

H.264 RTP Payload Format extensions for RCDO and Static Macroblocks

draft-kristensen-avt-rtp-h264-extension-00.txt

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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
- May send with given resolution at higher rate than indicated for signalled level

Reduced-Complexity Decoding Operation (RCDO)

- H.241/Annex B specifies RCDO to be applied to H.264 Baseline bitstreams
- Total computational complexity savings
 - 30% in decoders / 15% in encoders
 - Significant gain
- Propose new H264-RCDO MIME subtype
 - Optional MIME parameters for H.264 (RFC3984) apply
 - RCDO distinct from any H.264 Profile ("no profile")
 - RCDO not compatible with H.264 Baseline
- Acceptable approach?
 - Similar: H.263 have H263-1998/H263-2000 subtypes

Way forward

- Keep as one draft or split in two?
 - Common theme: Enable higher resolutions + higher framerates
 - However, max-smbps parameter applies to H264, H264-RCDO and potentially H264-SVC