this page.

WARREN KUMARI: I'm sure I could find something if you want me to.

RUSS HOUSLEY: It was only if you already found something.

WARREN KUMARI: So one thing I'm interested in people's comments on is the last paragraph. Well, it's no longer the last paragraph. But the paragraph that ends with the sentence, it's a mess. Particularly looking for comments on that and whether there's any different nuance we should present in that regard.

GEOFF HUSTON: You know, I kind of like calling it as it is. And it might have been Andrew that puts it, it's a mess.

BARRY LEIBA: He did.

GEOFF HUSTON: It's a mess.

WARREN KUMARI: I wasn't calling on that phrase in particular. I was really looking for is the whole paragraph, is that coherent? Is that what we want to say? I mean, I like it. I'm wondering whether everybody else does.

So seeing there's nobody else is going to answer that, I will take us down a different rat hole quickly while people think about this. At the last IETF meeting in wherever it was, I guess, to London. Actually, no. I think it was actually on a phone call. Wes Hardaker invited somebody that he'd written a paper with to come along and present. And the paper is "The challenges of blockchain based naming systems for mail way defenders".

BARRY LEIBA: Was this an IAB thing?

WARREN KUMARI: Yeah. It was an IAB, and I think someone else was invited as well. But she's a student at University of San Diego, and Wes was a co-author on this paper. But, I mean, it talks about how blockchain based naming systems actually work and has a lot of really good detail and stats --

BARRY LEIBA: Damn. I wish I were there. This is why the IAB should make these things available. Anyway, yes.

WARREN KUMARI: Yeah. There are many things the IAB should do. But, anyway, what I was wondering is it seems likely that she'd be willing to do a short presentation on it to SSAC.

BARRY LEIBA: I like that.

WARREN KUMARI: So if the work party leaders are happy with that, I can see if maybe for the next meeting she could come along and present to us, like, I know, half an hour or whatever sounds good. I thought it was a really good paper. It had a lot of really good stats and was well researched. I think, ideally, she and Wes would both present. I believe she's a student and Wes would be there for backup and moral support as well.

RUSS HOUSLE: Please send contact info.

BARRY LEIBA: Yes. Definitely, let's do that.

WARREN KUMARI: Okay. I will put who, I guess, Russ. I don't actually know who runs this. Russ and Barry?

UNKNOWN SPEAKER: Russ and Barry.

WARREN KUMARI: Okay. I'll send you and Wes email and you can figure out amongst yourselves.

BARRY LEIBA: Thank you, Warren. So we're good with that paragraph. Okay. Let's move on. Do we have any other comments about that section 6 staff or should we go ahead and launch to Andrew's updates on section 7, etc.?

RUSS HOUSLEY: I'm only hearing crickets, so I think we're ready for 7.

BARRY LEIBA: Yeah. I'm hearing background music in my part. So let's move on.

STEVE SHENG: There are a few sections Andrew highlighted for section 7. So this paragraph was one. And then there are some sections highlight for 7.1. So we can go through those one by one, I guess.

GEOFF HUSTON: This is the document already talked about ECS a little earlier. I'm trying to find the Find function in the Google Doc app. [00:16:22 -inaudible] are pain, aren't they? Control F.

WARREN KUMARI: [00:16:26 -inaudible] a real machine. Here's a nickel kid. Go by yourself a real machine.

GEOFF HUSTON: G, thanks, Dad. Yeah, now the reason why is that ECS was actually touched upon in the previous, in section 6 in the, I don't know, one two, third paragraph starting with, this basic behavior. Yeah, the one at the bottom of the page.

STEVE SHENG: Andrew, move it here. Up it from section 6.

GEOFF HUSTON: Well, my point is, I suppose, section 7 was drafted without the knowledge that with pop 6 where it was and it just the double reference discussing. It just says, well, you've already talked about ECS, why you're talking about it here.

STEVE SHENG: That's true. I don't know if we, maybe this paragraph I would delete it.

GEOFF HUSTON: I'd suggest just striking it here.

STEVE SHENG: All right. Perfect. There's no further feedback. Let's go to section 7.

BARRY LEIBA: I think when Andrew gets back, he'll probably weight on why we would stand there. If we did basically [00:19:13 -inaudible]. There is a reason he would really do that. But we don't know what it is [00:19:21 -inaudible].

