

# RTP No-op Payload Format

draft-wing-avt-rtp-noop-00.txt

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# Overview

- Problem
  - NATs, Firewalls, etc. can all interfere with media stream packets
  - This applies both during session establishment and for an on-going session
    - NAT bindings and firewall pinholes may time-out if there are no media packets
  - Verify connectivity and assess quality of media path

# Possible Solutions

- RTP ping/pong
  - Proposed previously
  - Suffers from multicast explosion problems
- ICE/STUN
  - Use STUN to verify connectivity
    - Only a single packet though
  - Requires STUN (obviously)
    - May not otherwise be present on all endpoints, e.g. PSTN Trunking Gateways
  - Requires RTP/STUN multiplexing on same port
    - May not be a huge issue during session establishment, but is rather ugly as a keep-alive mechanism

# RTP No-Op Solution

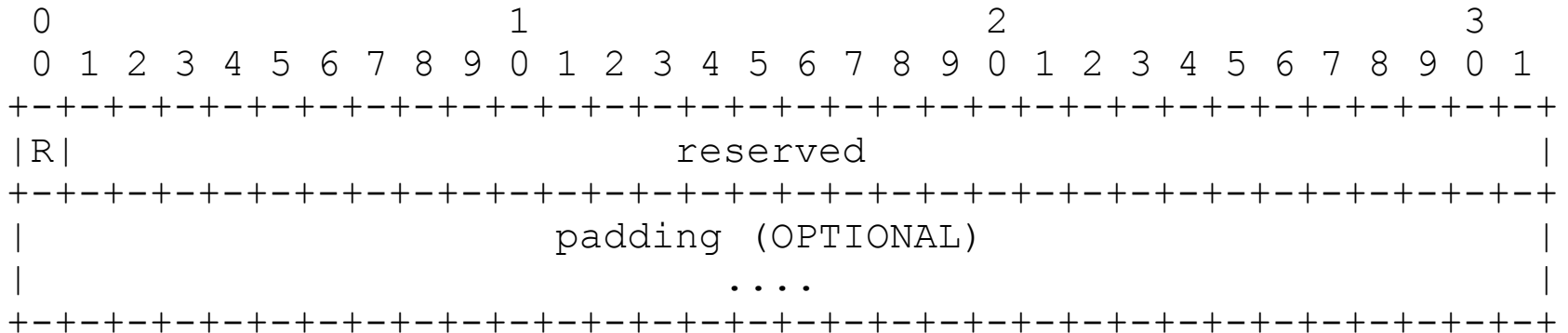
- RTP payload format that is not played out by receiver.
- RTCP statistics maintained as usual, i.e. packets received are counted, etc.
- “Request Immediate RTCP” opcode is used to request transmission of an RTCP report
  - Only honored when receiving on unicast address
- Statistics will indicate whether packets from a particular SSRC are received or not
  - Verify connectivity
  - Provide snapshot of current packet loss, jitter, etc.

# RTP No-Op Solution, cont.

- Multicast explosion concerns inherently addressed by use of RTCP
  - Normal RTCP transmission interval considerations apply
  - RTCP report only sent immediately if within interval limits
- Optional padding, e.g. to generate packet sizes similar to other packets for the media stream
  - Generate load test similar to other media stream packets
  - Foil traffic analysis

# RTP No-Op Payload Format

- Payload Format:



- Can use with Connectivity Preconditions to only establish calls when media stream connectivity exists:

draft-andreasen-mmusic-connectivityprecondition-00.txt

# Next Steps

- Comments ?
- Adopt as WG Item ?