CLAIMS

1. A video encoding method comprising:

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

applying (601) a first transform on the transform blocks of the coding block,

in response to a decision (602) that a second transform is to be applied:

signaling (603) the use of a second transform for a coding block,

performing (604) the second transforms on all the transform blocks of the coding block,

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:

in response to information representative of a second transform for a coding block (650) that is split in at least two transform blocks:

performing the second inverse transform (660) on all the transform blocks of the coding block and

performing first inverse transforms (680) on the transform blocks of the coding block,

decoding the inversed transform blocks.

3. The method of any of claims 1 or 2 wherein the second transform is a Low-Frequency-Non-Separable Transform.

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

5. The method of any of claims 1 or 2 to 4 wherein the second transform is selected as an index in a list of transforms.

6. The method of any of claims 1 or 2 to 5 wherein the second transform is selected as a predetermined index in the a list of transforms.

7. The method of any of claims 1 to 6 wherein the second transform is selected as being the first transform in the list of transforms.

8. The method of any of claims 1 to 7 wherein the second transform is to be applied when the size of the coding block is greater than a threshold in width and height.

~~9. The method of any of claims 1 to 7 wherein the second transform is to be applied when the size of the coding block is greater than a threshold in width or height.~~

~~10. The method of any of claims 1 to 7 wherein the second transform is to be applied when the size of the coding block is smaller than a threshold in width and height.~~

~~11. The method of any of claims 1 to 7 wherein the second transform is to be applied when the size of the transform block is greater than a threshold in width and height.~~

~~12. The method of any of claims 1 to 7 wherein the second transform is to be applied when the size of the transform block is greater than a threshold in width or height.~~

~~13. The method of any of claims 1 to 7 wherein the second transform is to be applied when the size of the transform block is smaller than a threshold in width and height.~~

~~14. The method of any of claims 1 to 13 wherein the second transform is selected at the transform block level.~~

~~15. The method of any of claims 1 to 13 wherein the second transform is performed only for a subset of transform blocks of the coding block.~~

~~16. The method of any of claims 1 to 13 wherein the transform blocks have different sizes and wherein the second transform is performed only on the largest transform block of the coding block.~~

7. 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.

~~17~~8. A video encoding apparatus (100, 300) comprising means for:

applying (601) a first transform over a coding block,

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

applying (601) a first transform over a coding block,

in response to a decision (602) that a second transform is to be applied:

signaling (603) the use of a second transform for a coding block,

performing (604) the second transform~~s~~ on all the transform blocks of the coding block,

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

~~18~~9. A video decoding apparatus (200, 300) comprising means for

in response to information representative of a second transform for a coding block (650) that is split in at least two transform blocks:

performing the second inverse transform (660) on all the transform blocks of the coding block and

performing first inverse transforms (680) on the transform blocks of the coding block,

decoding the inversed transform blocks.

~~19. The apparatus of any of claim 17 or 18 wherein the second transform is a Low-Frequency-Non-Separable-Transform.~~

~~20. The apparatus of any of claims 17 to 19 wherein the first transform is a 2D DCT2 transform in case a second transform is to be applied.~~

~~21. The apparatus of any of claims 17 to 20 wherein the second transform is selected as an index in a list of transforms.~~

~~22. The apparatus of any of claims 17 to 21 wherein the second transform is selected as a predetermined index in the list of transforms.~~

~~23. The apparatus of any of claims 17 to 22 wherein the second transform is selected as being the first transform in the list of transforms.~~

~~24. The apparatus of any of claims 17 to 23 wherein the second transform is to be applied when the size of the coding block is greater than a threshold in width and height.~~

~~25. The apparatus of any of claims 17 to 23 wherein the second transform is to be applied when the size of the coding block is greater than a threshold in width or height.~~

~~26. The apparatus of any of claims 17 to 23 wherein the second transform is to be applied when the size of the coding block is smaller than a threshold in width and height.~~

~~27. The apparatus of any of claims 17 to 23 wherein the second transform is to be applied when the size of the transform block is greater than a threshold in width and height.~~

~~28. The apparatus of any of claims 17 to 23 wherein the second transform is to be applied when the size of the transform block is greater than a threshold in width or height.~~

~~29. The apparatus of any of claims 17 to 23 wherein the second transform is to be applied when the size of the transform block is smaller than a threshold in width and height.~~

~~30. The apparatus of any of claims 17 to 29 wherein the second transform is selected at the block level.~~

~~31. The apparatus of any of claims 17 to 29 wherein the second transform is performed only for a subset of transform blocks of the coding block.~~

~~32. The apparatus of any of claims 17 to 29 wherein the transform blocks have different sizes and wherein the second transform is performed only on the largest transform block of the coding block.~~

~~33. Computer program comprising program code instructions for implementing the steps of a method according to at least one of claims 1 to 16 when executed by a processor.~~

~~34. Non-transitory computer readable medium comprising program code instructions for implementing the steps of a method according to at least one of claims 1 to 16 when executed by a processor.~~

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