STEVE SHENG: And then there are section 7.2, some new text to review. These are highlighted.

GEOFF HUSTON: Hang on a second, 7.1. I always get annoyed when I look at just how little I can control as an end user of my phone versus how much is controlled by the UI. And this entire section 7.1 is actually talking about the UI. I'm talking about me or you or end users.

BARRY LEIBA: That's an interesting point, Geoff. Thank you for raising it.

GEOFF HUSTON: My pleasure.

BARRY LEIBA: No. It's true. Yeah.

GEOFF HUSTON: I'm a victim of the UI. I'm like, I can't change the way the browser talks to me. Yet, you know, that's important the way the browser talks to me. And it's not even software developers. It's actually what you're talking about the UI engineering and the assumptions that is going on there. So the text is fine in many ways. It's just the title it's not reality.

BARRY LEIBA: Well, so I don't know whether I want to change the title, but I might want to change however text relates it to the actual end user versus the UI with the end user background. Because I think there is a fundamental difference there. But still, with you as the end user. And then there's the limitation that you want to put on the end user.

WARREN KUMARI: I mean, I should point out that getting the UI in an acceptable format for end users to actually be able to use is a really, really hard job. Like, Geoff is annoyed that he doesn't have more control.

BARRY LEIBA: Your auntie does not want that control. Right?

WARREN KUMARI: Yes.

BARRY LEIBA: So where do we go?

WARREN KUMARI: And probably would make herself sad if she did have it. Right? Like, some of the reason I use an iPhone instead of an Android is because the UI gives me less flexibility, and same for a Mac. Right? Like, if I used a Linux machine as my workstation, I could set the exact color of every individual button in my file browser. But I would never get any work done if I did.

BARRY LEIBA: Well, what I say is that on my Mac, I had various override in my homes file and shit like that, and I used the [00:22:28 -inaudible] and things like that. I can't do any of that staff on my phone. I can't say send Facebook to some local like home, which I could do on my MacBook, but I can't do it on my phone, my iPad, or my whatever. And that's a significant issue.

WARREN KUMARI: I mean, you can on android.

GEOFF HUSTON: I think the point you're making, I think, is a real one underneath all this. And it's this tension about how to make the UI simpler, easier, and more straightforward for a wider variety of people to use. And the tension

with that, and how do you resolve when you enter the machine, behind the UI enters an area of ambiguity. And the traditional computing approach when it was only nerds and nob heads who used computers was to present the ambiguity saying, direct me. And then we go up to the preset directives, set this widget to green, and it'll all be obvious. And now increasingly, the commentary behind, we don't interact with the domain names, we don't do this, we don't do that through UIs, the reality is, that's true. And we actually rely on the engine behind the UI to resolve those ambiguity silently. And it's kind of the user is no longer being consulted about ambiguity and uncertainties, decisions are being made.

BARRY LEIBA: Geoff, I would move us out in a different way. I think it's not [00:24:19 - inaudible], but I think it's about how do you give the user enough choices and enough option without making the UI that's so confusing no end user can do. And that's the tension. That's the first part. You can't give people options without adding computers.

WARREN KUMARI: It's not only that. I mean, that's a that is very true and a very good point. But there is also, in many cases, a disincentive for companies to give users too much control. For example, in the Facebook app, they certainly don't want you to be able to open Twitter directly. Right? Like, the fact that you're in something that looks like a full screen application is a feature for them, not a back.

BARRY LEIBA: Well, so okay. There are three major reasons for not to want to give people options. One is that it confuses them and makes it [CROSSTALK]. One is that it makes it a maintenance because everybody changes their options and then you have no idea how to help them debug the problem. And the third is that it's against your business model there that you allow them the option your whole business model relies on.

GEOFF HUSTON: Well, there is a thought and that is presenting users with a choice amongst options that they are unqualified and get lesser knowledge to decide.

BARRY LEIBA: Yes. Exactly.

GEOFF HUSTON: Could this be red or green? Red, I guess. Why? I don't know.

WARREN KUMARI: I do think that that was covered mostly in Barry's first point of...

BARRY LEIBA: Yeah. But still it's a valid point. But never ask a user a question the user is not qualified to answer. It's also never give the user an option the user is not qualified to choose. It's the same kind of thing.

