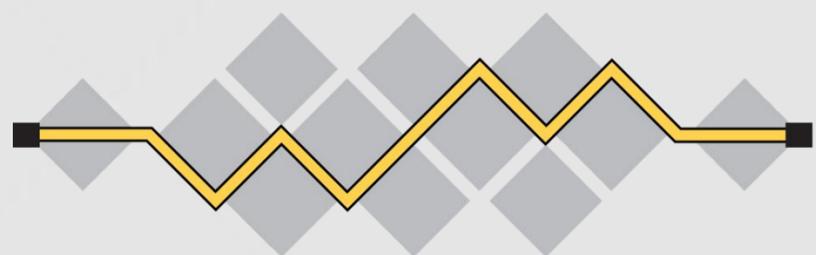




GAC and the IETF



I E T F[®]

Internet Engineering Task Force

11th March 2026

Agenda

01	IETF within the IG Ecosystem - Dhruv Dhody
02	Interaction with ICANN - David Lawrence
03	Emerging & Ongoing Work - Warren Kumari
04	Engaging with IETF/ISOC - Sally Wentworth
05	Individual from the Government at the IETF



The IETF within the Internet Governance Ecosystem

Dhruv Dhody, IAB

Partners in the Internet Technical Community

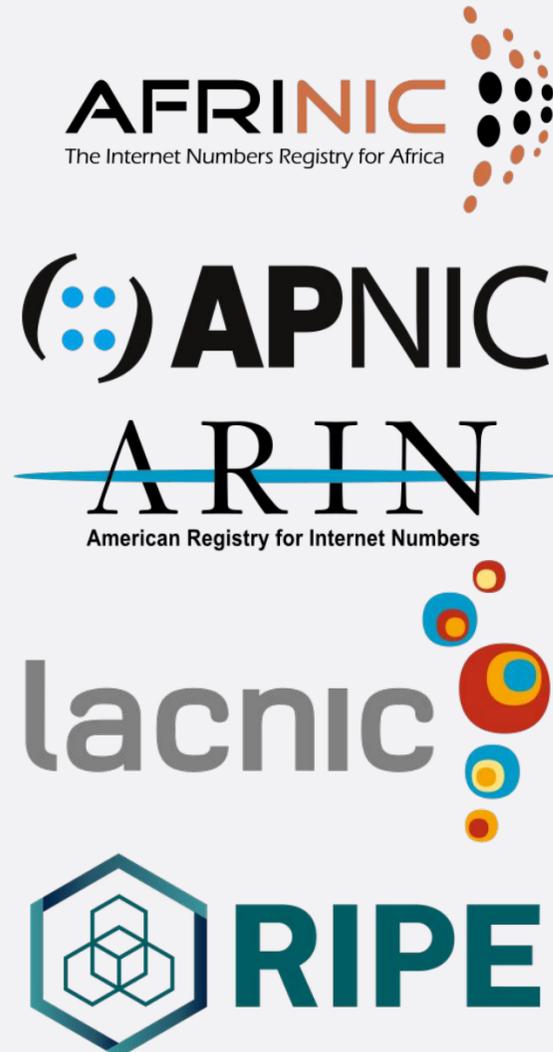
Providing expertise that helps maintain & develop Internet infrastructure, protocols, and reliable operation

Names



+

Numbers



+

Protocols



Internet Engineering Task Force (IETF)

Mission

Make the Internet work better by producing high quality, relevant technical documents that influence the way people design, use, and manage the Internet.

[RFC 3935]



IETF

Open Internet Standards

- Open standards are key to allow devices, services, and applications to **interoperate across a interconnected, heterogeneous, and global network of networks**
- The IETF process is **open, transparent**, and relies on a **bottom-up consensus-building**
- **Openness** in both the technical standards itself as well as the standards development process is the basis for **innovation** in, and on top, of the Internet and is **key to its success**.

IETF Ethos



Everyone participates as an individual



We don't have **Members**



Specifications provide **“building blocks”**



All work is available for **free**



Judge contributions on **technical merits**

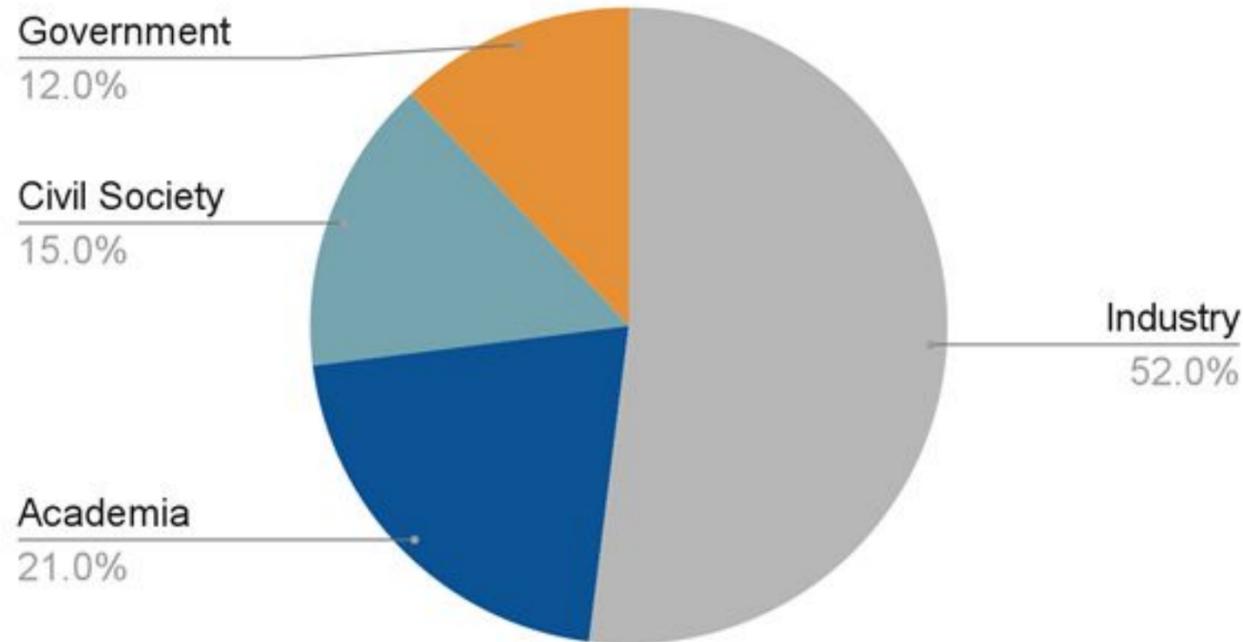


Determine success by **voluntary deployment**

Standardization with multi-stakeholder participation

The IETF draws individuals from industry, academia, civil society and governments

Community Participation



77

Countries of the participants in the 2024 plenary meetings

Everyone participates as an individual

All communities have equal standing in the IETF processes

Tailored engagement programs for new participants, starting new work, policy makers and open source software communities

Flexible approaches to contribution

All IETF meetings are remote-only or hybrid

35 - 45%

of plenary meetings participants
that are remote

~40%

of working groups meet during the
year in remote-only sessions

WebRTC  

Same meeting participation tool
for on-site and remote

All key working group decisions
confirmed via email

I E T F[®]
Datatracker

All work in progress, final
specifications, and meeting
materials, recordings are
available free

