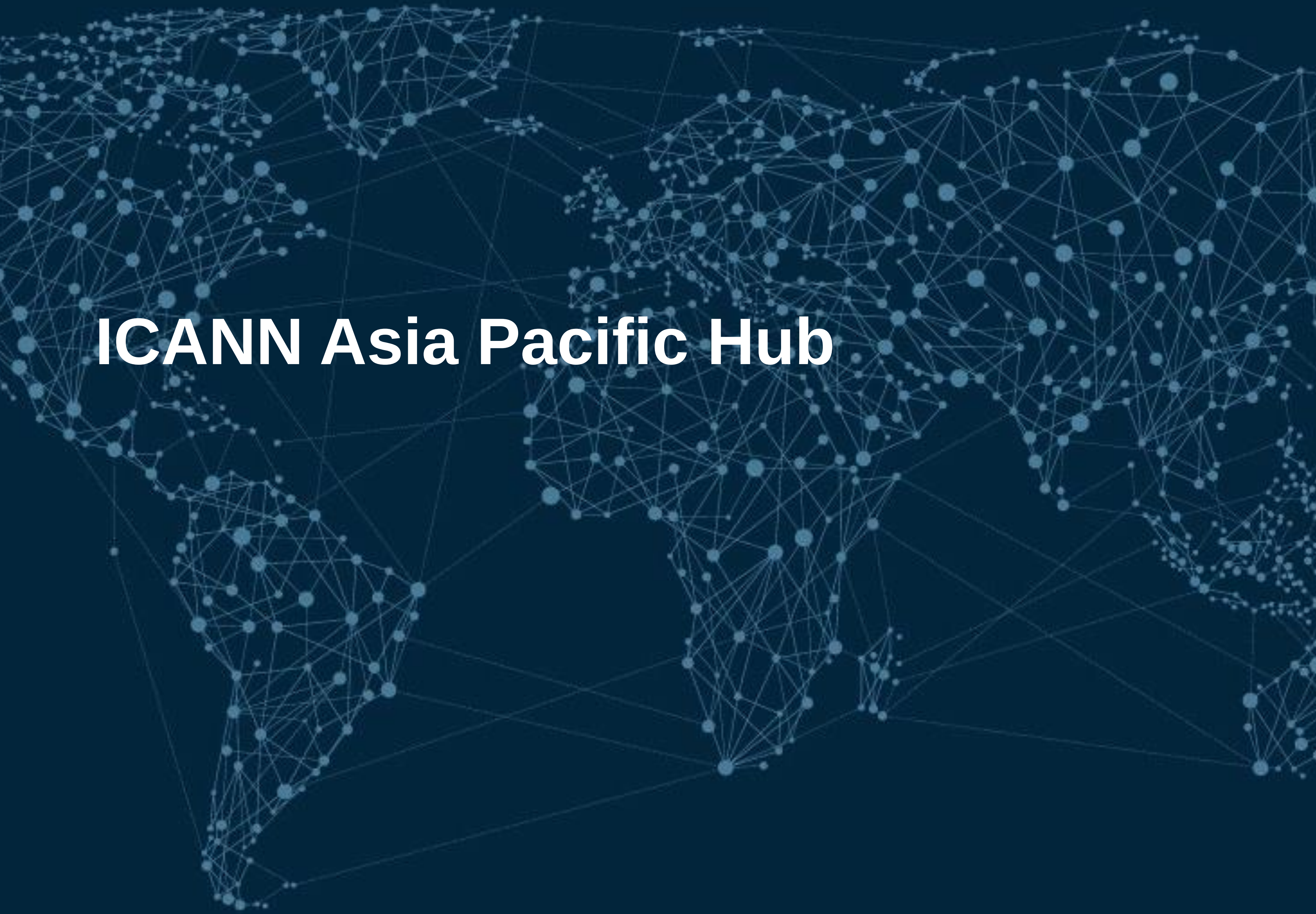
ICANN Update @ PacINET 2015

Save Vocea | Vice President, Oceania | 8 July 2015

Overview

- Globalization: ICANN Asia Pacific Hub
- IANA Stewardship Transition
- New gTLD Update
- Regional engagement