GEOFF HUSTON: Right. It's why people never go to the configure screens in browsers on the whole. And it's never really pushed as you can solve this by... The answer is we really don't want you to go there if you don't know what you're doing, but rather you didn't have the choice. But all of these actually explain I think in better ways the perspective on the UIs that end users use and the wake we can resolve tension in the ambiguity of the name system.

And part of the conclusion, I think, that any reasonable observer would end up with is, you can't rely on the human right at the end and the UI they use to resolve such contradictions and ambiguity as an informed choice. It just isn't an option for the internet. I know that sounds a bit nerd arrogant and all that, but, you know.

WARREN KUMARI: No. I don't think it does sound nerd arrogant. I mean, it's also in many cases, it's not just that the user doesn't have the button or wouldn't know how to configure the button. If Suzanne calls me up and says, “Send money to wallet.crypto,” it's not that I don't know how to configure my browser to use that or my OS to use that. I don't know which one of the 17 dot cryptos she even means. So it's not only that, I guess, is a different way of saying.

GEOFF HUSTON: Right. And it pop up and said, which dot crypto? The answer is, I'll take the red one.

WARREN KUMARI: Yep. Take the red pill. Take the blue pill.

STEVE SHENG: So coming back to this section, are there any changes to be made? Either at the title or the text.

GEOFF HUSTON: Well, in very general terms, Steve, I would certainly advocate making the point that we necessarily aren't talking about the end user as a person, but talking about their interaction with the user interfaces on systems and applications. And the remainder of section 7.1 will use this lens of the user and the UI to look at this subject in further detail. And even if that text was added right at the front, it would put the rest of that section into a better grounding from where it is right now.

STEVE SHENG: Okay. I noted down there. All right. Why don't we continue to review? I was not on the call last time, was section 7.1 reviewed last time, or only reviewing the highlight, or we will review this.

BARRY LEIBA: We have reviewed that a couple of times, but it doesn't hurt to review it again especially up there. Yeah.

STEVE SHENG: Sure. Yeah. The updates here is that this paragraph in 7.1--

GEOFF HUSTON: Thanks, Steve. Which part of this? You're still on section 7.1 at the end? Oh, 7.2. You are done, thank you.

STEVE SHENG: The switching to the correct resolution context is not always easy, nor is it always clear which resolution context a specific name requires. Often, unless the developer is aware of different resolution contexts, software gets written in a way where every name encountered that looks like a domain name get sent to the DNS for resolution. This then result in names not intended for DNS ending up in the DNS.

WARREN KUMARI: I mean, it's largely correct except that I would make it a bit stronger. I mean, I'm clearly aware that there are different resolution contexts. But every time I get input from a user, like, when I write my own little script, or piece of software, or come online utility, I just send it to the DNS. Because, even though I know there might be other things, it's too hard and so far they're not common enough that I care.

GEOFF HUSTON: Plus this is also the realistic taste.

RUSS HOUSLEY: What software switch would you flip, Warren?

GEOFF HUSTON: If you want to test that something is a DNS name that's a delegated name in the DNS, the only way to actually do that test to see if you get NX domain back not from a query. Right? Because otherwise you don't know. You could download the entire DNS. Yes, you could, Warren. Yes, you could.

WARREN KUMARI: No. I mean, I know that dot crypto is a name that I should not send to the DNS. I know that if a user types in food.local, I probably shouldn't send it to the DNS. Right? It's not likely to work. Or if a user types in--

GEOFF HUSTON: That means you're just running a golden list. But the generalization if you're writing software is the only way I know that the name isn't delegated is by asking the DNS if it's delegated or not basically.

WARREN KUMARI: Sure. We might be in violent agreement.

GEOFF HUSTON: I think we are.

WARREN KUMARI: What I'm saying it's like it's often even if a developer is aware of different resolution context, software gets written in a way where blah, blah, blah. Right? Like, unless it's even if.

STEVE SHENG: So Warren, can I just delete this phrase?

WARREN KUMARI: I think if you just change unless to even if.

BARRY LEIBA: Yeah. That works. I like that.

WARREN KUMARI: Because, like there are people at Google who are aware that they're different resolution context because I told them, but chances are no matter what you do, it's either just going to be viewed as a search query or they're just going to ship it to the DNS because realistically--

GEOFF HUSTON: The reason why you know the difference is the DNS didn't give you an answer.