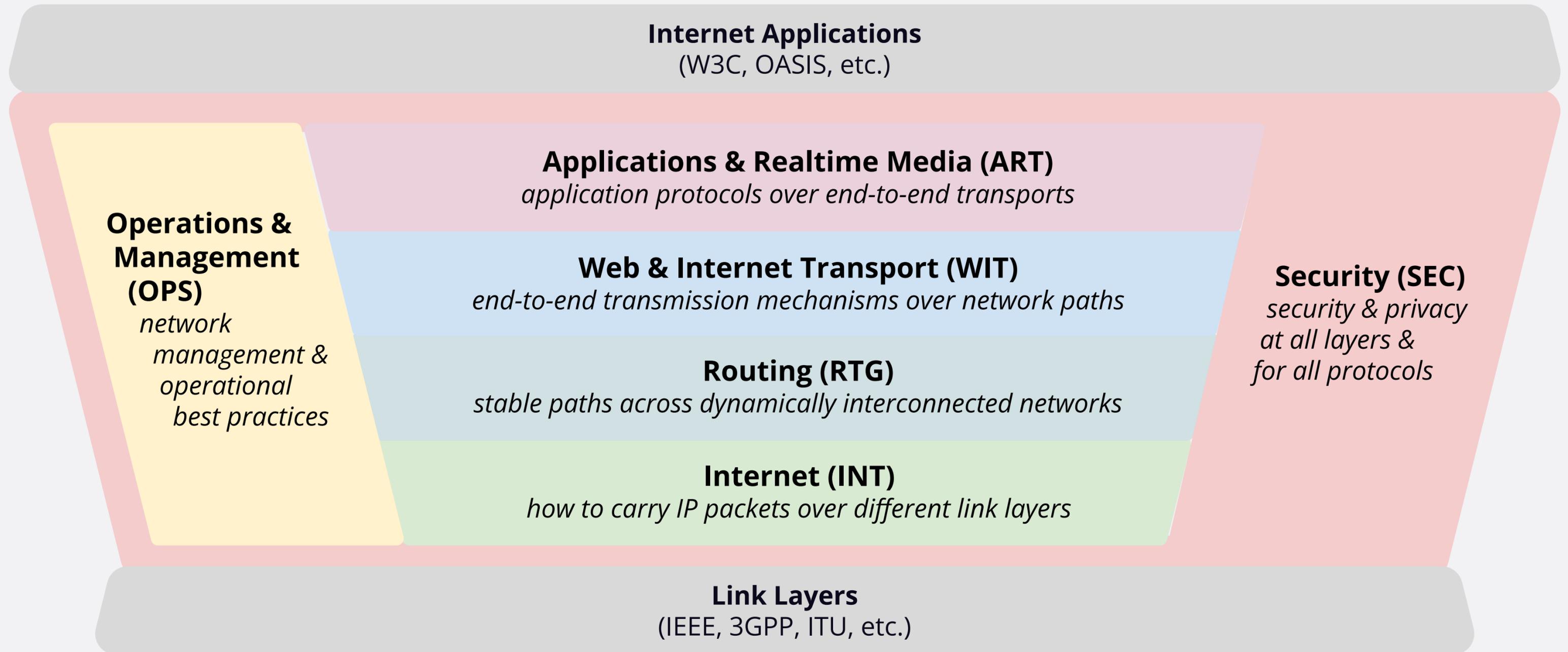
<https://datatracker.ietf.org>

IETF RFCs - Request for Comments

The “building blocks” of the Internet

- **Defining how the Internet works**
 - **DNS** for naming [RFC1034](#), [RFC1035](#)
 - **HTTP** for Web [RFC9110](#)
 - **SMTP** (and more) for e-mail [RFC5321](#)
 - **TLS** for encrypted connections [RFC8446](#)
 - **TCP** and **QUIC** for connectivity [RFC9293](#), [RFC9000](#)
 - **IP** for networking [RFC791](#), [RFC8200](#) (**IPv6**)
 - **BGP** for routing [RFC4171](#)
- **A document series that is**
 - **Free** and **publicly available**
 - Produced in a **fair, open process**
 - Published under a **comprehensive, mature IPR policy**
 - **Stable** over time
 - **Widely respected** and known
 - **Maintained** and **evolved** by an active global community that includes engineers, users, industry, civil society, and government actors

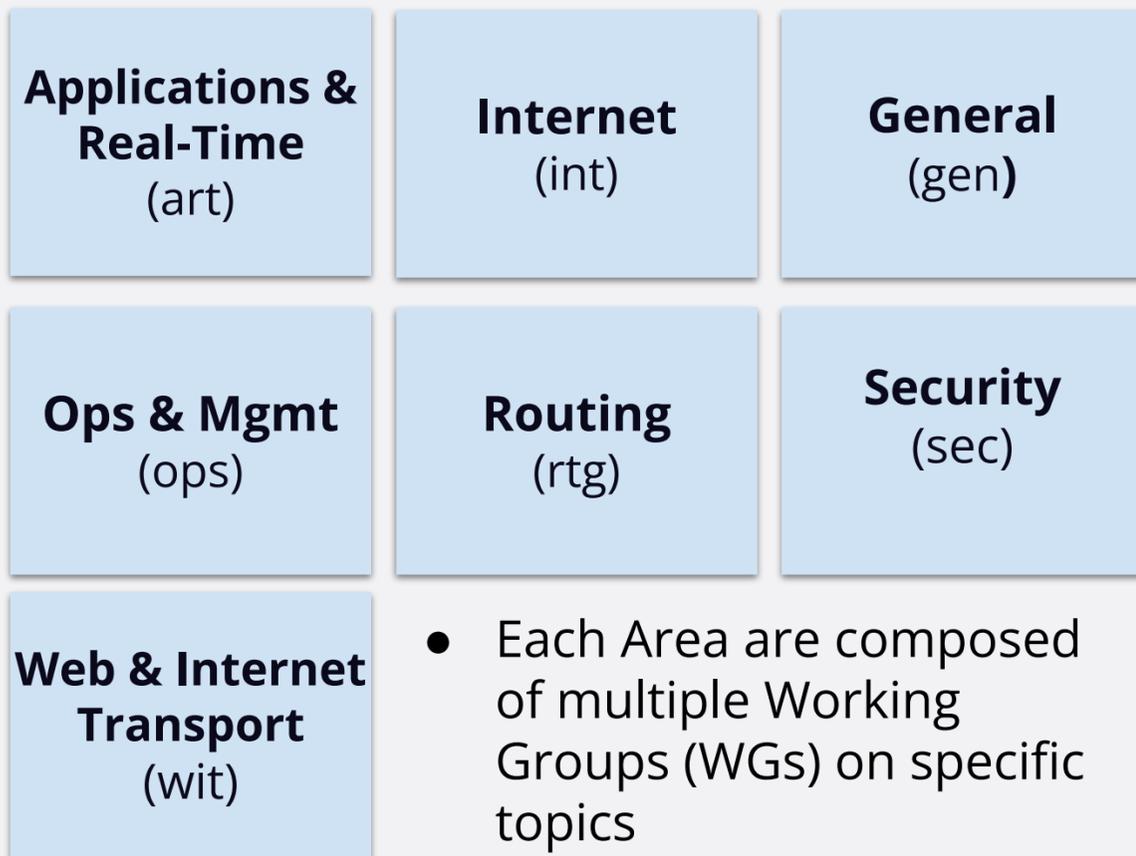
Areas of Work



Key Organizational Elements

Standards

IETF standards are organized into Areas



Architecture and Outreach

Internet Architecture Board (**IAB**) provides:

- Long-range technical direction for Internet development
- Pre-standardization workshops
- Liaison coordination
- Outreach

The **IETF Administration LLC** provides the corporate legal home of all the IETF activities

The **IETF Intellectual Property Management Corporation (IPMC)** holds and manages the rights to IETF contributions

Research

Internet Research Task Force (**IRTF**) conducts research on the evolution of the Internet protocols, applications, architecture and technology.