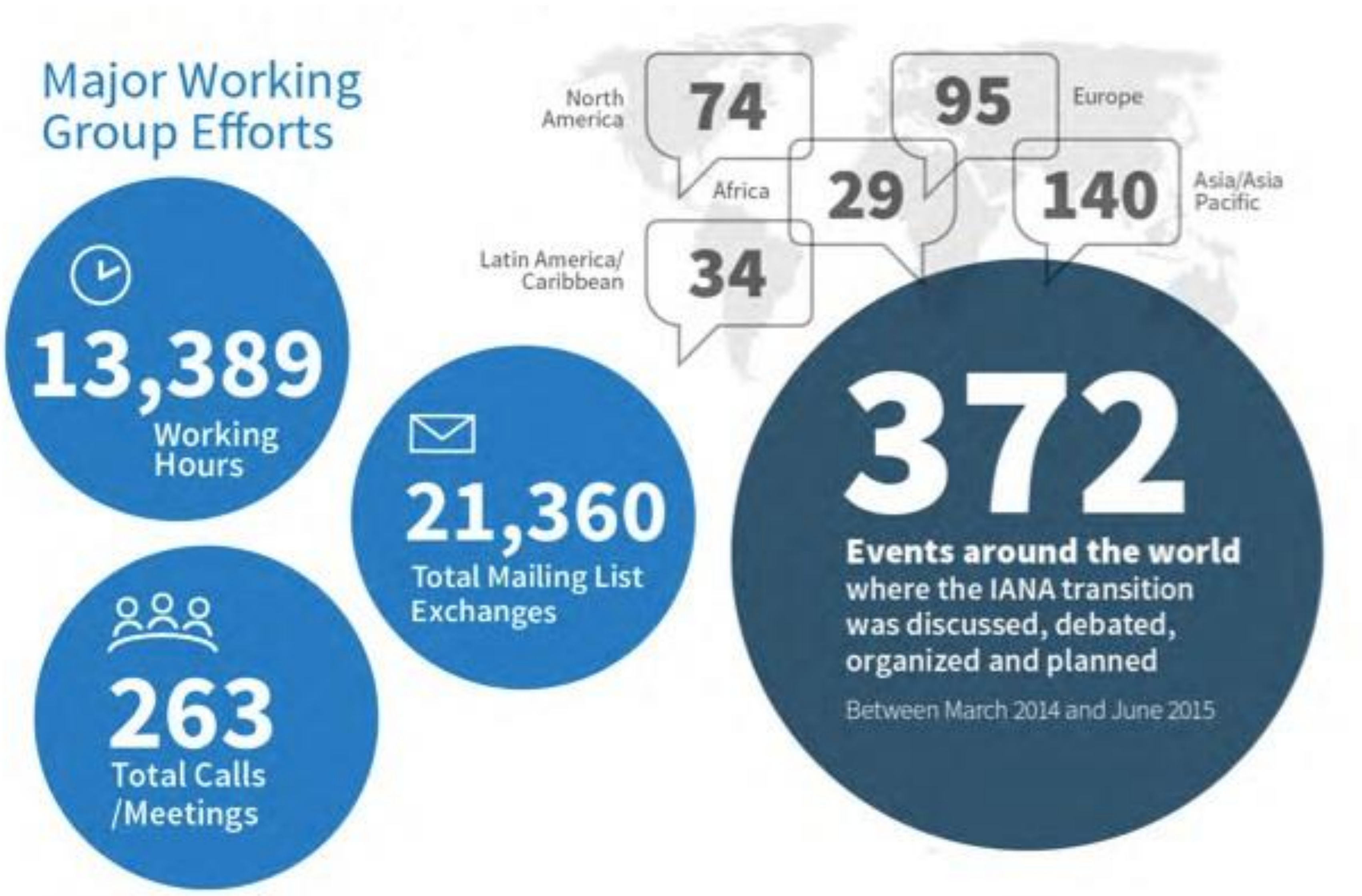
ICANN Asia Pacific Hub

APAC Hub

- Established August 2013:
  - 24 staff
- Functions:
  - Global Stakeholder Engagement; Contractual Compliance; Registrar/Registry Services; SSR Engagement; Legal; Comms; Ops, Finance, HR
  - Customer Service Channel

IANA Functions’ Stewardship Transition Update

Community Transition Work (prior to ICANN53)



