Amended Set of Claims 1 to 38

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

obtaining an index value for a current video block;

obtaining a partition type for the current video block;

selecting one of a plurality of defined sets of ordered candidate predictive video blocks based on the partition type, wherein at least one of the plurality of defined sets of ordered candidate predictive video blocks includes a set of N candidate predictive blocks, wherein N is less than five;

selecting a predictive video block from a selected one of the plurality of defined sets of ordered candidate predictive video blocks based on the index value; and

generating a motion vector for the current video block based on motion information of the predictive video block.

2. The method of claim 1, wherein the plurality of defined sets of ordered candidate predictive video blocks includes a set including three candidate predictive blocks selected from five possible video blocks.

3. The method of claim 2, wherein the five possible video blocks include: an adjacent left video block to the current video block, an adjacent upper video block to the current video block, an adjacent upper-right video block to the current video block, an adjacent lower-left video block to the current video block, and an adjacent temporal video block to the current video block.

4. The method of claim 1, wherein the first set contains an adjacent upper video block to the current video block and an adjacent upper-right video block to the current video block to the current video block and does not include an adjacent left video block to the current video block and the first partition shape is defined according to an Nx2N_1 partition unit index.

5. The method of claim 4, wherein generating a motion vector based on motion information of the predictive video block for a current video block includes inheriting a motion vector from the predictive video block.

6. A device for decoding video data, the device comprising a video decoder configured to

obtain an index value for a current video block;

obtain a partition type for the current video block;

select one of a plurality of defined sets of ordered candidate predictive video blocks based on the partition type, wherein at least one of the plurality of defined sets of ordered candidate predictive video blocks includes a set of N candidate predictive blocks, wherein N is less than five;

select a predictive video block from a selected one of the plurality of defined sets of ordered candidate predictive video blocks based on the index value; and

generate a motion vector for the current video block based on motion information of the predictive video block.

7. The device of claim 6, wherein the plurality of defined sets of ordered candidate predictive video blocks includes a set including three candidate predictive blocks selected from five possible video blocks.

8. The device of claim 7, wherein the five possible video blocks include: an adjacent left video block to the current video block, an adjacent upper video block to the current video block, an adjacent upper-right video block to the current video block, an adjacent lower-left video block to the current video block, and an adjacent temporal video block to the current video block.

9. The device of claim 6, wherein the first set contains an adjacent upper video block to the current video block, and an adjacent upper-right video block to the current video block and the first partition shape is defined according to an Nx2N_1 partition unit index.

10. The device of claim 9, wherein configured to generate a motion vector based on motion information of the predictive video block for a current video block includes configured to inherit a motion vector from the predictive video block.

11. The device of claim 6, wherein the device comprises at least one of

an integrated circuit;

a microprocessor; and

a wireless communication device that includes the video decoder.

12. A device for decoding video data, the device comprising:

means for obtaining an index value for a current video block;

means for obtaining a partition type for the current video block;

means for selecting one of a plurality of defined sets of ordered candidate predictive video blocks based on the partition type, wherein at least one of the plurality of defined sets of ordered candidate predictive video blocks includes a set of N candidate predictive blocks, wherein N is less than five;

means for selecting a predictive video block from a selected one of the plurality of defined sets of ordered candidate predictive video blocks based on the index value; and

means for generating a motion vector for the current video block based on motion information of the predictive video block.

13. The device of claim 12, wherein the plurality of defined sets of ordered candidate predictive video blocks includes a set including three candidate predictive blocks selected from five possible video blocks.

14. The device of claim 13, wherein the five possible video blocks include: an adjacent left video block to the current video block, an adjacent upper video block to the current video block, an adjacent upper-right video block to the current video block, an adjacent lower-left video block to the current video block, and an adjacent temporal video block to the current video block.

15. The device of claim 12, wherein the first set contains an adjacent upper video block to the current video block, and an adjacent upper-right video block to the current video block and the first partition shape is defined according to an Nx2N_1 partition unit index.

