## L4S Dual Queue Coupled AQMs

Summary of IPR Discussion TSVWG Chairs IETF-105, Montreal, 2019

## Alcatel-Lucent's updated IPR declarations\*

- 3 IPR declarations against aqm-dualq-coupled
- Originally FRAND license terms
- Updated to non-assert with defensive suspension
  - Subsequently clarified on list that original FRAND terms still apply if preferred

https://datatracker.ietf.org/ipr/search/?submit=draft&id=draft-ietf-tsvwg-aqm-dualq-coupled

\* See IPR declarations (3561 & 3562) and Koen De Schepper's subsequent clarification on the list for full wording

## IPR discussion on the List

- Toke Høiland-Jørgensen raised concerns over defensive suspension clause (in which Alcatel-Lucent reserves right to suspend non-assert offer to defend against other assertions)
  - broad conditions
  - unclear whether FRAND still available resolved by Alcatel-Lucent clarification
- Chairs summarized off-list discussion on the list\*
- Survey of other IETF IPR declarations:
  - Uses terms with a common licensing formulation

<sup>\*</sup> See posting for full text and disclaimers <a href="https://mailarchive.ietf.org/arch/msg/tsvwg/PoFrFpjJDi007FqqPw4PJz">https://mailarchive.ietf.org/arch/msg/tsvwg/PoFrFpjJDi007FqqPw4PJz</a> IGNk

## Relationship of IPR to the draft

- aqm-coupled-dualq (B) is a framework for coupling AQMs
  - non-normative implementation appendices
- Bob Briscoe posted his analysis of relevance to the list\*
  - "The claims all cover non-essential or non-preferred aspects of aqm-dualq-coupled"
- Alternative implementations
  - PI2 (Appendix A "more responsive and stable")
  - Curvy RED (Appendix B)
  - FQ for L4S (not discussed in draft)
  - There may be others

<sup>\*</sup> Each WG participant will need to make up their own mind https://mailarchive.ietf.org/arch/msg/tsvwg/o35Lx-ftlhqUqP4RvBZH0eUaaJQ