- Long-term exploration ahead of standardization activities
- Organized into ~16 active Research Groups (RGs)

Multistakeholder Model Characteristics



IAB

Internet Architecture Board

- The Internet Architecture Board provides **long-range technical direction** for Internet development, ensuring the Internet continues to grow and evolve as a platform for global communication and innovation.
 - Providing **architectural guidance and early technical foresight.**
- Responsibilities include
 - Architecture and Standards **Process Oversight** (including Appeal Handling)
 - **Liaison Coordination** including contact point and cooperation with ICANN, IANA, ITU-T, ISOC etc.
 - Active participation in **Internet Governance**
 - **Outreach**



Making the Internet work better

Internet Architecture Board

Recent IAB Statements



- [Revision of Regulation \(EU\) No 1025/2012, also called the 'EU Standardisation Regulation'](#)
- [WSIS+20 Stakeholder Consultations: Inputs to the Zero Draft from the IAB](#)
- [IAB Co-signed Open Letter: Bill C-2 Strong Borders Act](#)
- [IAB Response to the ICANN Public Comment on "Functional Model for Root Server System Governance"](#)
- [WSIS+20 Stakeholder Consultations: Inputs to the Elements Paper from the IAB](#)
- [IAB Co-signed Joint Letter in Response to Australian eSafety Proposed Industry Standards](#)
- [IAB Statement on Encryption and Mandatory Client-side Scanning of Content](#)
- [IAB co-signed an open letter on the EU's proposed eIDAS reform](#)
- [Risks of Attestation of Software and Hardware on the Open Internet](#)
- [European Commission's exploratory consultation on "The future of the electronic communications sector and its infrastructure"](#)



We believe in:
Rough consensus
and running code

David Clark, 1992



Interactions with ICANN

**David Lawrence, IETF
Liaison to the ICANN
Board**

IETF

Relationship with ICANN

- **ICANN** and the **IETF** were coupled from the start, with each creating work that the other depends on
- ICANN's original 1998 bylaws included the **Protocol Supporting Organization** (PSO), which included the IETF
- A Memorandum of Understanding established an IANA Liaison to the IETF in **March 2000**
- The **December 2002** bylaws update:
 - eliminated the PSO, and
 - created non-voting liaison seats on the ICANN Board, including for the IETF
- The IETF Liaison provides a channel to discuss issues that have both **technical** and **policy** implications
- **Technical community members** regularly participate in both organizations:
 - IETFers in the SSAC, RSSAC, at Tech Days and DNSSEC Workshops
 - ICANN technical staff as IETF document authors and research contributors

IETF Work

Selection of ICANN staff-authored RFCs

- [RFC8949 - "Concise Binary Object Representation \(CBOR\)"](#)
- [RFC8909 - "Registry Data Escrow Specification"](#)
- [RFC8914 - "Extended DNS Errors"](#)
- [RFC8806 - "Running a Root Server Local to a Resolver"](#)
- [RFC8748 - "Registry Fee Extension for the Extensible Provisioning Protocol \(EPP\)"](#)
- [RFC8499 - "DNS Terminology"](#)
- [RFC8484 - "DNS Queries over HTTPS \(DoH\)"](#)
- [RFC8145 - "Signaling Trust Anchor Knowledge in DNS Security Extensions \(DNSSEC\)"](#)
- [RFC8109 - "Initializing a DNS Resolver with Priming Queries"](#)
- [RFC7958 - "DNSSEC Trust Anchor Publication for the Root Zone"](#)

Relationship with ICANN

Liaisons and Appointments

- IETF Liaison to ICANN Board – *David Lawrence*
- Root Zone Evolution Review Committee (RZERC)
– *Willem Toorop*
- ICANN Nominating Committee (NomCom)
Delegate – *Pete Resnick*
- Technical Liaison Group (TLG) – *Warren Kumari, Petr Špaček*
- Root Server System (RSS) Governance Working Group (GWG) – *Geoff Huston, Jim Reid*
- Root Server System Advisory Committee (RSSAC) – *Daniel Migault*

IANA Function

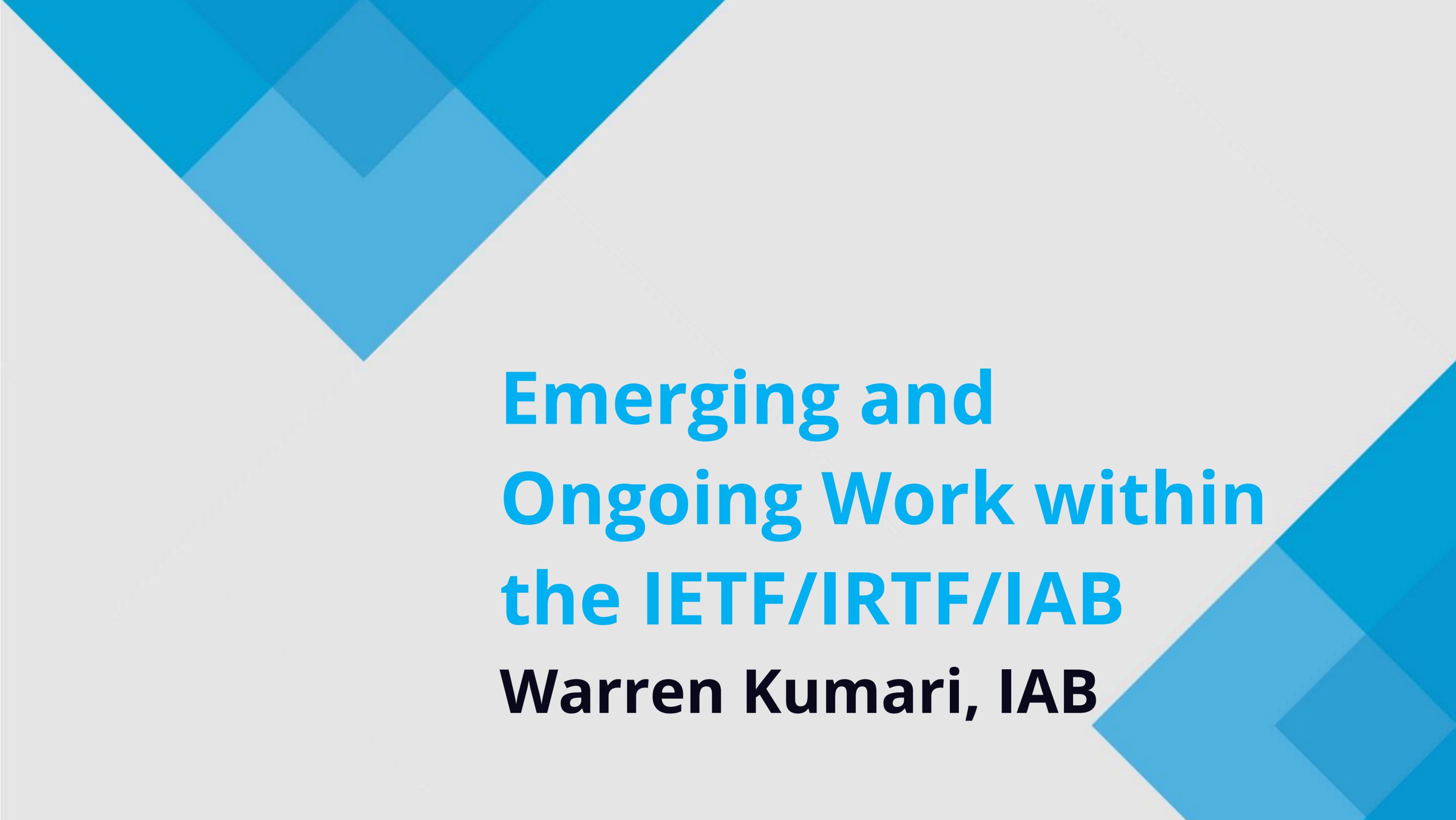
- *ICANN operates the IANA protocol registries for the IETF under IAB oversight.*
- *Many, many IETF standards need IANA updates*
- *A key component of avoiding collisions and confusion*

Several individuals have contributed to both the IETF and ICANN communities, strengthening coordination and mutual understanding.

