

ICANN77 | PF – ccNSO: Pre- and Post-Pandemic ccTLD Reg Trends
Tuesday, June 13 2023 – 10:45 to 12:15 DCA

CLAUDIA RUIZ:

Hello and welcome to the ccNSO Pre- and Post-Pandemic ccTLD Regulation Trends. My name is Claudia and I, along with Bart Boswinkel and Kimberly Carlson are the remote participation managers for this session.

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Thank you and with that, I will hand the floor over to Fernando Espana. Thank you.

FERNANDO ESPANA:

Thank you very much. Good morning, good afternoon, good evening for the remote participants. My name is Fernando Espana from GoDaddy registry, and I'm the representative for the .us ccTLD. I am also a participant in the DASC within the ccNSO and the repository subgroup.

The purpose of this session today is to have a general introduction on the global registration trends of ccTLDs during the 2019-2023 timeframe. We'll have ccTLDs from different regions exploring the registration trends of their respective ccTLDs. The ccTLDs will also have a chance to reflect on what the future looks like for them in terms of domain registration trends.

Before we start, I'd like to invite attendees to also log into the Zoom session as the instructions were given. And I would also like to remind

you that we are going to have a French panelist today, so he will be speaking in French. So if you could, please get your headsets ready for that.

So we have a very exciting panel today. We have Matthew Zook. Matthew is the principal of ZookNIC, a domain name data aggregation and analysis service.

We have Serge Sanou from .bf. He works at the Burkina Faso Regulatory Authority for Electronic Communication, and he's also the chairman of the executive committee for AfTLD.

We have Ai-Chin Lu from .tw. She's the executive direction at TWNIC and also a ccNSO councilor.

Kristian Ørman from .se. He is currently the VP of registry services and the .se ccTLD manager.

We have Francisco Patino from .ec. He's the marketing manager of NIC.ec.

And last but not least, we have Sean Copeland from .vi. Sean is the technical liaison for the registry, and Sean is also a ccNSO councilor.

I'd like to remind everybody that is going to ask questions to please state your name and affiliation and also to speak slowly so that the translation services can properly translate.

So as we move on to start off the session, I'd like to invite Matthew Zook. He's going to share with us some of the global trends from 2019-2023 and how ccTLDs have been affected. He will share with us if there are any initiatives globally that impact ccTLDs. Matthew, the floor is yours.

MATTHEW ZOOK:

Great. Thank you very much. My name is Matthew Zook from ZookNIC. I'm very happy to be here. I will just give everybody a warning. This is a rather data filled presentation. I'm not going to try to talk about all of it in my time here because there's just not enough time but I'd be happy if you've got questions, to talk with people afterwards here or you can also email me. My email is in the last slide. And you can get the presentation eventually through the website as well. Next slide, please.

I wanted to give you a bit of the overview where my particular data and project is coming from. Next slide.

This started back when I was doing my Ph.D. dissertation back in 1998 when I was like I need something quick to study the Internet, and here we are 25+ years later. It's a bigger project than you'll see me present here, but in terms of ccTLD data in particular there's a number of different sources including getting from registry operator reports, personal communications with folks. I'm happy to talk with people here as well. As well as some technical analysis of zone files. And also you've probably seen some of this data in various industry reports. Next slide.

I just wanted to put this up because this is sort of my original intent with this, and I don't think many people have ever actually seen domain names mapped to a street level. Yes, I was a Ph.D. student with too much time on my hands, but that was one of my interests in all this is looking at regional differences. Mostly looking at intra-country differences at this point in terms of domain name use and adoption. Next slide.

Looking at the most macro view, I'd like to start out looking at comparing different TLD types. Next slide.

We can look at a broad stretch of history of what the domain name industry looked like going back to 1991 which is some of the earliest data I had I got from a different source. You can see both the ebbs and flows with a couple macro economic situations I have put on this particular slide.

I've been told to speak more slowly. I will try to do that now. Thank you. I tend to get kind of excited.

Anyway, I won't talk much more about this slide because you can see some of the big trends here, particularly around the most recent time around COVID. Next slide.

Looking at where we are compared to, at least in this graph, about six years ago the overall size of the industry has grown. ccTLDs in general have been increasing. The big takeaway from this is you can see that the relative share of the industry for ccTLDs has become smaller over time. It doesn't mean that ccTLDs have shrunk in terms of number, simply that other TLDs are growing faster. Next slide.

And this is probably clearer in this particular slide. You can see there was a time from about the mid-2000s to about maybe ten years ago where ccTLDs' share of the industry was increasing. And then for the past ten years it has been more on a plateau and most recently on a decline, particularly if we look at the COVID time. Next slide.

If we break out the legacy gTLDs which is useful between .com and the other legacy gTLDs, we can see that there's almost a mirror image effect

that we see between ccTLDs and .com during the past two or three years. Again, I don't want to read too much into this in terms of competition and things like that. It's very complex, but I just want to show some of these ongoing trends comparative with ccTLDs. Next slide, please.

So that's the biggest look at the domain industry, trying to look at differences within ccTLDs as well. I want to first start looking at some differences within the phenomenon of IDN domains within ccTLDs. Next slide.

There are a lot of interesting things here. You can see my definition of what I'm including in IDN ccTLDs here. You can also see that it has remained a relatively small percentage of all ccTLDs, somewhere between 2-3%. I point this out because, again, IDNs are really interesting type of domains and in particular for registry operators. I'm sure you're all familiar with the complications and the challenges for these particular kinds of domains. And I don't want to say too much about the trend because it is obviously up and down. But one thing I would say about this, it's not growing significantly. It is a relatively steady percentage, if anything, maybe declining somewhat. Next slide.

The next step I want to do is look at—I think we're still on the same. Can we have the next slide? Yes, thank you.