16. The device of claim 15, wherein generating a motion vector based on motion information of the predictive video block for a current video block includes inheriting a motion vector from the predictive video block.

17. A computer program product comprising a computer-readable storage medium having stored thereon instructions that, when executed, cause a processor of a device for decoding video data to:

obtain an index value for a current video block;

obtain a partition type for the current video block;

select one of a plurality of defined sets of ordered candidate predictive video blocks based on the partition type, wherein at least one of the plurality of defined sets of ordered candidate predictive video blocks includes a set of N candidate predictive blocks, wherein N is less than five;

select a predictive video block from a selected one of the plurality of defined sets of ordered candidate predictive video blocks based on the index value; and

generate a motion vector for the current video block based on motion information of the predictive video block.

18. The computer program product of claim 17, wherein the plurality of defined sets of ordered candidate predictive video blocks includes a set including three candidate predictive blocks from five possible video blocks.

19. The computer program product of claim 18, wherein the five possible video blocks include: an adjacent left video block to the current video block, an adjacent upper video block to the current video block, an adjacent upper-right video block to the current video block, an adjacent lower-left video block to the current video block, and an adjacent temporal video block to the current video block.

20. The computer program product of claim 17, wherein the first set contains an adjacent upper video block to the current video block, and an adjacent upper-right video block to the current video block and the first partition shape is defined according to an Nx2N_1 partition unit index.

21. The computer program product of claim 20, wherein the instructions that, when executed, cause a processor to generate a motion vector based on motion information of the predictive video block for a current video block include instructions that, when executed, cause a processor to inherit a motion vector from the predictive video block.

22. A method of encoding video data, the method comprising:

obtaining a motion vector for a current video block;

obtaining a partition type for the current video block;

selecting one of a plurality of defined sets of ordered candidate predictive video blocks based on the partition type, wherein at least one of the plurality of defined sets of ordered candidate predictive video blocks includes a set of N candidate predictive blocks, wherein N is less than five;

selecting a predictive video block from a selected one of the plurality of defined sets of ordered candidate predictive video blocks based on the motion vector; and

generating an index value identifying a selected predictive video block.

23. The method of claim 22, wherein the plurality of defined sets of ordered candidate predictive video blocks includes a set including three candidate predictive blocks selected from five possible video blocks.

24. The method of claim 23, wherein the five possible video blocks include: an adjacent left video block to the current video block, an adjacent upper video block to the current video block, an adjacent upper-right video block to the current video block, an adjacent lower-left video block to the current video block, and an adjacent temporal video block to the current video block.

25. The method of claim 22, wherein the first set contains an adjacent upper video block to the current video block and the first partition shape is defined according to an N×2N_1 partition unit index.

26. A device for encoding video data, the device comprising a video encoder configured to:

obtain a motion vector for a current video block;

obtain a partition type for the current video block;

select one of a plurality of defined sets of ordered candidate predictive video blocks based on the partition type, wherein at least one of the plurality of defined sets of ordered candidate predictive video blocks includes a set of N candidate predictive blocks, wherein N is less than five;

select a predictive video block from a selected one of the plurality of defined sets of ordered candidate predictive video blocks based on the motion vector; and

generate an index value identifying a selected predictive video block.

27. The device of claim 26, wherein the plurality of defined sets of ordered candidate predictive video blocks includes a set including three candidate predictive blocks selected from five possible video blocks.

28. The device of claim 27, wherein the five possible video blocks include: an adjacent left video block to the current video block, an adjacent upper video block to the current video block, an adjacent upper-right video block to the current video block, an adjacent lower-left video block to the current video block, and an adjacent temporal video block to the current video block.

29. The device of claim 26, wherein the first set contains an adjacent upper video block to the current video block and the first partition shape is defined according to an Nx2N_1 partition unit index.

30. The device of claim 26, wherein the device comprises at least one of

an integrated circuit;

a microprocessor; and

a wireless communication device that includes the video decoder.