Major Working Group Efforts

13,389
Working Hours

21,360
Total Mailing List Exchanges

263
Total Calls /Meetings

North America 74

Europe 95

Africa 29

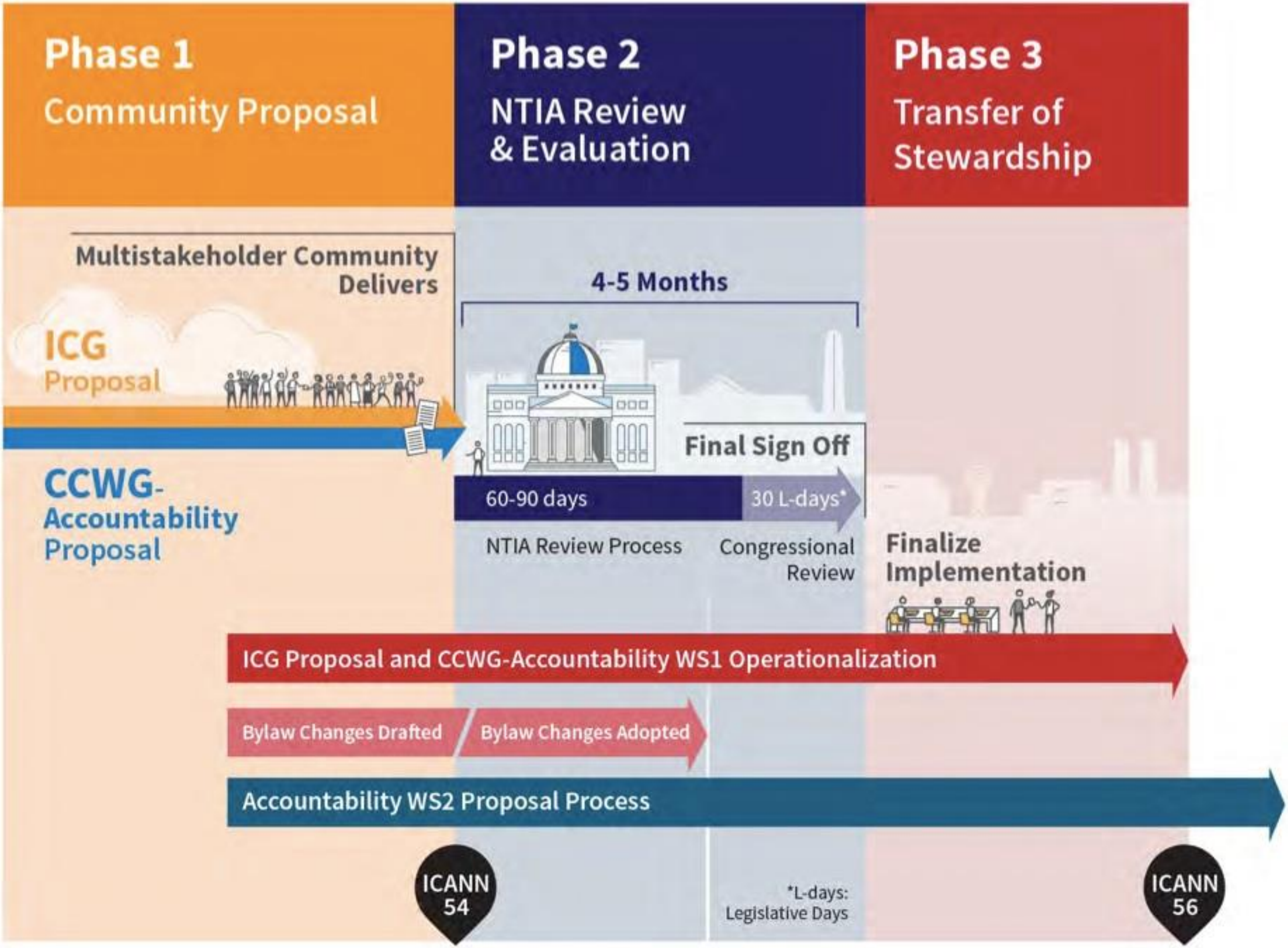
Asia/Asia Pacific 140

Latin America/ Caribbean 34

372

Events around the world
where the IANA transition was discussed, debated, organized and planned

