ICANN86 Seville | PF – ccNSO: ccTLD News Session (1 of 2)
Tuesday, June 09, 2026 – 11:45 to 13:15 CEST

CLAUDIA RUIZ

Hello and welcome to the ccNSO session on ccTLD News. My name is Claudia Ruiz and I, along with my colleague, Joke Braeken, are the participation managers for this session. Please note that this session is being recorded and is governed by the ICANN Community Participant Code of Conduct, the ICANN Expected Standards of Behavior, and the ICANN Community Anti-Harassment Policy.

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When called upon, virtual participants will be given permission to unmute in Zoom, on-site participants will use a physical microphone to speak. Please state your name for the record and the language you will be speaking if speaking a language other than English. And please speak at a reasonable pace to allow for accurate interpretation. Thank you. And with that, I will now hand the floor over to Joel Karubiu, moderator for this session. Thank you.

JOEL KARUBIU

Thank you, Claudia. So welcome and good morning, good afternoon or good evening to our members joining. I hope you're having a great time in Sevilla. Weather is excellent. And I think now we are at the best sessions of ccNSO, which is seeing what our ccTLDs have been doing, giving us examples of what they've been able to do and best-case studies.

So, for us, this session is about learning, it's about being able to see experiences, sharing, and I encourage members to ask as many questions as possible. We will try and maintain the time so that we can entertain as many questions as possible. This is session one of two on Tuesday, 9th of June, and welcome everyone.

So, the session will have four, sorry, will have four speakers. Just moving this. This technology is always a thing. So, we'll have something from .es. We'll have a presentation from .rw, .bd, .cn, and .ua. Two of our members will be joining us online. So, we're also excited that they are out there and willing to share with us.

So, without further ado, I'd like to welcome Alejandro from .es to tell us about suspicious domain detection systems in .es. Welcome. And I'll hand over the clicker to you. You should be good, yes.

ALEJANDRO CANAS NIETO

Thank you so much, Joel. Thank you everybody for coming here. For all of you who were in CENTR Jamboree last May, this is going to sound a bit repetitive because we already talked about amalA in

May in Berlin. But for the rest of you, we are going to talk about a system that we have developed inside .es. And yeah, let's talk about it. This will be the index. And let's start directly with the motivations.

What are the main motivations after creating this system? Initially, it was born from two main drivers. First, the growing international focus on cybersecurity, including regulations like NIS2, which demand a stronger incident management and data verification. And secondly, as an internal goal that we had in the registry of building a more secure and more reliable database and registry in general.

Let's move now into what is amalA. Basically, it's a lightweight AI-based system designed to detect potentially suspicious domains. Don't think about it as an intricate system of AI like neural networks or generative artificial intelligence. Not at all. It is just a simple machine learning that we will talk about how it works a bit further and later. The important thing is that it only generates alerts.

It doesn't take any automatic decision about what to do with those domains. That is always human-made decision. The key features are the ones that you can see there. We have a fast and automatic detection of domains. It helps to decision making. It detects risks at registration stage, self-learning and adjustable, and contributes to a higher quality registry.

Let's move now into how it works. Basically, we have a data set that is formed from more than 8,000 terms or words. Each one of

those terms are distributed between a series of categories. The main ones, you can see them there listed. And each category has their own threshold from zero to one. We will talk later about what is that important but right now let's focus into the criteria.

As you can see, we have criterias like government related terms, banks, telcos, major companies, public figures, sensitive areas like child abuse, gambling, geographical indications, a little bit of everything. These data sets are in right through collaboration with organizations like internet watch foundations, for example, with the child abuse, Spanish authorities and regulators, for example, with the geographical indications or the gambling, and also with law enforcement and search teams.

This category, as I said, has a threshold from zero to one. Remember this. Let's move now into the technology. What is inside amalA? You can see here a big picture about what it's all about. But the most important thing is that it is made in Python. We are using standard libraries, for example, Pandas, NumPy, and Scikit-learn. And the most important is the algorithms used.

We are using Levenstein distance, lead pattern detection, and Jaccard similarity. That is going to make you a hint about what is going on. It is all about similarity. We are going to compare domains with that list of 8,000 terms. Let me put you an example just to make it clear. Imagine that we have a term in amalA that is called mouse.

Let's say that mouse is a word that we want them to be alert. And somebody register house.es. Because house and mouse are very similar. Imagine that we have that word in a threshold of 80% or 0.8, then amalA will alert us and we will take a decision about what to do with it. This is the complete process. As you can see on the right side of some of the steps, that little robot is an automatic decision.

There is a mistake that I'm checking right now. That last one that said manual technical analysis is completely manual. It is all human-based, okay? But all the previous steps are automatic and made by the tool. Usually, what amalA does is to connect to the database of the registry. We can send whatever number of domains that we want, but usually what we do is the last day registrations that usually in .es are around 1,300 and 1,500.

