

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

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

Tom Kristensen, TANDBERG

Roni Even, Polycom

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 2nd.

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