- *Examples include: Wes Hardaker, Suzanne Woolf, Jim Galvin, Paul Hoffman, Patrik Fältström, Barry Leiba, Steve Crocker, Geoff Huston, John Klensin, Matt Larson, and many others.*

Relationship with ICANN

- Key areas for IETF / ICANN interaction:
 - Internationalized domain names
 - Special-purpose domains (.local, .onion, .internal, .home, .arpa, ...)
 - DNS security & operations
 - Registry/Registrar communications (EPP, RDAP,...)
 - IANA
- The IETF is not a policy-making body, but its technologies have policy implications.
- We welcome discussions with policy-making bodies, both informally and formally.
- Please use the IETF Liaison as a resource.
- We also welcome the GAC to contact the IAB for independent technical advice
 - at iab@iab.org



Emerging and Ongoing Work within the IETF/IRTF/IAB

Warren Kumari, IAB

IETF 125

March 14-20, Shenzhen

🏠 > [Meetings](#)

IETF 125 Shenzhen

14 Mar 2026 - 20 Mar 2026

IETF 125 starts Saturday 14 March and runs through Friday March.



** Fee waiver for Remote Participation are easily available...*



Making the Internet work better

IETF

New work

Newly formed Working Groups:

- [Secure Evidence and Attestation Transport](#) (SEAT)
- [Domain Connection](#) (DCONN)
- [Open Cloud Mesh](#) (OCM)
- [Web Bot Auth](#) (WEBBOTAUTH)
- [PKI, Logs, And Tree Signatures](#) (PLANTS)

In process of chartering:

- [Authenticated Transfer](#) (ATP)



IETF

New work

Birds of a Feather (BoFs) approved for IETF 125

- [Coordinating Agent To Agent List of efforts](#) (CATALIST)
 - An effort to coordinate the various initiatives to develop IETF work on AI agent-to-agent communications.
- [Operationalizing Network & Service abstractionNs](#) (ONSEN)
 - Enable operators to manage and automate service abstractions in a consistent manner based on inputs from the [IAB NEMOPS](#) workshop.

DNS Updates

- Recent [DELEG WG](#)
 - Currently, the DNS only provides very limited information about delegations. DELEG extends the DNS to provide more information, such as child server's support for DNS-over-TLS, Alias domains, etc.
- New group on Domain Connect
 - [DCONN](#) is an application-level protocol that enables Software Service Providers (e.g., hosting) to request configuration of required DNS records in their customers' zones in a DNS provider
- Extensions to EPP and Maintenance of RDAP (see [REGEXT](#))
- JSON/REST based RDAP-like protocol (see [RPP](#))
- Standardizing the Domain Connection Protocol ([DCONN](#))

Selected Work on AI

- [AI Preferences](#) (aipref)
 - Working on building blocks for the expression of preferences about how content is collected and processed for Artificial Intelligence (AI) model development, deployment, and use.
- [Web Bot Auth](#) (webbotauth)
 - To work on cryptographic identity for bots as non-browser traffic on the Web grows and traditional techniques such as User-Agent, IP addresses become less effective.
- For the AI datacenter
 - Energy efficiency metrics ([GREEN](#)), Routing protocols (e.g., [RIFT](#), [LSVR](#)), Improved identity of workload ([WIMSE](#))
- Engaged on the ITU AI Standards Exchange

IAB Workshops

Dec-2025: IAB Workshop on IP Address Geolocation (Virtual)

- Initial report [posted](#)
- Recordings: [Day 1, Day 2, Day 3](#)
- IP is a weak and overloaded signal for geolocation
- Many operational issues - Anycast, Satellite, overlays...
- Need for signaling intent, certainty and consent
- Scope for incremental updates for IP geo but cannot meet high-assurance or privacy-sensitive needs

Oct-2025: IAB/W3C Workshop on Age-Based Restrictions on Content Access

- Initial draft report [posted](#)
- No single one-size-fits-all technical solution: different use cases imply different trade-offs, and network-layer solutions alone are insufficient.
- Strong privacy and trust concerns
- These mechanisms can have long-term impacts on Internet architecture



Engaging with the IETF & ISOC

Sally Wentworth, ISOC

11 March 2026

Internet Society and the IETF

Sally Wentworth,
President and CEO, Internet Society and Internet Society Foundation



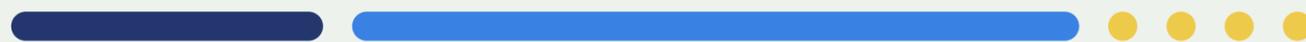
Internet Society and the Internet Engineering Task Force

- Since 1992, the Internet Society has supported the IETF through annual financial contributions and as its corporate home.
- In 2018, IETF LLC was set up as the IETF's corporate home. The Internet Society continues to fund the IETF through an annual funding agreement.
- The Internet Society appoints the IETF's Nominating Committee chair.
- The IETF plays a role in the Internet Society's governance by appointing a set of trustees to our board.
- The Internet Architecture Board is a technical advisory body to the Internet Society.
- The Internet Society promotes the development and use of open standards, and through the IETF Policymaker Program shows policymakers how open Internet standards are developed



Internet Society's IETF Policymaker Program

- organized at IETF meetings, speakers are drawn from the IETF community
- brings policymakers from around the world to engage with the IETF, IAB and IRTF on Internet policy issues
- offers training to policymakers on the Internet, Internet technologies, and how Internet standards are developed
- enables policymakers to meet with various leaders within the IETF, IAB, and IRTF
- helps policymakers understand the implications of policy decisions on the Internet and make better policies
- opens the door for future conversations and information sharing between policymakers and the technical community



The background features decorative blue geometric shapes in the corners. In the top-left and bottom-right corners, there are overlapping triangles and squares in various shades of blue, creating a modern, abstract design. The rest of the background is a light, neutral color.

Individuals from Governments at the IETF

The background features a light gray gradient with decorative blue geometric shapes in the corners. These shapes consist of overlapping squares and triangles in various shades of blue, creating a modern, abstract design.