And amalA take it, extract the data, it analyzes it, and then it creates an Excel, a document, and it will send it to us by email. And then the employees of Red.es, we analyze it and we take the decisions. We can make either these two scenarios. The one on your left is in case that we detect that the alarm is not necessary to take any other action. We don't do anything. We reject the alert and nothing happens.

The other side is if we detect some kind of abuse or maybe some suspect that there is abuse involved, then we took in place a verification process that we had since 2008. There is nothing new about it. In which we contact the registrant and we ask them to

verify their data. We give them 10 days to make any complaint or to give us the data.

And in case that the data is verified to our satisfaction, then we go back to the left side of the process. Nothing happens and the domain continues. In case that the 10 days pass or we have an unsatisfactory response, then we suspend the domain. Then later, after two months, it will be released again because of our own regulation, it doesn't allow us to have a domain completely suspended forever.

Let's go to the next slide. It will be about some figures. You can see here that amalA usually for those 1,400 domains, it takes like 10 minutes to complete. So, it is really fast. We already have analyzed 950,000 domains. And we have detected so far with this tool 1,600 malicious domains.

Let's talk also about one case in particular that we experienced last summer in 2025. We detected, thanks also to our organizations that we collaborate with, it was a total of 5,500 domains that were tied to some phishing campaigns. We detected and we actually upgraded things to amalA and we managed to eliminate these threats. What else?

Let's move into the next steps. This is the future that we are going to contemplate for our system. Basically, the conclusion will be to reduce false positives. That's something that we are finding currently, usually, after all those 5,400 domains that we analyze

each day, we have 200 alerts and probably almost 90% are false positives.

We want to have them because for those false positives, you may find something that is relevant. So far, we are talking into it, but we want to reduce it. Also, we would like to expand detection to register data, not only focusing on the domain, but also into the emails, IDs, name of the registrants.

Also, we will want to continue improving algorithms, and in the long term, we would like to move this not only to post-registration, that is what we are doing, but into the pre-registration. For that, we will need a change in regulation, but yeah, that's our focus.

Let's move now. And this is actually my last slide. We are reaching to the end of the presentation. Please, if you have any question, go ahead, and you can do it right now or even in the hallways or whatever. We are always at your service. Thank you for your attendance.

JOEL KARUBIU Thank you very much. Any questions from the floor? Yes.

STEPHEN DEERHAKE Stephen Deerhake, .as, American Samoa for the record. I like that you're moving to a pre-registration model. Your current model is post-registration analysis. And if you decide you've got a domain

that you need to kick out that's been recently registered, do you refund the registration fee?

ALEJANDRO CANAS NIETO No, we don't. We actually, because the verification process that we have, and as I said, since 2008, we are giving the opportunity or the chance to the registrant to actually correct us. We may have a failure, and we give them 10 days just to say, okay, no, you're wrong. I'm alive, I'm a registrant, and I'm not doing anything malicious, and this is my data. And if they don't do it, we send the AC to them.

JOEL KARUBIU Thank you. Any other question? Any questions in the chat room? For me, I have a question as we just checked. So, everyone is using AI technology, says fast technology than legal. So, what are the legal implications? Are you allowed to use AI legally to do this?

ALEJANDRO CANAS NIETO We actually are, but at this extent, remember, this is just a machine learning. We are not giving any data to an external provider. We are not using open AI or Anthropic. It is all in-house and it is a simple process that just compares one word, one domain into a term that we have created. So, there is no legal or further legal implications. Also, because we are using this verification process that we had in a regulation since 2008, it is all covered.

JOEL KARUBIU Thank you very much. Another clap for Alejandro. We'll move to the second presentation from .rw, Grace. Thank you very much.

INGABIRE GRACE MWIKARAGO Thank you so much, Joel. My name is Grace Ingabire. I represent the .rw ccTLD, which is Rwanda. So, I'm here to talk about the journey on how we managed to integrate the RW domains with the government service. So, most of the ccTLDs usually we provide our services through our website where we list our accredited registrars.

But for us, we thought going extra mile and think about those who don't know the registry, which we believe the community, the population, we thought of going extra mile and partner with our government. So, as a ccTLD, just a glimpse about who we are. We are a not-for-profit organization. We were founded back in 2012 after the repatriation of the .rw domain back to Rwanda. It was previously managed by Frederic Grégoire from Belgium.

So, as of today, we have 53 registrars. 36 come from Africa, while the rest come from international. As of now, we have close to 10,000 domain names, and we use a 3R registry model, registry, registrar, registrant. And we have DNSSEC enabled as of now. The root zone has been signed in partnership with ECH, and we are planning to continue the signing of the rest of the zone. Just to talk about IREMBO. IREMBO is a government institution.

IREMBO in our local language, which is Kenya-Rwanda, means a gateway. So, IREMBO is a gateway to the digital public services for Rwanda. What happened previously, Rwandans used to queue in offices just to go and get some certification. For instance, if you are looking for a birth certificate, if you are looking for a visa, a passport or any other document that is provided by the government, you have to go to the offices, take time, fill forms, queue for long until you get the service.

