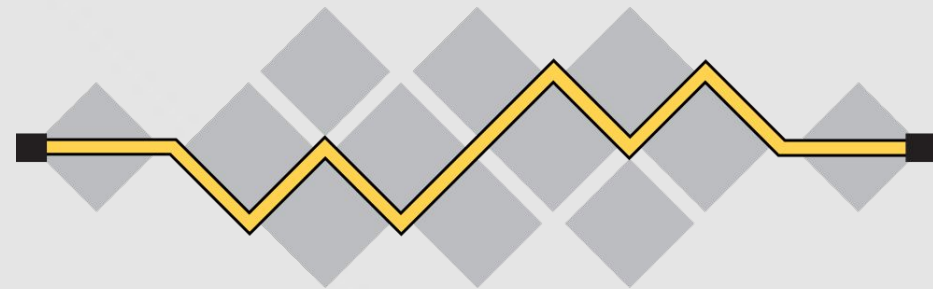


IETF New Participant Program

Session 5: Advanced topics



I E T F®

Making the Internet work better

Welcome to the IETF New Participant Program!

Program agenda

1. Introduction to the IETF
 - About; Participants; Structure; Funding; Governance; Policies
2. Participating in the IETF
 - Mailing lists; Datatracker; IETF Meetings
3. Standards development
 - Areas; Working Groups; WG process; IESG process; Bringing new work
4. IETF Hackathon
 - Running code
5. Advanced topics (**this session**)
 - Protocol registries; Patents; Disputes and Appeals; IAB; IRTF; NomCom
6. Internet-Drafts and RFCs
 - Formats; Statuses; Streams; Structure; Content guidelines; Tools; Submitting; AUTH48
7. Long term participants (two sessions: Panel and Meet and Greet)
 - Their path in the IETF; What worked, what didn't; Meeting people; Hot topics; Advice



Your presenter for this session

Leslie Daigle



Leslie Daigle has been actively participating in IETF work since the mid-1990's.

She has chaired 5 working groups, been appointed to, and chaired, the Internet Architecture Board as well as the IAOC.

She currently chairs the Media Operations (MOPS) WG.

IETF Note Well

This is a reminder of IETF policies in effect on various topics such as patents or code of conduct. It is only meant to point you in the right direction. Exceptions may apply. The IETF's patent policy and the definition of an IETF "contribution" and "participation" are set forth in BCP 79; please read it carefully.

As a reminder:

- By participating in the IETF, you agree to follow IETF processes and policies.
- If you are aware that any IETF contribution is covered by patents or patent applications that are owned or controlled by you or your sponsor, you must disclose that fact, or not participate in the discussion.
- As a participant in or attendee to any IETF activity you acknowledge that written, audio, video, and photographic records of meetings may be made public.
- Personal information that you provide to IETF will be handled in accordance with the IETF Privacy Statement.
- As a participant or attendee, you agree to work respectfully with other participants; please contact the ombudsteam (<https://www.ietf.org/contact/ombudsteam/>) if you have questions or concerns about this.

Definitive information is in the documents listed below and other IETF BCPs. For advice, please talk to WG chairs or ADs:

- [BCP 9](#) (Internet Standards Process)
- [BCP 25](#) (Working Group processes)
- [BCP 25](#) (Anti-Harassment Procedures)
- [BCP 54](#) (Code of Conduct)
- [BCP 78](#) (Copyright)
- [BCP 79](#) (Patents, Participation)
- <https://www.ietf.org/privacy-policy/>(Privacy Policy)

Protocol registries

Public registries at www.iana.org

Internet Assigned Numbers Authority (IANA)

Internet protocols often use **codes and numbers** as parameters. These parameters are recorded in **registries operated by IANA**, following **rules** specified by the IETF.

