CLAIMS

1. A video encoding method comprising:

splitting an intra coding block in at least two transform blocks,

obtaining a decision that a second transform is to be applied and a selection of an index of a selected transform in a list of transforms, the second transform being a Low-Frequency-Non-Separable Transform;

when the second transform is to be applied:

signaling the application of the second transform for the intra coding block; and

performing a first transform on all of the plurality of transform blocks, and performing the second transform on all of the plurality of transform blocks of the intra coding block using the selected transform;

when the second transform is not to be applied,

selecting a zero value as index for the second transform in the list of transforms; and

performing a first transform on all of the plurality of transform blocks, the first transform being selected in a set of transforms; and

encoding the coding block with signaling information representative of the use of the second transform for the coding block.

2. A video decoding method comprising, for a coding block that is split into a plurality of transform blocks:

obtaining information representative of an index of a second transform;

when the index is a zero value, performing an inverse of a first transform on all of the plurality of transform blocks of the coding block, the first transform being selected in a set of transforms;

when the index is not a zero value, performing an inverse of the second transform (660) on all the transform blocks of the coding block using a second transform selected identified by the index in a list of second transforms, wherein the second transform being a Low-Frequency-Non-Separable Transform, and performing an inverse of the first transform on all of the plurality of the transform blocks of the coding block,

decoding the inversed transform blocks.

3. The method of any of claims 1 or 2 wherein the first transform is a 2D DCT2 transform in case a second transform is to be applied.

4. The method of any of claims 1 or 2 wherein the second transform is to be applied when the size of the coding block is greater than a threshold in width and height or when the size of the coding block is greater than a threshold in width or height or when the size of the coding block is smaller than a threshold in width and height, or when the size of the transform block is greater than a threshold in width and height, or when the size of the transform block is greater than a threshold in width or height or when the size of the transform block is smaller than a threshold in width and height.

5. A video encoding apparatus (100, 300) comprising means for:
splitting an intra coding block in at least two transform blocks,
obtaining a decision that a second transform is to be applied and a selection of an index of a selected transform in a list of transforms, the second transform being a Low-Frequency-Non-Separable Transform;
when the second transform is to be applied:
signaling the application of the second transform for the intra coding block; and
performing a first transform on all of the plurality of transform blocks, and performing the second transform on all of the plurality of transform blocks of the intra coding block using the selected transform;
when the second transform is not to be applied,
selecting a zero value as index for the second transform in the list of transforms; and
performing a first transform on all of the plurality of transform blocks, the first transform being selected in a set of transforms; and
encoding the coding block with signaling information representative of the use of the second transform for the coding block.

6. A video decoding apparatus (200, 300) comprising means for,
for a coding block that is split into a plurality of transform blocks:
obtaining information representative of an index of a second transform;
when the index is a zero value, performing an inverse of a first transform on all of the plurality of transform blocks of the coding block, the first transform being selected in a set of transforms;

when the index is not a zero value, performing an inverse of the second transform (660) on all the transform blocks of the coding block using a second transform selected identified by the index in a list of second transforms, wherein the second transform being a Low-Frequency-Non-Separable Transform, and performing an inverse of the first transform on all of the plurality of the transform blocks of the coding block, and

decoding the inversed transform blocks.

7. Computer-readable medium comprising instructions which, when executed by a computer, cause the computer to carry out the method of claim 1 or 2.

8. The apparatus of any of claims 5 or 6 wherein the first transform is a 2D DCT2 transform in case a second transform is to be applied.