

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
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 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
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- 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
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- 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 <u>RFC 7154</u> (Code of Conduct) and <u>RFC 7776</u> (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
- Today's slides
 - Github repository or IETF datatracker:
 - https://datatracker.ietf.org/meeting/106/session/nwcrg/
- Remote participation
 - Meetecho: http://www.meetecho.com/ietf106/nwcrg
 - about...

http://ietf.org/how/meetings/106/remote/

Agenda

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

01- Sliding Window FEC (SWiF) codec hackathon feedback
(Vincent Roca) (5+5')

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)
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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