Excerpt from the Media Types registry:

Name	Template	Reference
1d-interleaved-parityfec	application/1d-interleaved-parityfec	[RFC6015]
3gpdash-qoe-report+xml	application/3gpdash-qoe-report+xml	[_3GPP][Ozgur_Oyman]
3gppHal+json	application/3gppHal+json	[_3GPP][Ulrich_Wiehe]
3gppHalForms+json	application/3gppHalForms+json	[_3GPP][Ulrich_Wiehe]
3gpp-ims+xml	application/3gpp-ims+xml	[_3GPP][John_M_Meredith]
A2L	application/A2L	[ASAM][Thomas_Thomsen]
ace-groupcomm+cbor	application/ace-groupcomm+cbor	[RFC9594]
ace-trl+cbor	application/ace-trl+cbor	[RFC-ietf-ace-revoked-token-notification-09]

All RFCs must have an '**IANA Considerations**' section that provides instructions for IANA. These may include creating/closing a registry and setting the registration policy for the registry.



Registration policies

Set by the RFC that defines the registry

1. **Private Use.** Private or local use only. Conflicts possible. Not recorded.
2. **Experimental Use.** Similar to private use.
3. **Hierarchical Allocation.** Control over part of a namespace. e.g. DNS and URNs
4. **First Come First Served.** Anyone can register, no substantive review.
5. **Expert Review.** Reviewed by IESG appointed 'designated experts'.
6. **Specification Required.** Same as Expert Review with the addition that the values and meanings must be documented in an accessible, published specification.
7. **RFC Required.** New values or removals must be specified in an RFC.
8. **IETF Review.** Must be specified in an IETF stream RFC (i.e. not IRTF or IAB RFC)
9. **Standards Action.** Must be specific in a STD RFC.
10. **IESG Approval.** IESG decides what documentation/process is required on an individual basis.



Patents and similar IPR

Intellectual Property Rights (IPR)

BCP 79 Intellectual Property Rights in IETF

Technology

During the standards process any IETF contribution covered by patents or patent applications owned by a participant or their sponsor must be disclosed, or they must refrain from participating.

BCP 79 explains how IPR claims may impact the standards process:

In general, IETF working groups prefer technologies with no known IPR claims or, for technologies with claims against them, an offer of royalty-free licensing.

However, to solve a given technical problem, IETF working groups have the discretion to adopt a technology as to which IPR claims have been made if they feel that this technology is superior enough to alternatives with fewer IPR claims or free licensing to outweigh the potential cost of the licenses.

IPR Disclosures

All on Datatracker

Datatracker has functionality for people to submit an IPR disclosure and list/search disclosures.

Specific IPR disclosures

Search

Date	ID	Title
2025-02-18	6646	Huawei Technologies Co.,Ltd's Statement about IPR related to draft-li-mpls-enhanced-vpn-vtn-id
2025-02-10	6641	ORANGE's Statement about IPR related to draft-ietf-opsawg-prefix-lengths Updates ID #6622.
2025-02-10	6640	Huawei Technologies Co.,Ltd's Statement about IPR related to draft-ietf-6man-icmpv6-reflection and draft-ietf-ippm-stamp-ext-hdr
2025-02-04	6631	Juniper Networks, Inc.'s Statement about IPR related to draft-li-mpls-mna-nrp-selector Updates ID #6628.
2025-01-31	6628	Juniper Networks, Inc.'s Statement about IPR related to draft-li-mpls-mna-nrp-selector Updated by ID #6631.
2025-01-22	6622	ORANGE's Statement about IPR related to draft-gasser-opsawg-prefix-lengths Updated by ID #6641.
2025-01-21	6621	Antoine Delignat-Lavaud's Statement about IPR related to draft-birkholz-cose-cometre-ccf-profile Updates ID #6609.
2025-01-20	6620	ZTE Corporation's Statement about IPR related to draft-xz-pim-flex-algo
2025-01-06	6609	Antoine Delignat-Lavaud's Statement about IPR related to draft-ietf-cose-merkle-tree-proofs and draft-birkholz-cose-receipts-ccf-profile Updated by ID #6621.
2024-12-19	6595	Telecom Italia SpA's Statement about IPR related to RFC 9506 Updates ID #5028.
2024-12-19	6594	Telecom Italia SpA's Statement about IPR related to RFC 8957 Updates ID #2705.