Between March 2014 and June 2015



Phase 1
Community Proposal

Phase 2
NTIA Review & Evaluation

Phase 3
Transfer of Stewardship

Multistakeholder Community Delivers

ICG Proposal

CCWG-Accountability Proposal

4-5 Months

Final Sign Off

60-90 days

30 L-days*

NTIA Review Process

Congressional Review

Finalize Implementation

ICG Proposal and CCWG-Accountability WS1 Operationalization

Bylaw Changes Drafted

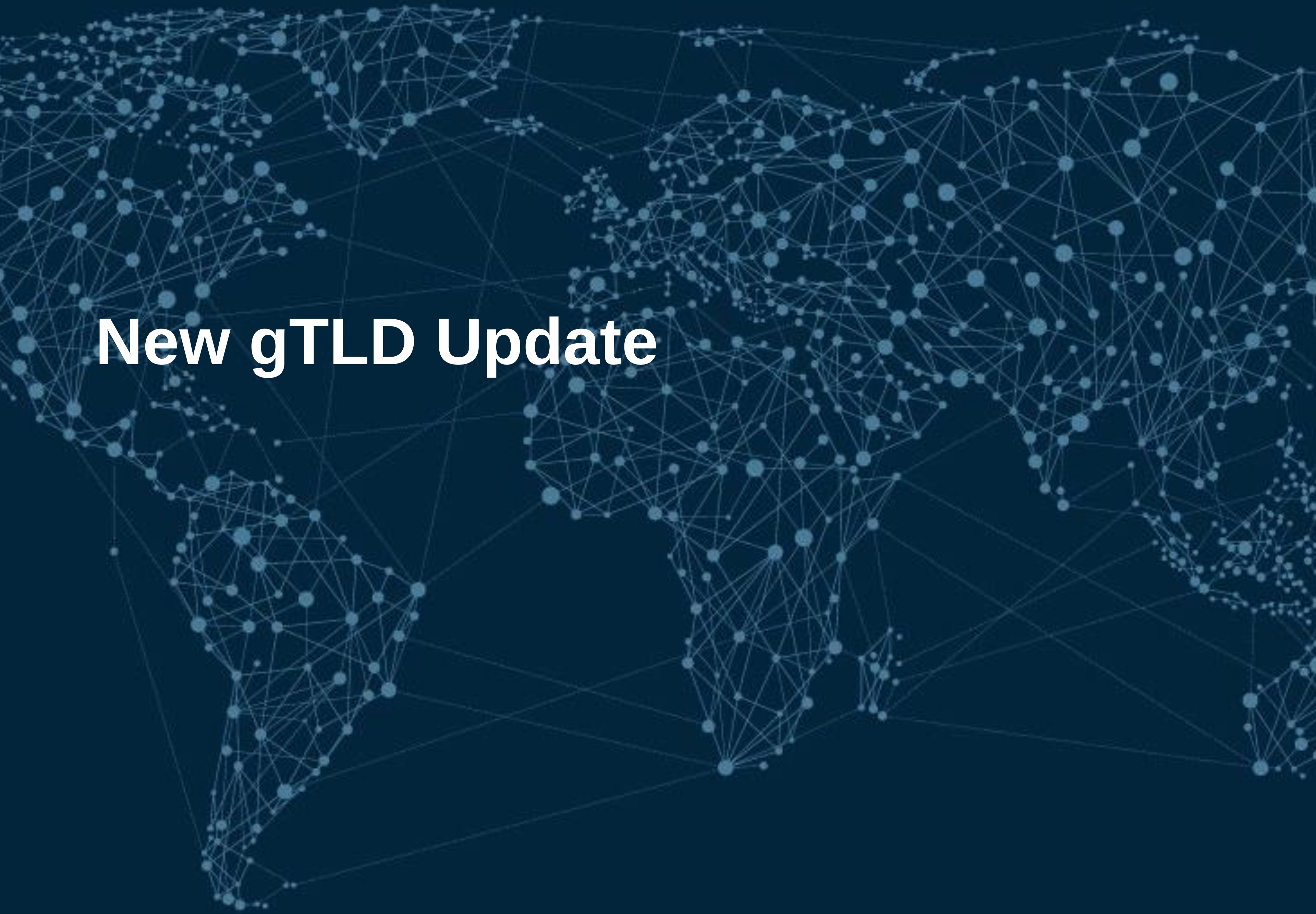
Bylaw Changes Adopted

Accountability WS2 Proposal Process

ICANN 54

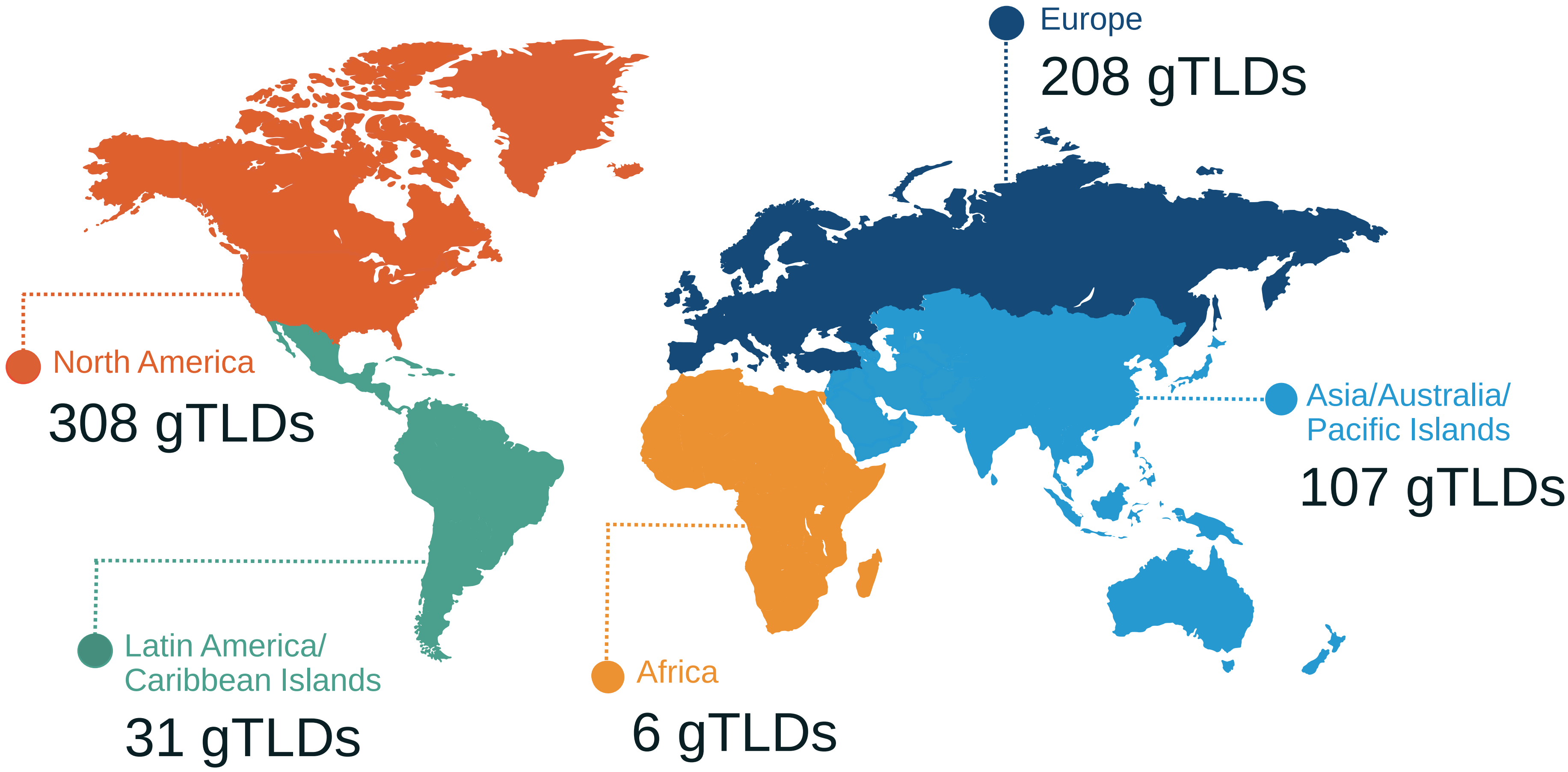
ICANN 56

*L-days: Legislative Days



New gTLD Update

660 Delegations and Counting (at ICANN 53)



Europe

208 gTLDs

North America

308 gTLDs

Asia/Australia/
Pacific Islands

107 gTLDs

Latin America/
Caribbean Islands

31 gTLDs

Africa

6 gTLDs

What’s next for new gTLD programme?

- Program Reviews = first step toward future rounds