WARREN KUMARI: Well, no, we don't send such queries to the DNS yet. Anyway, but yeah.

GEOFF HUSTON: Not this week.

STEVE SHENG: Okay. All right. We've had change. Are people okay with this text?

WARREN KUMARI: I think it's really good text. I mean, yeah, switching to front is not always easy or, I mean, I would even say, or possible, or knowing which. Anyway, now this is good. This is good. No need to back shared every sentence, I think.

GEOFF HUSTON: The only other perspective for software developers, and I'm going to talk in general to not propose text at this point, is actually the tension between the application as a standalone piece of software in the application operating in the context of an operating system. And part of the issue about what do I write for is I might use get host by name in my API, my application, and that's just hunky. But the operating system might say, well, the settings were good. Get host by name is going to ask for dot crypto using this and dot that using whatever.

And what's going on is my assumptions in writing software and what I think should be running in the host that I am operating in, and the settings that the host is applying to calls made by my application might well differ. And it's incredibly difficult as the application author, as a software developer, to, a, detect that this has happened, and b, even if you could figure out what you're going to do about it. And that's always the tension between the platform and the app.

Now, Facebook solved it by saying, no, don't care. I'm going to do everything in the app, complete control. And that is a solution. But

ambiguous name resolution comes often because the application and the platform pull out a sync and the default expectations from the application developer, maybe five years ago when they wrote the app don't match what the current operating system 15.8 is actually doing to those API calls. I can't suggest text. I don't have it in my head, but the point is, it's not, oh, well, the application the developer should be aware of this, the answer is, well, it's more complicated than that. Thanks.

STEVE SHENG: Okay. So I guess my question is, is it worth adding text to that? If so, we can figure out some text, if not, we'll just move on. Any thoughts? No?

BARRY LEIBA: I want to folk a couple of people who haven't said anything. So Matt and Tara, not to put you on the spot, but do you have any comments on any of the discussion that's gone by so far? No is a valid answer, but, you know.

TARA WHALEN: Going smoothly for me. Thanks for checking in.

BARRY LEIBA: Okay. Thanks.

MATT THOMAS: Yeah. It seems really good. I like Jeff's last point. I just don't have any additional x doll for you there. But I do you think it's a little bit more complicated than what's just stated there? The expectations of reality versus the assumptions of what it was developed are clearly not always aligned.

BARRY LEIBA: If you have text you'd like to suggest or comment you'd like to make, please put it in the document. I'll appreciate that.

MATT THOMAS: Will do.

STEVE SHENG: Okay. So we keep that open. And let's move on to these texts. Let's highlight this paragraph. Let's take a look at that.

GEOFF HUSTON: Well, firstly, it's a commentary about the UI. It's not a commentary about software.

WARREN KUMARI: Yes. Very much so.

GEOFF HUSTON: So I think it's 0.1.

WARREN KUMARI: Where exactly are you saying in this bit that's highlighted? Because users do just expect names to work. Or maybe we're talking about different parts. I was looking at the highlight there.

STEVE SHENG: Yeah. The highlight is section, users expect names to work in the correct manner.

GEOFF HUSTON: I'm not criticizing the content, Warren. I'm just saying maybe it would be better placed in section 7.1 because it's a commentary about the UI, not software.

BARRY LEIBA: I'm thinking back on a comment that Geoff had made on another section where it mentioned QR codes. And he said, well, isn't that just a URI? And, yes, but not from the user's view of it, and that's say so it's all a URI issue. Whether the user types in a URI, clicks on a URI, or scans a QR code, is the same thing from our point of view, but a different thing from the users. Suzanne, you were about to say something?

SUZANNE WOOLF: No. I'm reading this again.

WARREN KUMARI: So just to be clear that I understand what Geoff said. He doesn't disagree with the text. He just thinks maybe it should be somewhere else.

GEOFF HUSTON: Correct.

WARREN KUMARI: Okay. Cool. Now I understand.

SUZANNE WOOLF: As a friendly amendment, users expecting certain behavior and relying on certain behavior slightly different because we made the point just above that users aren't using domain names for search and various other functions. But the things that they're using instead still have domain names underneath them. So the fact that the user doesn't see domain names doesn't mean they don't rely on them working in one way or another.