Discussion

「thank you.」

Backup – Will not present

GAC & the Internet Engineering Task Force

Agenda

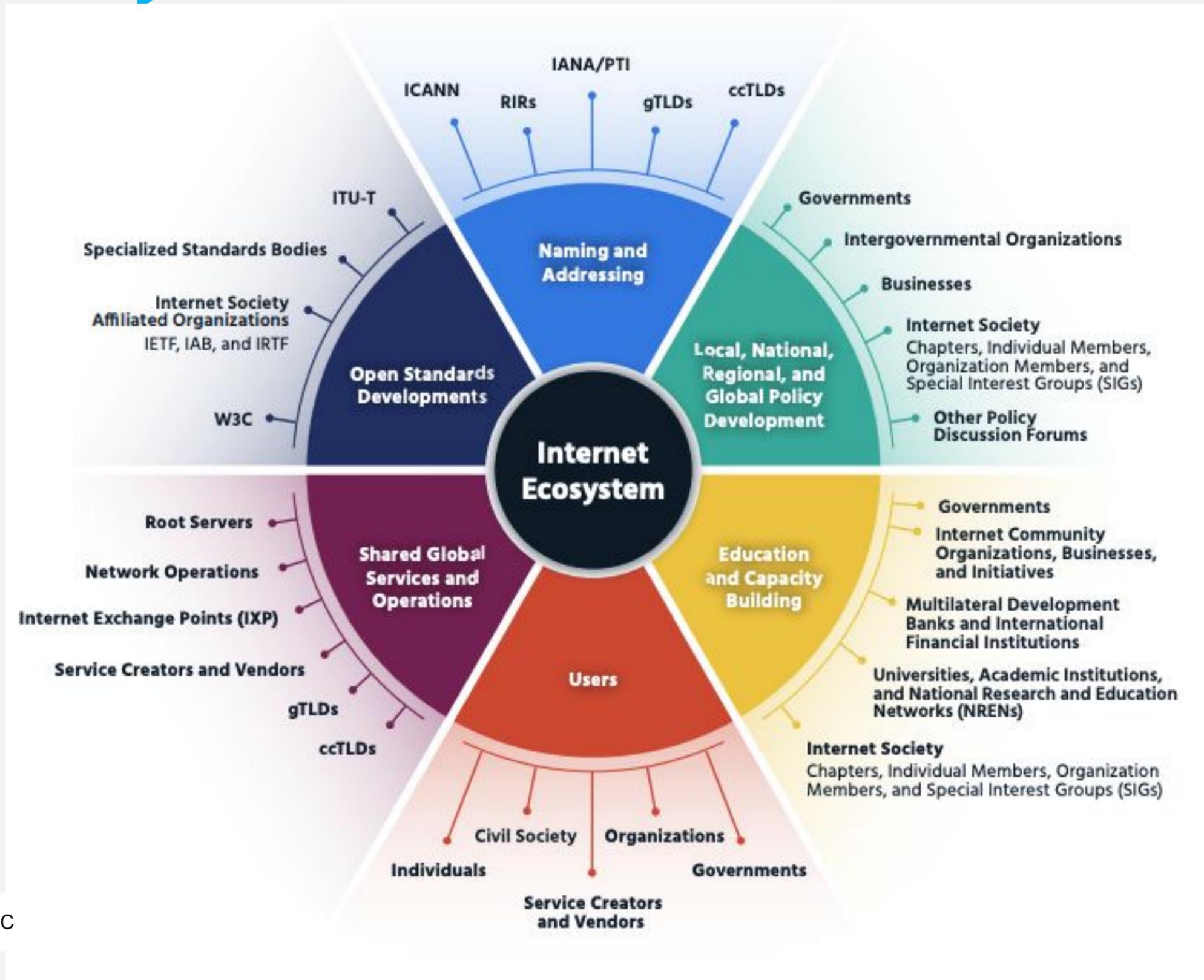
- Overview of the IETF's Activities
- The IETF within the Broader Internet Governance Ecosystem, including its interaction with ICANN and other relevant organizations
- The IETF's Multistakeholder Model, including how it differs from ICANN's approach and the practical implications of those differences
- Emerging and Ongoing Work within the IETF/IRTF that may be of interest to the ICANN community
- Engaging with the IETF: ISOC's Role and the Policy Makers Program at the IETF Meeting in Vienna

IETF

Open Internet Standards

- Open standards are key to allow devices, services, and applications to **interoperate across a interconnected, heterogeneous, and global network of networks**
 - All IETF standards are available **online at no charge**, thus facilitating adoption of them.
 - The IETF determines its success by **technical quality and voluntary deployment**
- The IETF process is **open, transparent**, and relies on a **bottom-up consensus-building**
 - **Everybody may participate**, no membership
 - All work like Internet-Drafts and email archives are **publicly available**
 - Decisions are based on **rough consensus**
- **Openness** in both the technical standards itself as well as the standards development process is the basis for **innovation** in and on top of the Internet and **key to its success**.

Internet Ecosystem



Document Types

Internet-Draft (I-D)

- Active **working documents**
 - *Not finalized and not stable*
- **Anyone can submit an I-D**
 - *draft-yourname-...*
- Only **some I-Ds are Working Group documents**
 - *draft-ietf-wgname-...*

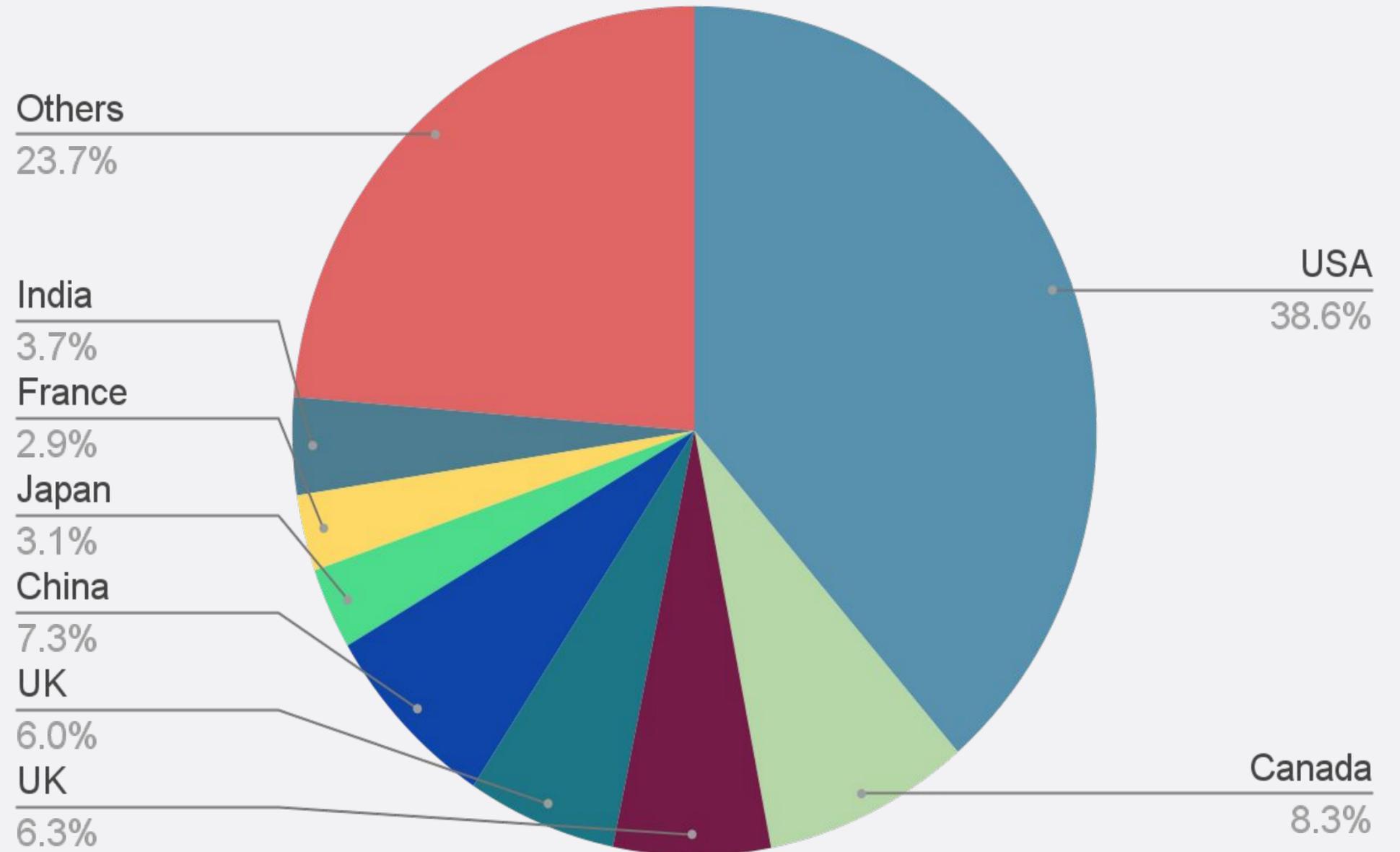
RFC (Request For Comments)

- **Archival** publication series
 - RFCs never change once published
- **Not all RFCs are standards**
 - Also: Informational, Experimental
- **Not all RFCs are IETF documents**
 - Also Internet Architecture Board (IAB), Internet Research Task Force (IRTF), others

IETF 124 Montreal, November 2025

1791 registered participants

- **953** on-site (63% of total)
- **838** remote (37% of total)
- **21.6%** first-time participants
- **547** IETF Hackathon participants
 - **444** onsite
 - **103** remote



IETF Snapshot 2024

<https://www.ietf.org/blog/ietf-snapshot-2024>

Participants

7,831 participants in all IETF activities (mailing list posters, meeting participants, I-D authors)*