IPR Search

IPR search criteria...

Document search

Internet-Draft name

RFC number

Words in document title

Working group

IPR search

Name of patent owner/applicant

Words in IPR disclosure title

Text in patent information

This search string must contain at least three characters, including at least one digit, and include punctuation marks. For best results, please enter the entire string, or as much of it as possible.

Elements of an IPR Disclosure

Specific Disclosures relate to a specific

I. Patent Holder/Applicant ("Patent Holder")

Holder legal name Huawei Technologies Co.,Ltd

II. Patent Holder's Contact for License Application

Holder contact name Director of licensing

Holder contact email licensing@huawei.com

Holder contact info

III. IETF Document or Other Contribution to Which this IPR Disclosure Relates

Internet-Draft: [draft-li-mpls-enhanced-vpn-vtn-id](#) ("Carrying NRP related Information in MPLS Packets")

Revisions: 05

IV. Disclosure of Patent Information

i.e., patents or patent applications required to be disclosed by [RFC 8179](#)

A. For granted patents or published pending patent applications, please provide the following information:

Patent, Serial, Publication, Registration, or Application/File number(s) Number: CN2020110226495
Inventor: Jie Dong; Zhibo Hu; Yun Chen; Yongjian Hu
Title: PACKET PROCESSING METHOD AND NETWORK DEVICE
Date: 2020-09-25

B. Does this disclosure relate to an unpublished pending patent application?:

Has patent pending No

V. Licensing Declaration

The Patent Holder states that its position with respect to licensing any patent claims contained in the patent(s) or patent application(s) disclosed above that would necessarily be infringed by implementation of the technology required by the relevant IETF specification ("Necessary Patent Claims"), for the purpose of implementing such specification, is as follows(select one licensing declaration option only):

Licensing Reasonable and Non-Discriminatory License to All Implementers with Possible Royalty/Fee

Licensing information, comments, notes, or (No information submitted)

URL for further information

Note: The individual submitting this template represents and warrants that he or she is authorized by the Patent Holder to agree to the above-selected licensing declaration.

Who holds the IPR

What contribution(s) this relates to.
Generally one or more I-Ds and/or RFCs.

The relevant patents (or other IPR).

Licensing for this IPR:

- No License Required
- Royalty-Free, Reasonable and Non-Discriminatory
- Reasonable and Non-Discriminatory with Possible Royalty/Fee
- To be Provided Later (implies a willingness for a), b), or c) above)
- Unwilling to Commit to the Provisions of a), b), or c) Above
- Custom declaration

Things to be aware of with IPR disclosures

A regular cause of WG awkwardness

The IETF only checks IPR disclosures if they appear to be 'objectively false'.

- No check is made to see if the patents exist
- No check is made to see if the patents are relevant
- No check is made to see if there is prior art

Despite precautions, sometimes patents appear after a standard has been established and there is little the IETF can do about that.

The IPR disclosure rules do not apply to those who do not participate in the IETF and so the list may be incomplete.

The IETF advises people to seek their own legal advice if they may be affected by an IPR disclosure.

Disputes and appeals

Process disputes and technical disputes

Not uncommon

The IETF process has multiple decision points:

- **Group consensus** decisions where one or more people are responsible for “calling” the consensus (e.g., WG Chairs)
- **Individual decisions**
- **Group ballot** decisions

These decisions are regularly disputed for two broad reasons:

- **Process error:** e.g., “my views have not been adequately considered”
- **Technical error:** e.g., “the WG decision creates a serious problem”

The IETF has a documented process for **managing these disputes**



Dispute resolution process

Steps to be followed in order

1. Ask the **WG Chairs to reconsider**. They may go back to the WG to check if they have called the WG consensus correctly and/or to address a technical point raised.
2. Ask the **responsible AD(s) to intervene**. Will generally attempt to resolve the dispute informally.