And this happens in most of the countries where the service is still being done like that. So, our government thought of going extra mile as well to digitize the public services into one portal. So, that portal is called IREMBO, and today it has more than 100 public services that are available. And those services include birth certificate, national ID, driving license, passport, visa, and many others just to enable citizens to get those services in one platform.

And the platform has helped so many Rwandans in terms of job creation, just to help those who are trying to access the platform to assist them. And the platform is available 24/7 and has been recognized by UN as among digital government platform innovation.

So, basically, as I said, we thought, what do we do as a ccTLD, even though people know us in country, but we thought as well about Rwandans who live abroad and who need some of the services in Rwanda. So, how does it happen? A user or anyone willing to get a

domain, they can access the platform, which is irembo.gov. And then, we did not kill the channel of registrars.

So, you can still go on our website and get .rw domain for our accredited registrars. But since the platform offers more than 100 public citizen services, so it was more easier for citizens to go there while they're still trying to get other services. So, how does it work? I will ask the technical team behind just to play a small video of two minutes.

Thank you so much. The process is straightforward. So, you can get the service in less than five minutes. So, what we did in partnership with the government, IREMBO as the government company is not an accredited registrar of RICTA, but you can find them among the list of accredited. Just whoever lands on our web portal, they can choose them to get their services.

So, in terms of revenue distribution, IREMBO takes 31% of the revenues, while the registrar, actually what we did, we did the integration through one of our local registrar, and they are the ones taking 13% since the registrar offers additional services. And the rest of the balance is given to us. So, the rest, I think you saw it through the videos, the payment is done through mobile money, but people have gotten as well the opportunity to pay via bank services.

So, as of today, we have managed to register around 308 domains. The number is still very low, but we are planning to do more awareness in country just to sensitize Rwandans to adopt RW as the

domain of their choice. So, I think I'll stop here if there's any questions from the room.

JOEL KARUBIU

Thank you very much, Grace. Very interesting. Any questions? I have two questions, but first I'll allow the floor. Any questions from the floor? Yes, one at the back and one here. So, let's start at the back.

BIYI OLADIPO

Good day, everyone. And thanks so much, Grace, for that insightful presentation. My name is Biyi Oladipo from the .ng ccTLD Registry. I see that this is an initiative from a registrar, seeing the way you did the revenue share with the three entities.

My question is, if this is from one registrar, how do you ensure equity with the other registrars and ensuring that there's a level playing ground with everyone so you don't look like you are using this since there are other government services here, which means there's going to be a lot of traffic to this website. How do you ensure that there's fairness within your registrars?

INGABIRE GRACE MWIKARAGO

Thank you so much for a good question. So, what we did, we partnered with one registrar. By the way, it's an initiative from the registry, not the registrar, but the registry partnered with one local registrar. So, how do we go through about it? So, we signed an MOU of five years, which is renewable once, and then we do a call

for proposal to choose another one who can continue with the service.

So, at the start, we started with a call for proposal. It was open to all registrars, local registrars I mean, not international, so that they can try to do the integration. So, after the MOU ends, we'll do definitely another call for proposal. But again, please note that IREMBO only provides just domain names, additional services are still provided through other local registrars.

JOEL KARUBIU: Thank you, Grace. Souleymane.

SOULEYMANE OUMTANAGA: Hello, I am Souleymane from Côte d'Ivoire, and I will speak in French. I used to be with .ci, and I am a researcher at this point. Thank you very much, Grace, for this excellent presentation and for this initiative of the .rw. I just have one quick question for you. Do you think that the model that you developed and implemented can be used in other countries?

And if so, what would be the conditions for success? If it is an example that we should follow, it would be great that we do and it would be good for the other countries to be inspired and to get help from you. So, what can you say about that? Thank you.

INGABIRE GRACE MWIKARAGO Thank you very much. I will actually answer in French since the question was asked in French. Of course, it is an excellent opportunity. We did think about it. We had certain countries come and study in Rwanda to learn from us. They came to see what we did, but also to look at IREMBO so that they can propose the same platform in their country.

So, it is a real opportunity for us. We are open. If some ccTLD would like or have an interest, we can certainly discuss this in private. That's why I presented today. So, I'm available for any questions. I'm available to share more.

JOEL KARUBIU Thank you, Grace. From the chat, there's a question in the chat room. Maybe I'll just read it. Thank you so much, Grace, for the presentation. Ubongo from Nigeria. My question is, how accessible and scalable is the platform? He's not clear whether it's the IREMBO or the registry, but maybe you can look at it from the IREMBO because I think it's more government.

INGABIRE GRACE MWIKARAGO Okay, so that's a good one. So, IREMBO, as of now, as I said, it has more than 100 public services and it is still growing. So basically, since we are coming from the private sector, they started with the integration with government services and then they open up for privates. So, that's when we joined and they are still onboarding the organization, including the business registration.

