



# COIN

## Computing in the Network

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Interim meeting – February 2020



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# 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](#)

# COIN

- Our goal:
  - Foster research in computing in the network to improve performance for networks, applications, users*
- Scope:
  - Architectures
  - Protocols
  - Real-world use cases, applications, work in progress
- Focus:
  - The core-to-edge compute continuum.

# *Agenda*

- Review of milestones
- Drafts update
  - Active
  - Expired
  - New
- Potential new work and related meetings/conferences
- Vancouver Hackaton Preparation
- Vancouver Meeting

# *Milestones Review*

- **Current active milestones (from Datatracker)**

Nov 2020

Work toward defining a COIN scope appropriate for the IRTF, within which new architectures, mechanisms and protocols can be proposed

**Apr 2020**

Identify COIN network-related eco-system dependencies

Target COIN case studies, from architecture, implementation and use case standpoints

Discuss/catalog COIN requirements and implications for network elements (including network services, network SW stacks, network HW design, etc.)

- **New milestones?**

# *Drafts Update (1)*

- Active drafts
  - Edge Data Discovery for COIN - <new version>
    - [draft-mcbride-edge-data-discovery-overview-03](#)
  - Industrial Use Cases for In-Network Computing
    - [draft-kunze-coin-indutrial-use-cases-01](#)
  - Transport Protocol Issues of In-Network Computing Systems
    - [draft-kunze-coinrg-transport-issues-00](#)
  - Directions for Computing in the Network
    - [draft-kutscher-coinrg-dir-01](#)
  - Requirement of Computing in network
    - [draft-liu-coinrg-requirement-01](#)

# Drafts Update (2)

- Expired
  - In Network Computing Enablers for Extended Reality <new version to come>
    - [draft-montpetit-coin-xr-03](#)
  - In-Network Computing for Managed Networks: Use Cases and Research Challenges
    - [draft-he-coin-managed-networks-01](#)
  - In-Network Computing for App-Centric Micro-Services
    - [draft-sarathchandra-coin-appcentres-01](#)
- New
  - Identifying a Reference Architecture for Agriculture 4.0
    - draft-bassi-reference-architecture-for-agriculture-4.0
  - Common data layer for COIN <to come>
- Other?

# *Potential new work and related meetings*

- New/potential work
  - IoT use cases
  - Common data layer
  - Distributed cognition
  - Tactile Internet
  - Other?
- Related meetings/conferences
  - Netproc – Feb. 24 (Paris)
  - Dagstuhl Seminar – March 9-11
  - ICN2020 – September 28-30 (Montreal)
  - Other?

# *Vancouver Hackathon Preparation*

- **Goal:**
  - Architecture evolution
  - Tools development
- **Common project?**
  - Multistream processing project

# *Vancouver Meeting*

- **Hackaton on March 21-22**
- **2 sessions requested**
  - 1 - research talks and invited talks on current and new research topics
  - 2 – active and new drafts
- **Logistics**
  - Call for agenda items and talks
  - Day passes available