when the bitrate is low, the PSNR of HRMIR and RS-MDC are nearly same, this is because in this case, very few Intra macroblocks are inserted, which makes HRMIR approach similar as RS-MDC approach. Furthermore, as the QP values of different macroblocks in the proposed HRMIR approach are not identical, additional bits are needed to encode the residual QP value.

In all the previous experiments, the channel packet loss rate is assumed to be available at the encoder, this can be implemented with the Real Time Control Protocol (RTCP) [18]. However, in