The next thing I want to do is start looking at regional trends and regional differences. A very important part of this is to filter out some ccTLDs. I do this not because there's any particular problem with these ccTLDs. It's just an apples versus oranges kind of comparison. There are certain ccTLDs that operate with different business models, have

different operations. And so what I did with this next step is I removed 38 ccTLDs where the number of domains per capita is much higher than all the other ccTLDs. This is just to make the per capita numbers and growth rate change numbers that I'm going to be showing in the subsequent slide make more sense. Again, I don't want to put any judgment on these particular ccTLDs, but for looking at regional differences it's important to have this filtering step. And I'm happy to talk about this process more if people are interested. Next slide.

This is just to give you a visualization on the actual numbers between ccTLDs in general. The graphs I was showing earlier were percentage of the overall industry. These are actual numbers of registrations.

And there are three lines on here. The first one, the blue line or the topmost line, is all of ccTLDs, none of them removed. And you can see some of the reasons why that filtering step is important. There can be quite some volatility and change on some of these ccTLDs, and it's just a different kind of phenomenon than the other ones.

The filtered set is the red line, the one in the center. And you can also see that there are some increases and decreases. I decided then to also just go with this green line and I created the green line by removing data for .cn and .tw. Again, not for saying that these aren't important and useful ccTLDs to study, but during this period of time there were some fairly large increases and fairly large decreases that made that bulge in the red line that you can see.

So we're left with this green line which, as far as I'm able to do, represents the overall trend for ccTLDs in general. And I'll be the first one to say that this is difficult. I'm talking about averages here, sort of

generalities. But each ccTLD obviously has its very unique and different kind of experience. But in this larger look I'm trying to show where we are in looking at overall trends.

The big thing I would take away from this particular green line is this moment maybe about ten years ago that you can see where the trend line shifts. It was going at a certain rate, and now it's shifted to a different growth rate trend, a slightly slower trend line than previously again at the overall level. Let's go on to the next slide.

If we break this out and look down at ICANN regions, there's a lot of data on here. I'm not going to really going to be able to talk all through it. But if you look at this data, you can see a couple big takeaways. Europe remains in terms of per capita figures much higher rates of ccTLD domains per capita. Also, a big takeaway from this for me is the much higher growth rates we're seeing for ccTLD domains within the African and the Latin American and Caribbean regions. Again, you can go back and take a look at this more carefully. Next slide.

I want to end on just trying to start talking about what are some of the explanatory factors behind these differences we see. If we go to the next slide here, you can see a couple different takes on this. The table on the left is my attempt to look at some different datasets that might be interesting correlations with the total number of ccTLDs. And just to be clear, each ccTLD of that filtered group that I talked about earlier is an observation. And I look at how the number of ccTLD domains correlates with these different variable such as population, government effectiveness as well.

I then decided I should go ahead and maybe just try a little modeling exercise just to see what might come out of this. I will say this is very preliminary. Don't take this too seriously. This is sort of back-of-the-envelope kind of analysis. But I took the three variables with the highest correlations and then looked to see what kind of model we might get out of it. And from that, population and government effectiveness were statistically significant in this model. Price was not. It was a fairly good t-score on that, but it didn't reach a level of significance.

Now all that said if all of you are not stretching your brain trying to remember your high school statistics class, this model only explains about 30% of the variation between ccTLDs. That's not surprising given the variation within ccTLDs, but I thought it would be a useful starting point.

Then in the next slide I'll just have my final takeaways, but I see I'm at 12 minutes already as I probably talked too fast, and apologies to the translators and everyone. It's an occupational hazard of mine. But I'll stop there and I'll let you just read this slide yourself. Thank you very much.

FERNANDO ESPANA:

Thank you, Matthew. That was very informative. I do have a question before I open up the floor for questions. The growth rate of ccTLDs seemed to have started to slow down about ten years ago. Is that something that you also observed, and do you have any ideas as to why?

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- MATTHEW ZOOK: Yeah. I mean, I do think that's the overall trend I saw, that there was a timing issue about ten years ago it did seem to be slower growth rates. It does correspond with when the new gTLD TLDs were introduced. I don't want to say that's the cause, but I do think that's something that would be an interesting thing to look more at because the timing is right and you could imagine a substitute argument going on.
- FERNANDO ESPANA: Thank you. So I want to open up the floor for questions, if you have any questions for Matthew. I think we have a couple questions back there. Nigel?
- NIGEL ROBERTS: Yeah, Pierre was before me, I think.
- FERNANDO ESPANA: Pierre?
- PIERRE BONIS: Thank you, Nigel. Thank you very much, Matthew, for this presentation. Pierre Bonis from AFNIC.fr. I'm very happy to work with you on the studies [we share] every year. I have a question about what you call the other categories in your presentation. You have ccTLDs and other categories. It seems to me that the legacies—for instance .gov, .org, etc.—are not having the same kind of growth as other categories as the gTLDs. So to comfort us in a way, can you find another category that is growing less than us? Thank you.
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MATTHEW ZOOK: I've not looked at that specific kind of thing, but I do think that there are...I mean, the simple answer is yes. There are ones. I suspect—and I haven't looked at this so this is just a speculation kind of question—that some of the legacy gTLDs are actually declining, I know that, and so are growing less. I'm not quite sure what I would call that category though.

FERNANDO ESPANA: Thank you. Nigel?

NIGEL ROBERTS: Yeah, thank you. Nigel Roberts from .gg. I would be interested if you could expand a little bit more on what government effectiveness means, please.

MATTHEW ZOOK: Great. That's a great question. I meant to talk more about that. All the variables I was showing up there are coming from the World Bank, and in this particular dataset I don't remember exactly how they defined it. I'd be happy to look that up during the break. But essentially, it's a measure of the national level of government and its ability to provide various services both for citizens but also things in terms of trade, currency exchange, and things like that. I will emphasize it's not specific to anything related to ccTLDs.

FERNANDO ESPANA: Thank you. I think we have a question online. We have a question from [Siobhan] who says great insights [inaudible]. Have you done the analysis at the ccTLD or TLD level as well?

MATTHEW ZOOK: I'm not sure if I understood that question.

