CLAIMS

1. A method for decoding a bitstream, wherein the bitstream corresponds to an encoded video, wherein the encoded video includes a sequence of frames, wherein each frame is partitioned into encoded blocks, for each encoded block comprising the steps of:

determining a set of paths in the block, wherein each path is oriented at a transform angle determined from a transform index in the bitstream;

obtaining transform coefficients from the bitstream, wherein the transform coefficients include one DC coefficient for each path; and

applying a primary inverse transform to the transform coefficients on each path to produce a decoded video, wherein the determining, obtaining and applying steps are performed in a decoder.

2. The method of claim 1, wherein each path has a first coefficient ~~to form a set of first coefficients~~, and wherein the obtaining further comprises:

applying a secondary inverse transform to ~~the~~ a set of first coefficients formed from the first coefficient of each path to obtain the DC coefficient for each path.

3. The method of claim 1, wherein each path has a first coefficient ~~to form a set of first coefficients~~, and wherein the obtaining further comprises:

predicting the DC component for each path from the set of first coefficients formed from the first coefficient of each path.

4. The method of claim 1, further comprising":

associating a length with each path.

5. The method of claim 4, wherein the lengths are different.

6. The method of claim 1, wherein the primary inverse transform is based on an inverse discrete cosine transform.

7. The method of claim 1, further comprising:

partitioning the block into a set of partitions according to a partition angle.

8. The method of claim 7, wherein the partition angle is perpendicular to the transform angle.

9. The method of claim 1, wherein the blocks include macroblocks, sub-blocks, block partitions, or an array of pixels.