31. A device for encoding video data, the device comprising:

means for obtaining a motion vector for a current video block;

means for obtaining a partition type for the current video block;

means for selecting one of a plurality of defined sets of ordered candidate predictive video blocks based on the partition type, wherein at least one of the plurality of defined sets of ordered candidate predictive video blocks includes a set of N candidate predictive blocks, wherein N is less than five;

means for selecting a predictive video block from a selected one of the plurality of defined sets of ordered candidate predictive video blocks based on the motion vector; and

means for generating an index value identifying a selected predictive video block.

32. The device of claim 31, wherein the plurality of defined sets of ordered candidate predictive video blocks includes a set including three candidate predictive blocks selected from five possible video blocks.

33. The device of claim 32, wherein the five possible video blocks include: an adjacent left video block to the current video block, an adjacent upper video block to the current video block, an adjacent upper-right video block to the current video block, an adjacent lower-left video block to the current video block, and an adjacent temporal video block to the current video block.

34. The device of claim 31, wherein the first set contains an adjacent upper video block to the current video block and the first partition shape is defined according to an Nx2N_1 partition unit index.

35. A computer program product comprising a computer-readable storage medium having stored thereon instructions that, when executed, cause a processor of a device for encoding video data to:

obtain a motion vector for a current video block;

obtain a partition type for the current video block;

select one of a plurality of defined sets of ordered candidate predictive video blocks based on the partition type, wherein at least one of the plurality of defined sets of ordered candidate predictive video blocks includes a set of N candidate predictive blocks, wherein N is less than five;

select a predictive video block from a selected one of the plurality of defined sets of ordered candidate predictive video blocks based on the motion vector; and

generate an index value identifying a selected predictive video block.

36. The computer program product of claim 35, wherein the plurality of defined sets of ordered candidate predictive video blocks includes a set including three candidate predictive blocks selected from five possible video blocks.

37. The computer program product of claim 36, wherein the five possible video blocks include: an adjacent left video block to the current video block, an adjacent upper video block to the current video block, an adjacent upper-right video block to the current video block, an adjacent lower-left video block to the current video block, and an adjacent temporal video block to the current video block.

38. The computer program product of claim 35, wherein the first set contains an adjacent upper video block to the current video block and the first partition shape is defined according to an Nx2N_1 partition unit index.

CLAIMS

1. A method of decoding video data according to a merge mode, the method comprising:

obtaining an index value for a current video block;

generating a set of candidate predictive blocks based on spatial and temporal neighbors to the current video block;

limiting the set of generated candidate predictive blocks to a subset of generated candidate predictive blocks, wherein the subset of generated candidate predictive blocks is limited to be smaller than the set of generated candidate predictive blocks;

selecting a predictive video block from the subset of generated candidate predictive blocks based on the index value; and

generating motion information for the current video block according to the merge mode based on motion information of the predictive video block, wherein generating the motion information for the current video block includes inheriting motion information from the predictive video block.

2. The method of claim 1, wherein the subset of generated candidate predictive blocks includes three candidate predictive blocks.

3. The method of claim 2, wherein the set of generated candidate predictive blocks includes: an adjacent left video block to the current video block, an adjacent upper video block to the current video block, an adjacent upper-right video block to the current video block, an adjacent lower-left video block to the current video block, and an adjacent temporal video block to the current video block.

4. The method of claim 1, wherein generating the motion information includes inheriting a motion vector and a reference frame from the predictive video block.

5. A device for decoding video data according to a merge mode, the device

comprising a video decoder configured to:

obtain an index value for a current video block;

generate a set of candidate predictive blocks based on spatial and temporal neighbors to the current video block;

limit the set of generated candidate predictive blocks to a subset of generated candidate predictive blocks, wherein the subset of generated candidate predictive blocks is limited to be smaller than the set of generated candidate predictive blocks;

select a predictive video block from the subset of generated candidate predictive blocks based on the index value; and

generate motion information for the current video block according to the merge mode based on motion information of the predictive video block, wherein generating the motion information for the current video block includes inheriting motion information from the predictive video block.

