RATE–DISTORTION ESTIMATION FOR H.264/AVC CODERS
(WedPmOR3)

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Abstract :
In a video coder, the optimal coding mode decision for each coding block could be achieved by exhaustively calculating the Lagrange cost (which includes the coding distortion plus the Lagrange parameter times the coding bit consumption) of all possible modes. The best mode can then be chosen as the one with the minimum Lagrange cost. To speed up the computationally intensive Lagrange cost computation, in this paper, we propose transform–domain bit–rate estimation and distortion measures for the inter–mode decision in H.264/AVC coders. With the proposed scheme, entropy coding, inverse DCT, and pixel–reconstructions are not required in the process. Simulation results show that the proposed estimation method is accurate for the inter–mode decision and about 46.42% time reduction can be achieved.