ICANN Update

PacNOG 25

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Overview

- ICANN Ecosystem
- ICANN66 Discussion Topics
- Security Threats, DNS Abuse and Consumer Safeguards
- Getting Involved - Participate

ICANN's Mission

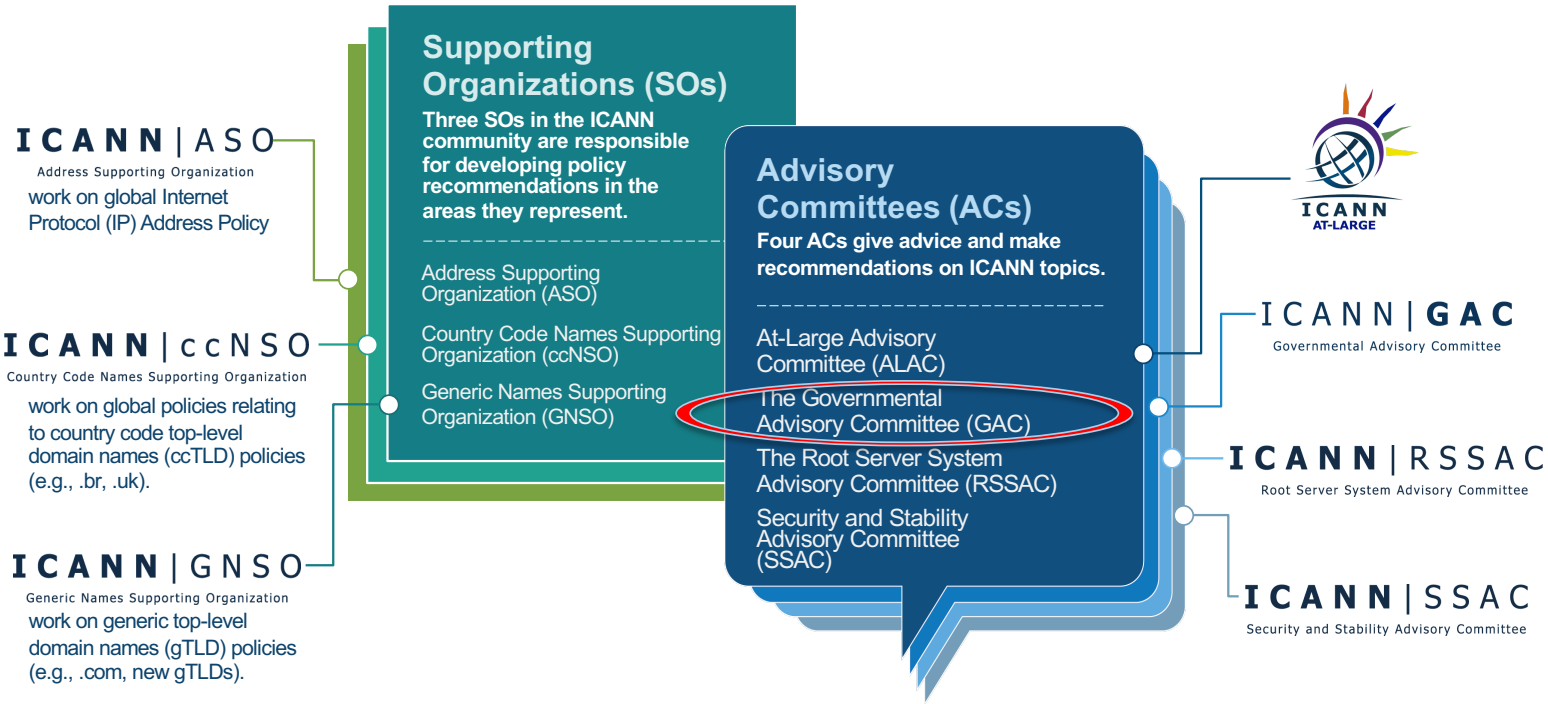
The mission of the Internet Corporation for Assigned Names and Numbers (ICANN) is to **ensure the stable and secure operation of the Internet's unique identifier systems**

Specifically, ICANN:

1. Coordinates the allocation and assignment of names in the root zone of the Domain Name System
2. Coordinates the development and implementation of policies concerning the registration of second-level domain names in generic top-level domains (gTLDs)
3. Facilitates the coordination of the operation and evolution of the DNS root name server system
4. Coordinates the allocation and assignment at the top-most level of Internet Protocol numbers and Autonomous System numbers
5. Collaborates with other bodies as appropriate to provide registries needed for the functioning of the Internet as specified by Internet protocol standards development organizations

ICANN Ecosystem

Exploring ICANN's Multistakeholder Community



Some of What the ICANN Organization Does

Domain Name System

The Domain Name System provides addressing for the Internet so people can find websites, send email, and other tasks. The ICANN org also supports the stability of the DNS through its work, contracts, and accreditations.