BARRY LEIBA: Yes. Thank you for calling that out. That is a very significant part of this. There is lot of stuff that relies on domain names that is not obvious to the people who are actually using them.

SUZANNE WOOLF: Yeah. So people who aren't seeing domain names and aren't being confused directly by them anymore are still relying on them.

BARRY LEIBA: Yes. Yes. Yes.

WARREN KUMARI: Hopefully, my random editing of text is not making self-confusing.

STEVE SHENG: Okay. So I hear a suggestion to move it to another section. Then we have some edits from Warren. And Suzanne, I'm trying to determine your comment how do we change or if any change is needed in this text.

SUZANNE WOOLF: Yeah. I was just looking for a way to point out because we way DNS is decentralized and then people point to ICANN and say, well, but they're in charge. Right? One single entity. And we were just noodling on ways of making the point that in many importantly, many DNS is decentralized.

BARRY LEIBA: I think maybe the point is ICANN is not in charge. ICANN coordinates. And maybe that's the point we want to.

SUZANNE WOOLF: ICANN still doesn't coordinate which resolver you use or what they incorporate IT puts under your local business DNS.

BARRY LEIBA: Right.

STEVE SHENG: I mean, ICANN only coordinate the allocation and assignments?

BARRY LEIBA: Right. ICANN has a lot less involved in this than many people think. Yes.

WARRE KUMARI: Including ICANN. Sorry. That was snarky. Yes. And when I say snarky things like that, it's not directed in our stuff. Mainly because both of them or most to them are bigger and scarier than me.

STEVE SHENG: All right. So what do we do about this paragraph? If we were to move it where are we to move it to? Let's see.

WARRE KUMARI: Do we think that the very last sentence is actually helpful?

BARRY LEIBA: Sorry, what Warren?

RUSS HOUSLEY: The suggestion was at the end of 7.1 after that paragraph that talks about QR codes.

STEVE SHENG: This one, right?

WARREN KUMARI: We should probably reread that section now again because I think we might be repeating ourselves in this paragraph. But what I'd started saying is, is the very last sentence of this actually helpful? It feels like a fragment. [CROSSTALK] Last sentence. A generally agreed upon principle. I mean, that's true. It just feels like a fragment or, like, breaks the flow. They generally agreed upon principal and user blah, blah, blah. I mean, that's true. It just kind of feels like when you're reading the paragraph, it goes, la, la, la, la, then suddenly you've got that and you're like, oh, what does that mean? And then it all ends.

BARRY LEIBA: Yeah. I agree with that. I would just strike the last sentence. Kind of redundant.

STEVE SHENG: Speaking too much. So we'll leave it here, and then Suzanne, if you have some thoughts on what to say then we can see if this needs to be changed. How's that?

GEOFF HUSTON: Hang on a second before you actually strike that last sentence. Because where you end up, you're talking about an example. And what the last

sentence is trying to say is, it wasn't just the omnibar. This illustrates a, and even if you added just the introduction to that last sentences, this illustrates a generally agreed upon principle and user design, that the network should behave predictably from the perspective of the user. I think that makes more sense than just striking it because you know, the last two or three sentences it is, well, let's talk about the omnibar, like omnibar confusion. Cool. But you haven't kind of said why you are. And this kind of says, why.

BARRY LEIBA: So in the less than 10 minutes we have left, maybe we should probe what the overall flow of the document is for a moment. And looking at sections 3, 4 and 5. Is it 3, 4 and 5 or just 4 and 5? Yeah, 3, 4 and 5. How do they fit in to sections 6 and 7? Do we want that flow, or is there some difference flow that would work better? So Steve, go ahead and scroll down through sections 3, 4, and 5, which are right now just outlined, and let people look at how that feeds into the section 6 and 7 that are pretty well fleshed out.

GEOFF HUSTON: In my mind, what is missing is in the true communist Marxist theory synthesis kicking around somewhere between section 8 and section 9. And the thing is the pressure to create and evolve is natural and will always happen. But the resistance comes from incumbency. It's the broad mass of what users actually do and their resistance to change. And the whole issue about when and why does the status quo change is the question.

