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:
  
  \[ RTO = \text{MAX} (100\text{ms}, Ta \times (\text{number of pairs})) \]
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?