

## About the Internet Architecture Board

The IAB convenes workshops of specialists, initiates and executes specific work programs, and writes documents that lead to comprehensive technical analyses of matters of interest. While its work may influence the industry broadly, the IAB does not operate from a grand-architecture blueprint of, or vision for, the Internet. Rather, the IAB's efforts are guided by fundamental design principles—the Internet's building blocks and their interactions—that make the global open Internet what it is. The IAB also helps connect different fields of expertise when this is needed to understand the full situation affecting the evolution of the Internet. For instance technology, policy and other considerations often impact each other.

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## Internet Architecture Board (IAB)

### Description:

The IAB is comprised of 13 members who serve as individuals, and not as representatives of any company, agency, or other organization. The IAB is chartered both as a committee of the IETF and an advisory body of the Internet Society. Further details about the IAB are documented in RFC 2850.

### Stakeholder(s):

IETF

### Internet Society

#### IAB Members :

*The IAB is composed of twelve members selected by the IETF Nominations Committee, the IETF Chair (also selected by the IETF Nominations Committee), and several ex-officio and liaison positions.*

#### Jari Arkko :

*Ericsson — Jari Arkko is an Expert on Internet Architecture with Ericsson Research in Jorvas, Finland. At the IETF, he has served six years as one of the Internet Area Directors in the Internet Engineering Steering Group (IESG). He has published 32 RFCs, including specifications for Mobile IPv6, EAP-AKA, Diameter, SEND, and various IPv6 related documents. He has previously served as a chair of three IETF working groups, and has created and terminated over a dozen of working groups at the IETF in his Area Director role. Jari also serves as a chair of the Technical Advisory Board for the IP Smart Objects Alliance (IPSO) and works in a number of research projects at Ericsson. In the past, Jari has worked in the implementation of routers, VPN software, testing tools, modem banks, cellular network nodes, AAA systems, compilers, and AI systems. He received his Licentiate's degree from Helsinki University of Technology in 1996. Jari's main interests in the Internet include architecture, IPv6, small implementations, the Internet of Things, social media, Internet governance, and cutting through hype that often surrounds some aspects of our technology. He likes to build and use the technology that he works with. For instance, he moved to an IPv6-only network in 2010 and builds smart home networks as a hobby. He frequently communicates with his laundry on Facebook.*

#### Alissa Cooper :

*Cisco – IETF Chair — Alissa Cooper is a Fellow at Cisco Systems. She is currently serving as IETF Chair. Previously, she served three years as an IETF Applications and Real-Time (ART) area director and three years on the Internet Architecture Board (IAB). She also served as the chair of the IANA Stewardship Coordination Group (ICG). At Cisco she was responsible for driving privacy and policy strategy within the company's portfolio of real-time collaboration products before being appointed as IETF Chair. Prior to joining Cisco, Alissa*

*served as the Chief Computer Scientist at the Center for Democracy and Technology, where she was a leading public interest advocate and technologist on issues related to privacy, net neutrality, and technical standards. Alissa holds a PhD from the Oxford Internet Institute and MS and BS degrees in computer science from Stanford University.*

#### Stephen Farrell :

*Trinity College Dublin — Stephen Farrell is a research fellow in the School of Computer Science and Statistics at Trinity College Dublin where he teaches and researches on security and delay/disruption-tolerant networking (DTN), and in 2006 co-authored the first book on the latter topic. He is a co-founder of Tolerant Networks Limited, a TCD campus company. Tolerant Networks are currently funded by OTF to implement the draft ESNI specification in the DEfo project. Stephen's IETF participation is supported in part by the EU-funded standict.eu scheme and sponsorship from IEDR (the .ie ccTLD). In 2017, Stephen escaped the IESG after a fun 6 years but was recaptured by the IAB in 2019.*

#### Wes Hardaker :

*USC/ISI – IAB Liaison to the IESG — Wes Hardaker is a Senior Computer Scientist at the University of Southern California's Information Sciences Institute (USC/ISI), where he conducts research on Internet security and is the DNS Root Server operational manager for B-Root. He has been active in the within IETF, across multiple companies, since 1998 and regularly participates in ICANN.*

#### Ted Hardie :

*Google – IAB Chair — Ted Hardie currently works for Google, putting networks, protocols, and people together in new and optimal ways. Ted first worked in the Internet field in 1988 when he joined the operations staff of the SRI NIC. He later became the technical lead for the NASA NIC, part of the NASA Science Internet project. After leaving NASA, he joined Equinix as its initial Director of Engineering before taking on the role of Director of Research and Development. He was an early-stage executive at Nomium before joining Qualcomm R & D. While he was Qualcomm's Director of Internet and Wireless, he served the Internet community as a member of the Internet Architecture Board and as an Applications Area Director for the IETF. He served as Trustee of the Internet Society from*

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*Stakeholders (continued)*

2007 to 2010, and as its Treasurer in 2008 to 2010, while Managing Director of Panasonic's Silicon Valley Wireless Research Lab. Dr. Hardie received his bachelor's degree from Yale and his doctorate from Stanford. He has been a Fulbright Fellow and a Yale-China Fellow, both in Hong Kong.

