

# BUNDLE

CHRISTER HOLMBERG  
HARALD ALVESTRAND  
CULLEN JENNINGS

IETF#90

Toronto, Canada.

## (2) Q13: RECEIVER-ID

- **WHAT IS THE ISSUE?**

- We need a mechanism for the Offerer to associate incoming RTP packets with its associated m- line, where:
  - Association cannot be done based on address:port
  - Association cannot be done based on PT value
  - Offerer has not received SDP answer
- Offerer defines an identifier for each m- line within a BUNDLE group, and requests answerer to mirror that value in RTP packets associated with an m- line.

# (3) Q13: RECEIVER-ID

- **WHAT DO YOU SUGGEST?**

- Use existing SDP mid attribute value as receiver-id
  - Unique value per m- line
  - Semantics fit (identify/reference m- line)
  - Always present within a BUNDLE group
- Define RTP header extension to carry mid value in RTP (or, carry SDES item in RTP)
- Define RTCP SDES item to carry mid value in RTCP
- Support mandatory – usage optional
  - Not needed if entity can use PT to map RTP packet to m- line
  - Endpoint must use if remote endpoint indicates desire to receive

# (4) Q13: RECEIVER-ID

- **AWESOME, DO YOU HAVE AN EXAMPLE?**

SDP Offer:

a=group:BUNDLE **Y W**

m=audio...

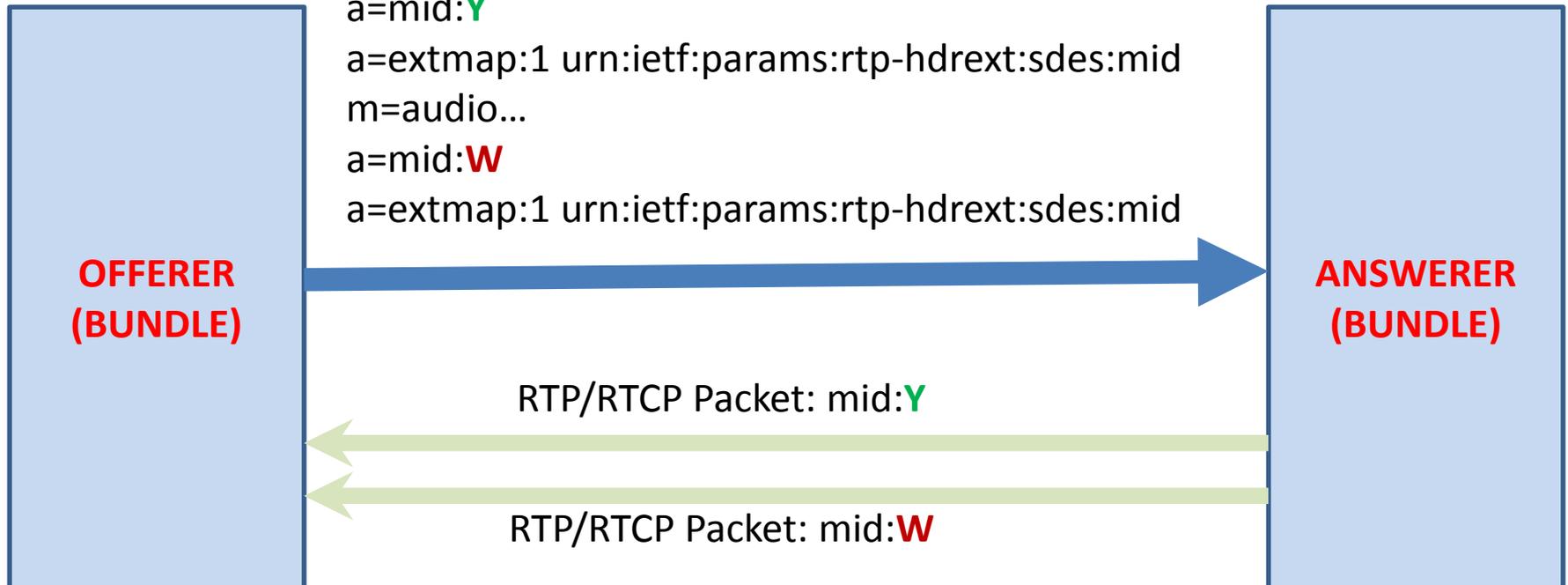
a=mid:**Y**

a=extmap:1 urn:ietf:params:rtp-hdrext:sdes:mid

m=audio...