JOEL KARUBIU Thank you, Grace. I had two questions. One was asked by Biyi. I think he was looking at my notes. The second one was more around trust. So, I know in Africa, we really don't trust our governments. So, what did you do to give the citizens trust that they could go to this platform and actually register there? Thank you.

INGABIRE GRACE MWIKARAGO Thank you, Joel. I know this is a concern from most African countries, but in Rwanda, we don't have this. So, we trust our government fully. And it comes from history, the journey we went through and where we are today. So, we have seen a lot that has been done by government, so, the trust is more than 100%. So, maybe a message to the rest of the countries is to come and learn from us. So, our government, we trust them fully.

JOEL KARUBIU And with that, we close that. Please give Grace a hand. Thank you, Grace. The next presentation is from Joyeeta, who's online. Is she?

JOYEETA SEN RIMPEE Yes, I'm online.

JOEL KARUBIU Okay, thank you. Welcome, Joyeeta. Over to you. Go ahead.

JOYEETA SEN RIMPEE

Good afternoon, everyone. My name is Joyeeta Sen Rimpee, and I'm here representing BTCL, Bangladesh Telecommunication Company Limited. We are the registry operator of Bangladesh's country code domains, .bd and .bangla. Today, I want to share with you what we have been going to grow our corner of the internet. We are not the biggest registry in this room, but we are working hard and the results are starting to show. Next slide, please.

In the next 10 minutes, I will cover six things. New domain extensions we launched, the opening of .bd at the second level, DNSSEC, our security upgrade, premium domains, our new reseller program, and how all of this reflected in our revenue. Let's get that started. Next slide, please. For many years, .bd had the same seven extensions, com.bd, edu.bd, gov.bd, and a few others.

This served us well, but they didn't reflect the modern Bangladeshi internet. So, we opened five new extensions, ai.bd for the new age technology sector, id.bd for digital identity, sch.bd for schools, tv.bd for media, and co.bd for commercial use. These are not just names. They give Bangladeshi businesses the right address for what they actually do. Next slide, please.

Now, this is the one I am most excited to talk about. We opened .bd at the second level. What does that mean actually? It means that for the first time, a Bangladeshi business can register simply

company.bd. Not company.com.bd, it's just company.bd. Short, clean, and Bangladeshi.

Before we opened it to everyone, we ran a three-month sunrise period, giving existing trademark and copyright holders the first chance to protect their names. After that, general registration opened for all. The response has been strong. Thousands of .bd domains have already been registered and demand is still growing. Next slide, please.

We also made two important commitments, one on security and one on policy. On security, BTCL has fully deployed DNSSEC.BD. This protects our users from DNS attacks and ensures that when someone types a .bd address they land where they actually intended to. This is technology step, but the impact is trust, and trust is everything in the domain industry.

On policy, our national telecom regulator, BTRC, published a domain administrative guideline. For the very first time, we have a clear published framework for how .bd domains are administered, eligibility, disputes, and registration rules. This gives registrants confidence, it gives our system legitimacy, and it moves us closer to the international best practice that we are trying to follow. Next slide, please.

Two more things we are proud of. We introduced a premium domain category. Short two-letter .bd names and high-demand keyword domains priced at a premium that reflects their real value. And we launched a reseller program. Today, eight resellers are

actively selling .bd domains across Bangladesh. It may not sound like a lot, but these eight partners are already bringing thousands of new registrations that would not have happened.

We are building a distribution network. We are trying to meet the customer's demand. Next slide, please. Now, let me show you what all of this looks like in practice. In last six months from December 2025 through May 2026, our revenue grew by 42.5 percent compared to the six months before. January 26 was our single new month ever. 10.3 million Bangladeshi taka in one month.

Please notice it's Bangladeshi Taka. It is the direct result of second level .bd of the reseller network for premium category and of course of the marketing we have done very strongly. We are a small registry, but these numbers tell us that we are on the right track. Next slide, please.

For years, people in Bangladesh you preferred .com over .com.bd, and now mostly out of habit, .bd seemed incomplete somehow, like it was not really a real destination. It's changing now and it's really faster. When we opened .bd second level, something shifted. A .bd [00:36:50 – inaudible], other companies, schools, universities, and actually everything.

Add to that, our reseller network making it easy to buy and our marketing campaigns building awareness. And you get what you see on this chart. Demand is rising because we made it clear,

better, and more meaningful to own a .bd domain. Next slide, please.

Now, a word about .Bhangla, our IDN ccTLD. Bengali is spoken by around 230 million people worldwide. It is the seventh most spoken language on earth. Yet, the internet remains largely English. .bangla is our response to that. With .bangla, a user can navigate the web entirely in their own script. No transliteration, no compromise.