———— Disputes outside of a WG decision start on the next step ————

3. Formal **appeal to the IESG**. Fixed process and timescale. All appeals to the IESG are published, as are the responses.
4. Formal **appeal to the IAB**. Fixed process and timescale. All appeals to the IAB are published, as are the responses.
5. Under limited circumstances, a **process appeal** can be made to the **Internet Society Board of Trustees**.

Appeals

Rare but an important part of the process

IESG Appeals

Date ↕	Appeal ↕
2025-02-20	Appeal Re: Complaint regarding threat (D. J. Bernstein) Appeal - 2025-02-20
2024-12-15	Appeal regarding threat on the TLS Mailing List (D. J. Bernstein) Appeal - 2024-12-15 Response to the Appeal regarding threat on the TLS Mailing List - 2025-01-09
2024-11-06	Appeal to the IESG re WGLC of draft-ietf-lsr-multi-tlv) (Aijun Wang, 2024-11-06) Appeal - 2024-11-06 IESG Appeal Response: WGLC of draft-ietf-lsr-multi-tlv - 2025-01-23
2023-08-15	Appeal: IESG Statement on Guidance on In-Person and Online Interim Meetings (John Klensin, 2023-08-15) Appeal - 2023-08-15 Response - 2023-08-24
2023-07-19	Appeal of current Guidance on in-Person and Online meetings (Ted Hardie, Alan Frindell, 2023-07-19) Appeal - 2023-07-19 Response - 2023-08-15

IAB Appeals

Date ↕	Appeal ↕
2023-10-23	Appeal to IAB of IESG appeal decision on Meeting Guidance (John Klensin) Appeal - 2023-10-23 Addendum to appeal - 2023-10-26 IAB Response to John Klensin's 2023-10-23/25 appeal - 2023-12-19
2020-07-31	IAB appeal for arpa assignment (Timothy McSweeney) Appeal - 2020-07-31 Response - 2020-08-26
2019-01-31	An appeal to make the procedure related to Independent Submission Stream more transparent (Shyam Bandyopadhyay) Appeal - 2019-01-31 Response - 2019-03-06
2015-06-22	Appeal to the IAB concerning the IESG response to his appeal concerning the IESG approval of the "draft-ietf-ianaplan-icg-response" (JFC Morfin) Appeal - 2015-06-22 Response - 2015-07-08
2013-07-08	Appeal to the IAB irt. RFC 6852 (JFC Morfin) Appeal - 2013-07-08 Response - 2013-07-17



IAB

Internet Architecture Board (IAB)

From 1986 to 1992 “Internet Activities Board”

Long history and its role has changed over the years. Currently chartered (RFC 2850) as both a **committee of the IETF** and an **advisory body of the Internet Society**.

Role:

- **Architectural oversight.**
 - Work includes: Technical programs; Workshops; BOF evaluation.
- **Confirmation of appointments** to the IESG.
- **Appoints** IRTF Chair, Independent Submissions Editor, and many others
- **Liaison coordination.** Formal liaison relationships with other SDOs. Informal outreach.
- Standards process oversight and **appeal**.



Making the Internet work better

IAB active and recent work

Programs:

- **EDM**: Protocol evolution, deployability, and long-term maintainability.
- **EIMPACT** : Environmental impacts and sustainability of Internet technology.

Workshops (each is reported in a resulting RFC):

- **NEMOPS** : Next Era of Network Management Operations (Dec 2024)
- **AI-CONTROL** : Practical opt-out mechanisms for AI (Sep 2024)
- **BIAS** : Barriers to Internet Access of Services (Jan 2024)

RFCs (a curated selection):

- RFC 9614 "Partitioning as an Architecture for Privacy"
- RFC 9413 "Maintaining Robust Protocols"
- RFC 8890 "The Internet is for End Users"



Making the Internet work better

IRTF

Internet Research Task Force (IRTF)

Parallel organization to the IETF

Focuses on longer-term research issues related to the Internet.