FERNANDO ESPANA: [Siobhan], maybe you can ask that question directly to Matthew. I think in the interest of time, we're going to move on to the next presentation, please. I think Matthew provided his email address. Thank you.

So thank you very much. I'd like to remind everybody that our next panelist is going to be speaking in French so if you could put on your headsets. Our next panelist is Serge Sanou from .bf. Serge, please give us a little bit of time to put on our headsets, and the floor is yours.

SERGE SANOU: Thank you very much. Thank you, Chair. My name is Serge Sanou. I come from .bf, and I am also the president of AfTLD as has been said. I am here to talk to you about the ONDA Project and what we have been doing within the regional organization AfTLD during 2023.

What is AfTLD? It could be summed up as being the regional African organization that supports ccTLDs during their development. We act as a focal point for all African ccTLD managers in order to discuss matters of policy that affect ccTLDs globally and then to present the group's position as one united voice when there are international or national and regional meetings. Thank you. Slide.

If you wish to know a bit more about the AfTLD, here is our structure. This is how we are organized. We have to say that AfTLD is formed of a general assembly made up of 32 full members. There is also a board of directors made up of seven members. And finally we have staff. It is one person that has been appointed. We hope in time to be able to increase the number of full-time employees.

In this next slide you see a summary of our activities for 2023. It has to be said that our first activity is actually the one that I will be presenting today, and it is the ONDA observatory.

The interpreter apologizes but the speaker's connection seems to have cut out.

FERNANDO ESPANA:

We lost you for a moment. Okay, should we maybe move on to the next speaker and then have him come back?

CLAUDIA RUIZ:

Hi, everyone. Sorry for interrupting. Before we continue, there was a question that we missed in the chat. It was in Spanish. I can read it now, but I will be reading it in Spanish. It says, "Good morning, everyone. Stephanie from NIC.es. I have a question. The relation between decrease in ccTLD registries, is it related to an increase in social media?"

MATTHEW ZOOK:

It could be. It's one of the common things people talk about in terms of possible competition for domain names, social media being an alternative for using a domain name. I will say that there are a lot of

opinions on it. I have no data that can point directly to social media being there. I think it has an effect in some cases, but having talked to other registry operators beyond ccTLDs--I'm going to hop off—I will say that there are lots of opinions. I'll stop there. Sorry.

FERNANDO ESPANA: So Serge is back. He's reconnected, so we will continue with his presentation.

SERGE SANOU: Yes, I'm sorry. Please excuse me. I was presenting the summary of the AfTLD's 2023 activities. I spoke of the observatory that we are trying to set up that will unite the different stakeholders. And then part of our activities are also related to capacity building organized through workshops and webinars on different subject areas of interest to our members such as marketing or technical matters, that is for ccTLDs.

As for the activities of AfTLD, we have stakeholder engagement. And at that level it is important to point out that for this year AfTLD intends to encourage different African countries to locally establish their own national DNS fora with a view to have local discussions around domain names and ccTLDs. That is something that is very important to us and we are working very insistently on. That is like in the cases of national IGF fora as well. So we are trying to set up these national DNS fora to discuss matters related to each country's situation.

Another part of our activities is related to brand development. Within the ccNSO we are also actively engaged. We support different countries in terms of their delegation processes, and that is the case of Gambia

and Equatorial Guinea which are currently going through the delegation procedure and we are supporting them to get to the end of that.

We are also working on the organization of the Africa DNS Forum for 2023. We have created the Africa DNS Awards. And then finally, I wanted to remind some countries that we are getting together to discuss the establishment of national DNS for Benin and Burkina Faso, countries that are part of the list that exchange information around the subject within the AfTLD. But the idea is to encourage that there be national discussions regarding ccTLDs. Next slide, please.

Very quickly in terms of what we do and how we do it, the AfTLD is organized working groups that are chaired by our members. We have a technical working group, a research working group which is in charge of the observatory project. There is also a marketing working group, a working group in charge of universal acceptance, a working group that is responsible for the implementation of the constitution review, and then finally the meetings. These are meetings that are organized by the AfTLD but also other meetings in which we take part at the national, international, and regional levels. Next slide, please.

So what's the ONDA project? What's it all about? When we wish to observe the trends within ccTLD registrations, we have decided to establish an observatory for African domain names where we can monitor the evolution of domain names in Africa to then collect all the necessary data and produce statistics that could be available to all stakeholders.

Specifically, the observatory will consist of a web portal and a user interface that can be accessed online via which we will be gathering data from the different African registrars and through our different exchanges with all the other parties involved in the domain name market.

The key objectives of the project include, among others, to improve the collaboration of institutional Internet players at the national and international levels. At the international levels we're working with ICANN, ISOC, the OIF, and others that are interested in this project.

We wish to have these data available for ccTLDs upon demand or upon request. When they ask for this information, it is important to be able to provide them with important and accurate information regarding the evolution of ccTLDs in general and not only their own because they could all be of interest to them. And that is the purpose of the ONDA project. Next slide, please.

Here is a screenshot of our online interface for the ONDA project. It is a web platform that's accessible to all. And as you see on the page, we have established four key missions out of which the third, which is the key mission, which is to monitor the evolution of African domain names and to generation statistics that will be made available to stakeholders. Next slide.

We cannot speak of an observatory and data collection without discussing indicators because when we gather information we have to define what the indicators to measure the different categories will be. So we have created categories of indicators, namely 17 categories for the ONDA observatory but all in all we have 71 indicators.

All these indicators are not currently implemented, and we have had to make compromises in the selection. But today through our work with ICANN, ISOC, and others we are discussing the possibility of improving these indicators and drivers in order to have data that is relevant and of interest to everyone. And those that are less relevant to everyone could be added gradually.

But these are the different categories that we have established. We have the ccTLD organizational model, the type of business model adopted, the domain name statistics. In the fourth place you have the pricing policy that is practiced by each ccTLD and so on. There is the accreditation procedure, the naming charter, the ccTLD automation process, WHOIS service, etc. So as I was saying, we have 17 categories that will help us organize our data collection procedure.

