

# The Internet: Communities, Collaboration, and Concepts

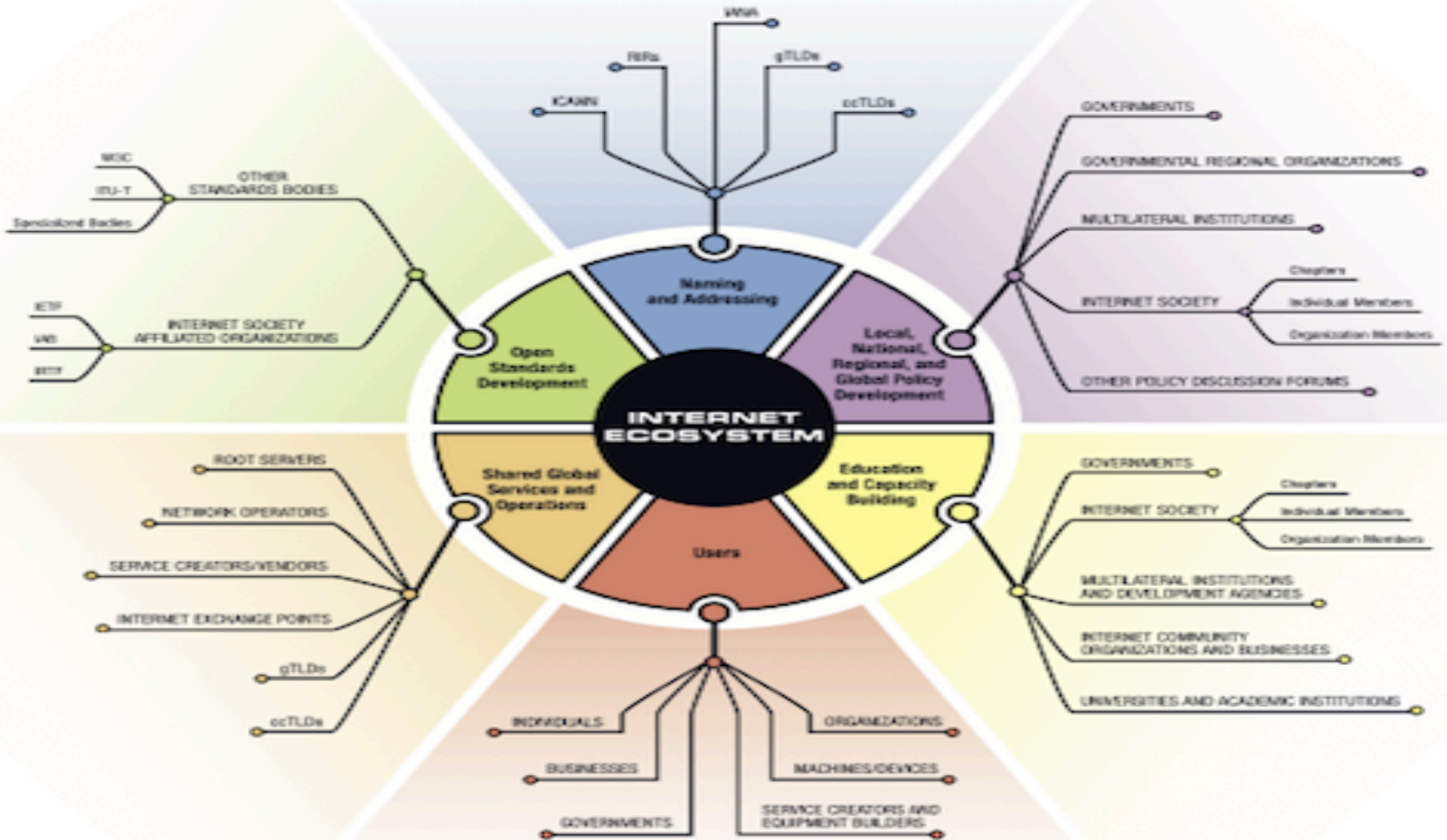
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The Internet Society

