ANDREA GLANDON: We will now begin this recording for today's conference call. Good morning, good afternoon and good evening to all. Welcome to the first Webinar of the Five Mandatory Atlas II Webinars. Today's Webinar will cover domain names. Our presenters are Alan Greenberg and Olivier Crepin-Leblond. We will not be doing a rollcall for this Webinar, however, we are taking attendance for the first 10 minutes on this call, after that, your participation will not be a valid for the required attendance metrics. If you are only on the phone bridge, please join the Adobe Connect Room as soon as possible, as this is attendance requirement.

We have French and Spanish interpretation for this Webinar, so a kind reminder to please state your name when speaking to allow for the interpreters to identify on the other language channels, as well as for transcription purposes. Please, also speak at reasonable speed, to allow for accurate interpretation. All lines will be muted during the presentations and open for questions and answers at the end of the presentation. I will now hand the floor over to Joanna Kulesza, Co-Chair of the Atlas III Capacity Subgroup. Over to you, Joanna.

JOANNA KULESZA: Thank you very much Andrea. Welcome to the first in a series of webinars preparing our At-Large Community for the Atlas III Phase Major Review. We are happy to have these series of webinars [inaudible] both in English and in French if there [inaudible]. As Andrea mentioned, this is a required element of the Atlas III Preparation program that we have set up. I'd like to start by thanking the wonderful

At-Large Staff who have supported setting up this endeavor, especially Heidi, Gisella, Andrea who are with us and last but not least, our presenters today who have stepped in helping us [inaudible].

Without further ado, I'm going to hand the floor to Alan and Olivier and if I understand they will be sharing the floor for this webinar. Please explain to us the perplexity of gTLDs. Over to you, Alan and Olivier. Thank you.

OLIVIER CREPIN- LEBLOND: Thank you very much, Joanna. Thank you everyone for coming on to this webinar which Alan Greenberg and I are very excited to be able to present over to you. We've put together a set of slides that are based on the ICANN Learn Course called Domain Names Demystified. Hopefully, by the end of this webinar, you won't be mystified and you will indeed be unmystified or demystified, I guess. You'll find out a lot more about domain names. I think the way we'll work is that I can ask Staff, if Staff can flip to the next slide, please?

What we're going to have today is a number of subsections here. Because we've got so little time to cover so many things, what we'll do is to go through the whole set of sections. If you have any questions, then please keep them or type them in the chat and then we'll be able to address them at the end of the presentation. You might questions on any of these sections.

We'll start with a review of the terminology related to domain names and there's a lot of terminology dealing with this. Then we'll describe how the DNS, the Domain Name System itself works. We'll be speaking

about the Root Zone and in fact, the different type of top-level domains that you can find in that Root Zone. We'll even touch on things like DNS Sec and so on but that's some of the details. Then we'll be able to tell you more about How You Register Domain Names and Rights and Obligations of Domain Name Registrants Are and indeed, what the Risks are When You are a Domain Name Registrant. Quite a full set of domain name related topics.

After this quick introduction, I guess we can immediately start. What is a Domain Name? Over to Alan Greenberg for this. Alan, you have the floor.

ALAN GREENBERG: Thank you very much, Olivier. Thank you all for coming, it's a marvelous turnout. The first question is, What is a Domain Name? I suspect most of you have a pretty good idea of that. A good example of a domain name is ICANN.ORG, something you've all seen and are familiar with. Domain names are the prime way that people can address things on the internet.

Now, that's not the way the internet itself works. The internet itself address things by numbers, IP Numbers, Internet Protocol Numbers, examples are on the slide of the traditional IPv Version 4 addresses are made up four parts, separated by periods, each of the numbers can be from zero to 255, it's a binary number. IPv6, the next version of the protocol, we skipped IPv5, is made up of a number of groups, separated by colons, much longer. None of those numbers are things that most humans remember and not readily. The Domain Name System was

designed to allow you to type in a name that makes some sense to you, hopefully these made sense to somebody and get translated automatically into the kind of IP number, of Internet Protocol Number you see there. The DNS, the Domain Name System essentially maps, has correspondence between domain names and IP numbers and that's it's whole purpose.

Here's another domain name, one based on ICANN.ORG, this is LEARN.ICAAN.ORG, that's the system which has courses, which if you weren't taking this webinar, you might be taking courses on LEARN.ICANN.ORG. The right most part and these names are in hierarchy starting at the right and going to the left. The right most part is the Top Level Domain, it identifies essentially which over all part of the Domain Name System you're using and each string to the right of the first period, of the right most period, is a Top Level Domain and it identifies a Registry that manages it. In this case, .ORG is run by the Public Interest Registry PIR, which is a group that is associated with the Internet Society. Most Registries are for-profit, this happens to be a not for profit but, never the less, it's essentially a commercial organization, a company that runs the Registry.

The next part, ICANN is the Domain Name that we're talking and depending on the rules of the Registry, we'll see as we go along and maybe anybody can register maybe not, in this case, ICANN registered, ORG is traditionally used for non-profits, although there's not a formal rule and therefore ICANN fits nicely into that package. Whoever owns that domain, many have more pieces to the left, Learn is an example of one we have in this case.

The same domain, this time prefixed by a WWW, which in many cases means it's a website, many times that optional. The different parts of the Domain Name are referred to as Levels, the Top Level Domain, TLD is the right most one and then we have the second level, third level and so forth. Normally, we don't talk about things above the third level but you could assign names to them and numbers to them should you choose.

Now, this is a pictorial version on the same thing. You'll notice we have what we're calling the Root and we'll talk a lot more about that in a moment. Under that are various Top Level Domains, ORG is one we talked about, .CA is the Country Code for Canada, .BERLIN is one of the new TLDs that ICANN allowed to be put into the Root, starting in about 2012 and there's about 1,200 of them. This one is for the City of Berlin. The last one is Chinese characters, it happens to be Chinese for restaurant and is presumably a Top Level Domain under which you might find restaurants.

Now, under each of these, you then have the domains that are registered. .ORG has, I don't remember exactly, 10 million domains I think, ICANN is one of them. ICANN within its own area, has a number of different domains. You might look up WWW.ICANN.ORG, which is just its website. LEARN.ICANN.ORG, At-Large.ICANN.ORG, which would get you to the At-Large site. Those are all third level domains that ICANN uses within its organization.

Now, the question is, how does this help you? How does this work? Here we see the same, we've cutout the other ones and we're just focusing on the ICANN one at this point. You'll notice the Root is

managed by IANA, the Internet Assigned Names Authority. That's essentially a subsidiary of ICANN, it's an operation that runs under ICANN and it is responsible for the Root. The Root is a directory, as are all of these parts, which is responsible for telling you where the Top Level Domains are.