Policy Development

The ICANN org supports inclusive, open and transparent multi-stakeholder bottom-up consensus-based policy development mechanisms.

L-Root

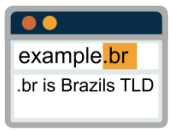
The ICANN org hosts and supports 1 of the 13 L-Root infrastructures. At over 160 locations worldwide, L-Root is critical to infrastructure that helps reduce latency and improves performance of the DNS.

Support and Grow the Community

The ICANN org engages, nurtures and supports interested stakeholders for active and meaningful participation in ICANN. ICANN connects with stakeholders through outreach and engagement, and meeting and event support.

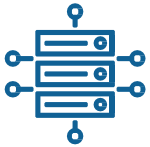
Generic Top-Level Domains

The ICANN org manages the Domain Name System's top-level domains. ICANN helps promotes competition and choice in the gTLD marketplace.



Country Code Top-Level Domains

The ICANN org delegates top-level domains identified with a country code. Management is done by national ccTLD operators.



Protocol Parameters

The ICANN org, in coordination with the Internet Engineering Task Force, manages protocol parameters by maintaining many of the codes and numbers used in Internet protocols.

Internet Protocol Addresses

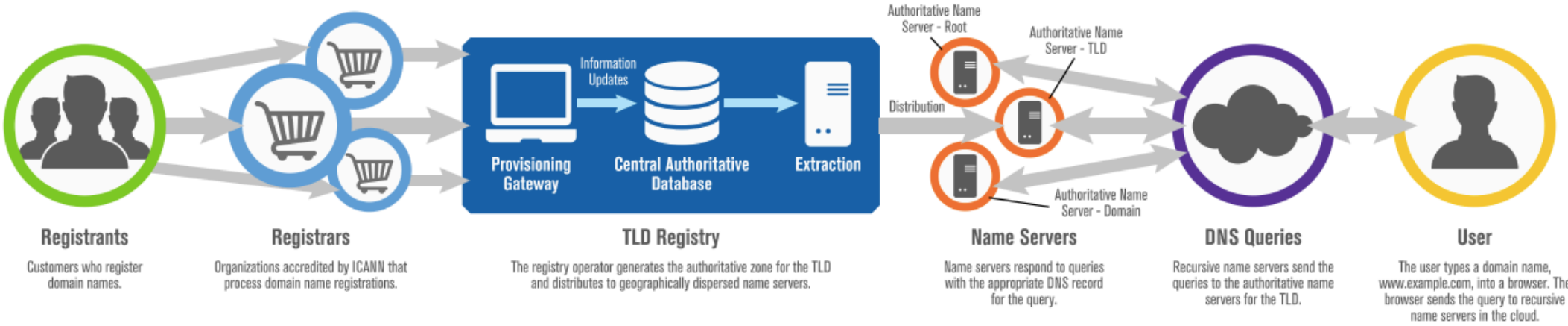
By serving as the central repository for IP addresses, the ICANN org helps coordinate how IP addresses are supplied – preventing repetition and conflicts.