# Organisations and Communities of the Internet



# Organisations and Communities of the Internet

**There is no definitive list of organisations and there are a lot of participants!**

## Some of the significant entities include:

- Internet Engineering Task Force (IETF)
- Internet Society (ISOC)
- Internet Architecture Board (IAB)
- Internet Assigned Numbers Authority (IANA)
- Regional Internet Registries (RIRs)
- Internet Corporation for Assigned Names and Numbers (ICANN)
- Regional Network Operators Groups (\*nogs)
- W3C, ITU, and many more!



**I E T F**<sup>®</sup>



**I A B**



Internet Assigned Numbers Authority



**ICANN**

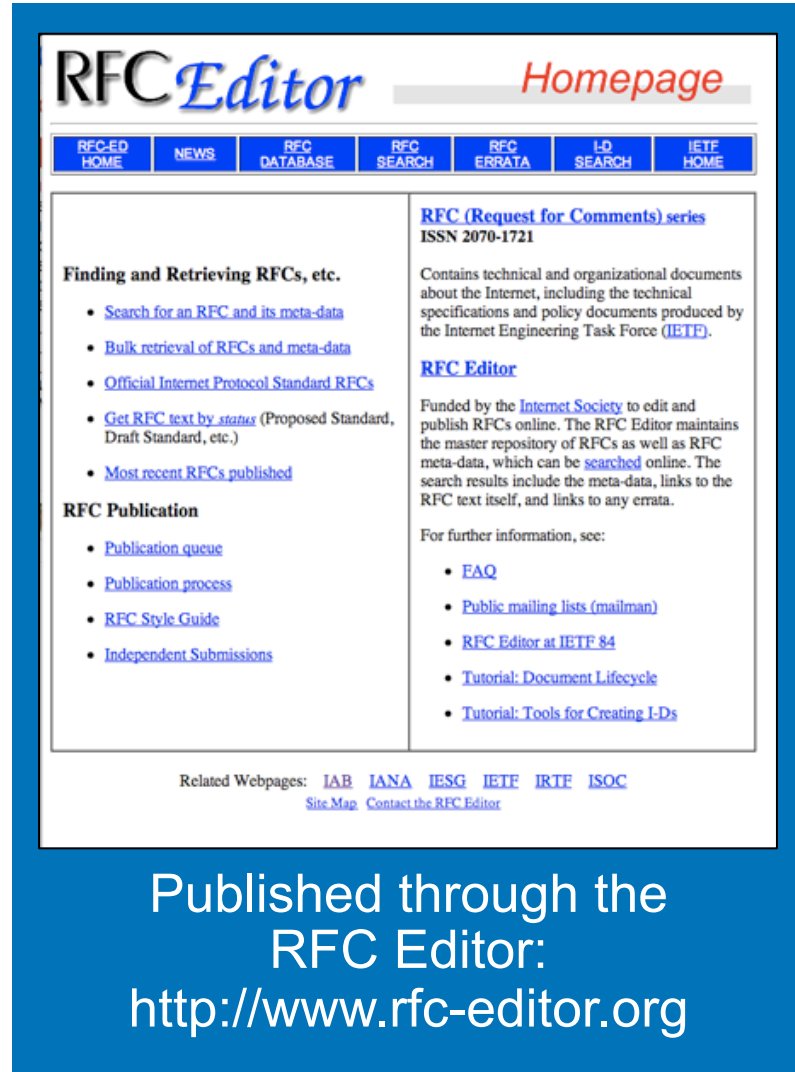
# The Internet Engineering Task Force (IETF)



# The IETF

The IETF was founded in 1986 and produces Internet Standards and related technical documents, including:

- Request for Comments (RFCs)
- Best Common Practices (BCPs)
- Internet Drafts (IDs)