How does that work? In your computer, you might have a little program called A Resolver and if you try to go to a specific site, LEARN.ICANN.ORG in this case, then your Resolver asks the Domain Name System, where is it? It talks first to the Root. It might not talk directly to the Root but we'll use a simplified case right now of it talking to the Root. Your computer will ask the Root, where is LEARN.ICANN.ORG? And the answer is, the Root doesn't know but it does know where ORG is and tells you. You then go back and say, "Okay ORG, where's LEARN.ICANN.ORG?"

And ORG's answer as you might imagine is, I don't know but I know where ICANN.ORG is. You go to ICANN.ORG and ask where is LEARN and it tells you. Each of these are managed by different organization. The Root is managed by IANA, which happens to be part of ICANN, that's incidental, ORG is managed by PIR, Public Interest Registry, ICANN is managed by ICANN. Each of those play a part in this distributed Domain Name System which allows you to look things up.

The resolver in your computer asks where a Domain Name is. Now, in reality, it doesn't talk to the Root, it probably talks to a Domain Name Server that might be in your router, in your wireless unless. It probably talks to a Domain Name Server in your ISP and you keep on going up the chain and eventually one of them says, "I'm going to go to the Root and

find out where that address is." And then it goes down to the next level, the second level, the third level if possible, eventually coming back.

Here again is the similar type of thing, in this case asking, Where is WWW.IANA.ORG. Remember, IANA is the group that manages the Root but they have a website themselves and if you want to go to that website, then you or someone on your behalf asks the Root, where is WWW.IANA.ORG, the answer comes back, I think you know by now, it says, "I don't know, but I know where. ORG is." You go to .ORG and ask the same the question, it says, "I don't know where WWW.IANA is but I know where IANA is." And you go to IANA and it tells you were WWW is and it says it's a 192.0.2.0 and magic has happened and everything is now working.

With that, I will turn it over to Olivier. Just to tell Olivier, we are a few minutes ahead of time, so you have a bit of luxury.

OLIVIER CREPIN-LEBLOND: Thank you very much, Alan. You heard Alan speak about the Root, all the time the Root, the Root, the Root and I guess it's about time that we talk about the Root because the Root is particularly important in the Domain Name System.

As Alan mentioned, the Root is basically a database of all the Top Level Domains exist in the world. The Generic Top Level Domains, the Country Code, the Internationalized ones in Chinese Character Sets, the Generics, pretty much every Top Level Domain has to be in the Root. Managing the Root Zone itself is one of the primary responsibilities of IANA and if ICANN. IANA is defectively the organization that accepts the

changes, requests for list of Top Level Domains and basically puts together whole list of who manages each one, what the information is about the actual Resolvers, all of the equipment if you want, the IP Address, Internet Protocol Addresses of the Name Servers. Including further information such as the one for DNSSEC, which is Domain Name Security Extensions and we'll be talking about DNSSEC in a moment actually. IANA constantly updates and distributes the new version of the Root for distribution to all of the Root Server Operators because having just one point of failure is a little dangerous on something like the internet.

Effectively, the whole set of Root Servers, there's 13 Root Servers around the world, they're all distributed geographically around the world and so the Authoritative Roots, the main database of all the Top Level Domains is held in the A Root. There's a first list that IANA puts together, that list then gets given to a contractor who is actually running the A Root Name Sever, you'll find it at the middle, bottom part of that slide.

Verisign Naming and Directory Services and they've got that A Root and then system, the whole Domain Name System, makes sure that this is copied along to each one of the other Roots, B, C, D, E, F, G, H, etc. all the way to I believe L, which is the Internet Corporation for Assigned Names and Numbers. You can see that those different 13 instances are geographically distributed but if that wasn't enough, because this of course started out back in the early days, that looked like plenty of places that you could have connection from.

You'll notice actually it's somehow a little unbalanced geographically and what's actually happened is that those different instances of the Root have not been replicated and you'll find out that in fact there are now 980 instances of that Root Zone throughout the world. It's affectively copies of this Root Zone that are then run locally in each one of the many countries that there are around the world.

Now, why should there be so many of these servers? The first reason of course is for resilience, if you're going to have a cyber attacks and denial attacks and all sorts of malware to try and cool down some parts of the internet, it's good to have further copies of that Root, so that when your computer or devices asks for LEARN.ICANN.ORG then it doesn't get stuck in trying to find that information because no Root Server is available. Having an instance of a Root Server close to you geographically speaking, is something that pulls -- we'll, it certainly brings down the amount of International traffic, so it makes it more efficient, it's also good in case there are problems Internationally.

Let's say there is a decrease in traffic speed and so Internationally, the performance of your local network is less likely to be affected because there doesn't need to be a long-distance search for that essential root element that will tell you where to find the next level of domain. You can see, there are quite a few here. If you want to see the source of this you go to ROOT-SERVER.ORG and you've got another map that you can zoom into, you'll be able to see where all, each one of these 980 instances of the Root is.

Now, you might think, "Ok, so all the Roots are, what does a Root Zone Entry look like?" A Root Zone Entry is as I said, it's a database. Here's

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we're looking at Root Zone Entry for .HAMBURG. Hamburg is as you know, a city in Germany so the overall entry that IANA has in the Root Zone is effectively the name of the operator, the address, the contacts, the main contact for technical contacts and perhaps a backup contact and then they technical configuration that's put in that database, which effectively provides you with the NS Records.

The NS Records is effectively for this entrance, the first one A.DNS.NICK.HAMNGURG and corresponds to one line for .0.25.21, that's the corresponding IPB4 address. You've got the next address which is an IP version 6 address, a new longer type of addressing, which is 2001:678:20:000…. and you can see that here as well, for this specific zone, for .HAMBURG, there's not one Name Server but there are three Name Servers. When there is a request to find out about a Domain Name under .HAMBURG, then the response to your device would be, any one of these three Name Servers would be able to provide with you details about Second Level Domain under .HAMBURG.

You've got that and you've got these DS Record also, which is the records for DNSSEC. They're keys that affectively that are there, we'll speak about these in a moment but the affectively are a way to identify the server and identify who is allowed to make updates under this Zone.

Why should be need DNSSEC? Because one of the things is, you could actually run the entire DNS without using DNSSEC and indeed, that's what's happened for many, many years. The problem is, as time went on, some hackers have found a way to actually corrupt the DNS and try and find a way to effectively make things a lot more difficult for people and try and make money effectively.

DNSSEC is a system call Domain Name System Security Extensions. It was developed to protect the Root Zone and to protect many Top-Level Domains, the ones that actually use it, in order to stop the likelihood of malicious replacements of data. Malicious updating by people and organizations that were not authorized to change the data. In the early days you could actually change, you just needed to send an email sometimes to the Root Server Operator and say, "Okay, we just need to have these addresses changed."