Root Zone Management

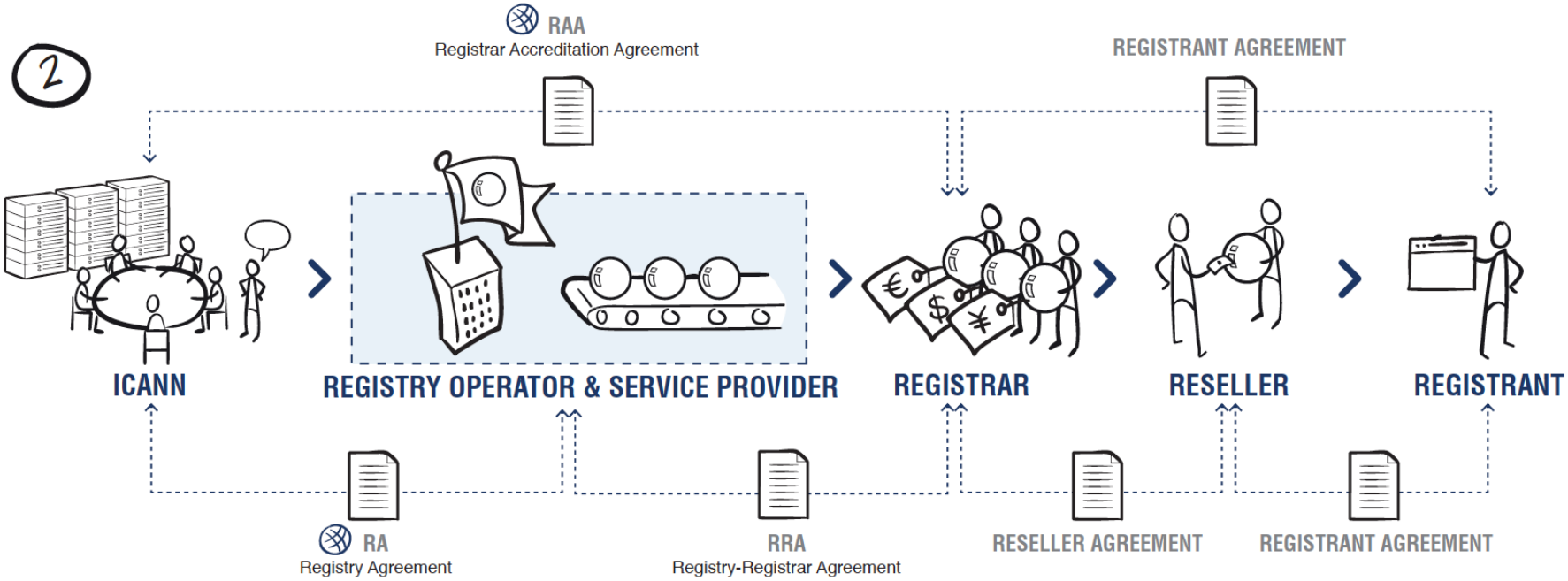
The ICANN org helps manage the root zone through the IANA functions, which involves assigning the operators of top-level domains, such as .bank and .com, and maintaining technical and administrative details.

IANA Functions

The DNS Ecosystem



Relationships based on contracts



ICANN66 Annual General Meeting

- Held in Montreal, Canada: 2-7 November 2019
  - View presentations and session transcripts : https://66.schedule.icann.org/meetings

- Key discussions:
  - Future of ICANN and evolving its Multistakeholder model
  - General Data Protection Regulation (GDPR) / Whois matters
  - Expedited Policy Development Process on gTLD registration data
  - Subsequent rounds of new generic Top-Level Domains
  - DNS Abuse Mitigation
  - Proposed governance model for the DNS Root Server System
  - Universal Acceptance
  - Cross Community Working Group on new gTLD Auction Proceeds

Expedited Policy Development Process on the Temporary Specification on gTLD Registration Data

- In May 2018, the ICANN Board adopted a temporary specification on gTLD Registration Data to:
  - establish temporary requirements for how ICANN and its contracted parties would continue to comply with existing ICANN contractual requirements and community-developed policies related to WHOIS
  - comply with the European Union's General Data Protection Regulation (GDPR)
- A one-year policy development process was required to confirm whether or not the temporary specification should become a consensus policy.
- GNSO Council voted to adopt all 29 recommendations within the EPDP's Phase 1 Final Report in March 2019. Following Board adoption of recommendations on 15 May 2019, an Implementation Review Team was launched and has commenced its work.
- Phase 2 is underway: collaboration with the European Commission to test a hypothetical Unified Access Model (UAM). Aim to publish an Initial Report in December 2019 or January 2020.

New gTLD Subsequent Procedures PDP

- Tasked with calling upon the community's collective experiences from the 2012 New gTLD Program round to determine what, if any changes may need to be made to the existing 2007 Introduction of New Generic Top-Level Domains policy recommendations.
- Existing policy recommendations will remain in place for subsequent rounds unless modified via a PDP.
- Follows the efforts of the New gTLD Subsequent Procedures Discussion Group (DG), which identified a set of issues for a future PDP-WG to consider in their deliberations.
- The WG is currently in the process of reviewing public comments received on its Initial Report and supplemental Initial Reports.
- Work Track 5 report focusing on issues on geographic names at the top level presented final report and recommendations to be considered by the WG.
- The working group aims to coordinate timing of different elements of the PDP to deliver a single Final Report to the GNSO Council.