Organized with 16 Research Groups:

CFRG Crypto Forum	COINRG Computation in the Network	DINRG Decentralization of the Internet	GAIA Global Access to the Internet for All
HRPC Human Right Protocol Considerations	ICCRG Internet Congestion Control	ICNRG Information-Centric Networking	MAPRG Measurement and Analysis for Protocols
NMRG Network Management	PANRG Path Aware Networking	PEARG Privacy Enhancements and Assessments	QIRG Quantum Internet
RASPRG Research and Analysis of Standard-Setting Processes	SUSTAIN Sustainability and the Internet	T2TRG Thing-to-Thing	UFMRG Usable Formal Methods

Internet Research Task Force (IRTF)

Roles and rules

Headed by the IRTF Chair (about to be Dirk Kutscher) - appointed by the IAB as the IRTF is an activity of the IAB. IRSG is made up of the RG Chairs.

Operates similarly to the IETF with some key differences:

- RGs have a much broader, research-focused scope than IETF WGs
 - no deliverables or milestones
 - expected to be much longer lived
- Can only publish Informational and Experimental RFCs, not standards
- No requirement for RGs to come to consensus on one approach - may publish multiple competing proposals
- Supplementary code of conduct covering academic integrity, research ethics and more.

Internet Research Task Force (IRTF)

Recent RFCs (a curated list)

RFC 9620 Guidelines for Human Rights Protocol and Architecture Considerations

*September 2024, Informational, product of **HRPCRG***

RFC 9583 Application Scenarios for the Quantum Internet

*June 2024, Informational, product of **QIRG***

RFC 9556 Internet of Things (IoT) Edge Challenges and Functions

*April 2024, Informational, product of **T2TRG***

RFC 9507 Information-Centric Networking (ICN) Traceroute Protocol Specification

*March 2024, Experimental, product of **ICNRG***

RFC 9496 The ristretto255 and decaf448 Groups

*December 2023, Informational, product of **CFRG***



Making the Internet work better

Nominating Committee

IETF Nominating Committee (NomCom)

Role and structure

The IETF NomCom interviews and selects people to be appointed as: Area Directors; IAB members; IETF LLC board members; IETF Trustees.

- **Chair** (non-voting), appointed by Internet Society CEO
- **Previous chair** (non-voting).
- **10 Members** (voting), selected by random selection from eligible volunteers.
 - Must have attended at least 3 of last 5 meetings (two other rarer paths)
 - No two from the same company
 - RFC 3797 "Publicly Verifiable Nominations Committee (NomCom) Random Selection"
- **5 Liaisons** (non-voting), one each from IAB, IESG, ISOC, IETF LLC, IETF Trust



IETF Nominating Committee (NomCom) Process (huge amount of work for the volunteers)

Every year a new NomCom is selected.

- May/June: NomCom Chair appointed after open call for candidates.
- May/June/July: Call for volunteers and volunteer selection
- August/September: Call for nominations
- October: Call for feedback on nominees
- October/November/December: Interviews with nominees
- December/January: Selections sent to approval bodies for confirmation.
 - Confirmation bodies can reject individual selections if they choose
- December/January/February: Appointments confirmed and announced

New appointments are seated at first IETF meeting of the year (March).



Power of the community

The IETF — Volunteer Built and Driven

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

Participating in a WG discussion is volunteering your expertise to help achieve that mission.

When the IETF itself needs updating or restructuring to better support achieving the mission, volunteers do the work of proposing, and consensus is sought to agree on updates.



Making the Internet work better

Questions?

Thank you for attending this session

**Please fill out the post-session survey that will be
emailed to you**

