Active RTP liveness discovery

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Requirements

- Active, i.e., even if other side is not sending

- Deal with NAT and firewall disruptions
  - use same port and protocol as "real" traffic

- Don't provide DOS tool

- No implosion for multicast

- RTP mixers & translators may not be aware of mechanism

Solution 1: RTCP

- send dummy RTP packet, use RTCP response to confirm receipt

- ☺ RTCP already subject to multicast scaling, including reconsideration

- ☹ RTCP response may be delayed
  - not substantially longer than max. reasonable RTT
  - can probably decrease min. interval

- Can't know if receiver implements RTCP
  - everybody should ☺
  - can tell whether any RTCP messages

Solution 2: RTP "ping"

- send special RTP packet if other side advertises capability via SDP
  - receiver returns another special RTP packet, to either:
    - to SDP address
    - to IP source address & port → no guarantee that anybody's listening there
- potential feedback implosion → reimplement RTCP one feature at a time
  - ping sender can't know for sure that there's no multicast
    - conference mixers
    - RTP translators