There was a lot of trust because so many people knew each other personally, there was an overall trust of who you were dealing with. Of course, as there were more and more Top-Level Domains, the internet started becoming a lot more crowded, with a lot more official processes put in place, it started becoming a little hard. What you basically ended up with was the ability to poison parts of the DNS to hijack people and basically…

GISELLA GRUBER: Olivier, apologies to interrupt you, we've just lost [inaudible] on the Adobe Connect Room.

OLIVIER CREPIN-LEBLOND: Oh dear, that's what I was worried about.

ALAN GREENBERG: That will help us up some of our extra time.

GISELLA GRUBER:	We're doing a quick auto text to see if we can have audio on the Adobe Connect Room. [AUDIO BREAK]
OLIVIER CREPIN-LEBLOND:	Apologies to those people who are on the dial out and are waiting. We have had this problem, unfortunately, of no connection from time to time. Is that working again? Audio is okay?
GISELLA GRUBER:	Just doing a quick audio check as I personally don't hear it on the Adobe Connect.
OLIVIER CREPIN-LEBLOND:	Testing one, two, three. The link is not working yet.
PRERECORDED VOICE:	You may hear a list of available options at any time by touching star, star.
OLIVIER CREPIN-LEBLOND:	That's tested now, Alan?
ALAN GREENBERG:	Sounds fine now.

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OLIVIER CREPIN-LEBLOND: Does it work over there? It looks like we're back, okay. Apologies for this. Thankfully, I was told by Gisella in time that we had a technical problem but now we're back on, so you haven't missed anything. I was just speaking about DNSSEC and saying that this is a Domain Name Security Extension. It's there to protect the Root Zone and protect many Top Level Domains from having malicious attacks by people who are providing updates that are not supposed to be providing.

That of course, is used to protect or can be used to protect Domain Names. As Alan has reminded me a number of times, yes it would protect Domain Names and Top Level Domains if only people actually used it and checked, using the DNSSEC system to make sure that the entry has not been tampered with. I hope I've whet your appetite here.

I'll explain to you a little bit how this DNSSEC things works. Let's start with WWW.MAJORBANK.SE. Now, as Alan mentioned earlier, when you type this in your browser, that would go to a local DNS Resolver, that could be your internet service provider, it could be your own router, something local basically and that will go and that will ask the DNS Server, it might to the Root first, ask about .SE, then the Root Server will say, the .SE is at such and such a place, so it will go to .SE and then the .SE server will say okay, we can send you to the main server for MAJORBANK.SE and then .MAJORBANK.SE would respond and say, the IP address for this is 1.2.3.4. and then of course, your machine would get connected through the web server and 1.2.3.4, get the webpage and you will be able to login to MAJORBANK.SE, put your username, password and then get back your account data, perfect. That's how things should work.

As we mentioned earlier, because there might be thousands and thousands and thousands of queries through your internet service provider about MAJORBANK.SE, what actually happens is that the local DNS Resolver can as a cache. It already knows the IP address of MAJORBANK.SE, so it will go either directly to MAJORBANKS.SE DSN Server or what it might do I to remember from someone else before you having gone to WWW.MAJORBANK.SE and it will say, right, we already know that it's 1.2.3.4, so it doesn't always interrogate the DNS Server.

The big DNS Server, the one that we usually call the Authoritative DNS Server and that's of course, for a measure of efficiency. It caches the thing and then you login to your page. Some clever hacks some time ago thought, now there is a way to play around with it. What if we could update the DNS Resolver with the wrong information? What happens is the attacker would basically look at the local DNS Main Server Resolver in the internet service provider and instead of sending the update 1.2.3.4, MAJORBANK.SE is 5.6.7.8 and so your computer would say, okay so the answer is 5.6.7.8, it would connect to the webserver at 5.6.7.8, which of course would look exactly like your bank and you would think, let me login to my bank, you type in your username and then you type in your password and then the thing would probably answer you and say, sorry there's been error and disconnect.

They don't really care, by now the attackers have your username and your password at the MAJORBANK and they would probably make use of it in the real webservers to empty your account. Not a great thing. Really, this attack, a cache, it's called DNS Cache Poisoning Attack is something that was used and very successfully indeed and therefore

one needed to have some way of being able to counter this and that's where DNSSEC came in.

With DNSSEC, what happens is that there are signature, cryptographic signatures for each one of the levels. First the Top Level Domain, .SE would have a cryptographic signature and then underneath that you would have the cryptographic signature that would be for MAJORBANK.SE, of course it's one of these signatures which has got what they call a Private Key and Public Key and it's impossible for an attacker to have both of these key because one of them is private.

The update that includes the actual key in the updates would be allowed by the local resolver but the ones which did not include this validation using the key, would not be allowed and therefore when an attacker would try an poison this cache right here, at this point, then the local resolver would say, "I'm sorry, that does not validate. You don't have the right key for that." And it would reject it and as a result, only updates from the DNS server that runs DNSSEC would be allowed to go through and therefore you can go through getting the page but the cache does not get poisoned anymore. That's essentially what DNSSEC does, from the top all the way to the bottom, from the ROOT all the way down to the actually second level domain.

As I said, we have different typed of Top Level Domain, each one is managed by a Registry. We have Country Code Top Level Domains, Generic Top Level Domains and Legacy Top Level Domains. The Legacy ones are the ones which were the original ones, at the beginning when the internet started, so .EDU, .INC, .GOV, .MIL, .ARPA, I think even .COM is considered a legacy Top Level Domain. They're all generics. The

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other Generic Top Level Domains are all the news ones we've spoken about, .HAMBURGER for example and .BERLIN.

One thing that is important to note is that the Generic Top-Level Domains have a contract with ICANN. The Registries that run those Top Level Domains, the databases, have a contract with ICANN and are subjected to ICANN's overall rules and those rules are designed in the Generic Name Supporting Organization, GNSO, that's where the rules for these generic are done. They don't have a choice but to actually follow them because by contract, they have to follow them.

The Country Code Top Level Domains don't actually have a contract with ICANN, they are around because, they've been around for a long time, many of them were around even before ICANN was create and they are just there to say, if there are any global policies that we might need to discuss, fair enough, we like to take part in ICANN work but we are not going to let ICANN actually run our own policies, we're sovereign.

They are managed on behalf of the countries and territories, some of them are run by private organizations, some of them are run my universities, some of them are for profit, some of them are not for profit. Each one sets its own rules and if they want to sell Domain Names under their Country Code Top Level Domain for $500 a go, ICANN can say absolutely nothing about it. In fact, no one. It usually is something they have to discuss on a local basis. That's affectively the differences between the two.