Policy Development: Communities

Throughout the ICANN ecosystem there are numerous communities developing policies and procedures to improve Security, Stability and Resiliency (SSR):

- Governmental Advisory Committee's (GAC's) Public Safety Working Group (PSWG)
  - PSWG "focuses on aspects of ICANN's policies and procedures that implicate the safety of the public" including developing the "DNS Abuse and Cybercrime mitigation capabilities of the ICANN and Law Enforcement communities"
- Security and Stability Advisory Committee (SSAC)
  - SSAC engages in ongoing threat assessment and risk analysis of the unique identifier system to assess where the principal threats to stability and security lie
- Root Server System Advisory Committee (RSSAC)
  - Advises the ICANN Board and community on matters relating to the operation, administration, security, and integrity of the Root Server System

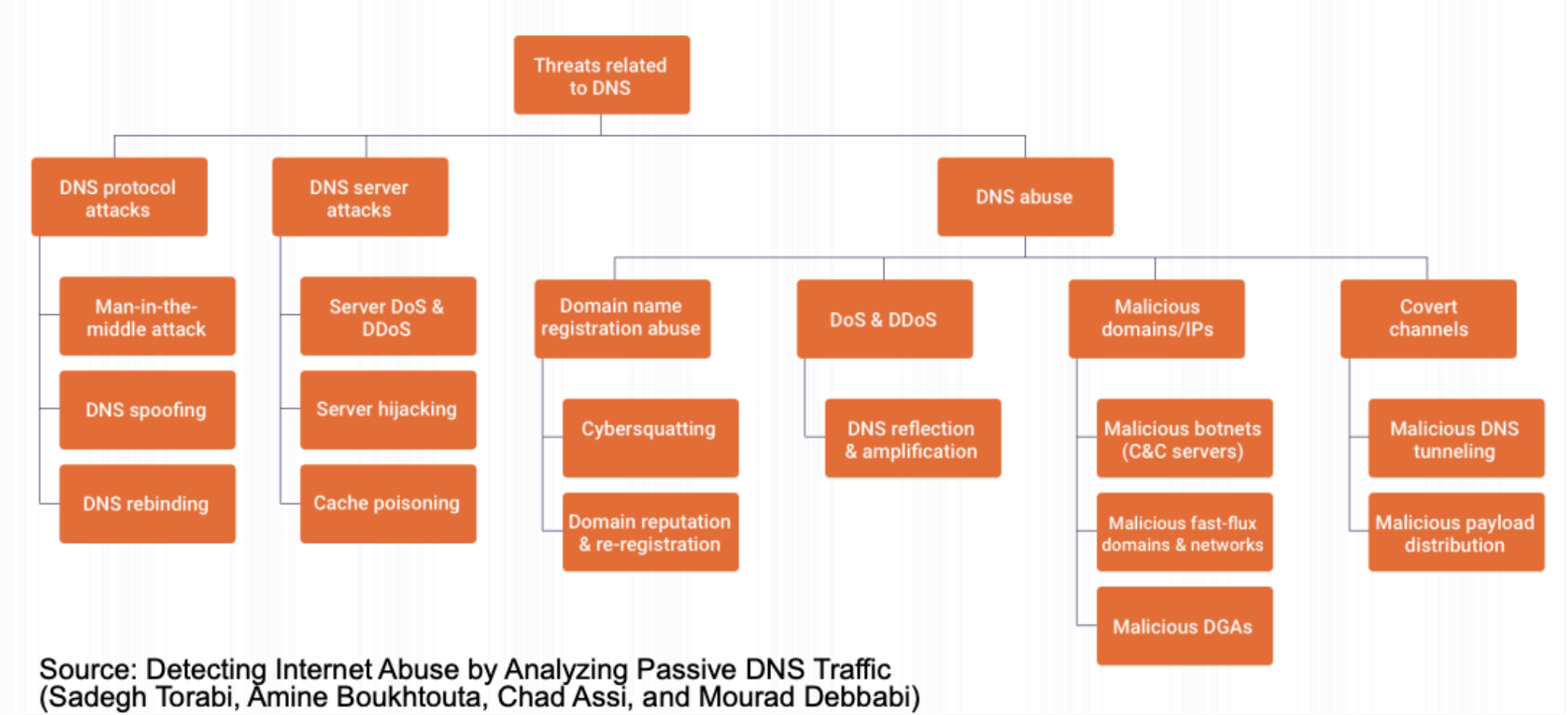
What is DNS abuse?

