ICE Connectivity Check Pacing

How low can we go?

Background

- When gathering candidates or doing connectivity checks, STUN messages are sent at most once every Ta milliseconds

- Also impacts re-transmissions:

  RTO = MAX (100ms, Ta * (number of pairs))

Background

- For non-RTP traffic: min 500ms
    - (Overly) "safe choice" -> poor performance
    - Check phase can take >10s to finish
    - Implementations seem to ignore the MUST
- RTP traffic: min 20ms
    - Specific formula to mimic RTP bandwidth consumption

Concerns

- Should not create NAT bindings too fast and overload NATs (ongoing research)
- Should not overload links
  - Results in false negatives due to dropped check packets
  - And is not good for the network?

- So, how low can we go?