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I've spoken to you about Registries and I'll hand over the floor to Alan to tell us about Registries and Registrars and all of this lingo that comes along with this Domain Name business.

ALAN GREENBERG: Thank you very Olivier. You're correct, COM, NET and ORG are considered legacy TLDs but there's a big difference them and the ones that are listed on this slide and that is, those essentially were transferred over to ICANN and now fall under the auspices of ICANN and ICANN sets the rules for them. Whereas the ones that are listed on the slide, EDU, ENT, GOV, MIL and ARPA, ARPA is a very special one, it's not a real TLD, it's used for addressing within the internet but those are still running by organizations, they are not subject to the ICANN rules, they still deal with IANA because they are Top Level Domains and have to be in the Root, they are a very special class of Top Level Domains.

I'll go back a little bit also on the independence of ccTLDs. You'll notice there is something in brackets, they can set their own rules but, they have to work within the overall guidelines of how the internet works. The IETF Standards that are published and a number of other related things, for instance, they could not arbitrarily put up IDN, we'll talk about IDN in a little, Internationalized Domain Names, they could not arbitrarily put them until ICANN came up with a process. In general, they work within their own Domain, sorry, I guess that's a little pun, they work according to their own rules within their Top Level Domain but they are subject to certain overall processes and rules associated with making the internet work.

Another time that IANA does get involved is, if a Country Code changes hands. In other words, if someone says, "Whoever's running this Country Code are not the right people and we need different people." Then there are IANA processes that are in fact being discussed right now, that kick in for, how do you do that? How do you find someone that is acceptable organization to run the Top Level Domain in the Country or Territory?

We've talked about Registries, they're the organization that run Top Level Domains. Within ICANN we talk about Registrars a lot. Now, Registrars are a very different beast. Registrars are a creation of ICANN when ICANN was formed, to separate who runs the Top Level Domain from who essentially sells it, who markets access to the Top Level Domain? Who do you go to if you want a domain within it?

According to the rules of most Generic Top Level Domains, you can't go to the registry to have to go to a Registrar, a Registrar has to be authorized by ICANN and they must sign a contract with ICANN and obviously follow a large set of rules. The Registrar also has a contract with a Registry. A Registrar maybe accredited but unless they have agreements with Registries, they can't actually make any domains available but most Registrars have agreements with many Top Level Domains, many Registries to make them available.

Registrars don't have to do the work themselves though, they can have something called Resellers. They essentially have agents who can sell things. I use the term sell, domains are not really sold, they're effectively rented because you only get it for a certain amount of time. To make it more interesting, resellers can have Resellers and Reseller,

Reseller can have Resellers and it can go down many chains. You might be dealing with someone either who is actually a Registrar and you can look up on the ICANN website who the Registrars or you might be dealing with someone who is a Reseller perhaps directly or indirectly.

Within a few exceptions, prices are set by Registrars and Resellers. This is an independent, open market and they are free to set the price based on whatever they feel the market will bear, at a level they want to sell it. They compete with each other and with their Resellers and they often have other businesses related to it. Many Registrars will also run websites and make a website available to you for a reasonable price. Many Registrars operate DNS Servers, if you don't want to run your own, you can use theirs. The Registrar business to a large extent is not a very profitable business. They addon things are often where the Registrar actually makes some of their money.

Let's say you want a name of you own, you want to become a Registrant, you want some particular name. What we're talking about here is related to gTLDs, Generic Top Level Domains, every CCLD has it's own set of rules for how you can obtain a domain within their area, some of them have very strong stringent rules about who is allowed to have a domain name, very often there are location rules, that is, you can't have a domain name unless you are associated with that country or territory. Other ones make them available essentially as Generic gTLDs, that is no restrictions as who can buy one, who can make one available but you have to find out from that ccTLD Manager exactly what their rates are.

ANDREA GLANDON: Alan I'm sorry, we've lost audio again so please give me one minute before continuing

ALAN GREENBERG: Sure, no problem.

ANDREA GLANDON: Thank you. Thank you everyone, we are reconnecting the audio, it will be just a moment. Okay Alan, it looks like it's reconnected, can you speak so I can test it?

ALAN GREENBERG: The AC Room seems to be working now, can you hear me?

ANDREA GLANDON: Yes, thank you.

ALAN GREENBERG: When we lost audio, are we losing it on all languages or just in the English?

ANDREA GLANDON: It's just the AC Room that's losing audio.

ALAN GREENBERG: Okay and the interpreters aren't getting it from the AC Room?

ANDREA GLANDON: No, they're getting it from the phone.

ALAN GREENBERG: Okay, just so I know. Let's see if we can figure out where we are. There overview of how to register a domain, you have to chose what Top Level Domain you want, that name might be based on which one you want to work on just because your friends are doing it or because that's where expect it. With new Top Level Domains, there may be one specifically targeted to the kind of things you want to do. If you're looking for a music domain, .MUSIC may make some sense.

You have to select a Top Level Domain. Then, you have to select a Registrar or Reseller and as I said, there's heavy competition, they offer different services, their pricing is different and in some cases their reputation is different for how reliable they are. Then you have to check to see whether the domain name you're interested in is actually available. There's lots of domain names out there that are already taken and very often the one you want, someone else already has. You have to decide how long you want to keep it for.

You're allowed on a gTLD to have anywhere from one to year to ten years, it's renewable after that but initially, you can select that time. Then you have to complete the procedure, make the payment and you have a domain but note, that's just the domain name, it doesn't give you email, it doesn't give you a webserver, all of those are things you have to arrange separately, although you might be able to arrange them with the Reseller or with the Registrar.

Going back, we have the three original domains that predated ICANN, .COM, .NET and .ORG, they used to be targeted at commercial operations, network providers and nonprofits, nowadays, they still have the connotation but there are no actual restrictions of who can use one. There were a number of domains that were made available in 2002 timeframe, plus or minus.

Examples of those are BIZ, INFO, ARROW, TRAVEL, MUSEUM and ASIA and then there's a whole bunch of them that have been made available over the last few years. Examples are BANK, ACCOUNTANTS, AFRICA, BMW, CANCERRESEARCH, MELBORN, NOKIA, SHOES, you can see they cover a huge range of areas from very target specific professions to those owned by specific companies, often geographic ones or subject matter.

There are ccTLDs, Country Codes and of course, there are IDN TLDs Internationalized Domain Names in other character sets that are associated both with countries and territories and with generic TLDs. Lots of rules, lots of flexibility, lots of options. The rules vary. .BANK for instance, you must prove that you are a real, legitimate bank to get a Second Level Domain under .BANK. Many of the geographic ones you must prove that you have some relationship to that geographic area.