**Christian Huitema :**

*Independent* — After working a long time in the software industry, and participating to the development of the Internet since the 80's, Christian Huitema retired from Microsoft in September 2016. He is not actually retired, doing consulting work through his company, "Private Octopus Inc", working in the IETF on privacy issues and the QUIC protocol.

**Zhenbin Li :**

*Huawei* — Zhenbin Li currently works for Huawei, being responsible for IP innovation and standard work. He joined Huawei in 2000. In 10+ years he worked for design and development of many MPLS functions including basic/static MPLS, MPLS LDP, MPLS TE, RSVP-TE, MPLS L3VPN, MPLS L2VPN, MPLS OAM/BFD, GMPLS UNI, MPLS Multicast, EVPN, etc. as the network engineer and system architect. He was also responsible for the delivery of Huawei IP Software Platform (VRP) as the system engineer. From 2015-2016, he worked for research on the SDN controller, architecture analysis of ODL/ONOS, and the architecture design of Huawei SDN controller as the architect. He joined the IETF work in 2009 and is the co-author/contributor of many RFCs/drafts in RTG/OPS areas, especially in the fields of BGP, PCEP, Netconf/YANG using as the south bound protocols for SDN controller. Currently he focuses on the innovation and standardization work of SRv6, Telemetry, 5G Transport, Network Intelligence, etc. He received his bachelor's degree of Information and Communication Engineering from Xi'an Jiaotong University and his master degree of Electronic Engineering from Tsinghua University.

**Erik Nordmark :**

*Zededa* — Erik Nordmark works on a software stack for real-time edge computing at Zededa; a startup company based in California, USA. He has been active in the IETF since the early 1990-ies, as key contributor to IPv6 standards, co-chair in Mobile IP and TRILL, and as an Internet Area Director. His interest is in expanding the reach and capability of the Internet standards towards the various edges of the network including further reaching low-powered devices, by providing architectures and standards that are robust and secure across a large range of scales. Erik holds a Technical Licentiate Degree from Uppsala University and a Master of Science from Stanford University.

**Mark Nottingham :**

*Fastly* — Mark Nottingham has been active in the IETF since 2000 and currently co-chairs the HTTP and QUIC Working Groups, and is a member of the Internet Architecture Board. He is also active in the W3C, most recently being a member of the Technical Architecture Group (TAG). Previously, he worked at Akamai, where he helped manage the company's standards participation and served as a subject matter expert, Yahoo!, where he helped deploy HTTP-based "Web services", and BEA Systems, where he was puzzled by SOAP-based "Web Services." Mark's technical interests include HTTP(S), Web performance, caching, intermediation, metadata and privacy.

**Melinda Shore :**

*Fastly* — Melinda Shore Melinda Shore is a Principal Security Architect at Fastly, where she works on PKI and TLS-related problems. She's been active in the IETF since the mid-1990s, having brought in some of the earliest middlebox traversal work. Her computing background was originally in operating systems and distributed and parallel computing, and has spent much of her career hopping back and forth between academia and networking companies (the latter including Nokia and Cisco). Melinda's undergraduate degree is in music theory (Ithaca College) and her doctoral work (incomplete) was in information retrieval (University of Chicago).

**Jeff Tantsura :**

*Apstra* — Jeff Tantsura has been in the networking space for 20+ years and has authored/contributed to many RFC's and patents, worked in both, SP and vendor environments. He is co-chair of IETF Routing Working Group, chartered to work on New Network Architectures and Technologies, including protocol independent YANG models and Next Gen Routing Protocols as well as co-chair of RIFT (Routing in Fat Trees) Working Group chartered to work on the new routing protocol that specifically addresses Fat Tree topologies typically seen in the Data Center environment. Jeff serves the Internet Architecture Board (IAB). His focus has been on 5G transport and integration with RAN, IoT, MEC, Low Latency networking and Data modeling. He's also a border member of SF Bay Area ISOC Chapter. Jeff is Head of Networking Strategy at Apstra, company championed Intent Based Networking, defining company's networking strategy and technologies.