We have improved the infrastructure behind it, system updates are mostly done, and we are actively promoting it for our local content creators and businesses. The internet should feel like home in every language, that is what we are trying to make field by the customers. That's what .bangla is all about. Next slide, please.

So, where are we going? We are preparing a major system upgrade to modernize our registry platform because currently we are not providing registry-registrar model. We are now added with some resellers. We are working on this system upgrade, more automation, better integration, and faster service.

We plan to grow the reseller network, more partners, and wider reach. We will continue to push .bangla adaptation, particularly for Bangla language content, and we intend to build on this revenue momentum with more targeted outreach and more premium offerings. We know we have a lot of ground to cover, but we also know that direction is right. Next slide, please.

So, let me close with this. We are not the biggest registry here. We don't have the largest team or a highest budget. But Bangladesh has 170 million people, a fast-growing digital economy, and a language spoken by hundreds of millions more around the world. So, we believe that every person in Bangladesh and every Bangladeshi abroad deserves a domain that is truly theirs. That is what we are building step by step. Thank you.

JOEL KARUBIU Thank you very much, Joyeeta, for that presentation on Bangladesh. Any questions from the floor? Yes, there's one more.

UNKNOWN SPEAKER Hi, Joyeeta. That was a wonderful presentation. Just curious, what's the difference between EDU, SE and SCH?

JOYEETA SEN RIMPEE Okay. Our regulatory has defined the SCH for schools that we can say it from for the primary education up to class five. And then, .EDU is for specially high schools and colleges. We provide SE domains to our universities, the private, and public universities. That is how it really has defined our SLDs.

JOEL KARUBIU Thank you. Another question? Okay, Joyeeta, I have a question for you. Oh, yes, go ahead.

UNKNOWN SPEAKER Just a follow-up observation, being the sixth most spoken language, we still can't have the language in this room and being translated. So, I can speak to her in the same language, but that won't be translated. Just an observation. Thanks.

JOEL KARUBIU Your observation has been duly noted by the NPC. It's the sixth largest language, yes, we agree. Thank you very much. Joyeeta, just for clarification, you said you have 170 million population. So, how many domains do you have currently registered?

JOYEETA SEN RIMPEE Currently, we have 52 active, but we have 64,000. But I think that people are registering domains more often, but they are not actually intending to renew it. Because in our country, the other platforms, YouTube and Instagram, people actually don't want to have their own websites for their business. So, we are trying to enhance our domain registration by more marketing. Thank you.

JOEL KARUBIU So, what I saw there in your presentation about marketing push. So, what channels are you using for marketing to get more attraction and that 42.5% that you're able to achieve?

JOYEETA SEN RIMPEE

Okay, the most important marketing strategy, actually, we got from Facebook marketing. We have some influencers who marketed the .bd on our behalf. They made videos and we hired some celebrities who can promote .bd from our end. And we also provided some news on the [00:43:02 – inaudible].

And the most important thing was we got some negative marketing that helped us a lot because .bd was launched but in a higher price at the first time when we launched it. So, it got some negative wrapped in a higher price, and that is how we could achieve the revenue.

JOEL KARUBIU

Thank you very much. Please, let's give a round to Joyeeta. Thank you for your presentation.

JOYEETA SEN RIMPEE

Thank you.

JOEL KARUBIU

Next, we'll have Antonia from .cn. Welcome.

ANTONIA CHU

Thank you, everyone. Hello, everyone, my name is Antonia Chu and I'm honored to present the China Internet Network Information Center, CINIC, today. I think that everyone's aware that the rapid advancement of artificial intelligence is reshaping our world and is bringing both opportunities and also challenges. So today, I'd like

to talk about our capacity building works and through these cases and how we try to tackle these merging challenges by a global corporation. Next slide, please.

Okay, good. So, before we dive into the theme of my presentation, please allow me to introduce the organization briefly. So, CNNIC serves as the national registry operator for .cn. And for the past nearly three decades, we not only just registered for .cn domains, we are also the cornerstone of China's internet infrastructure, and crucially a bridge for global internet cooperation.

Our work spans across several key areas, managing fundamental internet resources, operating R&D and security center to advance IP deployment, providing vital research and consulting services. Also, we actively engage with global bodies like ICANN, APNIC, IGF, and ITU. And we have delivered nearly 100 training programs domestically and globally. This commitment to cooperation is the foundation of what I will share today.

So, as AI reshapes every single layer of the internet ecosystem, we are observing a concerning trend, which is the gap between technological advanced nations and developing nations is widening. It could not be clearer that capacity building is no longer optional. It is a strategic imperative for equitable global internet development.

So, why is it so urgent? Firstly, the AI divide is accelerating. Without targeted capacity building, developing countries risk being left behind in deploying and governing this transformative technology.

And secondly, technical standards shape our future. Participation in bodies like the IETF or ITOT determines who is going to be the next president who influences internet architecture.

Yet many developing nations lack the expertise to engage meaningfully. Thirdly, effective governance demands technically literate stakeholders who can advocate for their interests. And finally, security threats respect no borders. A cybersecurity vulnerability in one nation can cascade globally.