a=mid:**W**

a=extmap:1 urn:ietf:params:rtp-hdrext:sdes:mid



## (5) Q13: RECEIVER-ID

- **WHERE DO WE DOCUMENT IT?**

- SDP mid attribute itself already defined (RFC 5888) and adopted by BUNDLE

- BUNDLE spec

- Usage of SDP mid attribute value for receiver-id usage
- SDP extmap attribute value
- RTP header extension
- RTCP SDES MID item

## (6) Q13: RECEIVER-ID

- **ARE WE DONE?**

- **Q1:** Value syntax used in SDP mid attribute must “fit” into RTP/RTCP
- **Q2:** Used in all streams, or only in bundled streams?
- **Q3:** Usage in both directions?
- **Q4:** When is the RTP/RTCP mid value sent?
- **Q5:** RTCP SDES item also in RTP?
- **Q6:** Usage in RTCP only?

# (7) Q13: RECEIVER-ID

- **Q1:** Value syntax used in SDP mid attribute must “fit” into RTP/RTCP
  - **FACTS:**
    - SDP mid attribute value: token
    - RTCP SDES item value: UTF-8 strings
      - token is subset of UTF-8
  - **SUGGESTION:**
    - No need to restrict syntax or length of mid values.
    - Add a note saying that long values have impact on RTP/RTCP packet size

## (8) Q13: RECEIVER-ID

- **Q2:** Used in all streams, or only in bundled streams?
  - **FACT:**
    - When the SDP grouping framework is used (SDP group attribute), SDP mid attribute must be present in all m- lines (including non-bundled m- lines).
  - **ALTERNATIVES:**
    - **Alt 1:** Include mid value in RTP/RTCP packets associated with m- lines where the header extension is negotiated
    - **Alt 2:** Include mid value in RTP/RTCP packets associated with all m- lines.
  - **SUGGESTION:**
    - **Alt 1**

# (9) Q13: RECEIVER-ID

- **Q3: Usage in both directions?**

- **ALTERNATIVES:**

- **Alt 1:** Allow usage from answerer towards offerer only
  - Answerer must send if offerer indicates desire to receive
- **Alt 2:** Allow usage in both directions
  - Each endpoint indicates desire to receive and/or willingness to send mid value in RTP/RTCP
  - Endpoint must send if remote endpoint indicates desire to receive

- **SUGGESTION:**

- **Alt 2**

# (10) Q13: RECEIVER-ID

- **Q4: When is the RTP/RTCP mid value sent?**
  - **ALTERNATIVES:**
    - **Alt 1:** Throughout the session
    - **Alt 2:** Send RTCP SDES mid whenever CNAME is sent. Send RTP mid when a new SSRC appears, and optionally for critical media frames (e.g. video key frames or parameter sets, audio talk-spurt after silence, etc.).
      - Need to decide for how long the mid value is sent when triggered by above
  - **SUGGESTION:**
    - **Alt 2**

# (11) Q13: RECEIVER-ID

- **Q5: RTCP SDES item also in RTP?**
  - **ALTERNATIVES:**
    - **Alt 1:** Define mid specific RTP header extension
    - **Alt 2:** Carry RTCP SDES item in RTP
      - Using the generic RTP header extension to carry SDES items, defined in draft-westerlund-avtext-sdes-hdr-ext
  - **SUGGESTION:**
    - ?

# (12) Q13: RECEIVER-ID

- **Q6: Usage in RTCP only?**
  - **ALTERNATIVES:**
    - **Alt 1:** When used, always use in both RTP and RTCP
    - **Alt 2:** Allow usage in RTCP only (additional negotiation needed)
  - **SUGGESTION:**
    - **Alt 1**

## (13) NEXT STEPS

- Provide text for open issues
- Community review
- WGLC

THE END

THANK YOU FOR  
LISTENING!