CLAIMS

1. A method of decoding video data, the method comprising:

inferring, for a current transform block of a current video block, a transform type from a plurality of transform types that includes one or more discrete cosine transforms (DCTs) and one or more discrete sine transforms (DSTs), wherein inferring the transform type comprises:

determining whether a size of the current transform block satisfies a size threshold, wherein the size of the current transform block satisfies the size threshold where the size of the current transform block is greater than or equal to 4 and less than or equal to 16;

determining whether the current video block is partitioned using intra-subblock partitioning (ISP);

responsive to determining that the size of the current transform block satisfies the size threshold and that the current video block is partitioned using ISP, selecting a particular DST of the one or more DSTs as the selected transform type, wherein selecting the particular DST comprises selecting the particular DST regardless of an intra prediction mode selected to predict the current video block, wherein the particular DST is a DST-7; and

responsive to determining that the size of the current transform block does not satisfy the size threshold and that the current video block is partitioned using ISP, selecting a particular DCT of the one or more DCTs as the selected transform type, wherein the particular DCT is a DCT-2;

transforming, using the selected transform type, the current transform block to obtain a block of reconstructed residual data for the video block; and

reconstructing, based on the reconstructed residual data for the video block, the video block,

wherein inferring the transform type for the current transform block comprises inferring the transform type for the current transform block responsive to determining that multiple transform selection (MTS) is enabled for the current video block;

wherein determining whether the current video block is partitioned using ISP comprises determining, based on values of one or more syntax elements decoded from a video bitstream, whether the current video block is partitioned using ISP;

wherein the size of the current transform block comprises:

a width of the current transform block; and

a height of the current transform block; and

wherein selecting the transform type comprises selecting a transform type for horizontal use and selecting a transform type for vertical use, the method further comprising:

selecting the DST-7 as the selected transform type for horizontal use responsive to determining that the width of the current transform block satisfies a width size threshold and that the current video block is partitioned using ISP; and

selecting the DST-7 as the selected transform type for vertical use responsive to determining that the height of the current transform block satisfies a height size threshold and that the current video block is partitioned using ISP, and wherein the width threshold equals the height threshold.

2. The method of claim 1, wherein the one or more DCTs include one or more of a DCT-1, the DCT-2, a DCT-3, a DCT-4, a DCT-5, a DCT-6, a DCT-7, and a DCT-8.

3. The method of claim 2, wherein the one or more DSTs include one or more of a DST-1, a DST-2, a DST-3, a DST-4, a DST-5, a DST-6, the DST-7, and a DST-8.

4. A device for coding video data, the device comprising:

a memory configured to store video blocks; and

one or more processors implemented in circuitry and configured to execute the method of any one of claims 1 to 3.

5. A computer-readable storage medium storing instructions that, when executed, cause one or more processors of a video coding device to execute the method of any one of claims 1 to 1 to 3.