And we are not working with all African countries. We only have about 15 countries that are a part of the project and are available within the observatory, but our main objective for this year is to continue gathering data and to add more countries to our contributors list. So we are exchanging with the different African countries to invite them to share data with us regarding the workings of their ccTLD.

And for that we have personal, individual relationships with the ccTLD because ccTLDs do not all go through the same struggles. We see that there are different difficulties in each case. So the objective of the observatory is to have a customized relationship with each of them to provide them with the information they need and with accurate information regarding their ccTLD so that they can use it to define their own action plan and to develop their ccTLD further. Next slide.

You have here and image of the statistics that are already online. First, you have a pie chart with the distribution of the number of domain names by ccTLD and by country. Then you have the distribution of the number of registrars by ccTLDs. And then finally toward the right you see the evolution of the total number of domain names between 2021 and 2023.

Those are statistics that have come from the observatory but that have been generated thanks to the indicators that were previously defined. As I was saying, these drivers or indicators can be changed and discussed. But today we are working on having reliable information coming from the different stakeholders. Next slide, please.

Okay, so this is the final slide I have where I present certain statistics for one single indicator which is domain name by country. This is merely to show you what we can extract from the observatory. You have a number of countries here with the data we have for each of them. We have statistics for 2021, 2022, and 2023. As you can see, we have included the evolution of each of the countries. So that is the indicator we have presented here, but the idea is to have more and more statistics to be made available through the observatory's interface as we collect more data from ccTLDs. Next slide, please.

So that's all from me. I would like to thank you by saying that the next ccTLD observatory is a very important project for Africa because on the one hand ccTLDs need support and that support must be enhanced and the situation of each ccTLD is not always the same. They each have their own difficulties. And so we are working with international partners, namely ICANN, with whom we are discussing and that are helping us.

But we also need to have action plans based on real data from the market and that we are trying to collect through the observatory project.

Now, yes, I would like to thank you and if you have questions, I will answer with pleasure. Thank you.

FERNANDO ESPANA: Thank you very much, Serge, for your presentation. If I could open up the floor for any questions.

BART BOSWINKEL: Fernando, Serge, we have an online question. The question is from Svetlana and it reads, “What is E-Reputation of the ccTLD? How do you measure it?” So that’s a question for Serge.

SERGE SANOU: Thank you for your question. This is a set of data that we have defined with a view to knowing what the online reputation of a ccTLD online is. For the time being though, we do not have data for this indicator. As I said, we defined 71 indicators, but we’re not currently measuring this because we don’t have the necessary data. So this has been defined, but it is not currently taken into consideration for statistical purposes.

The idea though is to find means to enable us to measure the ccTLDs online reputation, but we’re working on it and we hope to find a way to measure this. Because as you know, there are qualitative and quantitative indicators. So it is yet to figure out what the estimation method will be. Because as you say, the indicators that we have defined

must be published and clearly defined. So it is only once we will have finished that job that we will publish the definition of each of the indicators and how they're estimated. Thank you.

FERNANDO ESPANA:

Thank you, Serge. Apologies, but we are running a little bit behind. So we're going to move on to the next presenter. And if you have questions for Serge, you can email him directly.

So we have our next presenter Ai-Chin Lu from .tw. Ai-Chin, the microphone is yours.

AI-CHIN LU:

Okay. Hello, everyone. My name is Ai-Chin Lu. Today I will be talking about the registration trends of .tw domains before and after the COVID-19 pandemic. Now let's begin by looking at some COVID-19 statistics from the WHO. Next, please.

The WHO latest report reveals over 760 million confirmed COVID-19 cases worldwide with approximately 7 million deaths. Compared to two and a half years ago, cases have increased by 22 times and the fatalities have multiplied by seven underscoring the severity of the pandemic. The widespread availability of vaccines and the improved protection measures have helped mitigate our fears. However, COVID-19 continues to pose a significant health threat despite the WHO declaring it is no longer a global health emergency.

In the past we all know COVID-19 measures like lockdowns, travel restrictions, school closures, and social distancing were implemented.

However, they are now less common, enforced only in specific countries or regions as needed. How about Taiwan and the .tw registry situation? Next, please.

Taiwan's government took early actions like masks, travel bans, social distancing, and related policies to fight the pandemic. While mask requirements were lifted in mid-April of this year, they are still mandatory in places like hospitals.

Regarding the .tw registry, we have implemented more flexible work-from-home [policies] compared to before. Now employees can work from anywhere as long as they still clock in online on time. Additionally, apart from adopting a hybrid format for conference we continue to maintain measures such as employee communication through Microsoft Teams, utilization of cloud-based services, VPN setup, and customer service via VOIP. Next, please.

As you can see, I have assumed four scenarios that may influence domain registrations at the different stages of the pandemic. Number one, companies are shifting to online [inaudible] leading to an increased need for domain name [authorization]. Number two, establishing an online presence from the outset where your domain name is essential. Number three, companies closing down and deleting registered domain names. Number four, anticipating the rise in new company registrations following the peak of the pandemic making domain name registration necessary.

So according to the registration regulation of .tw, only companies are eligible to register .com.tw domains. So now let's check the registration

trends to see whether these four scenarios are likely to impact the registration status of .com.tw. Next, please.

So you can see [let's examine] these three graphs representing 2019 to April 2023. Graph 1 illustrates the annual number of new domain registrations ranging from 20,000 to 23,500. There is no significant variation between 2019 to 2022.

Moving to Graph 2 we observe the trend in renewed domains. The yearly range falls between 10,900 and 11,500 with a consistent renewal rate of 80% or higher.

Graph 3 we observe fewer deleted domains in 2021 compared to other years. While this observation may not directly relate to the pandemic it's still falls within a reasonable range. Although the year is not yet over, we anticipate minimal changes in the domain registration trends by the end of this year. Next, please.

