draft-xu-mmusic-sdp-codec-param-00

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Background

- What we have in SDP now
  - session level param, eg. o=, v=, s=, t=, c=
  - media level param, eg. m=, a=, c=
  - format specific param, eg. a=fmtp

- The proposal
  - to provide general means to describe codec level parameters (eg. ptime, address, …) in SDP.

requirement case 1

- codec level packet time
    - packet time : the length of time in milliseconds represented by the media in a packet
    - currently we only have media level parameter a=ptime: <ptime> which is applicable to all the codecs belong to the same media stream.
    - But, devices may have different (prefered) packetime capabilities for different voice codecs which need to be negotiated.
    - this issue being put forward from time to time on the mailing list, but no final conclusion.
    - concrete requirements:
        - Req 1: Should support different ptime value for different codecs in one media stream.
        - Req 2: The content of codec specific ptime may be a list of supported values, e.g. 10 20 30.
        - Req 3: The content of codec specific ptime may be scope of supported ptime values, e.g. 10-30.
        - Req 4: If there is no codec specific ptime value, the media level ptime value shall be used.

requirement case 2

- codec level transport address
  - Currently, the connect address(c=) and port number(m=) is only at media level
  - may be required by intelligent transcoding gateway
  - may be required by devices with different cards which have separate network interface and media capabilities
  - concrete requirements
    - Req 1: Should support different transport address information for different codecs in one media stream.
    - Req 2: The content of transport address information may contain connect address, port number or both.
    - Req 3: If there are no codec specific transport address information, the session level or media level one shall be used.

illustrative solutions

- a=fmtp not applicable now
  - This attribute allows parameters that are specific to a particular format to be conveyed in a way that SDP doesn't have to understand them. … Format-specific parameters … given unchanged to the media tool that will use this format.
- extend the a=fmtp semantic and syntax?
  - eg. a=fmtp:0 ptime=10,20,30; c=10.0.0.0; port=1234; …
- new header?
  - eg. a=x-cparam:<codec> <codec level parameters>
  - eg. a=x-cparam: 0 ptime=10,20,30; c=10.0.0.0; port=1234, …

Comments

- Do people agree with this proposal?
- What next for this draft?