- Goals:
  - Assess performance of program in several areas
  - Apply lessons learned to next round
  - Support community discussion on future rounds
- Learn more about New gTLD Program Reviews
  - http://newgtlds.icann.org/reviews
- Get involved!
  - Community feedback on the program is desired

Initiatives

1

Universal Acceptance

- Steering Group (UASG) leadership seated and charter established.
- Executive briefing paper produced – includes what “Universal Acceptance-ready” looks like.
- Email address internationalization identified as biggest challenge to achieving success.

2

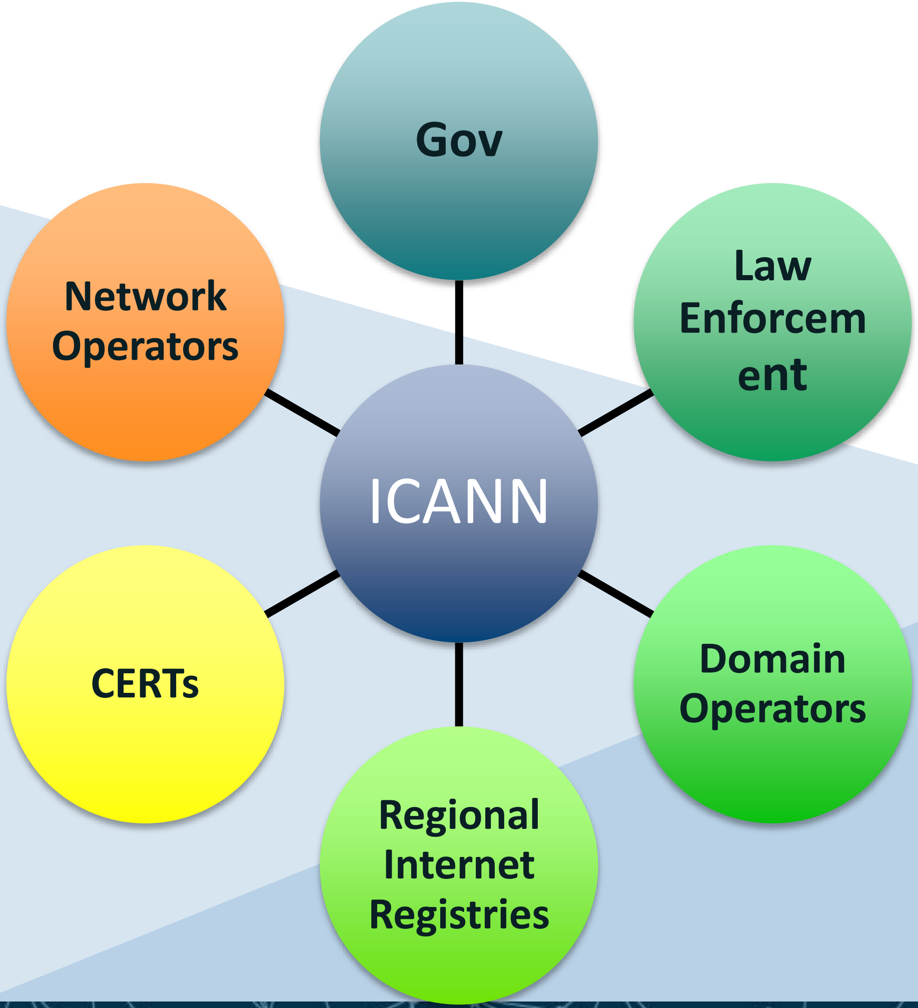
Internationalized Domain Names

- Arabic and Armenian script communities completed proposals for Label Generation Rules. Currently available for public comment.
- Six scripts added in recent update of Maximal Starting Repertoire
  (Armenian, Ethiopic, Khmer, Myanmar, Thaana, Tibetan)