Okay, so the total number of .com.tw domains is 260,529 as of April 2023. So you can see the graph shows a steady registration trend since 2019 with numbers ranging from 260,000 to 290,000. Next, please.

Due to COVID-19 some companies might be facing bankruptcy risk while individuals might be seeking new opportunities post-pandemic. So this slide showcases new companies establishment and the terminations from 2018 to 2022. As you can see, despite a peak of COVID-19 in 2021 new establishment reached a five-year high while closures were lower [than anticipated]. Additionally, in 2022 following the pandemic the number of new establishment did not increase as expected. Next, please.

So in reference to the previous slide I want to recap the .tw registration trend. Number one, the registration of .com.tw domains have remained stable from 2019 to 2022 with minimal [inaudible] beyond April 2023. Number two, the number of domain registrations and the deletions has consistently shown stability throughout the four-year period unaffected by the various stages of the pandemic. Number three, renewal rates have consistently exceeded 80% over the past four years. Number four, the annual company establishment and terminations remain stable. So I think the overall trend of domain name numbers has remained stable with the slide [inaudible]. Next, please.

So looking forward [transitioning] to the future, the domain name industry might be facing various challenges from the broader environment including economic recession, inflation, and the potential impact of epidemics. Additionally, the industry has seen an increase in competitors such as gTLD, new gTLD, social media platforms, and new media platforms. Despite the maturity and the uniqueness of domain name as [inaudible] it is crucial to create business opportunities and ensure the stable growth.

So I think to achieve this joint effort by the .tw registry and the registrars is essential. So the following key tasks are actively being promoted. The first one, continuous launch of preferential projects offering long-term promotions such as providing new companies with free domain registration for their first year. The second one, responsive customer service ensuring swift and efficient customer support. The third one, education and training providing resources and training programs to enhance domain name knowledge and utilization. The fourth one, data

security assurance implementing robust measures to safeguard data and protect user privacy.

I think above all for .tw the primary objective is to earn customer trust and the enhanced reputation of the .tw brand. Thank you. That's all my presentation. Thank you.

FERNANDO ESPANA:

Thank you very much, Ai-Chin. And as we're trying to catch up in terms of time, we only have space for one question. I'll open it if anybody has a question. If not, Ai-Chin, I do have one question for you. How do the registrations of .com.tw compare to the second-level just straight .tw domain names during the same period?

AI-CHIN LU:

Yeah, I think .com.tw is more stable [inaudible]. But for .tw I think there is the heavy variation because we do the wholesale promotion. Thank you.

FERNANDO ESPANA:

Thank you very much. So we will be moving on to the next presentation. Our next presenter is Kristian Ørman from .se. Kristian?

KRISTIAN ØRMEN:

Thank you. My name is Kristian Ørman. I'm from .se. I have been working at .se for one year. Before that I was working at various registrars. And I was also the chair of the Swedish registrar association,

so I was working very close with .se just from the registrar side and then moved into working directly at .se.

I'm going to talk a bit about how our registration trends have been in the past, and then I'll be using most of the time on talking on how we are trying to use incentives to steer those trends in another direction.

Since many years back, we have run quite a lot of different campaigns. It has been awareness campaigns. It has been add-on campaigns, price campaigns. They have been tried quite a lot. Some of these campaigns have been extremely price aggressive and have led to a big growth in our domain base. I think if I remember correctly, we were close to 2 million at some point.

But from 2021 we completely stopped running basically all types of campaigns and didn't do anything at all. So in 2022 we could then evaluate how our registration base and trends looked without any campaigns and all and like all campaign domains have been over this first year period. And both based on this and many other factors, we decided to take a new focus going forward. Next slide, please.

I'm not going to bring too many numbers and too many graphs, but I think this specific graph of the full number of domains is interesting. I'm not supposed to go all the way back, but I would say the first jump you can see there in 2003 is where changed our registration policy. Then the years after there were more awareness campaigns and public. In 2009 we went to a complete registry/registrar model, but we kept our own registrar as well. And in 2019 we sold our own registrar so we [were] all purely registry/registrar.

You can see a big jump there in domains which is based on campaigns mostly, very, very low price domains. And you can now see from the new year that we are at almost 1.5 million domains. I would say if I really wanted to, I could definitely get that number back to the 2 million but it would be low quality registrations and not something we would like to work with in general.

And also, with those campaigns we are disturbing the market quite a lot. Like some of the registrars working a lot with the end users have [difficulty] registering good domains because some of the high volume domain buyers have registered every good thing they could get their eyes on. And we want to focus on domains being used and especially, of course, being used in a good way.

So in the past we have had also different success with incentives. For example, we have had incentives for DNSSEC. That has made us go to 56% of our domains being DNSSEC signed. So I started to have thoughts that we could use other kinds of incentives to change these trends that we are seeing also with abusive domains and after these low priced. Next slide, please.

With this in mind, we of course knew from our campaigns and our evaluation that the price is quite important. But we could also see that the price of new registration is much more important to try to steer these trends in different directions than the price of renewal.

We also saw that the very low priced domains often have a bad quality registration data, have higher abuse, and in general our cost base on new registrations especially the low priced ones was a lot higher.

So the first thought about the new price structure was that we wanted to look at if we should maybe increase the price of new registrations without increasing that as much on renewal which is kind of a different step than most TLDs. But we wanted to do that to steer away from these very, very cheap domains.

But we also have registrars that are very price focused, especially on the new registrations. So on top of taking the price up we also looked at different incentives the registrar could have on that registration that they could then have a lower registration price again. So we basically took the price up to make it possible to give discounts the other way. Can I have the next slide, please?

So we increased the registration price 20 SEK. It's about \$2.00. Making it from 120 to 140 SEK. And then we gave different discounts. The first one is an eID discount. The focus here is to get the registration data quality up because a lot of our cost on new domains and abusive domains is to do validation of the registrant details. By doing this discount we reward the registrars that have eID validated registrations from day one because we know also that this will make sure that we at least on this domain registration will have less work in the first year. Can I get one slide back, please? Thanks.

