# Analysis for the Differences Between Standard Congestion Control Schemes

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# Background

- Congestion Control standards should provide consistent guidelines, shouldn’t contradict
  - Also, they should be transport protocol agnostic in general

- Analyzing the impacts of Congestion Controls on the Internet won’t be easy
  - It would require long term analysis
  - Having a reference for several checking points could be useful

# Goals of this document

- Published as an Informational RFC for a reference
- Clarify differences between congestion control standards
  - They should provide the consistent guidelines to avoid conflicts
  - Initiate discussions for the next steps
- Could be used as a reference for future analysis on the impacts of congestion controls on the Internet

# What’s in this draft?

- A list for differences on certain topics in CC standards
  - TCP Reno(RFC5681), QUIC Reno(RFC9002), CUBIC(RFC9438)
  - Difference between TCP Reno and QUIC Reno
    - Ideally, TCP Reno and QUIC Reno should not be different with regard to aggressiveness
  - Difference between Reno and CUBIC in terms of fairness
    - Ideally, Reno and CUBIC should coexist ‘mostly’ fairly
      - It’s fine CUBIC archives better performance, but shouldn’t push away Reno

# Relationship with RFC5681bis

- The doc can be an useful reference to revise RFC5681
  - Contains discussions for Initial Window, Loss window, Min RTO, ABC, etc

- The doc also contains discussions other than Reno
  - Discussions for CUBIC with Reno fairness issue, etc
  - Could be reference for future congestion control analysis on the Internet