To address these challenges, CNNIC has developed a suite of capacity building programs for this year, which is 2026. These are not created in a vacuum. They are built on comprehensive needs assessment conducted across partner countries in Asia Pacific, Africa, and beyond. Our programs are guided by four design principles.

They are demand-driven, practical and hands-on, collaborative, and scalable. Based on these principles, we have structured our 2026 initiatives around two strategic pillars. The first one is artificial intelligence, which focuses on understanding and deploying AI in internet infrastructure and governance. And the second one is technical standards development, which aims at building the capacity to participate in and shape international standards.

So, let's look closer at the first pillar, which is the AI track. This track is designed to address the full spectrum of AI literacy, moving from fundamental concepts all the way to complex governance

frameworks. We want to equip participants not just to deploy AI tools, but to actively engage in policy-making discussions. Our curriculum includes modules tailored for different audiences.

For technical staff, we cover AI fundamentals like machine learning and the LLMs in cybersecurity. For network operators, we dive into AI in internet infrastructure, focusing on threat detection and network optimizing. For policymakers, we offer a module on AI governance and policy, covering ethics and regulatory frameworks. And for all the participants, we host hands-on workshops using AI tools for network management.

Our second pillar is the technical standards track. Currently, participation in international technical standards bodies is heavily dependent on a handful of technologically advanced nations. In fact, according to our stats, only 50% of IETF participants come from developing countries. So, our track is designed to break down these barriers.

We guide participants through the entire ecosystem from understanding how bodies like the IETF, ITUT, and W3C work to the practical skills for drafting and submitting proposals. We also focus specifically on AI and emerging technology standards. We also conduct simulation workshops where participants can practice mock negotiations.

The scale of our ambition for 2026 is reflected in our program highlights. We have rolled out over 50 training courses across these two tracks, with more than 40 professionals from over 10 countries.

These programs featured in-person delivery in Shanghai and Beijing, combining expert lectures with group discussions and site visits. We are proud to be supported by esteemed partners including ICANN, NIDA, WAA, and Huawei.

This year, we're also celebrating the 20th anniversary of the Asia-Pacific Internet Resources Capacity Corporation Program, a major milestone in our ongoing commitment to regional collaboration. Beyond just reaching more people, we are innovating how we deliver this program to ensure deeper impact. This year, we are introducing an AI-assisted curriculum utilizing adaptive learning tools to tailor contents to each participant's unique background and pace.

We are also launching a robust mentorship program, pairing participants with scenic engineers and international experts for six months follow-up period to ensure that skills learned are practically applied.

Our new policy stimulation lab will offer immersive exercises simulating UN, ICANN, and ITU negotiations. And finally, we are strengthening our alumni network, connecting over 100 graduates from previous programs to foster ongoing peer learning and collaboration. So, as we look ahead, it is clear that AI era represents profound challenges for global governance, but it also presents unprecedented opportunities.

Our capacity building programs are designed not just to transfer knowledge, but to build lasting partnership and empower

community to shape their own digital futures. So, our key takeaways are pretty clear. Capacity building is a strategic priority and cooperation multiplies our impact standards. Participation is power, and crucially, AI should properly govern, not just adopt it.

Looking at our next steps, we will be conducting participant surveys in the next queue to gather feedback which will directly inform the design of our programs for the next year. And by 2027, we will kick off our next wave of initiatives. So, to conclude, I want to leave you with an invitation, whether you want to express interest in our upcoming programs, explore partnership opportunities, or join the CNNIC partner networks, we want to hear from you, and you can reach out to us by the contact information I shared on this screen. So, this is the end of my presentation, and thank you very much for your time and attention. Thank you.

JOEL KARUBIU: Thank you very much. I'll invite some questions. Yes.

INGABIRE GRACE MWIKARAGO: So, thank you so much for a good presentation and what you are doing for the community. So, one question I had is, I heard about the plan for 2027. Do you plan to have a remote session training for IT professionals? And the second question is more, is the training fee free?

ANTONIA CHU

Thank you for the question. Actually, as I mentioned, this capacity building program actually started from year 2012. It's more than 10 years ago, but we have arranged a series of consecutive programs for a few years, but during the pandemic, this program has suspended for a few years. And from last year, we have brought the program back to life.

And we are certainly planning on make this. a continuous program for the next year and beyond. And currently we are also thinking about, because for this year, both these two programs last for 15 days. We got some feedbacks from participants that maybe the time of the program is a little bit long.

So, we are considering whether we can maybe shorten the program to around one week to 10 days. And in this way, maybe we can arrange more programs for the next year. And also, we are considering about whether we can also introduce a hybrid method for participation, both on site and from remote. Yeah.

So, this is the first question. And the second, yes, the program is free of charge. The participants only have to pay for their travel expense to come to China. And after you are here all the expense including the hotel and the transportation will be covered by the sponsor and also by the organizer. Thank you.

