Note Well – Intellectual Property

• The IRTF follows the IETF Intellectual Property Rights (IPR) disclosure rules

• By participating in the IRTF, you agree to follow IRTF processes and policies:
  • If you are aware that any IRTF 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
  • The IRTF expects that you file such IPR disclosures in a timely manner – in a period measured in days or weeks, not months
  • The IRTF prefers that the most liberal licensing terms possible are made available for IRTF Stream documents – see RFC 5743
  • Definitive information is in RFC 5378 (Copyright) and RFC 8179 (Patents, Participation), substituting IRTF for IETF, and at https://irtf.org/policies/ipr
Note Well – Audio and Video Recordings

• The IRTF routinely makes recordings of online and in-person meetings, including audio, video and photographs, and publishes those recordings online

• If you participate in-person and choose not to wear a red “do-not-photograph” lanyard, then you consent to appear in such recordings, and if you speak at a microphone, appear on a panel, or carry out an official duty as a member of IRTF leadership then you consent to appearing in recordings of you at that time

• If you participate online, and turn on your camera and/or microphone, then you consent to appear in such recordings

• This meeting is being recorded and live streamed
Note Well – Privacy & Code of Conduct

• As a participant in, or attendee to, any IRTF activity you acknowledge that written, audio, video, and photographic records of meetings may be made public.

• Personal information that you provide to IRTF will be handled in accordance with the Privacy Policy at https://www.ietf.org/privacy-policy/.

• As a participant or attendee – whether in-person or remote, and on the mailing lists as well as during the meetings – 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.

• See RFC 7154 (Code of Conduct) and RFC 7776 (Anti-Harassment Procedures), which also apply to IRTF.
In-Person and Remote Participation

• **In-person participants**
  • You MUST sign into the session using MeetEcho (usually the “onsite tool” client) from the Datatracker agenda or by scanning the QR code
  • Use MeetEcho to join the mic queue
  • Keep audio and video off if not using the onsite version

• **Remote participants**
  • Make sure your audio and video are off unless you are chairing or presenting during a session

• Technical support: [http://www.ietf.org/how/meetings/issues/](http://www.ietf.org/how/meetings/issues/)
Goals of the IRTF

• The Internet Research Task Force (IRTF) focuses on longer term research issues related to the Internet while the parallel organisation, the IETF, focuses on shorter term issues of engineering and standards making.

• The IRTF conducts research; it is not a standards development organisation.

• While the IRTF can publish informational or experimental documents in the RFC series, the primary output of research groups is expected to be understanding and research results that may be disseminated by publication in scholarly journals and conferences.
Research Groups (1/4)

- **CFRG**: Crypto Forum Research Group
- **COINRG**: Computation in the Network
- **DINRG**: Decentralised Internet Infrastructure
- **GAIA**: Global Access to the Internet for All
- **HRPC**: Human Rights Protocol Considerations
- **ICCRG**: Internet Congestion Control
- **ICNRG**: Information-centric Networking
- **MAPRG**: Measurement and Analysis for Protocols
- **NMRG**: Network Management
- **NWCRG**: Network Coding for Efficient Network Communications
- **PANRG**: Path Aware Networking
- **PEARG**: Privacy Enhancements and Assessments
- **QIRG**: Quantum Internet
- **RASPRG**: Research & Analysis of Standards Processes
- **T2TRG**: Thing-to-Thing
- **UFMRG**: Usable Formal Methods

Color codes:
- Not meeting
- Met earlier this week
- Still to meet
• Jana Iyengar and Michael Schapira are stepping down as ICCRG chairs – thank you for your service!
• Simone Ferlin will continue as chair
Research Groups (3/4)

• The Coding for efficient NetWork Communications Research Group (NWCRG) has completed its work and will close

• Thank you to the RG chairs, Vincent Roca and Marie-José Montpetit, and the current and past participants

• “A Survey about the Work of the Coding for Efficient Network Communications Research Group (NWCRG)”
  https://www.net.in.tum.de/fileadmin/TUM/NET/NET-2023-06-1/NET-2023-06-1_02.pdf
Research Groups (4/4)

- DINRG has rechartered “Decentralised Internet Infrastructure” → “Decentralisation of Internet Research Group”
- Reflects shift in emphasis in the group’s work over the past few years
Recent IRTF Stream RFCs

RFC 9407  Tetrys: An One-the-fly Network Coding Protocol  June 2023  NWCRG
RFC 9426  BATched Sparse (BATS) Coding Scheme for Multi-hop Data Transport  July 2023  NWCRG
RFC 9414  Unfortunate History of Transient Numeric Identifiers  July 2023  PEARG
RFC 9415  On the Generation of Transient Numeric Identifiers  July 2023  PEARG

- IRTF research groups can publish Informational and Experimental RFCs, but the main focus is on developing understanding – research papers are more common outputs than RFCs
- “To me, the fundamental outcome of research is understanding, and the fundamental outcome of engineering is a product” – Fred Baker, quoted in RFC 7418
The Applied Networking Research Prize recognises:

- the best recent results in applied networking
- interesting new research ideas of potential relevance to the Internet standards community
- and upcoming people that are likely to have an impact on Internet standards and technologies
Two ANRP award talks today:

- **Simon Scherrer** for his work on modelling the BBR congestion control algorithm
- **Siva Kakarla** for his work on verifying the correctness of nameservers

Papers and slides at [https://irtf.org/anrp/](https://irtf.org/anrp/)

Live stream at [https://www.ietf.org/live/](https://www.ietf.org/live/)

Recordings on IETF Channel on YouTube
Applied Networking Research Workshop

• ACM/IRTF Applied Networking Research Workshop (ANRW) 2023 took place earlier this week
• Thank you to the organisers (Francis Yan and Maria Apostolaki), reviewers, authors, and speakers
• https://irtf.org/anrw/2023/program.html
Applied Networking Research Workshop

• ACM/IRTF Applied Networking Research Workshop (ANRW) 2024 will co-locate with IETF 120 in Vancouver in July 2024

• Organisers will be Simone Ferlin (Red Hat) and Ignacio Castro (Queen Mary University of London)

• Details to come at https://irtf.org/anrw/2024/
The IRTF is pleased to offer travel grants to support early career academics and PhD students from under-represented groups to attend the IRTF meetings co-located with the IETF.

We also offer travel grants to attend the ACM/IRTF Applied Networking Research Workshop and make a small number of meeting fee waivers available.

https://irtf.org/travelgrants

Thank you to our sponsors – please contact the IRTF Chair if you wish to help expand these programmes.
# Agenda

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<thead>
<tr>
<th>Time</th>
<th>Topic</th>
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<tr>
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<td>Introduction and Status Update</td>
<td>Colin Perkins</td>
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