Others, even though they sound like they're targeted at a specific area, there's no restriction as to what you can get a Second Level Domain. It may not make any sense to get a Second Level Domain under .SHOES but you might be allowed to, based on what the rules are. Of course, prices vary. There are some domains which are perceived as having a high value and they maybe hundreds or thousands of dollars for a

Second Level Domain. Other ones typically are in the range of $10 US dollars, plus or minus something. Sometimes there are sales where they are even cheaper. You have to do your own investigation, decide what you want and go from there.

How do you pick the name you want? How do you pick your Second Level Domain? You want to say something about your organization, it might be the name or it might be some other description of your organization, your club, your personal name or the business you're running. Do you want a distinctive to set it apart, that may make it more interesting, it may make it less easy to remember, it may be better to remember?

There are no rules. Domain names if you restrict them to ask key characters, can be any letter, any number or hyphen, there are some restrictions about what order they can be in but not many. Do you want a domain name that describes something instead of actually being the name of your company? Do you want it easy to remember? You may come up with a domain name that is so long that people will not remember it or will misspell it. All of those things have to be considered when you pick what you want.

Then you have to select the Registrar. As I said, there are Registrar's and there are Reseller's, you can go to a list of them on the ICANN website. There are also services that rate Registrar's, I'm sure you can find a website that says what are the best Registrar's. They may give you an honest answer, they may give you a slanted answer. Like everything else on the web, you have to take it carefully and consider if you trust these people. Some Registrar's target specific audiences. You

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will find some Registrar's that do business only with large companies because those large companies have very specific needs and they specialize in making sure they can meet those needs.

You have other Registrar's who deal in a specific language. You may find a Registrar near you that has the ability to speak, to operate in a language that you speak, which may not be common among other Registrar's. There are all sorts of ones that have different characteristics because of their business model. Also, may Registrar's as I pointed out and Reseller's have other added on services which they may want to sell you, web services and email are two primes ones.

Lastly to repeat again, prices vary. Read things carefully. Very often you'll find that a domain is available at one price to start, the renewal price the next year may be many times that amount. You have to do your homework carefully.

I've decided I want a .COM and the domain I really want to get is blah, blah, blah, how do you find out is blah, blah, blah available, BLAHBLAHBLAH.COM available? Well, the first way you can do is go to your Registrar, every Registrar offers the service where you can type a domain name in and find out if it's available or not. You can also go to the ICANN website and go to WHOIS.ICANN.ORG and you can type the name in and it'll tell you. I did that and we find out that BLAHBLAHBLAH.COM is owned by [inaudible] which is a mag company that publishes magazines, paper magazines and electronic magazines, why they have BLAHBLAHBLAH.COM, we don't know but they do have it.

You can see that it's not available. What do you do at that point? Let's say I really want BLAHBLAHBLAH.COM, I can go to BLAHBLAHBLAH.COM and I might find it doesn't even exist, someone owns it, someone's paying for it every year but it doesn't exist. Who do you know it doesn't exist? Not having a website doesn't mean you don't exist, they may be using it only for email. There are many, many domains that are not used at all. There are people who invest in domains that they think will have a value, a value much more than they paid for it and they invest in those domains and hope to sell it to somebody.

Maybe you can buy it from the owner. There are lots of domains that if you go to them what you'll see is a screen, this domain's available, make me an offer or they'll tell you that for only $17,000 you too can have this domain. Lots of options. I've just read a newspaper article where someone was trying to get a domain they wanted and the owner didn't want to sell and they eventually went up to the owner with a gun and forced them to transfer the domain on threat of being shot. That's not a technique I suggest you use but it did actually happen. Some people consider domains rather important things.

Let's say either I don't want to pay a lot for it or it's not available. Whoever has it, is not going to sell it to me. You can have a number of options. You may say, "Oh well, I really like BLAHBLAHBLAH but I'll add something to it to make it unique." And if you try BLAHBLAHBLAH-TODAY you'd find miraculously it's available and you could get that as your own domain. You may also choose to say, "Well, I can't get BLAHBLAHBLAH.COM but maybe I can get BLAHBLAHBLAH.

Something else and most Registrar's, if you try to get a domain, if you ask about one, they it's not available, they'll find a whole bunch of similar and related names that are available. You may find that BLAHBLAHBLAH.CLOUD is available and you could register that name assuming that .CLOUD didn't have any rules that you violated, assuming you met the criteria for .CLOUD and of course, the price was right.

"Alan forgot to mention, the other person who turned up at the other person's house with the gun to get the domain ended up in jail. Yes, indeed." Yes, indeed. That's an article from today by the way if want to look it up on your favorite news site I'm sure you can find it.

Now, you've found a domain that's available, you've selected your Registrar or Reseller, you now have to provide your contact information, you have to tell them who you are. You have to select a period of time that you want it. They may tell you it's 14 pounds a year and you can decide how many years you want it for and you pay and it's yours. You are now officially a Registrant, congratulations.

A little bit more about prices, I've talked about them and the reason I've talked about them a lot and I'm going back to them is, they're a major issue, it's one of the things people find confusing. Why is it that a domain, one-character string costs a lot and the other's cost so little? Well, it all has to do with business. It's a business model. It's partly based on what they think the market will bear for that type of domain. A .BANK, where they have to go through a lot of work to make sure you are a legitimate bank will obviously charge more then someone who's providing a domain that is completely generic with no rules and regulations associated with it. The perceived value may be higher.

If a domain has a value which the seller thinks has a lot of value, there was one Country Level Domain that was selling domains to doctors and they perceived a high value and although they would sell a ccTLD domain to a regular person at a low price, if they were dealing with a doctor, they would charge $1,000 or some number like that. It all is based on perceived values and bundled services. Sometimes you may purchase a domain name with a website. Sometimes they'll give the domain name if you pay for a website. All sorts of options.

I believe that is my last slide and we've back over to Olivier now.

OLIVIER CREPIN-LEBLOND: Thank you very much, Alan. You've spoken about all the great stuff about buying domain names and registering them. When I have to deal with all the terrible things that can happen. In fact, I can tell you more about terrible stuff that can happen. It just happened like this, I just have to deal with all the terrible things. I'm really sorry to be the bearer of bad news.

ALAN GREENBERG: You also get to deal with IDN's which are a lot of fun. We are 27 minutes from the end of the time period. We're just a little bit late but not a lot.

OLIVER CREPIN-LEBLOND: Well, let's catch up a little bit. When you register a domain name what happens? First thing you need to do is to provide contact information to register the domain. You got to provide all sorts of details, email

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address, telephone number, all this and some of this maybe displayed if someone asks about that domain. You saw earlier, Alan showed you examples of WHOIS information regarding Top Level Domains but you could also do that and ask for WHOIS information about the Second Levels or the owner of the domain name itself.