The other discount we also do on new domains is based on DNSSEC. As I said before, we have this [all] DNSSEC incentive. In this we gave all DNSSEC signed domains a small discount every year, but it didn't have much effect anymore. It used to. So we wanted to see if we could still reward those registrars that really had a high level of DNSSEC on their

domains and then take away the old bonus where we rewarded all registrars.

So with this new DNSSEC discount we are giving a discount to only registrars that have more than 70% DNSSEC on their portfolio in a way to continue to reward them for being working with DNSSEC this high. And then we have taken away the old bonus. Next slide, please.

On top of this, the registrars [inaudible] especially when we took away the campaign they asked how can we work more together on campaigns in the future now that the registry didn't have any at all. So we have started a co-funded marketing campaign where the registrars can apply for funds from the registry to marketing campaigns. It's very much like other registries are also doing. I personally looked a lot at .eu and how they have been working with co-funded marketing for a long time.

So the registrars at .se can get up to 10 SEK per new domain registration they're doing back in marketing funds, but they have to fund 50% of the campaign themselves. By doing this it's also based on the new registration price. So if they register [a lot of] domains, they do have more money to use for their marketing campaigns as well.

So to go through the whole thing we really are trying to change a lot to change these trends that we are seeing earlier in regards to both abuse, in regards to domain registration quality, in regards to positive campaigns. And we still see that we might need some tweaking on this. For example, some registrars have very difficult to participate in either the eID or the DNSSEC discount based on what type of registrar this is.

So we're looking into what other good quality measures we can also incentivize.

One of the ideas that I think we will incorporate in the future when we change this is that we are going to look also at renewal rates. So for registrars that have very, very high renewal rates that they would also be able to have an incentive on their registration price. This is usually good for many of our foreign registrars and brand registrars that today don't get the current incentives. Next slide, please.

So the end results of this is that we expect a negative trend in our total amount of domains, and this is because we don't focus on the total domain numbers anymore. We prefer to focus on the quality of the registrations. I would have no problem with having 10% less domains if we would have better quality on registration data and if we would have better security and stuff like that. So we do expect a positive trend in the quality of our domain registrations going forward.

Yeah, I think that's it.

FERNANDO ESPANA:

Thank you very much, Kristian. We do have some questions online, and I think we're going to go with one question and then we'll move on to the other presenter. But Kristian can probably maybe respond to some of those online as well. So, Claudia, I don't know if you could please help us with the first question or Bart.

BART BOSWINKEL: I will read them out. I like this. “What was the renewal rate on the discounted registrations?” And this question is from John McCormack.

KRISTIAN ØRMEN: Thank you. I don’t remember right here exactly the renewal rate. It was well below, but I don’t have the exact number right here. I’m sorry for that. But especially for those when we had campaigns where we sold domains from like 10 SEK, there were many, many domains that were registered only for the purpose of abuse and resell and stuff like that and were not renewed the year after.

FERNANDO ESPANA: Thank you very much, Kristian. We are now moving on to the next presenter. We have Francisco Patino from .ec. Francisco, you'll be speaking in English, right?

FRANCISCO PATINO: Thanks, Fernando. Hello to all attendees. Yes, I'm going to give my presentation in Spanish. Please, use your headphones to listen to the translation. Thank you.

Today, I will speak about e-commerce ecosystem in Latin America— evolution, trends, present and future of e-commerce in our region and how it impacts on our ccTLD .ec.

Latin America is home of approximately 300 million digital shoppers, and this number is predicted to increase by 20% by 2025. So we will be around 360 million shoppers. Next slide.

Even though e-commerce adoption in our region is not as high as in other emerging regions, the figures of e-commerce in Latin America are quite exciting. For instance, in the pandemic year in 2020 there were approximately \$68 billion worth of e-commerce, and it is expected to grow to \$160 billion by 2025.

Brazil and Mexico are the center of attention in the region with 31% and 28% of the market respectively. But countries like Chile, Peru, Colombia, and Ecuador are still on the forefront due to its rapid growth. In Ecuador in particular, in 2022 e-commerce reached \$4.9 billion and is expected to grow by 16.36% in 2023.

What have been the drivers for this growth in e-commerce in Ecuador? First of all, there has been better Internet access. Ecuador has 76% of its population with Internet access, ranking fifth in Internet penetration in South America. Only exceeded by Chile, Argentina, Uruguay, and Brazil.

At the same time, there are better tariff regulations in Ecuador. Some tariffs on computers, tablets, and smartphones have been reduced so that now these devices are available to more people.

At the same time, the pandemic accelerated the digitization process in Ecuador increasing sales in digital media. When we talk about the retail sector from 2019 to 2020 the increase reached 44% and it went from 932 million to 1,240 million. And it will increase even more through 2025, and I'm just speaking about the retail sector.

What has been the impact of this growth of e-commerce in our ccTLD? There have been two impacts, a quantitative and a qualitative one. Quantitatively, in the first year of the pandemic the increase of new

domains was 22%. In 2019 we have 9,000 and it increased to 11,000 in 2020. In 2021 and 2022 new registrations decreased but the total number of new registrations has been growing. And from 2019 we had 45,000 and we had 47,000 registrations in 2020, 48,000 in 2021, and in 2022 it ended with 49,283 registrations.

The other impact, as I mentioned before, has been a qualitative one. Our users have started using .ec as the idea domain for e-commerce because it has the same acronym. So .ec became an ideal alternative so as to generate virtual shops which started with the concept that .ec equals e-commerce.

What have we done to deal with this impact? We care and we comply with our responsibilities and got involved in the digitization process in the country. So .ec is the only identifier of Ecuador in the web, so to strengthen our digital identity we contributed with .com, .net, etc.

.EC certainly is useful for students' internships at university. So there are .ec domains that are free of charge up to three months. This is to educate from the educational institutions and generate a strong community, a robust community that is aware of the domain extension of Ecuador.

