Parameters for Static Macroblocks and Aspect Ratio in the RTP Payload Format for H.264 Video

draft-ietf-avt-rtp-h264-params-00.txt

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Origin and future

• *draft-kristensen-avt-rtp-h264-extension-00* split in two based on last IETF meeting
  – New optional parameters (from current H.241)
    ➔ Added in this draft
  – H264-RCDO payload format
    ➔ *draft-kristensen-avt-rtp-h264-rcdo-00* submitted July 2\textsuperscript{nd}.
Static Macroblocks

• Amount of macroblocks in video stream does not change in a frame ➔ static
  – Free up processing cycles for non-static macroblocks
• New optional parameter: *max-smbps*
  – Under hypothetical assumption all macroblocks are static, this is receiver capability
• Enables the encoder to send at given resolution using higher rate than indicated by level or max-mbps
Sample aspect ratio

- SAR is defined as the intended ratio of the horizontal distance between columns to vertical distance between rows of luma sample array in a frame.
- Receiver indicates what sample aspect ratio it can support without distortion.
- New optional parameter: sar
  - H.264 aspect_ratio_idc, 1→N
- New optional parameter: esar
  - Extended_SAR, aspect_ratio_idc == 255
Current work in ITU

• Video submode control
  – Enables a receiver to signal preference for a specific mode. For example CIF resolution using 4:3 picture aspect ratio
  – This is a receiver preference but encoder may ignore it if can not be supported.

• Initial work has started but expect a solution next year.
  – Similar requirement came on AVT
  – Will submit a draft before approving on ITU
  – Interested parties are invited to work with the authors