Now, fortunately there has been some of this information now that is less available to everyone and that's thanks to the European General Data Protection Regulation, the GDPR, and [inaudible] was ahead of us, the WHOIS service is now with a policy hiding many inflows to protect user personal information in French, RGPD and you've lost me.

ANDREA GLANDON: Olivier, I'm sorry, we've lost audio again, can you hold for one moment? I'll let you know when to try again. One moment please, thank you.

OLIVIER CREPIN-LEBLOND: At present, we lost audio with me once, with Alan once and now with me a second time, seems to be a pattern. Maybe we're speaking too loud, getting too excited. Who knows, I'm seeing all sorts of notes on the chat at the moment. Shall we launch a rumor. Someone hasn't paid their bill. No, I'm kidding.

ANDREA GLANDON: Okay, Olivier, can you give it a test please?

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OLIVIER CREPIN-LEBLOND: Testing, one, two, three.

ANDREA GLANDON: You are good to go.

OLIVER CREPIN-LEBLONE: Excellent, thank you very much for this and we're back. We have again stopped because we had a drop but we're back. I was talking about the personal information that is now -- when you register domains, personal information has to be provided. Up till recently, the WHOIS service use to provide all the details to pretty much anyone that was interested, they would be able to get your telephone number, your address, full address details, emails address, etc., and now with the General Data Protection Regulation, the GDPR, in French it's actually RGPDP the acronym.   This is providing some reduced amount of information displayed.

The process is still going on at the moment to provide exact details of what will be displayed and what will not be displayed. Phase 1 has provided details or has worked on the details of the data that will be stored. Phase 2 is going to provide, hopefully, with a lot of work, it finds a way to display that information, access model will be defined. But, aside from this, there are still proxy services available. If you don't want your full details to be given, then you subscribe to these proxy services and then they act as a go between, between you the Registrant and anybody who might be interested in the domain name itself.

Of course, the moment you provide personal information on anything on the internet, you end up with all sorts of emails in your account, messages telling that you have to renew your domain name because it's run out of time. Now, if comes from your own Registrar, these re legitimate emails. If it comes from others is probably is a scam. Trust me, having received these for many, many years, often they look very genuine indeed but then if you actually do click yes and proceed forward and give your details, you might actually be signing up to either transferring that domain name to being run by another Registrar on your behalf or even, just paying for stuff that doesn't exist, an absolute scam. Your credit card details being taken and you've just been the victim of a crime.

There's also a whole lot of things going about search engine optimization. They might email you and say, "Hey, we can bring your domain name or your website up to the front, first page of Google, just pay us this amount of money and we are going to optimize you on this." Of course, they all make it sound like you need to do that because if you don't, then obviously your domain will not even work, who know, they'll just come up with all sorts of claims.

There are also some that will want to sell you more domain names. Let's say you own ALANGREENBERG.ORG, of course you want to have ALANGREENBERG.STOP and ALANGREENBERG.COM and ALANGREENBERG.INFO and pretty much any other extension and these are the things that you might end up in your email and tons of other scams which are too numerous for us to list here. Unfortunately, that's some of the things that one has to deal with.

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I did get a little bit excited but now I'm even more excited because now we're going to be speaking about some positive stuff. Internationalized Top Level Domains. That's one of the things which I think this community can be very proud of. We've had a lot of input in this. There are really two main tracks which have happened. Internationalized Top Level Domains are quite risky. Originally, all of the domains were in this Latin Character Set, we called the Latin Character Set A, B, C, D, E, F, A-Z and numbers, 0 to 9.

Recently, maybe in the past 10 years or so, with the introduction of new Top Level Domains, there was a lot of push to use character sets that were not originally or not in Latin Character Sets, we're looking at Arabic and Chinese and Korean and Japanese and various Hundi scripts. There were two tracks that were launched with this. First there was a fast track for Country Code Top Level Domains that were in other character sets and then there was also a track for the new Generic Top Level Domains which had to follow the way that we had for all of these launches of new Generic Top Level Domains. This latest extension which took place in 2012, the 1,200 of them, I don't have the exact numbers for how many Internationalized TLDs there were but there were quite a number of them in there and they seem to be flourishing rather well.

You'll notice one little thing here, of course on your screen or on someone's screen that works with this character set, you'd have what's called a U Label, that's the actual domain in the local character set but the technical stuff behind the scenes, the Resolvers, the Name Resolvers, obviously don't work, maybe not obviously but actually they don't work because of legacy reason because they're old systems, they

only work in what they call Latin Character Sets, they are coded totally different. Of course, as an end user you would see the U Label but the A Label is what the DNS works on. This whole system is based on this UNI Code Coding and you effectively make the name correspond between and the other.

Latin characters, anything is okay, for non-English names, here you've got a Latin script to start with but it's not quite Latin, Latin with various accents on there, so that works, that's an Internationalized Domain name. The second one is a mix of Top Level Name, .ASIA, which has got some Chinese characters. The third on is entirely in I believe this is the Hindi script, maybe someone could write if they know exactly what script that is but I know that it is for .IN and then you can have a mix between the whole Hindi script and the WWW, that works there.

Really these IDN's have been introduced so that people who are using other character sets for writing letters, emails, etc. don't constantly have to swap between one and the other and one other, same thing when you're surfing the web. Sometimes it involves some swapping the keyboard, pressing a set of keyboard commands to be able to change from one character set to another. That's the basic thing behind them

The thing is that there are variances. Now, of course in the Latin script, the standard DNS as it currently stands, it doesn't really matter whether you're using lower case or upper-case letters. You could have .ORG all in lower case or you could have .ORG with the O being in upper case or maybe the other way around or everything in upper case, an email or website can be in either one of these two.

In the IDN scripts, it's Nationalized scripts, it's a little bit different actually because I'm not an expert in Chinese but let's say you've got two different scripts, one is simplified Chinese and the other is traditional Chinese, you'll notice that they look slightly different on this. In fact, both of them mean restaurant, in a way if both of these mean restaurants effectively, they should be the same domain names. But no, they're not, the DNS actually treats them differently because it looks at the actual script itself, not the actual meaning.

This is where you have this thing called variance, different ways to write the same word, different types of characters in some languages and there needs to be some kind of a way to say, either that this has to be separate, so treat it differently or this has to be treated in the same way, so when you type with one type of spelling you end up in the same website or the same email address as the other type of spelling.