The screenshot shows the homepage of the RFC Editor. At the top, it says "RFC Editor" in a stylized font and "Homepage" in red. Below this is a navigation bar with buttons for "RFC-ED HOME", "NEWS", "RFC DATABASE", "RFC SEARCH", "RFC ERRATA", "ID SEARCH", and "IETF HOME". The main content area is divided into two columns. The left column has sections for "Finding and Retrieving RFCs, etc." with links for searching, bulk retrieval, official RFCs, getting RFC text by status, and most recent RFCs. It also has an "RFC Publication" section with links for publication queue, process, style guide, and independent submissions. The right column features the "RFC (Request for Comments) series" with ISSN 2070-1721, a description of the series, and the "RFC Editor" section which explains its funding by the Internet Society and provides links for further information like FAQ, mailing lists, and tutorials. At the bottom, there are links to related webpages like IAB, IANA, IESG, IETF, IRTF, and ISOC, along with a site map and contact information.

Published through the  
RFC Editor:  
<http://www.rfc-editor.org>

# The IETF

**Email Lists**

Much of the daily work of the IETF is conducted on electronic mailing lists. There are four categories of mailing lists:

- **Discussion Lists:** a general IETF discussion list and discussion lists for each IETF working group
- **Announcement Lists:** an IETF announcement list, an Internet-Drafts (I-D) announcement list, an IPR announcement list and an IESG Agenda Distribution list
- **Working Group Lists:** discussion lists for each IETF working group
- **Non-Working Group Lists:** including lists hosted @ietf.org and elsewhere that may be of interest to IETF participants. Addition of a new list or modification of an existing entry both require the approval of an Area Director.

Please note that mailing lists @ietf.org are for conducting official IETF business only and must be approved by an IETF Area Director, the IETF Chair, or the IAB Chair. Statements addressed to these lists are considered IETF contributions and are subject to the IETF Intellectual Property Rights rules as defined in [RFC 5338](#), "Rights Contributors Provide to the IETF Trust," and [RFC 3979](#), "Intellectual Property Rights in IETF Technology."

To request that a new mailing list be created @ietf.org, please see "[Requesting a Mailing List](#)."

**Archives**

MinorArc archives are maintained for each list and can be found on the [ietfinfo](#) page for a particular list. In addition, searchable archives are maintained for the i-announce, ietf-announce, ipr-announce lists and can be found on the [Announcement Lists](#) page. Searchable archives for the IETF discussion list may be found on the [Discussion Lists](#) page.

**Note Well**

Any submission to the IETF intended by the Contributor for publication as all or part of an IETF Internet Draft or RFC and any statement made within the context of an IETF activity is considered an "IETF Contribution." Such statements include oral statements in IETF sessions, as well as written and electronic communications made at any time or place, which are addressed to:

- The IETF plenary session
- The IESG, or any member thereof on behalf of the IESG
- Any IETF mailing list, including the IETF list itself, any working group or design team list, or any other list functioning under IETF auspices
- Any IETF working group or portion thereof
- Any Block of a Face-to-Face (B2F) session
- The IAB or any member thereof on behalf of the IAB
- The RFC Editor or the Internet-Drafts function

All IETF Contributions are subject to the rules of [RFC 5338](#) and [RFC 3979](#) (updated by [RFC 4879](#)).

Statements made outside of an IETF session, mailing list or other function, that are clearly not intended to be input to an IETF activity, group or function, are not IETF Contributions in the context of this notice.

Please consult [RFC 5338](#) and [RFC 3979](#) for details.

A participant in any IETF activity is deemed to accept all IETF rules of process, as documented in Best Current Practices RFCs and IESG Statements.

A participant in any IETF activity acknowledges that written, audio and video records of meetings may be made and may be available to the public.

Lots of work takes place through mailing lists and other forms of communication.

- It is an open and participatory process.
- Meetings take place three times a year around the globe.
- Remote participation is encouraged as some IETF contributors have never physically attended a meeting.

# IETF Scope

Protocols: “above the wire and below the application.”