JOEL KARUBIU

Thank you very much. An invite to visit China for those who have not visited China yet. You just need to get on a flight, everything

else is covered. I have a question for you. AI, the talk on AI, I think is very interesting and everyone is talking about AI. How have you looked at the risks around AI in terms of data protection? What are you guys looking at in that space?

ANTONIA CHU

Actually, the reason why we have the AI track for this year is just, we're just considering that this is such a hot topic, and maybe, yes, there were more participants interested in this. But before we launched the program, we have no idea what the participants actually need from this program. So, this year, during the 15 days of training, we just deliver what we can think of for them.

For example, we invite lecturers from local universities and local companies and some other research institutes. And as I showed in the presentation that there were quite a variety of participation in the group discussion for sightseeing. And yes, and from the feedback we got from the participants, they liked it. But I think one of the problems for this year that the level of the participants is a little bit different for this year.

Some people are just like college students or they just graduated from college. Some people, they have been doing very advanced AI research for years, so what they're expecting from the course is a little bit different. So, maybe for the next year, we will try to discriminate the different level of the participants and try to make the program more targeted.

JOEL KARUBIU I'm trying to look online. Can anyone participate in the program or do you have some restrictions? Yeah, let's start with that. Do you have some restrictions for applicants? Can anyone participate?

ANTONIA CHU All of our courses are delivered in English. So, yeah, no matter which country or region they are coming from, yes, the basic requirement is that they can take English lessons. Yeah. And for this year, during the participant recruitment, we actually spread the call for participation notices through APAC and also APT channels. But maybe for the future, we will consider about having a broader channel for sending out the invitations.

JOEL KARUBIU And then another question as well. This is more around the domain. Is the .cn domain available worldwide for anyone to buy or only for the people of China?

ANTONIA CHU Technically, it's not just for the Chinese citizens, but as long as you choose an accredited registrar of .cn, and then you can get the .cn second-level domains you want.

JOEL KARUBIU Thank you very much. Let's give her a round of applause. Thank you. Thank you very much. The next presentation from Svitlana,

.ua, our hero in terms of trouble, but still able to present and join us on this meeting. Svitlana, over to you.

SVITLANA TKACHENKO

Thank you very much. Good morning, everyone. My name is Svitlana Tkachenko. I represent .ua, the country called domain of Ukraine. Today, I would like to speak about resilience by design and about what we have learned from keeping a national domain infrastructure running under extreme pressure. When we speak about resilience, we often imagine something technical. Better servers monitoring, incident response plan, security tools. All of this is true.

All of this is important. But Ukrainian experience has shown us something more. Resilience is not only about technology. It's also about people, partners, trust, and ability to continue when everything around you is falling apart. Usually, in discussion, we discuss resilience as a theoretical topic. In Ukraine, we eventually received too much practical experience. And next slide, please.

Since February 2022, Ukraine has been living through a full-scale war. This has affected every part of life, people, business, public services, communication, critical infrastructure. We had cyber-attacks, we had physical risk, we have faced shelling and missile attacks. We have power outages, sometimes for more than 20 hours a day, sometimes several days in a row. We have damaged infrastructure and homes.

And still, the expectation from users is very simple. Internet should work, domains should resolve, services should stay available, and the national domain should remain stable. And that's understandable because for users, DNS is invisible. It's something that they don't know how to work, they don't realize how it works. They notice it only when it fails. So, for ccTLD registry, the responsibility is very clear. We must make sure that this invisible layer continues to work. Next slide.

Thank you. So, what exactly does ccTLD protect? Usually, but especially during crisis. Of course, technically, we operate domain zone. We maintain DNS infrastructure. We support registrars. We keep registry system running. But in reality, ccTLD is more than a technical zone. Country code domain is part of the country's digital identity. For Ukraine, .ur, .ua domain is used by businesses, public institutions, media, communities, civil society.

It is part of how Ukraine is present online. So, when we speak about your resilience, we are not speaking only about service, we are speaking about ability to society to stay connected. Can business remain reachable? Can public information remain accessible? Can users trust that Ukraine and my names continue to work? Can registrars continue serving their customers? Can the country remain visible and connected to the global internet?

That's why ccTLD is not just a technical zone. It's part of the country's digital identity. And this changed how we think about resilience. We removed assumptions very quickly. The question

was no longer how to avoid disruption. The question became how do we continue despite this disruption? This led us to several resilient design principles. Next slide, please.

The first design principle is simple and obvious for all DNS engineers. It's distributed infrastructure. In crisis, one of the most dangerous things is dependency on one place or one data center on one decision point. True resilience requires DNS infrastructure to be geographically, operationally, and even politically distributed.

Anycast is a good example of this approach. It helps make DNS service less dependent on a single or even several physical locations. In normal times, this distribution and decentralization may look complex, but in crisis, it becomes a survival mechanism. Infrastructure that is distributed by design has a better chance to continue. So, the design should expect failure and continue anywhere. Next slide. The second principle.

