

IRTF – COIN RG

COIN RG – Some Thoughts on Ways Forward

Interim - Online

10.02.2022

Purpose of this Contribution

Provide individual understanding of the scope and intention of COIN (as a community effort)

- Take input from charter (as a visible statement of agreement on what COIN should be about) but also from understanding gained by contributing to COIN and discussions with COIN community members

Ask questions to community on this understanding

- Possibly the wrong questions, possibly no good answers

Goal is discussion that could possibly help wider understanding on way forward

- Paraphrasing Dave O. (12.11.2021): *I believe we have ample places to work on XXX from a research perspective. What would COINRG bring to the party?*

This discussion is **NOT** targeted towards specific outcomes like (re-)chartering

Observations: Core Concepts/Aspects

- “Compute in the Network”
 - This is NOT active networking (see Jon C response on list)
- Programmability of data plane
 - Results from ‘Compute in the Network’ vision
- Cloud-edge continuum
 - Specifically to move beyond packet interception towards computation
- Orchestration
 - Needed to orchestrate resource usage within ‘Compute in Network’
- Decentralization
 - Move beyond just DC

Missed anything?
Possibly?
Likely?
Definitely?

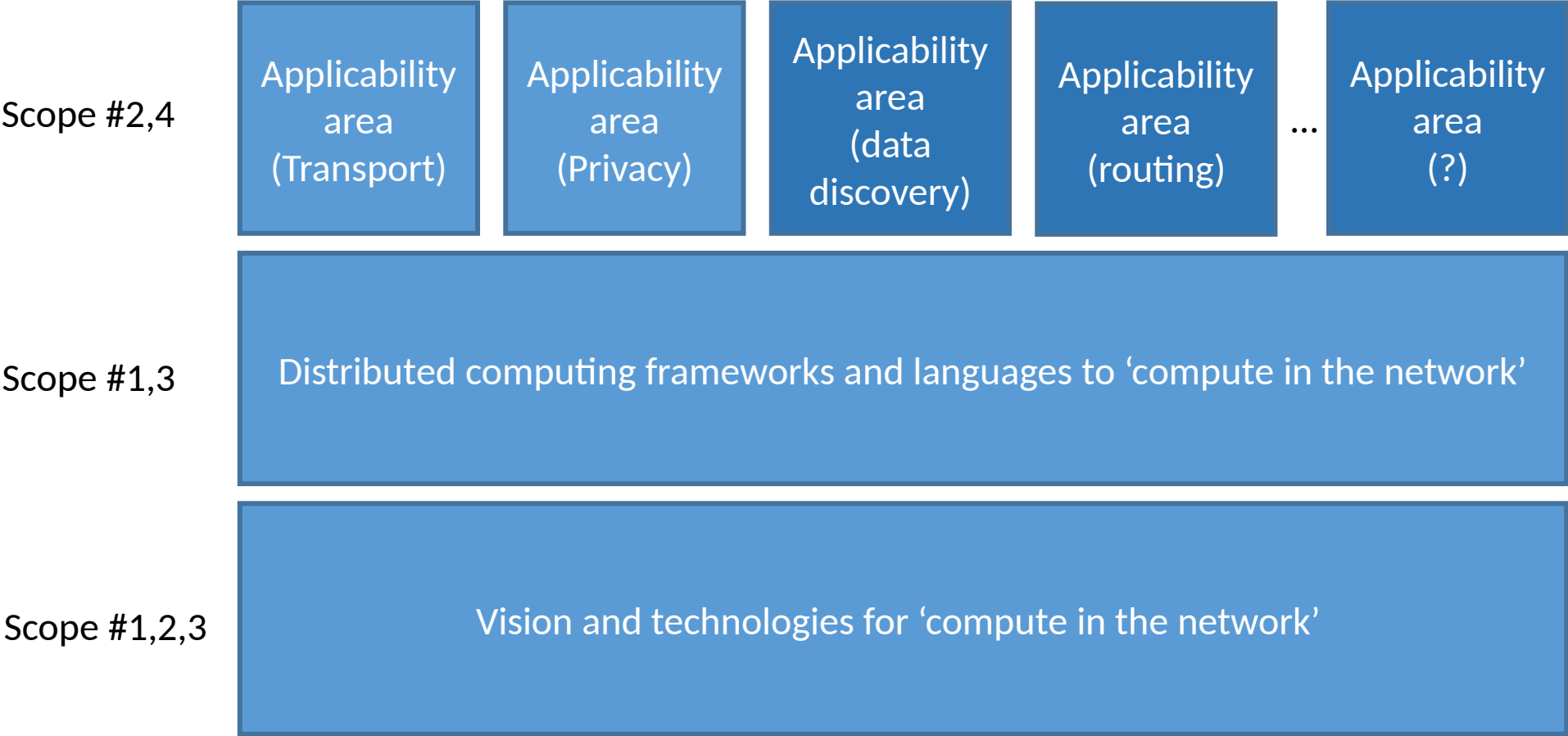
Observations: Intended Methods

- Use case driven requirements **analysis**
 - Identify potential benefits
 - May come from outside or from within COIN community
- **Research** into, e.g., new uses, languages, abstractions, architectures, protocol designs
 - Attract wider community to bring their work to COIN
- Pay close **attention** to work in other RGs
 - See what is happening elsewhere
- **Interact** with IETF
 - Avoiding proposals that, e.g., increase friction between privacy and in-network computing