4,662 IETF Meeting participant registrations (48% remote)

244 fully online interim meetings

Documents

2,977 Internet-Drafts (I-D) submitted†

2,888 I-D authors

173 RFCs published

Messages

110,943 sent to IETF mailing lists

Individuals

2,717 posting to IETF mailing lists

Working groups

126 active Working Groups

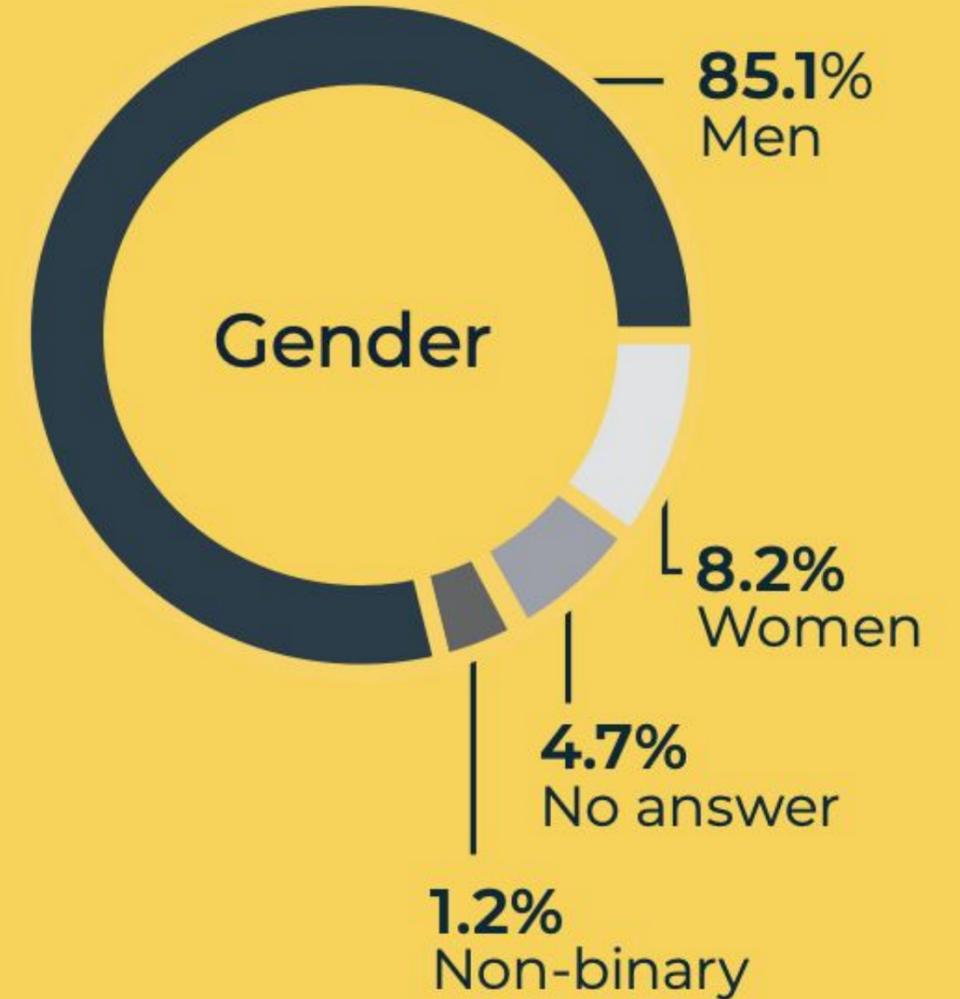
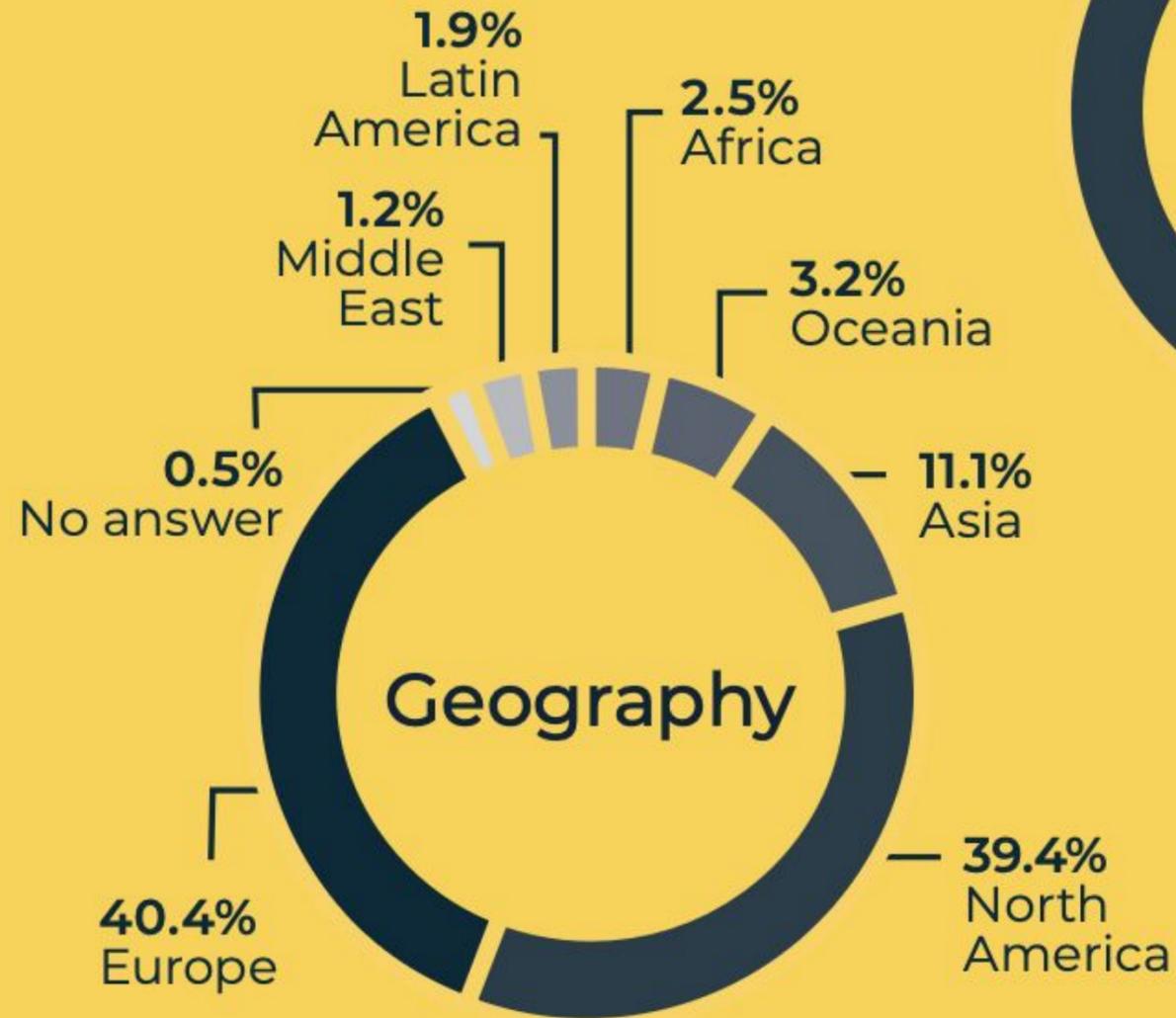
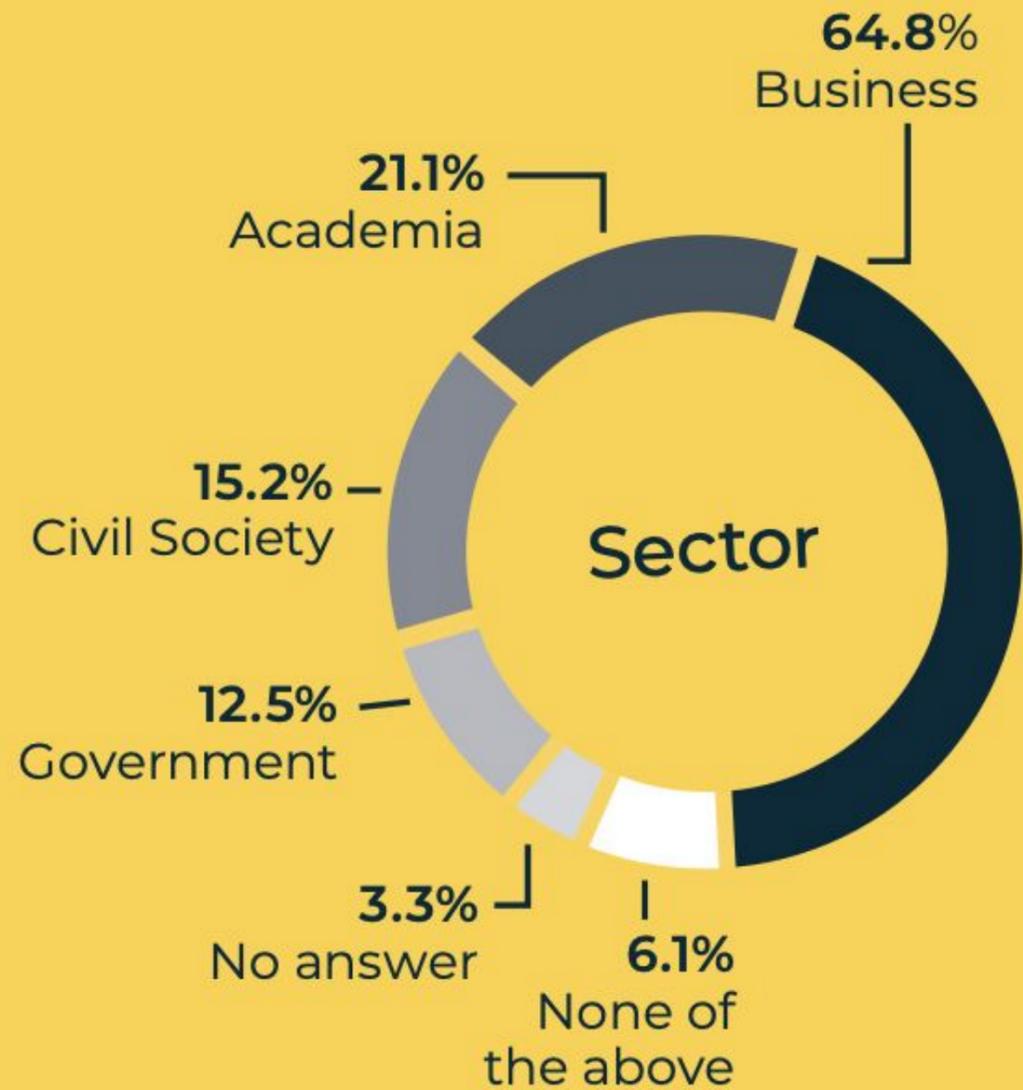
11 new Working Groups chartered during 2024