**Martin Thomson :**

*Mozilla* — Martin Thomson is an engineer at Mozilla. There he works on open standards in both the IETF and W3C. His recent work includes HTTP/2 and Web Push, and he is a core contributor to HTTP, TLS, and WebRTC. He previously worked at Microsoft, Commscope and Nortel on system architecture. Technical interests are privacy, security, and the messy interface where standardized protocols are applied to real problems.

**Brian Trammell :**

*Google* — Brian Trammell is a Site Reliability Engineering Manager at Google. Active in the IETF since 2005, his primary focus areas are Internet measurement and the evolvability of the Internet architecture and Internet protocols. He co-chairs the IP Performance Measurement working group and the Path Aware Networking Research Group. Prior to his work at Google, he was a Senior Researcher at the Swiss Federal Institute of Technology (ETH) Zürich, the Engineering Technical Lead at the CERT Network Situational Awareness group, and a veteran of a variety of short-lived Internet start-ups. He earned a BS in Computer Science from Georgia Tech in 2000.

**Liaison and Ex-Officio Members****Mirja Kühlewind :**

*Ericsson* – Liaison from the IESG — Mirja Kühlewind is a researcher at Ericsson Research in Aachen, Germany, focusing in her work on transport protocol evolution. Bevor that until February 2019, she worked as a Post-Doc at the Networked Systems Group (NSG) of the Computer Engineering and Net-

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*Stakeholders (continued)*

works Laboratory at ETH Zurich on topics around Internet measurements and transport protocol design. Mirja received her PhD in 2015 from the University of Stuttgart working in the field of TCP congestion control. Mirja was selected as IETF Transport Area Director in 2016; prior to that, she was co-chair of the IETF's RTP Media Congestion Avoidance Techniques (rmcat) and TCP increased security (tcpinc) working groups. She also co-chairs the Measurement and Analysis for Protocols research group (maprg) in the IRTF.

**Colin Perkins :**

University of Glasgow – IRTF Chair — Colin Perkins is a Senior Lecturer (Associate Professor) in the School of Computing Science at the University of Glasgow. His research interests are on transport protocols for real-time and interactive multi-media, and on network protocol design, implementation, and specification. He's been a participant in the IETF and IRTF since 1996, working primarily in the transport area where he co-chairs the RMCAT working group and is a past chair of the

AVT and MMUSIC working groups, and in related IRTF research groups. He proposed and co-chaired the first Applied Networking Research Workshop (ANRW), and has been a long-term participant in the Applied Networking Research Prize (ANRP) awarding committee. He received his BEng in Electronic Engineering in 1992, and my PhD in 1996, both from the Department of Electronics at the University of York.

**Heather Flanagan :**

RFC Series Editor – Liaison from the RFC Editor, RSE

**Karen O'Donoghue :**

ISOC – Liason from ISOC

**Cindy Morgan :**

AMS – IAB Executive Administrative Manager

## Vision

The Internet continues to grow and evolve as a platform for global communication and innovation

## Mission

To provide long-range technical direction for Internet development

## Values

**Communication****Innovation**

**Trust:** In its work, the IAB strives to: > Ensure that the Internet is a trusted medium of communication that provides a solid technical foundation for privacy and security, especially in light of pervasive surveillance,

**Connection:** > Establish the technical direction for an Internet that will enable billions more people to connect, support the vision for an Internet of Things, and allow mobile networks to flourish, while keeping the core capabilities that have been a foundation of the Internet's success, and

**Mobility**

**Evolution:** > Promote the technical evolution of an open Internet without special controls, especially those which hinder trust in the network.

**Openness**

## 1. Protocols & Procedures

*Provide architectural oversight of Internet protocols and procedures*

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## 2. Liaison

*Liaise with other organizations on behalf of the Internet Engineering Task Force (IETF)*

**Stakeholder(s)**

Internet Engineering Task Force (IETF)

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### 3. Appeals

*Review appeals of the Internet standards process*

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## 4. Standards

*Manage Internet standards documents (the RFC series) and protocol parameter value assignment*

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## 5. Confirmations

*Confirm the Chair of the IETF and the IETF Area Directors*

**Stakeholder(s)**

Chair of the IETF

IETF Area Directors

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## 6. IRTF Chair

*Select the Internet Research Task Force (IRTF) Chair*

**Stakeholder(s)**  
IRTF Chair

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## 7. Advice & Guidance

*Act as source of advice and guidance to the Internet Society*

**Stakeholder(s)**  
Internet Society

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