Multiple Packetization Times in SDP: Problem Statement

draft-garcia-mmusic-multiple-ptimes-problem-00.txt
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Problem description

- SDP defines the *ptime* attribute:
  
  *This gives the length of time in milliseconds represented by the media in a packet ... It should not be necessary to know ptime to decode RTP or vat audio, and it is intended as a recommendation for the encoding/packetisation of audio. It is a media-level attribute, and it is not dependent on charset.*

- PROBLEM:
  
  - The *ptime* attribute defines the packetization time of all the media format descriptions in the m= line
  - Not possible to specify different *ptime* per media format

- BUT:
  
  - Packetization time depends on the media format and network access technology
  - Implementations may behave better under certain combinations of packetization times and media formats
  - The issue has been solved with proprietary non-standardize means.
Example

v=0
o=alice 2890844526 2890844526 IN IP4 alicepc.example.com
s=
c=IN IP4 alicepc.example.com
t=0 0
m=audio 49170 RTP/AVP 0 8 97
a=rtpmap:0 PCMU/8000
a=rtpmap:8 PCMA/8000
a=rtpmap:97 iLBC/8000
a=ptime:20

Packetization time affects the three media formats
Issue: Recommendation or negotiation

- SDP says:
  
  *It should not be necessary to know ptime to decode RTP or vat audio, and it is intended as a recommendation for the encoding/packetisation of audio.*

- But in reality, implementations have constraints to decode any packetization time
  - Which leads to require a negotiation rather than a recommendation
Issue: Exact value or range

- Do we need to signal an exact packetization time per media format, or a range of acceptable values
Issue: same value both directions

- If the packetization time is a recommendation, then each endpoint can recommend different values.
- If the packetization time is negotiated, should it be the same in both directions?
Next steps

- We are in position to derive requirements
- And start some mail discussions about potential solutions
- Hopefully, a new draft before IETF 70 with a solution or survey of solutions.