If you're interested in these tables, I would suggest that you go over to the address that is there, the ICANN.ORG domain's IDN tables, you will see that a lot of these tables, they're currently still being worked out, some of the scripts are not complete but for others, they seem to be adding more and more. That's one of the major pieces of work that our community or members that are interested, in order to really have been involved with and as we are adding more and more scripts, there needs to be more and more of these special cases of some of the scripts that are being added there.

I think that's leaving it on a high note. It's exciting, it's great to see that in a few years this space has grown so much. As every space that is

growing, it's got its challenges. Let's go over to Alan Greenberg to see what we can do next.

ALAN GREENBERG: Thank you very much. One footnote I put in the chat on this one is, some Registries, if you have variance, if you buy one you get the other one free. Some if you buy one, will disallow anyone else from registering the other one. Some will allow two people to register each variant and have competing domains, that's as if .ORG with lower cases went to a different place then .ORG with upper case, a little bit scary but it is allowed right now.

Olivier said I got the good part and he got the bad part, well, no I get some bad parts. Here is a list of right's associated with being a Registrant and then we'll look at obligations, responsibilities. If you get a domain name and you register it according to the process we talked about, you have the right to use that. Now, they are subject to restrictions the TLD must put on and subject to applicable laws. You cannot use a domain name in a way that is illegal or may injure someone else or be fraudulent, we'll talk about that a little bit in a moment.

For gTLDs you should expect to be notified about renewals. Presuming you gave them valid contact information. If you gave them a wrong email address or if you register a domain for five years and after two years you change your email address and you don't bother telling the Registrar, then they may have no way of contacting you. They might be able to phone you if you still have the phone number or they might be

able to send you a paper letter, a paper mail letter but they maynot. Email is certainly the critical one, if you don't keep it up to date and working, then you may lose contact with your Registrar, which mean you may lose access to the domain. Note that the renewal price should be on the Registrar's website but they're allowed to change it over time and it doesn't have to be the same price as what you originally paid.

Obligations, you are obliged to provide accurate information. Now, in the past and still in the future in some cases, you may not want your real information to be published and therefore many people provide fraudulent information, that does not follow the rules. Now, there are services that many Registrar's offer to say, "You can register your domain name." Give them the valid information but they will hide it, that's a proxy service. That is certainly available. You are obliged to give valid, accurate information. You obliged to keep it up to date. You obliged to not use things for fraudulent reasons and a number of other reasons. All of those are causes for a Registrar to take away a domain name. Of course, you should keep track of your renewal dates, although you should be notified about renewal periods, it not necessarily guaranteed that they will because problems happen.

We'll talk specifically about name renewal. You should be notified and you should renew prior to expiration. For gTLDs, if you do not renew prior to expiration, they up until a few years ago, there was literally no protection, that domain could disappear immediately. Now, there are rules saying you must be given at least 10 days to renew and the domain will stop working during that period. You'll get some pretty blatant notification that it isn't working, unless of course you're on vacation for two weeks, in which case you might miss it.

The pricing to renew after expiration must be higher but it must be published. Some Registrar's and Registries may give you more time. The prices may go up and you may lose control of your domain with absolutely no recourse. Name renewal is a really important issue that you have to consider.

You can transfer your domain to another Registrar, there's no fee for doing that but you must renew for at least one more year at the same time. There are some restrictions on when you can transfer. You can't transfer a very new name; you can't transfer right near renewal time and there are some other restrictions. You can sell and I use the term sell, the right to your domain name to another Registrant. You can sell at whatever price you want, it's an open market. There are companies that will see it for you or auction it off. If you have a domain that you think has value…

ANDREA GLANDON: Alan, we've lost the AC audio again, if you can hold for one moment please?

ALAN GREENBERG: Alright.

OLIVIER CREPIN-LEBLOND: Alan, it's two -- two.

ALAN GREENBERG: Yup. We're going to run out of time at this rate or certainly not much time for questions. Do we have interpretation past the half hour?

GISELLA GRUBER: We have past, yes.

ALAN GREENBERG: I'm sorry, say that again, someone else was speaking?

GISELLA GRUBER: Confirming interpretation 10 minutes past.

ALAN GREENBERG: Thank you, very much.

OLIVER CREPIN-LEBLOND: It looks to me like every 20 minutes the audio drops.

ALAN GREENBERG: That's like your mobile phone, it use to drop after an hour.

OLIVER CREPIN-LEBLOND: Indeed, back in the day.

ANDREA GLANDON: Okay Alan, can you go ahead and talk so we can test that?

ALAN GREENBERG: Yes, I can.

ANDREA GLANDON: We're back.

ALAN GREENBERG: We were talking about selling your rights, you can sell a domain name if you think it has value, there are companies that will do it for you, it's an interesting part of the domain industry and as I said earlier, there are people whose business is collecting domain names and trying to sell them at higher prices. It's a very large part of the domain industry.

OLIVIER CREPIN-LEBLOND: It's a terrible story, of course it has to Olivier's.

ALAN GREENBERG: This is good for right's holders.

OLIVER CREPIN-LEBLOND: Now we're looking at Intellectual Property Issues. As you know, these names that people register, that you registered, could be trademarks, in fact, many people use trademarks and they trademark the name before they register it. Sometimes there are some people who try to possibly take a fair advantage of these names by having something that look visually similar or that looks similar to another site. That is pretty

terrible, you can see here three examples, say BO-OK with could be Facebook, who knows, that could be registered by someone who is not Facebook.

And Google here, G00GLE.COM but instead of the two O's it's actually two zero's, who would know that these are zero's looking at your screen, that would be registered by somebody who is not Google and they may show themselves as being Google and gain some traffic but in fact they're not. There's another one here, COKE.COM but in fact here the K looks funny it's actually because the four letters in the name are in Russian script and it looks very much like Coke but it isn't Coke. If does have the taste of Coke, it might not be Coke itself. That's the sort of thing you get.

Next is a way to basically get around these issues. You might think, this only happens every now and then, in fact there's a lot of this sort of thing happening out there and because of this, there are two special programs which have been put together for this. One is the Uniform Dispute Resolution Process, the UDRP, which is a way to resolve a dispute when there is a trademark that is involved in the name itself. Somebody registered a domain name that they don't hold the trademark to it, the trademark holder can go and dispute the allocation of this domain name. The other thing is the Uniformed Rapid Suspension, that affectively provides the ability to suspend a domain name fast, quickly while investigations are in progress.

For the new Top Level Domains that were launched in 2012, there's also a Trademark Clearing House, so that trademark holders can register names that they have and then when somebody tries to register that

name under an extension, the trademark holder on the one side is provided with a notification that somebody is trying to register that name but the person who is trying to register the name get's told, by the way, the name you're trying to register has a somebody who registered a trademark against it. Remember, the difficulty with these trademarks is that a trademark in itself, when you register it, has two limitations, one is a geographic limitation, it might be a trademark but only a trademark in the United States of America.