ICANN-Oceania Engagement

Security, Stability, & Resiliency (SSR) A key pillar of ICANN

The Internet – our “Network of Networks”

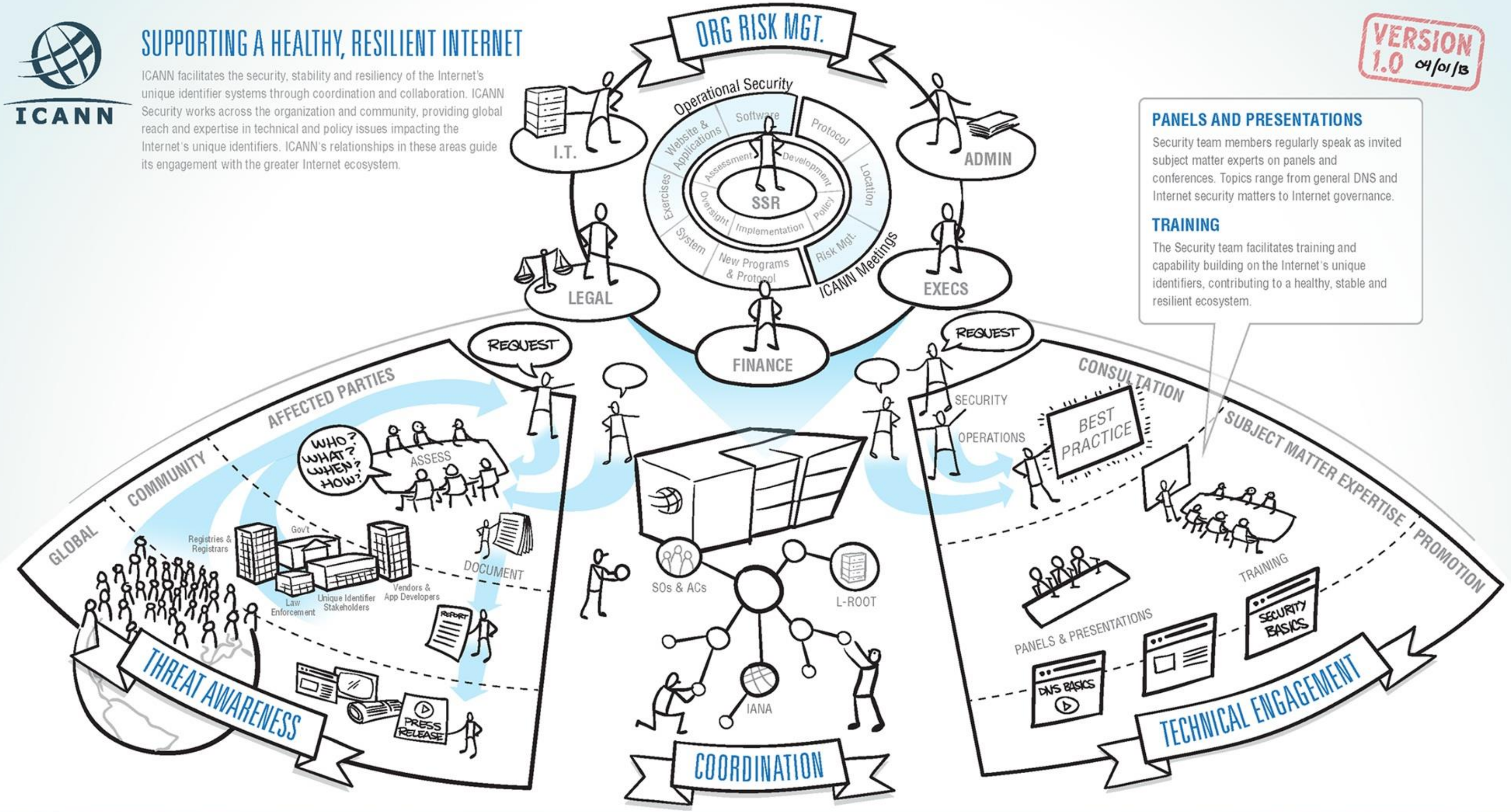


- Threat Awareness and Response
- Trust-based Collaboration
- Capability Building
- Identifier SSR Analytics

SUPPORTING A HEALTHY, RESILIENT INTERNET

ICANN facilitates the security, stability and resiliency of the Internet's unique identifier systems through coordination and collaboration. ICANN Security works across the organization and community, providing global reach and expertise in technical and policy issues impacting the Internet's unique identifiers. ICANN's relationships in these areas guide its engagement with the greater Internet ecosystem.