And the answer is, it's not because ICANN say so. It's not because there is any central authority to actually embrace evolution. You know? Who and why and how do we determine we move from DNS names to blockchain names. Oddly enough is actually a termination biomarker. Because there's no one in control, the whole issue is as long as enough people start to do it, it maintains or contains or generates its own momentum and forms its own momentum for more general acceptance.

And that doesn't mean you see that all evolution is fragmentary and bad. That's not the case. But it also doesn't mean that all evolution will succeed. All of these pressures to evolve will naturally find a market and not just a market but a dominant market, a market that gives you mainstream acceptance. And so like I was dealing with this in the economics of routing security that just because it's a good idea means nothing. The economics is enough folk have to agree and spend the money and invest for it to become part of a mainstream.

And quite frankly, this document needs to make the same point at some point that this evolution is not threatening. It's not bad. It can lead that way if the pressure to accept or the pressure to drop it does not manifest itself. If the Internet becomes an A or B proposition without able to decide and that quickly becomes A B or c or ABCD and we head into the morass of fragmentation. In some ways, I think that consideration needs to be stated that there's no fear answer here because no one's in control. And so the pressure to evolve will always be there. The issue of what defines acceptance is actually much trickier to define. But oddly enough, it's an incredibly important question.

BARRY LEIBA: I agree with that.

GEOFF HUSTON: I'll leave it at that because it's four minutes to the hour.

BARRY LEIBA: I think that part of the point for this document is if this becomes mainstream, what effect does it have and how does it change what we have now for better, for worse, for different or how does it affect the different stakeholders?

GEOFF HUSTON: But isn't it just that point before that Barry? If it becomes mainstream and it's the default, there is no ambiguity, there's no nothing, it's just the characteristics of the new system versus the characteristics of the old and off we go. It's kind of being unable to decide where the old competes with the new. And it's that kind of issue. You're almost liken to an electric and petrol cars. How many sort of service points do we need on our roads where we've got to do all kinds of fuel plus electricity, etc.? We're building that same issue, and we need to be at least aware of without suggesting how to resolve it. [00:53:35 - inaudible] behave.

BARRY LEIBA: Absolutely. I agree with you. So I have an electric car and I have this discussion with people all the time, but right now, I have to do a lot more planning than you do. In five years from now, that might play. So that is what we're trying to write up here. That if this starts to change, who has to change their assumptions, who has to change the way they work?

WARREN KUMARI: So something that I think it's actually interesting is my wife and I both have electric cars, and we have to do a lot less planning because we no longer have to worry about hey, we need to stop by the gas station at some point. And I think that that's sort of an important point that for some set of people, these changes are going to be a lot trickier than others. Like, fair amount of planning went down yours went yours went south.

BARRY LEIBA: Well, it depends. So my planning now involves what route do I take? If I choose take a particular route, I don't have to plan it all. There are chargers all along the route. If I want to take some little rural route somewhere, not so much. So take that to where we're going with this system, and it's the same sort of questions. There may be situations where I don't care because what I do just continues to work just fine. But there may be other situations where I have to have considerations to think about. And that's what this document is about. What do you need to know?

WARREN KUMARI: Yes. I think we're once again in violent agreement. Just I think for some set of people alternative resolution systems may make their life a lot easier depending on where they are in the ecosystem.

STEVE SHENG: All right. I think it's one minute to the hour.

BARRY LEIBA: [00:55:45 -inaudible] they are up there. So, Steve, what do you have to take away? And what do we have to think about for next week?

STEVE SHENG: There are a few action items. One thing is, Warren, please connect the author of that paper.

WARREN KUMARI: Already done already done. We have the email.

STEVE SHENG: Okay. That's good.

WARREN KUMARI: And was just replied. Oh, I didn't see that.

STEVE SHENG: I have a few things to update the documents, but these are nothing major. I mean, there is one outstanding if the Geoff Houston's point about the interaction of the APP environment versus with the operating system and sometimes the mismatch realities. Now, Geoff, if you can think of some texts, that'll be great. I think that's the only thing outstanding. Otherwise, there's a footnote I need to update. There's a sentence here and there. So these are nothing major.

BARRY LEIBA: Okay. All right. Well, So I'll say thank you to the people who've already left and the people who are still here. Thanks for spending the time, and I think we had a really good conversation. See you next week.

TARA WHALEN: Thank you.

STEVE SHENG: Bye.

[END OF TRANSCRIPTION]