How to deliver the data across a network and how to deliver the data to the application.

## Examples of Protocols managed within the IETF

IP	ENUM
TCP	HTTP
SMTP	SSL
DNS	BGP
SIP	etc.

# It's Only Good If People Use It

- There is no formal recognition of IETF standards.
- The process works because people choose to adopt these standards.
- The goal is to set global standards in protocol development.

**Example:**

My email server knows how to talk to your email server... not knowing (or caring) about what server application you chose to install.



# The Internet Society (ISOC)

# The Internet is for Everyone



The Internet Society was founded in 1992 as a nonprofit charitable organisation.

Our sole focus is promoting the Internet.

## Four Strategic Objectives:

- Foster an open, innovative, and trusted Internet worldwide
- Advance policies and strategies that strengthen the Internet's growth and evolution
- Enable a vibrant organisation and vital global community to advance the Internet's future
- Empower people through unencumbered Internet use

# The Internet Society

*Foster an open, innovative, and trusted Internet worldwide*

**ISOC is committed to advancing the underlying open and interoperable architecture of the Internet, and its distributed and collaborative means of management and development, as these principles are essential for fostering a stable, open, and trusted Internet upon which innovation can flourish.**

- Accelerate the deployment of Key Internet technologies and IETF standards
- Advance solution that enhance privacy and identity while safeguarding user choice and global internet interoperability
- Advance implementation of solutions that enhance Internet infrastructure and data security, while working to preserve the open, global Internet

# The Internet Society

*Advance policies and strategies that strengthen the Internet's growth and evolution*

**The Internet Society aims to educate and inform policy makers, civil society, industry, and others so they join us in advancing Internet policies and strategies that uphold the critical principles of openness, user-centricity, and stakeholder participation.**

- Achieve a ubiquitous, reliable, and sustainable Internet in developing countries that is on par with the rest of the world
- Spearhead advocacy for the fundamental principles of the Internet Model and Internet Ecosystem
- Advance the understanding of the value and benefits of open Internet standards to key Internet influencers and increase engagement in open standards processes

# The Internet Society

*Enable a vibrant organisation and vital global community to advance the Internet's future*

**The Internet Society strives to further engage members, chapters, and the public to maximize our collective impact, as well as to help a new generation of Internet leaders, contributors, and innovators emerge.**

- Build a global cadre of Internet leaders who can skillfully advance complex issues at the intersection of policy, technology, and business
- Provide the world a trusted independent source for Internet information and thought leadership
- Bolster the effectiveness of the Internet Society as an organization

# The Internet Society

*Empower people through unencumbered Internet use*

**ISOC aims to advance the access and use of the Internet on an open, non-discriminatory basis, and empower individuals and communities, including the vulnerable and underserved, to maximize the transformative opportunities the Internet enables.**

- Advance the right of people across the world to access and use the Internet on an open, non-discriminatory basis, respecting the rule of law
- Empower individuals and communities to maximize the transformative opportunities the Internet enables

# The Internet Architecture Board (IAB)





In 1984 the IAB started as a replacement for the Internet Configuration Control Board (ICCB) and a committee of the IETF.

Initially the IAB had oversight for many taskforces, but eventually focused on two: IETF and IRTF (Internet Research Task Force).

### **Responsibilities include:**

- Confirmation of IETF chair and IESG Area Directors
- Architectural Oversight
- Standards Process Oversight and Appeal
- RFC Series and the IANA
- External Liaison between IETF and other entities
- Advice to ISOC
- Selection of IRTF Chair



# The Internet Corporation for Assigned Names and Numbers (ICANN)



# ICANN



Established in 1998 as a global nonprofit organisation to manage functions that were previously performed by U.S. government contractors.

Currently operates the IANA function and is responsible for coordinating the management of the Internet domain name system (DNS).