VERSION 1.0 04/01/13



PANELS AND PRESENTATIONS

Security team members regularly speak as invited subject matter experts on panels and conferences. Topics range from general DNS and Internet security matters to Internet governance.

TRAINING

The Security team facilitates training and capability building on the Internet's unique identifiers, contributing to a healthy, stable and resilient ecosystem.

COORDINATE & COLLABORATE

Operational Security Community
DNSSEC Implementation and Support

The Security team is regularly invited to speak with community stakeholder groups, and facilitates activity with ICANN's Supporting Organizations and Advisory Committees.

PUBLICIZE & PROMOTE

WHITE PAPERS

TALKS

The Security team provides thought leadership in the form of white papers, blog posts and the annual Security, Stability & Resiliency Framework for ICANN.

Team members represent ICANN at various conferences and events worldwide, speaking on cybersecurity and governance, the Internet's unique identifiers and ICANN.

CONSULT & ADVISE

EXERCISES

POLICY

ROOT SERVER

The team contributes to scenarios for global cyber exercises, provides advice on operational practices such as with the root server community and DNS technical community.

REVIEW & COMMENT

POLICY

RFCs

The team regularly provides input into policy development processes, comments on protocols and open standards managed by others in the Internet ecosystem.

XPLANATIONS™ by XPLANE.com

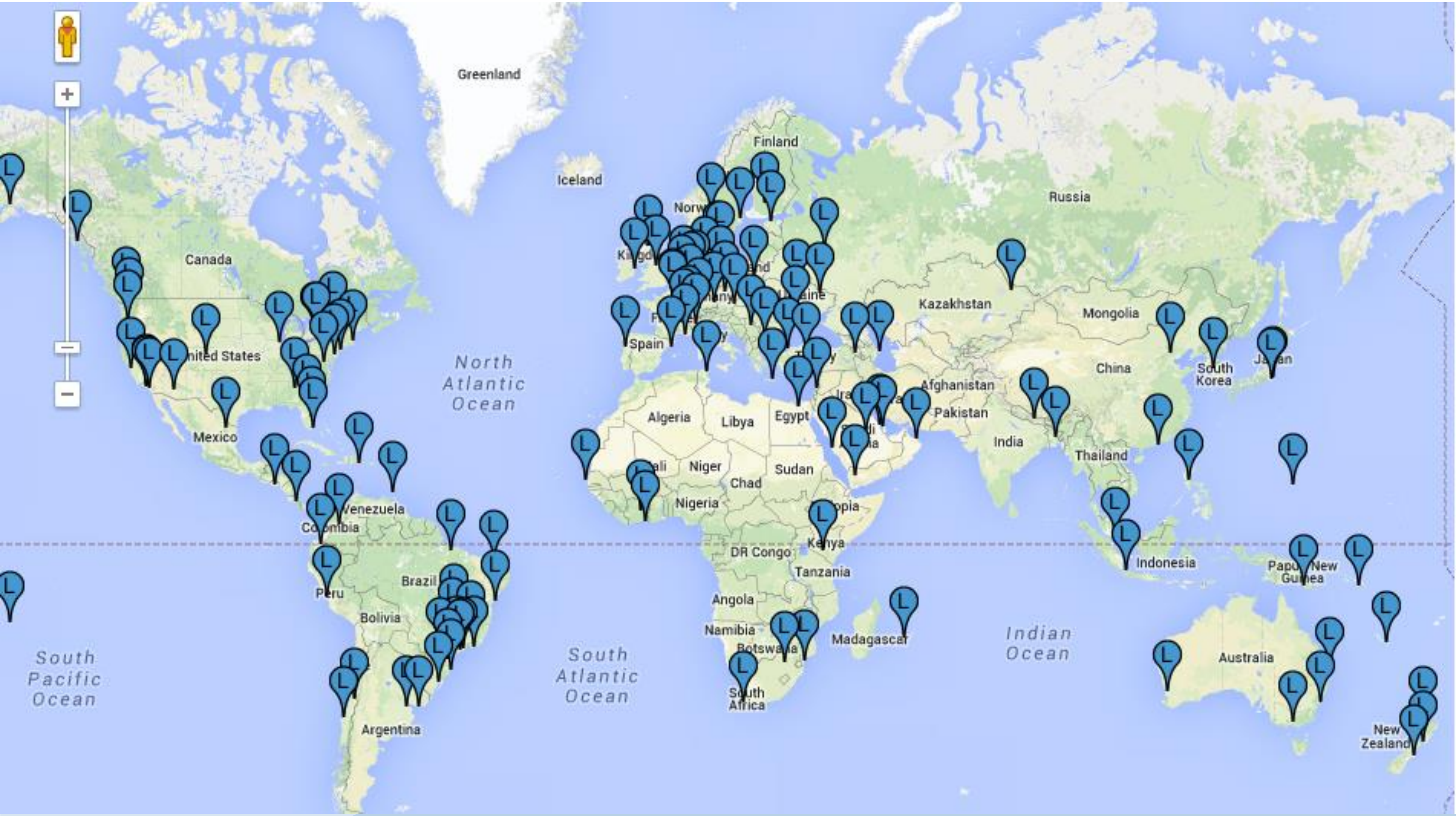
Root Servers to benefit Internet Stability and Resiliency