13 Working Groups concluded during 2024

* based on unique email address used to register for IETF events, submit I-Ds, and post to IETF mailing lists

† Unique I-D names not counting different versions of the same I-D submitted to the IETF I-D archives

The IETF Community



Source: 2024 IETF Community Survey

Work Areas and Key Protocols

Internet Applications
(W3C, OASIS, etc.)

Operations & Management (OPS)

network
management &
operational
best practices

YANG
NETCONF
SNMP
RADIUS
DNSOPS

Applications & Realtime Media (ART)

application protocols over end-to-end transports, voice & video, SIP, RTP, email

Web and Internet Transport (WIT)

end-to-end transmission mechanisms over network paths, HTTP
TCP, UDP, QUIC, congestion control

Routing (RTG)

stable paths across dynamically interconnected networks
BGP, OSPF, IS-IS, MPLS, RSVP, VPNs, SFC, multicast

Internet (INT)

how to carry IP packets over different link layers
IPv6, IPv4, DHCP, NTP, mobility, multihoming

Security (SEC)

security & privacy
at all layers &
for all protocols

TLS
IPsec
PGP
S/MIME
PKIX
cryptography

Link Layers
(IEEE, 3GPP, etc.)

All the Working Groups

The IETF loves acronyms

ART		GEN	INT	OPS	RTG		SEC		WIT
asap asdf calext cbor cellar dconn diem dispatch dkim dmarc escrit emailcore jmap mailmaint mediaman mimi mlcodec ocm regex	rpp satp sipcore sml stir vcon wimse	gendispatch ianabis modpod procon	6lo 6man add bpf deleg dhc dmm dnssd drip dtn intarea ntp schc snac tiptop	anima bmwg dnsop green grow iotops ippm ivy mboned mops netconf netmod nmop opsawg sidrops srv6ops v6ops	bess bfd bier cats ccamp detnet idr lisp lsr lsvr manet mpls nvo3 pce pim rift roll	rtgwg savnet spring teas tvr	ace acme cose dance dult emu hpke ipsecme jose keytrans kitten lake lamps mls oauth ohai openpgp ppm pquip	privacypass radext rats scim scitt seat secdispatch spice sshm suit teep tls uta	aipref avtcore ccwg cdni core happy httpapi httpbis masque moq nfsv4 quic scone tcpm tsvwg webbotauth webtrans wish

Hackathon

Where running code shines

- Held on the **weekend** before each IETF meeting, the IETF Hackathon brings the community together.
- A collaborative space to implement standards and test **interoperability** across implementations.
- **Open to all** – anyone can propose a project, anyone can join and contribute.
- Hackathon **demos** showcase progress and often shape discussions during the IETF week.
- A chance to **learn** new technologies, **connect** with global experts, and make real **contributions** to Internet standards – an outstanding opportunity for students and researchers.

- <https://www.ietf.org/how/runningcode/hackathons/>



Internet Architecture Board Activities



Architectural Review

Ensure architectural coherence across protocol and layers. Guidance to maintain a stable, interoperable Internet.

Future Technical Directions

Pre-standardization IAB workshops and technical programs that identify emerging issues and help bring new work into the IETF.

Principled Architectural Stewardship

Provide long-term architectural direction for the Internet and ensure that changes in protocols, naming, routing, and security mechanisms evolve coherently and sustainably by providing architectural guidance and early technical foresight.

IAB does not operate from a grand-architecture blueprint, but guided by fundamental design principles for Internet.

Governance & Process Oversight

Standards process oversight, appeals, appointments/confirmations, and responsibility relating to IETF protocol parameters managed by IANA.

Coordination & Outreach

External liaisons (including ICANN and other SDOs), advisory body to ISOC, participate in IG discussions, outreach.