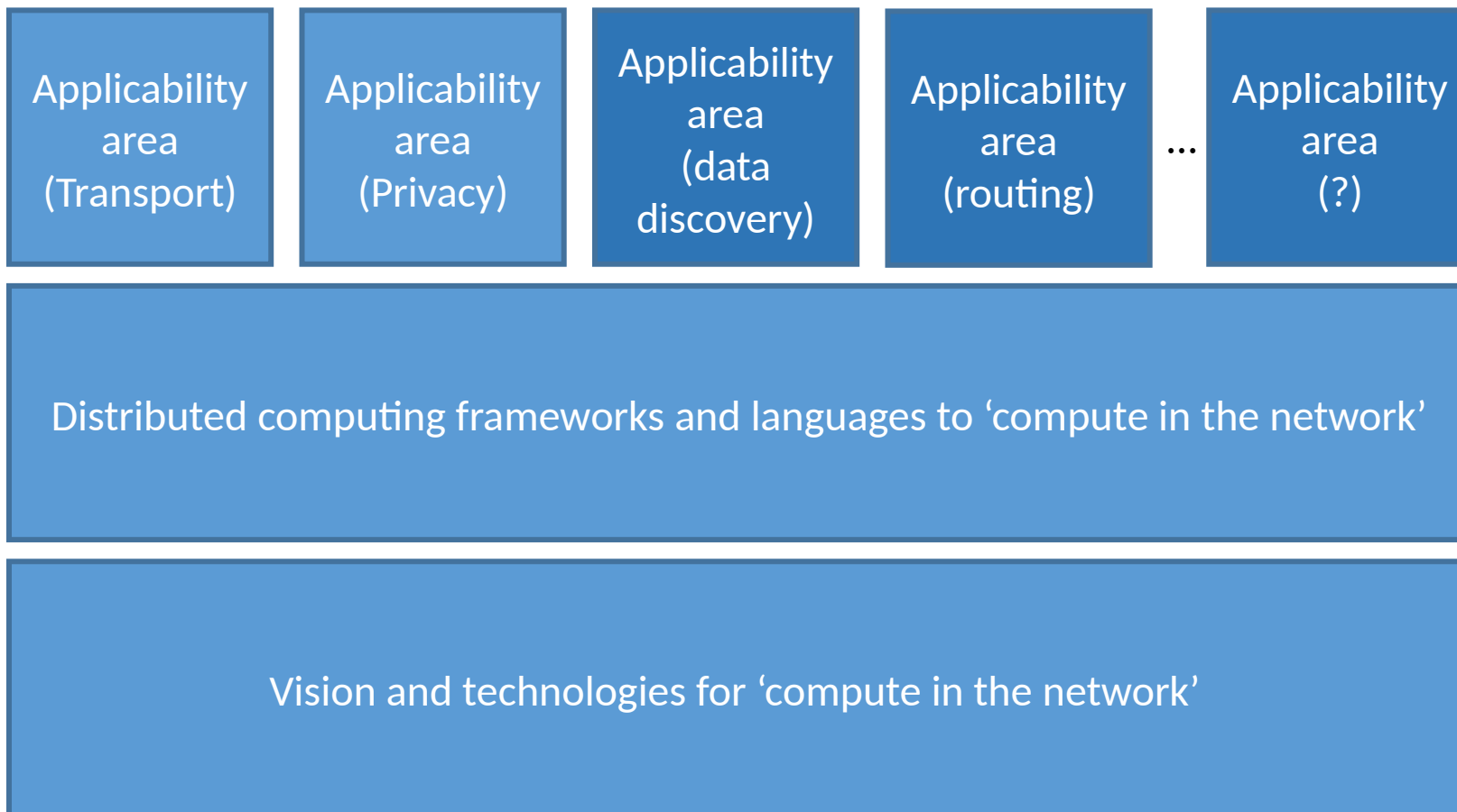
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NOTE: the vehicle(s) for capturing our discussions are varied, e.g., as I-Ds, papers, public github archives, ..., but not really relevant for this discussion

Own Analysis: Main Thrusts



Questions



- Where do we want to see progress?
 - Vision: positioning, delineating (against edge computing)
 - Technologies: possible enablement
 - Applicability: impact on existing or discovering new areas
- Tackling applicability areas
 - Focus on any?
 - Focus on few (which ones)?
 - What are key questions to ask when doing so?
 - How to connect (to RGs and IETF alike)?