- Root server nodes keep Internet traffic local and resolve queries faster
- Make it easier to isolate attacks
- Reduce congestion on international bandwidth
- Redundancy and load balancing with multiple instances
- ICANN is the L-Root Operator

L-Root presence

- Geographical diversity via Anycast
  - Around 160 dedicated servers
  - Presence on every continent
- On normal basis 15 ~ 25 kbps
  - Approx. 2 billion DNS queries a day
- We are supporting root server deployment in countries
  - Contact ICANN staff in the region

L-Root anycast server locations



Making the DNS Secure

- A computer sends a question to a DNS server, like “where is www.example.org?”
- It receives an answer and assumes that it is correct.
- There are multiple ways that traffic on the Internet can be intercepted and modified to give a false answer.

How can bad guys attack the DNS?

Attack	Description
Cache Poisoning	Dupe a resolver into adding false DNS records to its cache (example: basic cache poisoning)
Indirection attack	Malware can also poison a client computer's /etc/hosts file (example: DNSChanger)
Distributed Denial of service (DDoS) attack	A resource depletion attack where 1000s of bots send DNS queries to a target NS
DDoS amplification (reflection) attack	1000s of bots issue queries that evoke a very large response message, they all "spoof" the address of a targeted name server,and the targeted NS is flooded with very large DNS response messages requested by the compromised computers
Exploitation attacks	A bad guy discovers a software flaw that causes DNS server software to fail or behave in an unintended way
Redirection (wildcarding, DNS response rewriting)	Instead of a *Name Error* (NXDOMAIN), a name server or resolver returns a response it chooses

ICANN strongly supports DNSSEC

- Cyber security is becoming a greater concern to enterprises, government, and end users. DNSSEC is a key tool and differentiator.

- DNSSEC is the biggest security upgrade to Internet infrastructure in over 20 years. It is a platform for new security applications (for those that see the opportunity).

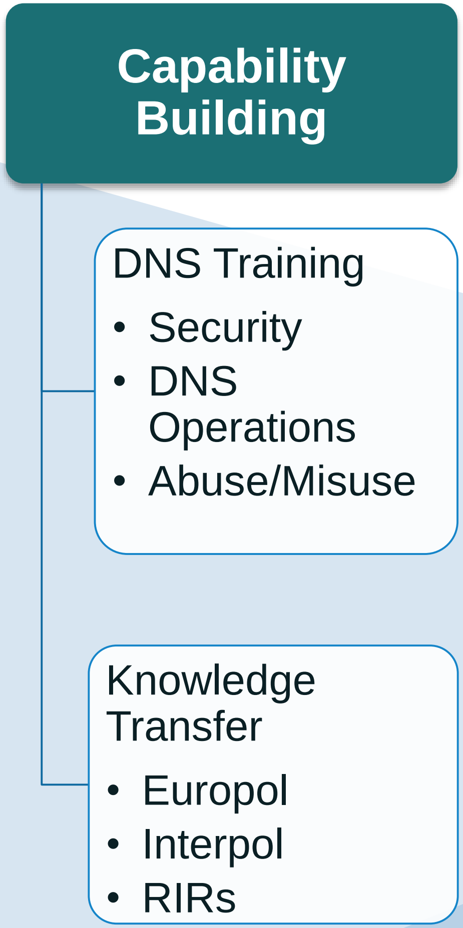
- DNSSEC infrastructure deployment has been brisk but requires expertise. Call for ccTLD registry and industry to implement DNSSEC

How about Registrations?

Importance of WHOIS from a Security point of view

- whois.icann.org
- Registration Data Directory Service
  - Database containing records of information
- Verification of records
  - Sponsoring Registrar
  - Domain Name Servers
  - Domain Status
  - Creation/Expiry Dates
  - Point of Contacts
  - DNSSEC Data

SSR Capability Building



Capability Building

DNS Training

- Security
- DNS Operations
- Abuse/Misuse

Knowledge Transfer

- Europol
- Interpol
- RIRs

- Training and Outreach
  - Security, operations, and DNS/DNSSEC deployment training
    - for TLD registry operators
    - Network Operators / ISPs
    - Enterprises, Corporates etc.
  - Information gathering to identify Internet Identifier Systems abuse/misuse and Investigation Techniques
    - Law Enforcement Agencies
    - CERTs
    - Internet Investigators etc.

Conclusion

- Need for the regions multistakeholders to engage in open, bottom up and transparent Internet governance processes
  - Opportunity to engage in IANA stewardship transition and ICANN accountability processes
- Promote and raise awareness of new business opportunities in the domain names industry
  - Strengthen local ccTLD management
  - Opportunities for Registry and Registrar business
- Strengthen SSR of networks

Engage with ICANN

Thank You and Questions

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