

BUNDLE -03

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LITERATURE



- › Multiplexing Negotiation Using Session Description Protocol (SDP) Port Numbers - BUNDLE

- <http://tools.ietf.org/id/draft-ietf-mmusic-sdp-bundle-negotiation-03.txt>

- › A Framework for SDP Attributes when Multiplexing

- <http://tools.ietf.org/id/draft-nandakumar-mmusic-sdp-mux-attributes-01.txt>

MAJOR CHANGES



- › **TWO OFFER/ANSWER TRANSACTIONS**
 - 1st OFFER
 - › SDP m- lines grouped using new SDP grouping value
 - › **DIFFERENT** port number for all m- lines associated with a group
 - 2nd OFFER
 - › Sent if remote entity supports BUNDLE
 - Otherwise each media (m- line) will use different ports
 - › Should be sent before media flow begins
 - › **IDENTICAL** port number for all m- lines associated with a group
 - › The port will be used for all media

- › **WORKS WITH LEGACY SDP ANSWERER**

- › **INTERMEDIARY WILL HAVE CORRECT PORT INFORMATION**

EXAMPLE



1st OFFER

```
v=0
o=alice 2890844526 2890844526 IN IP4 host.atlanta.com
c=IN IP4 host.atlanta.com
t=0 0
a=group:BUNDLE foo bar
m=audio 10000 RTP/AVP 0 8 97
a=mid:foo
b=AS:200
a=rtpmap:0 PCMU/8000
a=rtpmap:8 PCMA/8000
a=rtpmap:97 iLBC/8000
m=video 20000 RTP/AVP 31 32
a=mid:bar
b=AS:1000
a=rtpmap:31 H261/90000
a=rtpmap:32 MPV/90000
```

2nd OFFER

```
v=0
o=alice 2890844526 2890844527 IN IP4 host.atlanta.com
c=IN IP4 host.atlanta.com
t=0 0
a=group:BUNDLE foo bar
m=audio 10000 RTP/AVP 0 8 97
a=mid:foo
b=AS:200
a=rtpmap:0 PCMU/8000
a=rtpmap:8 PCMA/8000
a=rtpmap:97 iLBC/8000
m=video 10000 RTP/AVP 31 32
a=mid:bar
b=AS:1000
a=rtpmap:31 H261/90000
a=rtpmap:32 MPV/90000
```

VALUE CALCULATION



- › If multiplexing is used, value calculation (bandwidth etc) for the multiplexed media must be calculated based on values for each associated m- line
- › **Standardization** work needed to define the calculations necessary for every SDP parameter
 - draft-nandakumar-mmusic-sdp-mux-attributes

NO MORE



THANK YOU FOR
LISTENING!