At the same time, we provide free email through www.mail.ec. So you may register your domain with no problem at all using your name. For instance, rosa@mail.ec. So by having an email with .ec we have a better communication between companies and organizations in Ecuador, and this has increased their credibility. At the same time, if you use a .ec mail, you of course highlight an increased visibility of Ecuador.

In order to provide quality know-how we developed a schedule of free webinars of different topics—marketing, finance, technology, legal, among others. And these webinars are an effective tool to educate our users in digital aspects and how they may benefit from having a .ec domain.

Likewise, we created Revistalidentidad.ec. This is a free publication to disseminate the importance of the .ec domain, Internet business, and other aspects of knowledge that may arise from research and technology. This magazine helps educate our community regarding the breakthroughs in the market.

We also cooperate with trade chambers and associations so that they may understand the benefits of using a .ec domain and how this may improve their visibility and online presence. We constantly have campaigns with promotions and discounts so that our domain may be more available to more people and businesses in general.

What about the future then? What may happen in the future? First of all, there may be an increased growth of domain names because e-commerce increases and so we think that the demand for domain names will also increase. Entrepreneurs, businesses will like to have their relevant domains in their websites. And since this demand increases, there may be perhaps more competition for popular domain names. Next slide.

If the competition for popular domain names increases, the value of premium domains is likely to increase. Domains that are short, easy to remember, that include relevant keywords will have a higher market

value. This can open up opportunities for investors and domain brokers. Next one, please.

At the same time, we think that there will be more versatile ccTLDs because as e-commerce evolves there are new domain extensions that are relevant for the industry such as .shop, .online, .store. So within this framework a ccTLD like .ec may become an ideal global alternative for e-commerce because it is shorter and it includes the e-commerce acronym.

And artificial intelligence will be one of the leading actors because it may come with efficiency, customized recommendations, improvements in the domain industry. However, it is important to say that of course there will be major challenges such as the combination of high quality data, the company of generating robust algorithms, and the ability to adapt to an ever-changing environment.

Thank you very much for your attention.

FERNANDO ESPANA:

Thank you very much, Francisco. I think we have an online question.

BART BOSWINKEL:

Yes, you do. This is a question from Eduardo Duarte from .pt. “Who runs the mail .ec service?”

FRANCISCO PATINO: NIC Ecuador is the one that runs mail.ec. The idea is to give mass access to a tool that may improve the cooperation among institutions and organizations in Ecuador, but you may just register your email for free.

FERNANDO ESPANA: We're moving on to our next presenter, Sean Copeland from .vi. Sean, please take the microphone.

SEAN COPELAND: Good afternoon, you guys. Or good morning still, I suppose, by a minute. I'm taking a little bit of a literary exception on the term "trend" in my presentation, so please bear with me. I've been involved with NIC.vi for 25 years, 1998. This picture of Magens Bay....

BART BOSWINKEL: Sean, could you speak in the microphone please for the translators?

SEAN COPELAND: Sure. I brought it closer. Yeah, okay. So what you're looking at it Magens Bay, and this is actually where we do our board meetings in NIC.vi. After we finish, they actually come out with drinks, cocktails for us. So it's very ICANN-like. Nevertheless, from about 2004 through about 2022 we were having ongoing conversations with members of what would be the de facto board and our TLD manager on how we would maintain the stability of the registry.

As many of you know, in February 2022 Dotty passed away. She was the TLD manager. That was quite a hit for us. This caused myself and

another principle coworker to have to do a lot of work quickly and determine a lot of different job types and work through these stresses. And if I was to tell you that I was double fisting Gaviscon on a regular basis during this time, it's a fair statement to make. We will call that the proverbial being hit by a big red bus.

Somehow or other we managed to get through all of this and we ended up by about the time we were at Kuala Lumpur everything seemed pretty calm. Go to next slide.

What could possibly go wrong? What could happen? What's the one thing that you could think that could be worse than having somebody hit by a big red bus? Anybody want to take a chance? How about somebody else gets hit by a big red bus? The person I had been working with to solidify everything with the registry on a day-by-day basis. This happened a few weeks after we returned from Kuala Lumpur.

This meant that not only was I dealing with the technical side of the registry, interview was now dealing with everything else with the registry. These were things that were not my core competency, obviously, in terms of the registry but here we were. Double fisting Gaviscon is not the description that was quaint now. I probably have Gaviscon...you name it. It was a lot of stress. Anyway, next slide.

After Donna passed away very unexpectedly at the end of October, we had to figure out how to keep everything running, keeping it smooth, making sure that we were dealing with our customers effectively as we could. And boy did I learn a whole of things about the registry and where things can go wrong. And this is kind of why I've taken the approach on

this. We were fortunate that we had a structure in place that actually accommodated these types of issues.

We have a de facto board, if you will, that's made up of lawyers and people within this community and an accountant that was dealing with our year-end issues. Because we had that, we were able to deal with how to keep running, but we were not able to deal with some very simple things.

It turns out that if you are a person that deals with the day-to-day accounting, uses two-factor authentication with the telephones and if they haven't given the passwords or they haven't given the recovery codes, it's very difficult to do it with these things. And on the technical side, I'm not thinking about this. I'm thinking about keeping the DNS up and running, not how to get into the bank account, pay a bill, or what have you.

Notwithstanding having a lawyer on staff that could write really good letters and get things opened up in a short amount of time, we ended up having to deal with these issues. I had to deal with these issues, actually, which was a lot.

So what I ended up looking at is where we had been between the time that Dotty had passed away and time that Donna had passed away. And we had been working on what you're seeing below, but we were on a nice gradual timeline, about two years to get this all done. Because we generally had an idea of what we needed to do and, as I said, what could possibly go wrong?

So we knew on the successor operator in terms of the technical aspect we had a process in place to deal with basically replacing me. On the business side, we hadn't really thought about that. We had not thought about how do you deal with replacing customer service person, accounting person, so on and so forth.

We were lucky though because we had put in place an agreement with an accounting firm and we had very good legal. So we were able to very quickly deal with those aspects and change how we were operating the TLD.

