



Coding for efficient NetWork Communications Research Group (NWCRG)

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Administrativia

- Charter and documents

- <https://datatracker.ietf.org/group/nwcrp/charter/>

- Wiki

- <https://trac.ietf.org/trac/irtf/wiki/nwcrp>

- Mailing list

- subscription: <https://www.irtf.org/mailman/listinfo/nwcrp>

- Today's slides

- <https://datatracker.ietf.org/meeting/100/session/nwcrp/>

- Remote participation

- Meetecho: <http://www.meetecho.com/ietf100/nwcrp>
- other means:
<http://ietf.org/meeting/100/remote-participation.html>

Agenda v5

- **00- Welcome, administrative and general matters, information for new participants (chairs) (5')**
- **01- Interim meeting: quick feedbacks (Chairs) (5')**

PART I: Coding aspects (start: 16:00)

- **02- Existing network codes/protocols (Chairs) (10')**
Includes a "NC for newbies"
- **03- Generic, common NC API (Vincent Roca) (10')**
`draft-roca-nwcr-g-generic-fec-api-00`

PART II: Use-cases where NC could be beneficial (start: 16:20)

- **NC for satellite communications (start 16:20)**
 - **04- "Network coding and satellites" (Nicolas Kuhn) (10')**
`draft-kuhn-nwcr-g-network-coding-satellites-01`
 - **Discussions: what's next and where do we want to go? (5')**
- **NC for ICN/CCN (start 16:35)**
 - **05- "NC and ICN/CCN research challenges" (Hitoshi Asaeda/Kazuhisha Matsuzono/Cedric Westphal) (10')**
 - **Discussions: what's next and where do we want to go? (5')**
- **NC and QUIC (start 16:50)**
 - **06- "FEC codes and QUIC" (Ian Swett) (10')**
 - **Discussions: what's next and where do we want to go? (5')**

Agenda v5 (2)

PART III: Research Project Updates (start: 17:05)

- 07- "On the joint use of TCP and network coding" (Emmanuel Lochin) (10')
- 08- "NC and Congestion Control: problem statement, potential approaches, status" (10')
- Discussions: what's next and where do we want to go? (5')

- 09- "Network coding and Multihop Wireless Networks" (Cedric Adjih) (10')

- Time balance: 10'
- Total time: 120'

Quick status about active Internet-Drafts

● WG-item I-D

- **draft-irtf-nwcrp-network-coding-taxonomy-05**
 - submitted for IRSG last call (2017/07/18)
 - still awaiting end of IRSG review...

● Individual I-Ds

- **Network coding and satellites**
 - draft-kuhn-nwcrp-network-coding-satellites-01
- **Network Coding for Content-Centric Networking / Named Data Networking: Requirements and Challenges**
 - draft-matsuzono-nwcrp-nwc-ccn-reqs-00
- **Generic Application Programming Interface (API) for Window-Based Codes**
 - draft-roca-nwcrp-generic-fec-api-00
- **Network Layer Coding for QUIC: Requirements**
 - draft-quic-coding-00 (NB: bad name, will be fixed)

Welcome!



- What's new in nwcrq?
 - New name:
 - **Coding for efficient NetWork Communications RG**
 - **(was network coding research group)**
 - New charter
 - <https://datatracker.ietf.org/group/nwcrq/charter/>
 - New milestones
 - <https://datatracker.ietf.org/group/nwcrq/milestones/>
- Goal:
 - Reflect the current status of the NC research across different use cases
 - Focus on use cases, protocols, implementation issues and connections with other WG/RG outputs

01- Interim Meeting

- Sept. 19th in Boston
- More than 20 participants
 - 10-12 local depending on time
 - 10+ online
- Goals:
 - Define the major goals for the group in the years to come
 - Identify common issues/challenges to achieve these goals
- Outcomes:
 - Proposal for a **new charter and new milestones**
 - Identified **activities and first volunteers**

Charter and Milestones

- Milestones

- document Existing NC solutions (code + basic protocol if applicable)
- NC and QUIC use-case
- NC and satellite use-case: an overview and associated research challenges
- Common coding API
- NC adoption challenges
- NC and Congestion Control
- NC and ICN use-case: an overview and associated research challenges
- NC and robust tunnelling use-case