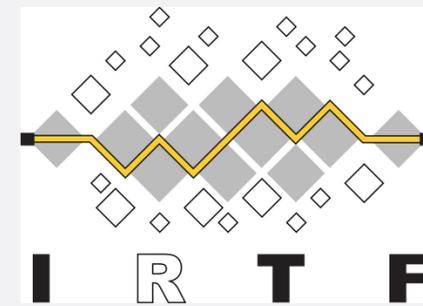
Internet Architecture Board Activities



- It is chartered both as a committee of the IETF and as an advisory body of the Internet Society (ISOC).
- Focus is on **long-term direction** ensuring Internet continue to thrive
- It provides **architectural oversight** into IETF technical activities as well as the **IRTF**.
- It acts as a source of advice and guidance concerning technical, architectural and procedural matters pertaining to the Internet and its enabling technologies.
- Admin Support Work
 - Appointments & Confirmations
 - Standard process oversight & appeals
 - Responsible for IETF protocol parameters by IANA
 - Coordination with ISOC
 - Outreach
- Technical Work
 - Helping bring new work to the IETF
 - IAB Workshops
 - Technical Programs
 - RFCs

Internet Research Task Force

Long-Term Research & Future Internet Exploration



What IRTF does?	Why it Matters?
<ul style="list-style-type: none">● Explores long-horizon Internet research● Works through stable Research Groups● Deeper investigation before standardization● Publishes research, experimental RFCs● Connects research with engineering & standards● Applied Networking Research Workshop (ANRW)● Applied Networking Research Prize (ANRP)	<ul style="list-style-type: none">● Some topics with policy relevance<ul style="list-style-type: none">○ Decentralization○ Connecting the unconnected○ Human Rights Protocol considerations● Supports future researchers<ul style="list-style-type: none">○ Travel Grants for PhD students, early early-career researchers, and under-represented groups● Strengthens long-term Internet viability

IETF & RFCs

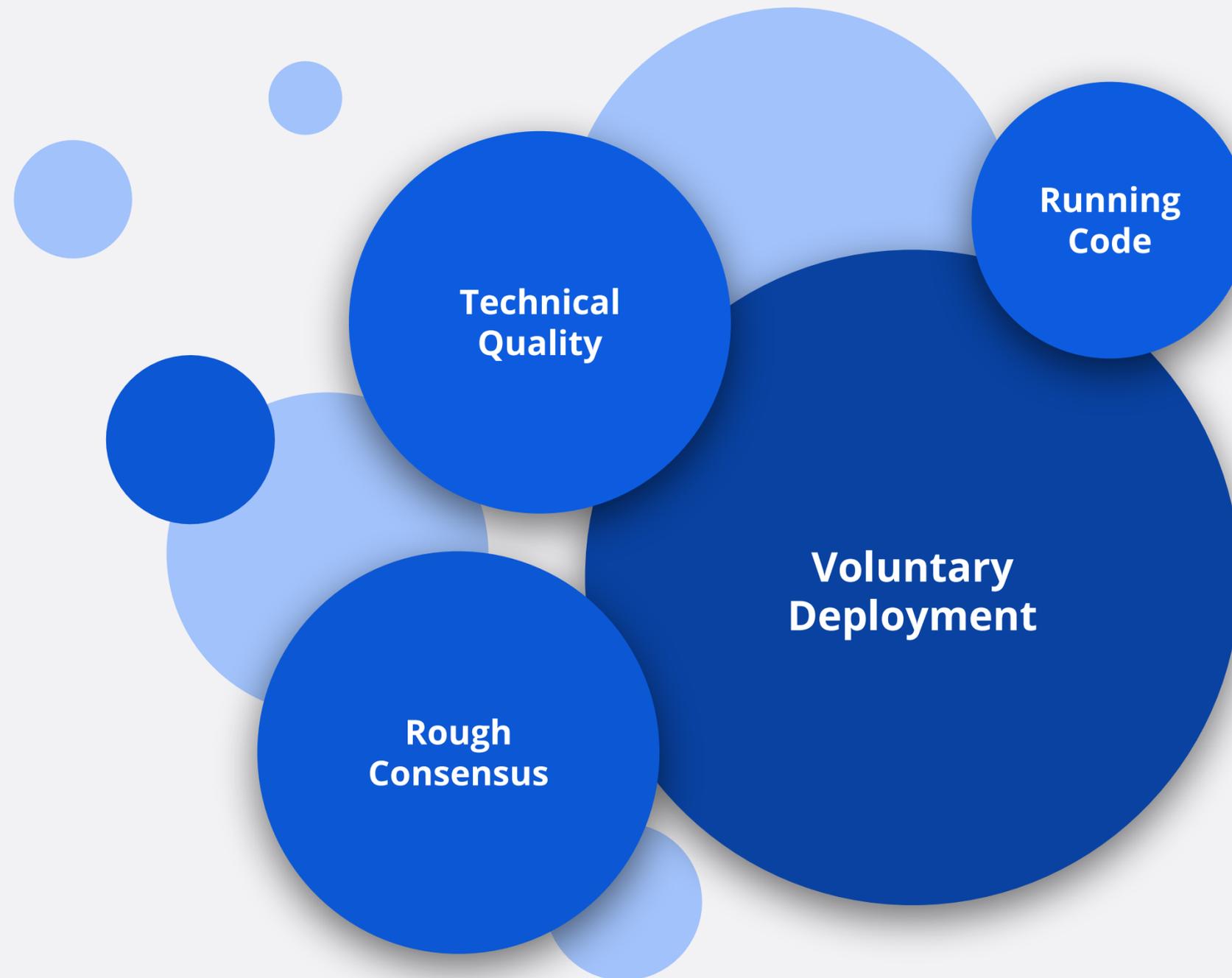
Some History

IETF	RFC Series
<ul style="list-style-type: none">● Formed in 1986<ul style="list-style-type: none">○ by the then <i>Internet Activities Board</i>● First IETF meeting was attended by 21 US federal government-funded researchers on 16 January 1986<ul style="list-style-type: none">○ some of them still participate!	<ul style="list-style-type: none">● RFC 1 published in 1969● Now approaching RFC 10000.● For initial 28 years, managed and edited by the Internet pioneer <i>Jon Postel</i>.● Now RFC Editor and RFC Production Center!

Rough Consensus

- Achieved when all issues are addressed, but not necessarily accommodated
- Lack of disagreement is more important than agreement
- Humming [and polling] should be the start of a conversation, not the end
- Technical reasoning matter, not +1 counting emails
- Reference: [RFC7282](#) "On consensus and Humming in the IETF"

What makes an IETF standard successful?



IETF & ICANN

Why this matter to this community?



The stability of the Internet depends on open technical standards.



IETF develops protocols that underpin global interoperability.



IETF and ICANN serve different roles but are key partners in the Internet Ecosystem.

Bangkok
15-21 March 2022



SCAN ME!
to use the
on-site tool

hosted by D... Camp



<https://www.youtube.com/watch?v=UiYD0cSnBI>

IAB Workshops

Past

- (Dec-2024) [IAB Workshop on Next Era of Network Management Operations](#)
- (Sep-2024) [IAB Workshop on AI-CONTROL](#)
- (Jan-2024) [IAB Workshop on Barriers to Internet Access of Services \(BIAS\)](#)

<https://www.iab.org/workshops/>

Selection of DNS-focused activities in the IETF

DNS Protocol	Registry / Registrar / Service Provider Protocols
<ul style="list-style-type: none">• Operations (e.g., DNS maintenance, Multi-Signer, LocalRoot)• Security (e.g., cryptographic algorithms for DNSSEC) (see DNSOP)• Resolver discovery (see ADD)• Service Discovery (e.g., dnssd / mDNS, Bonjour, .local) (see DNSSD)• Adding information for improved delegations (see DELEG)	<ul style="list-style-type: none">• Extension to EPP (see REGEXT)• Maintenance of RDAP (see REGEXT)• JSON/REST based RDAP-like protocol (see RPP)• Standardizing the Domain Connection Protocol (DCONN)

DNS Updates

- Operations (e.g., DNS maintenance, Multi-Signer, LocalRoot)
- Recent [DELEG WG](#)
 - Currently, the DNS only provides very limited information about delegations. DELEG extends the DNS to provide more information, such as child server's support for DNS-over-TLS, Alias domains, etc.
- New group on Domain Connect
 - [DCONN](#) is an application-level protocol that enables Software Service Providers (e.g., hosting) to request configuration of required DNS records in their customers' zones in a DNS provider
- Discussions on dividing DNS work into operations (DNSOP) and maintenance/protocol work
- Resolver discovery (see [ADD](#))
- Service Discovery (e.g., dnssd / mDNS, Bonjour, .local) (see [DNSSD](#))
- [...]