The second principle is trust. When we talk about resilience, we often focus on availability. Is the service online? Does it respond? Is it reachable? But availability alone is not enough. A system can be available, but still not trustworthy. For DNS, resilience also means integrity. Users should not only receive answers, but they should receive correct answers.

That's why DNSSEC, access control, monitoring, incident response, they're not just security features, but are part of the trust

infrastructure. Because in crisis, confusion is already high. People are tired. Organizations are under pressure. Attackers try to use it.

So, trust has to be built into system before the crisis, because a resilient DNS system should not only answer, it should answer correctly, securely, and predictably. And that's what user expects, even they never think about the infrastructure behind the DNS. Third principle is, next slide. Next. Thank you.

The third principle is very simple, but sometimes underestimated. Systems do not work themselves. Behind every resilient system, there are people. Engineers, registrars, partners, people who answer messages, make decisions, solve problems, and sometimes do all of this when shelling outside. And here we learn a very important lesson. Resilient systems are built by resilient people, but they should not depend on heroism.

In practice, resilience turns into a practical question. Who has access? Who can approve? Who knows the next step? Who can continue the work if someone is unavailable? That's why in documentation, backup roles and clear procedure matter. They reduce pressure, they reduce dependency on one person, and they reduce the risk of missing something important.

But resilience is also about trust, adaptability, and giving team autonomy to make fast decisions when needed. So, the key message here is people are not outside the infrastructure. They are part of it. If you want a resilient ccTLD, we need to think not only

about hardware, but also how people work together in tough conditions. Next slide. Thanks.

ccTLD registry does not exist alone. It works inside a wide ecosystem. Registrars, DNS operators, data centers, network providers, international partners, and many others. In time, this ecosystem may look like a waste of time and efforts. But in crisis, it became part of resilience, because when something happens, you need trusted contacts. You need people who answer quickly.

You need partners who understand the context. You need communication channels that already exist. You need corporations that were built before. Trust must be built earlier, through daily work, technical cooperation, community meetings, and sometimes just through knowing whom to call [01:08:19 – inaudible].

For .ua, this approach was tested in real condition and it's helped us continue operating. So, the main message here is ccTLD is resilient when the ecosystem around it is resilient. That's why the international cooperation matter. For us, the global community is not something abstract. And I think one of the most important lessons we can share here is resilience is connection. Next slide.

So, we face the outage, attacks, blackouts, and then certainly, reality became a very effective resilient consultant, unfortunately. Let me finish with five lessons from .ua experience. Design for failure before failure happens. Assume that something will fail and

design the system to continue. Avoid a single point of failure, technically, and organizationally.

This applies to infrastructure, access, people, locations, suppliers, and decision-making. Build trust into infrastructure, not only availability. A service should not only be online, it should be reliable, secure, and trustworthy. Treat people, partners, and procedures as part of the system because in crisis, this may become the most important part.

Resilience must be designed into governments, not only networks. Good governments help system keep working. Good cooperation help systems survive. So, if I had to summarize Ukrainian lesson in one sentence, it would be resilience is not one technology, one team or one institution. It's an ecosystem designed to continue. Next slide, please. Thank you.

And these are the lessons we bring from Ukraine to the DNS community. And I hope these lessons remain theoretical for most of ccTLD and only to discuss it on the ICANN meeting. Thank you.

JOEL KARUBIU

Thank you very much. I think very, very powerful presentation there. And for me, something that we don't look at is design for failure. We design for success, but do we design for failure? I think that's a word that is going to leave me for a while here in terms of what we're looking at. I'd like to open some questions on the floor for this, if there are any questions. Any questions?

If there are no questions, I'll ask one to Svitlana, then we can go around the room again. So, you mentioned something very critical, which is support from the community. And I know actively in the ccNSO, supporting your ccTLD. How else would a registry be supported in the case of where you are today? And how would you look at what more support you would require?

SVITLANA TKACHENKO

Actually, we designed our system now for this situation. And I want to thank you for all the support and all offering support at the beginning of the war, and now people and registry, ccTLD registry, who help us now. They are very supportive and understand if any situation is that sometimes we not can explain quickly and clearly what we need, that we don't plan our impairment, and they try to help us as much as possible. So, thank you very much for this support.

JOEL KARUBIU

Thank you very much. I think I cannot summarize this session anymore by saying it's great that we are a community that supports each other. That's what we do as ccNSO. As you heard in the morning presentations, that's why we're in this room. So, with that, I know I have another five minutes.

So, if there's any question to any of the presenters that may have come up as you are thinking through, I would like to allow for one more question, then we can close the session, if any. Okay. If no

questions, then I'd like to close this first session on the ccTLD News. Please have a good lunch and let's see you back in the room later. Thank you very much, everyone.

[END OF TRANSCRIPTION]