- No globally accepted definition, variants include
  - Cyber crime
  - Hacking
  - Malicious conduct
- Threats to the DNS often fall under three categories:
  - Data corruption, denial of service, & privacy violations

DNS abuse and misuse

- DNS abuse refers to anything that **attacks** or **abuses** the DNS infrastructure, or
- DNS misuse refers to **exploiting** the DNS protocol or domain name registration processes for **malicious purposes**

DNS Ecosystem Technical Threats



Source: Detecting Internet Abuse by Analyzing Passive DNS Traffic
(Sadegh Torabi, Amine Boukhtouta, Chad Assi, and Mourad Debbabi)

(Source: Merike Kaeo presentation at FIRST, June 2019)

ICANN's Role?

- Large scale attacks appear to be growing, and because of their surface area, involve:
  - Sovereign governments
  - Multi-national companies
  - International law enforcement
  - Widespread news coverage
- Other (smaller scale) cybersecurity incidents happen daily
- The ICANN Community and members of the ICANN Org have a role before, during, and after cybersecurity incidents

Security Threats, DNS Abuse & Consumer Safeguards

- DNS Abuse: What does it mean? What is ICANN's Remit?
  - Remit: maintain the "security and stability" of the DNS.
  - Security Threats – malware, botnets, and phishing (Spec. 11(3)(b)).
  - SPAM as a vector.
  - DNS Abuse: no community definition for abuse as still very subjective.

Security Threats, DNS Abuse & Consumer Safeguards

- Consumer Safeguards Department
  - Created in 2017 and started community discussions at ICANN 59 in Johannesburg.
  - 25 September 2017 Webinar
    - Summary of ICANN's Safeguards
    - https://www.icann.org/en/system/files/files/cccs-safeguards-11sep17-en.pdf
- Facilitating Other Community Discussions
  - Washington DC and Kobe 2019
  - GDD Summit: Bangkok 2019
  - ICANN 65: Marrakech
  - London Stakeholders Group July 2019
- Community Plenary Session at ICANN66
  - RySG, GAC, ALAC, SSAC, IPC, and BC

Security Threats, DNS Abuse & Consumer Safeguards

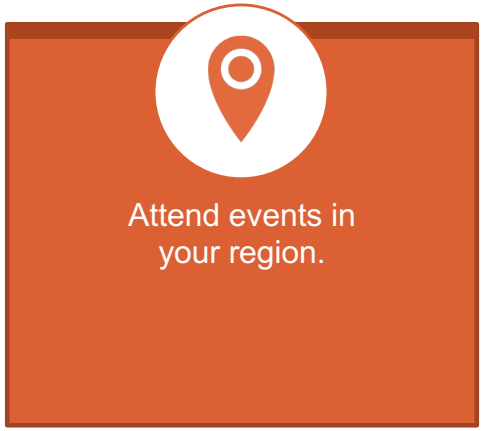
- Plenary Session at ICANN66
  - Registry Stakeholder Group
    - https://www.rysg.info/rysg-statements-and-comments [rysg.info]
  - GAC – PSWG
    - https://gac.icann.org/advice/correspondence/ [gac.icann.org]
  - Framework to Address Abuse
    - PIR, Donuts, Amazon Registry Services, Inc., Afilias, Amazon Registrar, Inc., Nominet UK, GoDaddy, Tucows, Blacknight Solutions, Name.com, and Neustar
    - https://blacknight.blog/wp-content/uploads/2019/10/Framework-to-Address-Abuse.pdf

Get Involved and Informed

Attend an ICANN Public Meeting. Three times a year, ICANN holds free and open public meetings in different regions around the world. Visit **meetings.icann.org** to learn more.

Visit **go.icann.org/journey** to learn how you can attend an ICANN Public Meeting as part of the NextGen@ICANN or ICANN Fellowship programs.

Take a free online course at **learn.icann.org**.



Attend events in your region.

Find and participate in an ICANN community group by visiting **icann.org/community**.

Sign up for ICANN news alerts and regional newsletters.

Our Programs

Fellowship

Global capacity-building program to support ICANN's multistakeholder community. Online application process is open three times per year to participate in an ICANN Public Meeting (one meeting for Alumni only).

NextGen

Regionally based program to create awareness and promote future discussions with universities and other regional forums. Online application process is open three times per year to attend an ICANN Public Meeting.

Newcomer

Program dedicated to those entering the ICANN community. Options are self-study using the Newcomer web page or participation in person or remotely at the Newcomer Sunday meeting at an ICANN Public Meeting.

Watch Fellowship and NextGen video:
https://www.youtube.com/watch?v=nrV_ZkDEfIQ

Watch Newcomer video:
https://www.youtube.com/watch?v=da1RQt9-e-g

Engage with ICANN – Thank You and Questions

One World, One Internet

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