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(54) SINGLE-INDEX QUANTIZATION MATRIX DESIGN FOR VIDEO ENCODING AND DECODING

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(57) **ABSTRACT**

Different quantization matrices may be transmitted corresponding to different block sizes, color components and prediction modes. To more efficiently signal the coefficients of the quantization matrices, in one implementation, a unified matrix identifier matrixId is used, based on a size identifier (sizeId) that relates to CU size with larger sizes listed first, and a matrix type (matrixTypeId) with luma QMs listed first. For example, the unified identifier is derived as: matrixId=N*sizeId+matrixTypeId, where N is the number of possible type identifiers, e.g., N=6. This single identifier allows referring to any previously transmitted matrix when using prediction (copy), and transmitting larger matrices first avoids interpolation in the prediction process. When a block uses the Intra Block Copy prediction mode, QM identifier may be derived as if the block uses the INTER prediction mode.