Then you come to documentation of policies and procedures. If you were at yesterday's session with Dr. E, he mentioned about having a little booklet where you document everything that you do in terms of the technical. And I think on the technical side we all do that. It turns out that on the business side, that wasn't the case. So now we had to deal with that. That took a little bit of time, and I'm going to recommend to especially the smaller TLDs where you have limited resources if you haven't done it, you want to be looking at it.

As I said, our corporate structure that we had in place at .vi kind of allowed for us to go with the flow of what was going on I think is the best way to put it. So we were kind of lucky. We had made some right decisions. Peter DeBlanc back in 1999, 1998 had made some really good calls there that would prove useful and good.

It's succession planning policies, it turns out that you need to really work on not just the technical, the business side. You need to have those people in place. We had started the process before Donna passed

of having a more defined accounting person in place, a more defined process. That was new for us, new for me to learn.

Knowledge transfer and training, it turns out in a small TLD it's actually really good to have people doing different things and then doing other people's jobs so that they can actually step in. It's a strange and unusual way to lengthen your bench, but it does work and it works fairly well.

Collaboration with peers is actually this community. A lot of you without knowing it when I've had conversations with you, some of you definitely do know, I was asking you guys questions and actually getting assistance from you on some of the issues and crises that I was going through. I can't emphasize that enough, especially for a small ccTLD. This community, brilliant and incredible help.

And of course, what I think about is Pablo's presentation before the pandemic. And that type of information and getting that type of information, it's critical. It really is. And not just, again, in terms of the DNS, business operations.

Which of course goes to the auditing and reviewing of plans, something that you guys all have to do. We have to do it. It's become more focused for me. I mean, I live in a part of the world that I could have a very bad day and I've got to make sure that the registry is still going, period. So we've got that actually in place.

Engagement with stakeholders, you have to communicate with people beyond, again, the DNS within the business community, within the government that you're with, within your organization. Again, in the heat of the moment and in the stress of it all you're not thinking about

it. But you've got to do it, and you have to get to the point where you're doing it on automatic.

Which I believe leads to the last thing, transparency. Transparency takes on a lot of different meanings for this. And I will talk about this in terms of a small registry perspective. Donna knew that she was ill in August but because of all of the stress that was going on with Dotty's passing she elected for all the right reasons to make the wrong decision. And that was not saying anything to any of us that she was not well. And I'm always left with what her son said to me were her last words. It wasn't talking about her family. It was being concerned about the business. And that for me was pretty sad, but it was a lesson because I'm wanting to maintain that the registry stay stable.

So I bring this all up to you because 2022 for the .vi registry plays like a very bad B-movie that would never be made except that we made it and I've lived it. So why I wanted to go with, as I said, is a "trend" toward stability and why that is important is stability is the result of a well executed plan. And if you have a well executed plan, you will in fact get positive trends. Learn from what I've gone through. If you're a small registry, deal with the people here. They're going to help you. And there you go. That's all I've got to say.

FERNANDO ESPANA:

Thank you, Sean. Thank you for the different approach on trends. And thank you also for getting us back on track in terms of time. So I think we have some time for questions from the audience. If you didn't have a chance before, now is your chance. I see the hand of Pablo. Pablo?

[PABLO]: Thank you. I can relate to Sean and what he has experienced because prior to Dotty's passing we had the passing of our founder. And like you, we also went through a very rough patch as a result of not being prepared or having succession policies. So I ask everyone to listen to Sean's words and to reflect on our experience because it's not an easy thing to deal with. Because of the emotional workload that brings on you but in addition to the professional side of it on the uncertainty that it causes to our customers. And we want to make sure that our customers feel completely at ease when situations such as these ones take place. Thank you. Thanks, Sean.

FERNANDO ESPANA: We still have time for some questions. I don't see anything online. We have a question. If you could please state your name and affiliation as well, please.

ROSALIA MORALES: Hi. I'm Rosalia Morales from .cr Costa Rica. Sean, this question is for you. Thank you for your candid presentation. I just want to follow up on one of the points you mentioned about auditing processes. What processes are you auditing? Could you tell us a little bit more about that? Thank you.

SEAN COPELAND: So it goes without saying the technical processes have been audited for a fair amount of time and we have worst case scenarios that we deal

with. Now we also do it on the accounting side, very significantly on the accounting side. I have learned that even though you can look at a profit and loss and balance sheet and understand what you're looking at, without any disrespect to anyone when people are not well accounting practices slip. And if you don't have in place I'll say a team that can deal with accounting or an auditing that's going on secondary to your internal operations, things can get very, very messy very, very quickly.

That's one of the things that we've been cleaning up since October, and I can tell you that it is complex and it is difficult even for a small registry. I would hate to see it for a larger registry than what we have. Does that answer your question? Yeah.

FERNANDO ESPANA:

Great. Thank you. I think we're getting close to the end of this session. I'd like to thank the panelists. Let me do a quick wrap-up on the session. We saw in the beginning Matthew presented us an overview of the ccTLD space and how it is consistent with some of the presentations from the other panelists in terms of trends in registrations.

Serge in terms of Africa. The Africa region had consistent growth up until 2022, but now it seems that the volume has stabilized.

Ai-Chin from .tw presented on how the .com.tw still has been stable from 2019 through 2023. And this was not seen only in terms of new creates but also renewals and deletions of their domain names.

Kristian from .se explained how pricing affects the registrations. Their numbers have seemed to come down, but I believe that they're doing quality registrations as part of the validation that they do.

And Francisco from Ecuador is glad to see that the TLD's still growing. And they had growth during the pandemic and they continue to see growth in 2023.

And lastly, Sean, thank you for explaining us about the different type of trends. And this also helped us understand how this community, the ccTLD community, is a good source of peers to communicate, exchange knowledge, and get support when we have challenges.

With all that, I appreciate again the panelists. We're about to go to lunch, and you can always find them on coffee breaks if you have any additional questions. Thank you very much. Enjoy lunch.

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