## **Develops policies and procedures for DNS related activities:**

- New Top Level Domains
- Accreditation of domain name registrars

# The Internet Assigned Naming Authority (IANA)



Internet Assigned Numbers Authority

# IANA



Internet Assigned Numbers Authority



Jon Postel,  
keeper of the  
famous  
unique identifiers  
“black book”

IANA came from the need to start recording unique identifiers on the Internet, a function operated by the University of Southern California under contract with the U.S. government until 1998 when it was moved to ICANN.

IANA works with the IAB and IETF as the repository of unique identifiers as described in RFCs and other documents and distributes blocks of IP addresses to the RIRs.

- Manages the DNS root zone file
- Manages and operates various core DNS zones, such as .INT and parts of .ARPA

## Regional Internet Registries (RIRs)

<b>APNIC:</b>	Asia and Pacific
<b>AfriNIC:</b>	Africa
<b>RIPE NCC:</b>	Europe, Middle East and parts of Central Asia
<b>LACNIC:</b>	Latin America and parts of Caribbean
<b>ARIN:</b>	US, Canada and parts of Caribbean

# RIRs



The RIRs are responsible, within their assigned regions, for allocating globally unique IP addresses (IPv4 and IPv6) and autonomous system numbers (ASNs).

Allocation policies are determined in-region through open policy development processes.

Number Resource Organisation (NRO) is comprised of the five RIRs and coordinates global allocation policies.

# Network Operators Groups (\*NOGs)

PacNOG

AfNOG

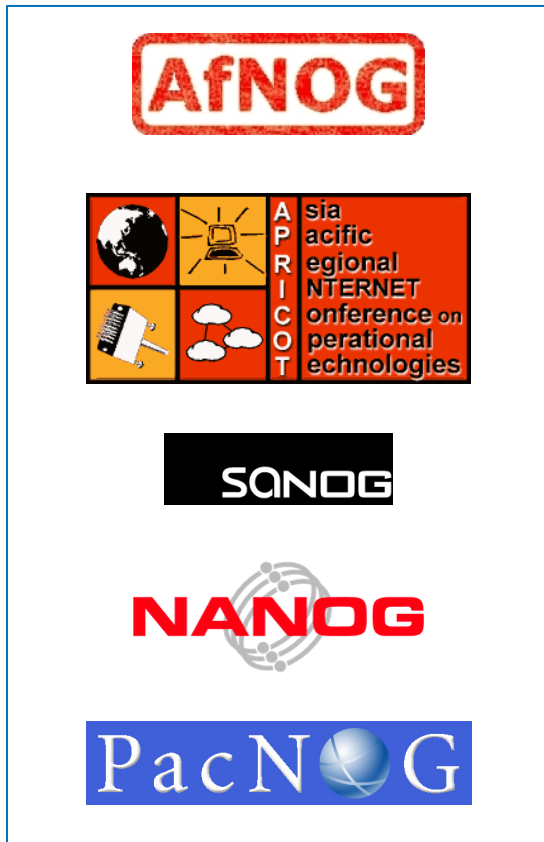
SANOG

APRICOT

NANOG

WALC

# \*NOGs



- \*NOGs focus on information exchange between ISPs and network operators within a region.
- They work to deliver key information and experiences to those who need it – the network operator.
- They act as a human networking opportunity so people can meet and interact with their peers and other companies. Critical for when things go bad on the network!



# So... who's in charge??

**Information sharing  
is key to a successful  
Internet!**

- There is no “central” Internet authority.
- Each organisation or community tends to specialise in a particular topic of interest or responsibility.
- For instance, the network operator groups tend to focus primarily on every day operational issues while the IETF focuses on protocol development and standards.
- Overlap of interests are very common.

# What does that mean to me?

## Participate!

Your ideas and dialog really do make a difference in developing a globally inter-operable Internet.

There are many new technologies coming out that really need participation from around the world (DNSSEC, IPv6, IDNs, etc.).

Work to understand the strengths and limitations of current Internet standards.

## Wait...there's more!

- Participate globally! (can be remotely)
- Participate locally!
- There are many opportunities to become involved!