The second one is that a trademark is usually linked to a specific activity. It could be a trademark that is linked to selling of cars but your name is a name that you're using is actually selling apples, nothing to do with cars and it just has the same name as the other trademark but cannot be confused with it. It's difficult because of course domain names are not restricted to specific activities, they are global and they're not use specific as such. These are the things you can do, some of the issues with regards to Intellectual Property.

You will have guessed by now; this is a complicated game. This is really something which we could talk about for hours and hours. Where can you go for help? First of course is your Registrar's help desk. If you have a problem you should be able to get in touch with them. As we've mentioned before, you've got all sorts of services facilities. Some Registrar's might be expensive but then you are able to pick up the phone and call them when you have a problem.

Others might want to sell you domain names that are very, very, very, very, very cheap price but unfortunately, they only way to get hold of them is via a web forum and they probably don't answer any queries.

There's a whole choice that you could go for there. But, in general, Registrar's are good as your first step to ask questions. Of course, you've got the ICANN website. You've got WHOIS.ICANN.ORG, which we've mentioned a number of times here and that's available in multiple languages.

If you have a problem regarding compliance, compliance as in your Registrar is not following the rules or you think there is a problem with them or there is a problem with a domain name as such, you can make a complaint with the Compliance Department. Again, we could take an hour and in fact we have had some webinars that have lasted an hour talking about the Compliance Department. If you have a problem with a Registrar, go and check out this announcement from 2007 that provides details of everything to do with how Registrar's are run and so on.

You've got other useful resources which are listed in the ICANN Learn Course and we thought we'd just copy them over here. One is the Australia Competition and Consumer Commission; their website contains information about domain names. There's also the E Consumer website, that's a US based website on this. Obviously, the ICANN website is one. The ICANN At-Large, which you hopefully should know about it, At-Large.ICANN.ORG.

The Federal Trade Commission and also, if you are interested in printing some of this material, the course, the ICANN Learn Course, which we have based this webinar on, is actually based itself on printed material which is available on the ICANN website. Domain Names Beginners Guide and that dated from 2010. It might be a little obsolete for a couple of the points made there but it has a lot of the material that

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we've covered today. That I think is pretty much everything. I've just scrolled myself to the last one. I guess we can take a few questions.

ALAN GREENBERG: Olivier, in the chat, just probably scrolled off, I also gave another address that Brian Gutterman reminded me of, of a really good website for Registrant information on the ICANN website, it's ICANN.ORG/REGISTRANTS. We have a few minutes for questions if anyone has any.

OLIVIER CREPIN-LEBLOND: I've actually copied a few questions from the chat. I know that a lot of questions were asked in the chat, some of them were answered in the chat itself by either Alan or in fact other people who were on the call, so thanks very much for doing this. I know that a couple of things that might not have been answered, one was, "In one of the slides you showed WWW and LEARN as third level domains." The person was trying to find out, to understand how WWW is third level. That answer was to say it's the position. Top Level is like .ORG, Second Level, ICANN, Third Level is either one, it's just position wise.

ALAN GREENBERG: Olivier, I did answer that. Normally, WWW is third, in this particular example it was a Forth Level though.

OLIVIER CREPIN-LEBLOND: Thanks. Next there was a question, "How does someone get a copy of the slideshow?" Obviously, I think there was a link which was given in the chat and I understand that the actual slideshow will also be available on the agenda page itself. Then there was a question from Otunte Otueneh, "To what extent does ICANN regulate the Registry?" Alan, maybe you can take this?

ALAN GREENBERG: They regulate the Registry relatively well for things that are within ICANN's purview. There are many things where the Registry has complete freedom to do as they wish and those, we don't regulate at all. It really depends what's in the contract and what isn't. Now, if a Registry is doing something that violates what is in the contract, ICANN Contractual Compliance is obliged to take action if they're notified about it.

OLIVER CREPIN-LEBLOND: Thanks for this, Alan. Then there was also a question from Wale Bakara, "What about the latest Amazon proposal for .AMAZON and the .BRANDS." We haven't spoken about these Alan?

ALAN GREENBERG: Well, I'm certainly not going to comment on AMAZON.COM, that is subject to a lot of discussion and I don't think we have any formal position on it. There are many .BRANDS, Nokia is one of the ones I use an expression. Some companies have registered a .BRAND TLD and then have decided they don't want it. Others are making good use of it.

It's a business decision the company has to make. Now, when the company name has overlap with other things as in AMAZON, it's an interesting situation, the Domain Name System is universal and there is only one copy of any given string and so we have to decide how to handle that but that's not something that we can talk about here, other than to say, it's an issue that has to be resolved, typically on a one on one basis.

OLIVER CREPIN-LEBLOND: Thanks for this Alan. Any other questions or comments? I'm trying to look through the list at the moment. I'm seeing a lot of thanks but that's not a question. If anybody has not had their question answered, could you please type it quickly or send a copy to the chat again?

ALAN GREENBERG: We have about two minutes before we have to stop. Don't think about it too long.

OLIVIER CREPIN-LEBLOND: I think we've pretty much gone through the whole list. If you have thought of a question and you'd like to ask this but unfortunately you've thought about it after the call has ended, I'd like to remind you that there is a wonderful call just like this one tomorrow and I think -- we'll do it live again, Alan and I. It might be slightly different or it might be the same but you can certainly ask questions tomorrow if you feel like watching this again. I know that Joanna was dropped, is Joanna back?

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ALAN GREENBERG: She is on the list right now. We can turn it over to Joanna, if you'd like to have any closing remarks.

JOANNA KULESZA: Thank you, thank you so much, we have two minutes. Thank you, gentlemen, that was definitely the most exciting ICANN [inaudible] calls I've ever participated in. We had blood, we have theft and we even had GDPR. Thank you, that was amazing, thank you for doing that. Wrapping up, please make sure you follow other webinars we have planned. I will [inaudible] the link into the chat box and those two wonderful gentlemen will be so gracious with their time tomorrow to join us again for another version of this webinar for those of you who were not able to -- for those At-Large members who were not able to participate today.

I personally am very much looking forward to tomorrow's webinar. [Inaudible] who participated. Good afternoon or good night. Special thanks to our wonderful presenters today. In the link is other training courses and I will see you there. Have a good afternoon and good night. Thank you so much interpreters, to our Staff and to the wonderful presenters. Thank you. Bye.

ANDREA GLANDON: Thank you, this concludes today's conference. Please remember to disconnect all lines and have a wonderful rest of your day.

[END OF TRANSCRIPTION]