

WHERE TO EXPECT MEDIA?

MMUSIC Virtual Interim Meeting

May 23rd, 2013

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PURPOSE OF PRESENTATION



- › DECIDE ON WHICH PORT(s) OFFERER CAN EXPECT MEDIA TO ARRIVE

- › DECIDE HOW TO INDICATE ON WHICH PORT TO SEND BUNDLED MEDIA

ON WHICH PORT TO EXPECT MEDIA?



O/A State	Port
Bundle Offer sent (Unknown whether answerer supports bundle)	Unbundled media on m- line port associated with each media Bundled media on “bundle port”
Bundle Answer received	Bundled media on “bundle port”
Non-Bundle Answer received	Unbundled media on m- line port associated with each media

HOW DO INDICATE BUNDLE PORT?



(WHEN DIFFERENT PORT VALUES IN OFFER)

ALTERNATIVES:

- 1) Port of “first” non-rejected m- line within bundle group
- 2) **a=bundle-port** SDP attribute
- 3) “First” mid in bundle **a=group** SDP attribute list

*Example: a=group:BUNDLE **foo** bar*

PROPOSAL: 3

When an offer with identical port value in each m- line of the bundle group is sent, that port value represent the bundle port.

BUNDLE SDP ANSWER RESTRICTIONS

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PURPOSE OF PRESENTATION



- › DECIDE ON RESTRICTIONS WHEN CREATING A BUNDLE SDP ANSWER

- › DECIDE ON USAGE OF PORT VALUES IN SDP ANSWER

CREATING BUNDLE ANSWER



› In an SDP answer:

- a BUNDLE group MUST NOT be created, unless it was included in the associated offer
- an m- line MUST NOT be added to a BUNDLE group, unless it was included in a BUNDLE group in the associated offer
- an m- line MUST NOT be added to another BUNDLE group than the group in which it was included in the associated offer
- an m- line MUST NOT be removed from a BUNDLE group, if it was included in a BUNDLE group in the associated offer
 - › Always?
 - › Only when identical m- line port values were used in the associated offer?
 - › If port value is set to zero?

PORTS IN BUNDLE ANSWER



- › If the answerer wants to use a single port, an identical port value **MUST** be used for each m- line within the BUNDLE group
- › What if the answerer does not want to use a single port, but wants to allow the offerer to use a single port?
 - Sending answer without BUNDLE won't work, as the offerer will do a fallback to using different ports.
 - › Send answer with BUNDLE, but with different port numbers?
 - Problematic if the answerer at some point sends an offer, as the usage of different port values now have different semantics than in the initial offer
 - › Send answer without BUNDLE, but with some kind of please-go-ahead-and-use-single-port indicator?
 - › Do not allow: either both, or no, endpoint use a single port?

HOW TO DEMUX RTP MEDIA?

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PURPOSE OF PRESENTATION



- › DECIDE HOW TO ASSOCIATE BUNDLED RTP MEDIA TO m- LINE

- › DECIDE HOW TO DEMULTIPLEX BUNDLED RTP MEDIA

HOW TO DEMUX RTP MEDIA?



Demux based on...	Comments/Issues
PT (Payload Type value)	<ul style="list-style-type: none">- PT space too small- Semantically wrong- Nothing prevents offerer from doing this, as it chooses which PTs to receive
SSRC	<ul style="list-style-type: none">- Requires signalling of each SSRC value used- SSRC can change mid-session
RTP Header Extension (SHIM, H.460.19,...)	<ul style="list-style-type: none">- Not supported by legacy devices- RTP analyzers don't like it
Combination of above	