Coding for efficient NetWork Communications Research Group (NWCRG)

Marie-José Montpetit, Vincent Roca

April 6th 2020, Interim meeting (as a replacement for IETF 107, Vancouver)
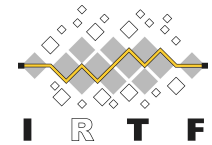
Welcome!

- Our goal:

  Foster research in network and application layer coding to improve network performance
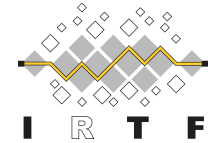
- Codes and coding libraries
- Protocols to facilitate the use of coding in existing systems
- Real-world use cases and work in progress
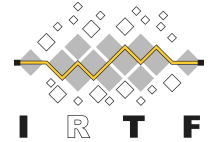
Note Well – Intellectual Property

- **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 – 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, 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

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, its primary goal is to promote development of research collaboration and teamwork in exploring research issues related to Internet protocols, applications, architecture, and technology

- See "An IRTF Primer for IETF Participants" – RFC 7418

Administrivia

- **Charter and documents**
  - https://datatracker.ietf.org/group/nwcrg/charter/

- **Github**
  - https://github.com/irtf-nwcrg/rg-materials

- **Mailing list**
  - subscription: https://www.irtf.org/mailman/listinfo/nwcrg

- **Material**
  - Direct links from announcement IETF page:
  - https://datatracker.ietf.org/meeting/upcoming

  - Github repository:
  - https://github.com/irtf-nwcrg/rg-materials/tree/master/ietf107-2020-03-21_virtual

Agenda

00- Welcome, administrative and general matters
(Chairs) (10+5')

01- "Quick info on IPR disclosure against RFC 8681 (RLC FEC Scheme) and reminder of the IETF/IRTF policy on IPR disclosures"
(Chairs) (10')

02- "Updates on Coding and congestion control in transport" I-D
(Nicolas Kuhn) (10+5')
(https://datatracker.ietf.org/doc/html/draft-kuhn-coding-congestion-transport)

Open discussions

Our group I-D news (1)

- **"Network coding for satellite systems"**
  - **several comments + updates since ietf 106**
  - **version -11 sent to IRTF Chair (2020-03-26), waiting for feedback**

- **"NC for CCN/NDN: Requirements and Challenges"**
  - **RG Last Call will start soon (with copy to ICNRG)**

- **"Coding for QUIC" I-D updated**

- **"Tetrys, an On-the-Fly Network Coding protocol" revived**

Our group I-D news (2)

- **"BATS Coding Scheme for Multi-hop Data Transport"**
    - IPR discl. done on Dec. 3rd, 2020 (not a surprise, authors always informed the group of the situation)
    - https://datatracker.ietf.org/ipr/3896/
    - comments made to -02, waiting for I-D update
    - TODO at some point: RG Item document to ask. Please read and send feedback to authors.

Related news

- **"FECFRAME extension to sliding window codes"**
  - **RFC 8680**, **Jan. 2020**
- **"RLC FEC Scheme"**
  - **RFC 8681**, **Jan. 2020**
- **"TinyMT32 pseudo-random number generator"**
  - **RFC 8682**, **Jan. 2020**

- **received IPR disclosure(s) for RFC 8681**
  - **following item in agenda**

Future meetings, hopefully

- Hackathon will be held during IETF108

- NWCRG will meet during IETF 108, Madrid