



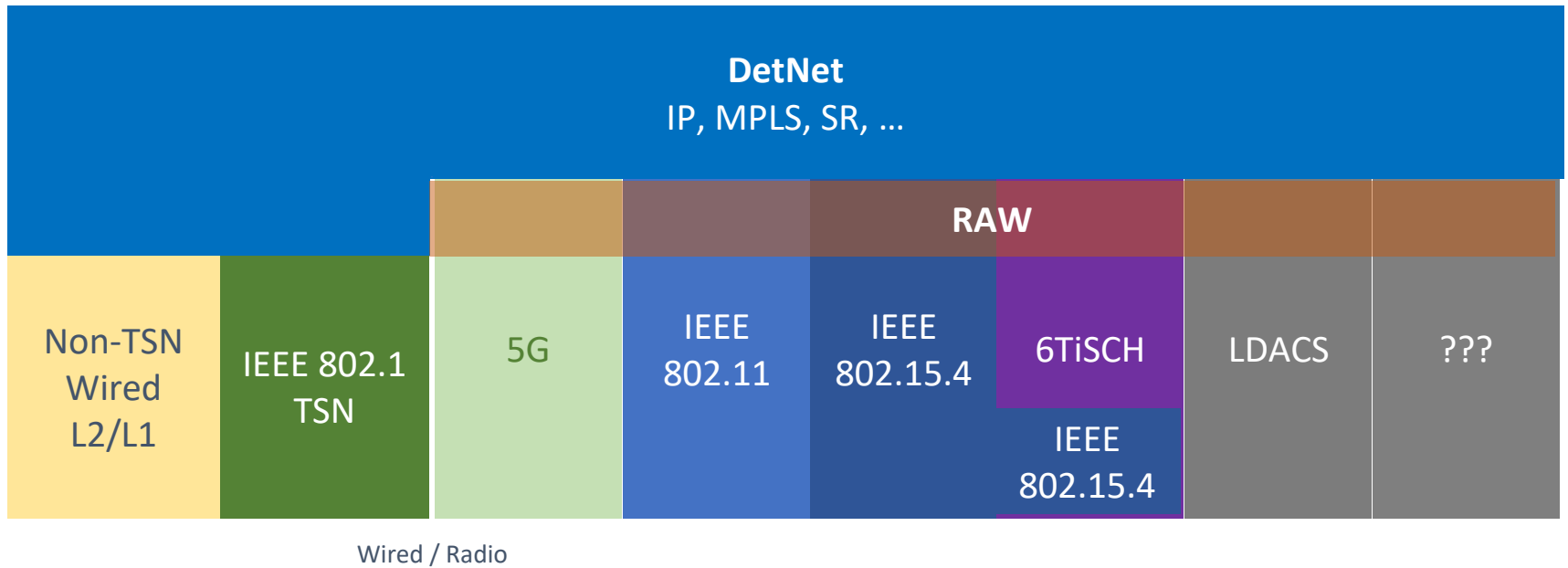
Reliable and Available Wireless

Co-chairs: Eve M. Schooler & Rick Taylor
IETF 110 – Thursday, March 11th, 2021

What is RAW?

- Sister WG to DetNet – launched a year ago
 - Extend DetNet to comprehend wireless L2 technologies
 - Enable deterministic properties across L2 and L3 routed segments
 - Seamless support for heterogeneous DetNets (wired and wireless)
 - at scale (across subnets), within single admin domain or coordinated domains
- Enable highly reliable, available scheduled wireless
 - IEEE 802.11ax/be (Wi-Fi)
 - IEEE 802.15.4 timeslotted channel hopping (TSCH)
 - 3GPP 5G ultra-reliable low latency communications (URLLC)
 - L-band Digital Aeronautical Communications System (LDACS)
- Close interaction between RAW and DetNet WGs
 - Co-chairs, participants, documents

DetNet / RAW Relationship





Proposed Milestones

4 Foundational Informational Documents in 18 months

Date	Milestone
Sep 2020	Working Group Adoption of <i>Use Cases</i> Document
Sep 2020	Working Group Adoption of <i>Requirements</i> Document
Nov 2020	Use Cases Document submit to IESG
Nov 2020	Working Group Adoption of <i>Architecture/Framework Aspects for a Wireless Network</i> Document
Dec 2020	Requirements Document submit to IESG
Dec 2020	Working Group Adoption of <i>Evaluation of Existing IETF Technologies and Gap Analysis</i> Document
Apr 2021	Architecture/Framework Aspects for a Wireless Network Document submit to IESG
Jun 2021	Evaluation of Existing IETF Technologies and Gap Analysis Document submit to IESG

Underestimated interest and activity...

Foundational Docs

- DetNet Foundational RFCs - informational and *proposed stds*
 - Problem Statement, Use Cases, *Architecture*
 - Data Plane Framework, *Data Plane: IP, Data Plane: MPLS*, etc.
- RAW Foundational I-Ds - so far
 - Use Cases, Technologies, Architecture/Framework
- Notable developments
 - Use Cases – **nearing WGLC** - high-level vs detailed Requirements
 - Technologies – **nearing WGLC**
 - Problem Statement – requested, likely to be extracted from multiple docs
 - Separate Architecture from Framework - generic vs specific aspects

Additional Active WG Topics

- DLEP – Dynamic Link Exchange Protocol (**RFC 8175**)
 - Efficiently monitor L2 link characteristics, expose/share with L3
 - Coordinate between layers
 - *Seed I-D on Evaluation of IETF Technologies & Gaps Analysis*
- OAM – Ops, Administration, Maintenance – **nearing WG adoption**
 - 2 separate but unified docs – across DetNet and RAW
- LDACS – L-Band Digital Aeronautical Comms System - **WG LC**
 - Air-to-Ground and Air-to-Air plane communication

New I-Ds:

- Requirements for Reliable Wireless Industrial Services
 - Next level of requirements detail
- MEC drafts – embryonic, but important translation to ETSI mobile edge computing framework
 - Extensions to enable wireless reliability and availability in multi- access edge deployments
 - Terminal-based joint selection and configuration of MEC host and RAW network
- Segment-Routing-inspired TSN

Document Status

- **WGLC**

- <https://datatracker.ietf.org/doc/draft-ietf-raw-ldacs/>

- **WG Adopted – Nearing WGLC**

- <https://datatracker.ietf.org/doc/draft-ietf-raw-use-cases/>
- <https://datatracker.ietf.org/doc/draft-ietf-raw-technologies/>

- **Nearing WG Adoption**

- <https://datatracker.ietf.org/doc/draft-theoleyre-raw-oam-support/>
- <https://datatracker.ietf.org/doc/draft-pthubert-raw-architecture/>

- **Under Consideration**

- <https://datatracker.ietf.org/doc/draft-bernardos-raw-mec/>
- <https://datatracker.ietf.org/doc/draft-bernardos-raw-joint-selection-raw-mec/>
- <https://datatracker.ietf.org/doc/draft-sofia-raw-industrialreq>
- <https://datatracker.ietf.org/doc/draftstein-srtsn>



Resources

- RAW WG: <https://datatracker.ietf.org/wg/raw/about/>
- Documents: <https://datatracker.ietf.org/wg/raw/documents/>
- Mailing list: raw@ietf.org
 - To subscribe: <https://www.ietf.org/mailman/listinfo/raw>
- Meeting materials:
 - <https://datatracker.ietf.org/wg/raw/meetings/>