Coding for efficient NetWork Communications Research Group (NWCRG)

Marie-José Montpetit, Vincent Roca
November 5th 2018, IETF 103, Bangkok

Welcome!

- Our goal:

  Foster research in network and application layer coding to improve network performance

- Codes and coding librairies
- Protocols to facilitate the use of coding in existing systems
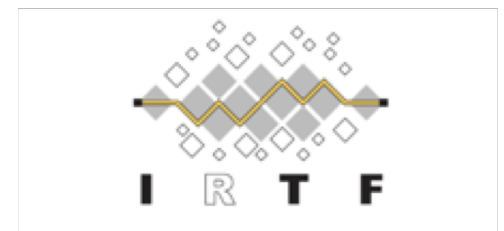- Real-world use cases and work in progress

Note Well (IRTF)

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. The IRTF follows the IETF's policies.

As a reminder:

- **By participating in the IRTF, you agree to follow IETF processes and policies.**
- **If you are aware that any IETF or 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.**
- **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 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 the RG Chairs or IRTF Chair:

- **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)**

I R T F

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/103/session/nwcrg/

- **Remote participation**
  - Meetecho: http://www.meetecho.com/ietf103/nwcrg
  - about...

  http://ietf.org/how/meetings/103/remote/

Agenda (1)

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

01- "BATS Coding Scheme for Multi-hop Data Transport" (Raymond W. Yeung, remotely) (10+5')
        (draft-yang-nwcrg-bats-code-00)

02- Hackathon feedback (SWiF Codec) (Vincent Roca) (5+5')
- Relationships with draft-roca-nwcrg-generic-fec-api-03

03- "Quick status on Network coding and satellites I-D" (Nicolas Kuhn) (5+5')
        (draft-irtf-nwcrg-network-coding-satellites-00)

04- "Quick status on NC for CCN/NDN: Requirements and Challenges" (authors) (5+5')
        (draft-irtf-nwcrg-nwc-ccn-reqs-00)

- What's next for both RG-item I-Ds?

Agenda (2)

05- "FEC and NC for dummies"
(Vincent Roca) (10+5')

06- "FEC and NC performance evaluation"
(Vincent Roca) (10+5')

07- Milestones update
(Chairs, all) (10')
[https://datatracker.ietf.org/rg/nwcrg/about/]

08- "In Network Computing Enablers for Extended Reality"
(Marie-Jose Montpetit) (10+5')
draft-montpetit-coin-xr-01
- To be presented during COIN meeting too

Quick status about NWCRG I-Ds

- **RG Item I-Ds:**
  - **Network Coding and Satellites**
    - now RG Item doc
  - **Network Coding for Content-Centric Networking / Named Data Networking: Requirements and Challenges**
    - now RG Item doc

- **Individual I-Ds:**
  - **New I-D on BATS coding scheme**
  - **Generic Application Programming Interface (API) for Window-Based Codes**
    - quick update
  - **Coding for QUIC**
    - no progress during period ☹
  - **Tetrys and RLNC**
    - **both I-Ds disappeared!**

Future meetings

- NWCRG will meet during IETF 104, Praha

- Hackathon will be held during IETF104