6. The device of claim 5, wherein the subset of generated candidate predictive blocks includes three candidate predictive blocks.

7. The device of claim 6, wherein the set of generated candidate predictive blocks includes: an adjacent left video block to the current video block, an adjacent upper video block to the current video block, an adjacent upper-right video block to the current video block, an adjacent lower-left video block to the current video block, and an adjacent temporal video block to the current video block.

8. The device of claim 5, wherein configured to generate the motion information includes configured to inherit a motion vector and a reference frame from the predictive video block.

9. The device of claim 5, wherein the device comprises at least one of an integrated circuit;

a microprocessor; and

a wireless communication device that includes the video decoder.

10. A device for decoding video data according to a merge mode, the device comprising:

means for obtaining an index value for a current video block;

means for generating a set of candidate predictive blocks based on spatial and temporal neighbors to the current video block;

means for limiting the set of generated candidate predictive blocks to a subset of generated candidate predictive blocks, wherein the subset of generated candidate predictive blocks is limited to be smaller than the set of generated candidate predictive blocks;

means for selecting a predictive video block from the subset of generated candidate predictive blocks based on the index value; and

means for generating motion information for the current video block according to the merge mode based on motion information of the predictive video block, wherein the means for generating the motion information for the current video block includes means for inheriting motion information from the predictive video block.

11. The device of claim 10, wherein the subset of generated candidate predictive blocks includes three candidate predictive blocks.

12. The device of claim 11, wherein the set of generated candidate predictive blocks includes: an adjacent left video block to the current video block, an adjacent upper video block to the current video block, an adjacent upper-right video block to the current video block, an adjacent lower-left video block to the current video block, and an adjacent temporal video block to the current video block.

13. The device of claim 10, wherein generating the motion information includes inheriting a motion vector and a reference frame from the predictive video block.

14. A method of encoding video data according to a merge mode, the method comprising:

obtaining a motion vector for a current video block;

generating a set of candidate predictive blocks based on spatial and temporal neighbors to the current video block;

limiting the set of generated candidate predictive blocks to a subset of generated candidate predictive blocks, wherein the subset of generated candidate predictive blocks is limited to be smaller than the set of generated candidate predictive blocks;

selecting a predictive video block from the subset of generated candidate predictive blocks based on the motion vector; and

generating an index value identifying a selected predictive video block according to the merge mode.

15. The method of claim 14, wherein the subset of generated candidate predictive blocks includes three candidate predictive blocks.

16. The method of claim 15, wherein the set of generated candidate predictive blocks includes: an adjacent left video block to the current video block, an adjacent upper video block to the current video block, an adjacent upper-right video block to the current video block, an adjacent lower-left video block to the current video block, and an adjacent temporal video block to the current video block.

17. A device for encoding video data according to a merge mode, the device comprising a video encoder configured to:

obtain a motion vector for a current video block;

generate a set of candidate predictive blocks based on spatial and temporal neighbors to the current video block;

limit the set of generated candidate predictive blocks to a subset of generated candidate predictive blocks, wherein the subset of generated candidate predictive blocks is limited to be smaller than the set of generated candidate predictive blocks;

select a predictive video block from the subset of generated candidate predictive blocks based on the motion vector; and

generate an index value identifying a selected predictive video block according

to the merge mode.

18. The device of claim 17, wherein the subset of generated candidate predictive blocks includes three candidate predictive blocks.

19. The device of claim 18, wherein the set of generated candidate predictive blocks includes: an adjacent left video block to the current video block, an adjacent upper video block to the current video block, an adjacent upper-right video block to the current video block, an adjacent lower-left video block to the current video block, and an adjacent temporal video block to the current video block.

20. The device of claim 17, wherein the device comprises at least one of an integrated circuit;

a microprocessor; and

a wireless communication device that includes the video decoder.

21. A device for encoding video data according to a merge mode, the device comprising:

means for obtaining a motion vector for a current video block;

means for generating a set of candidate predictive blocks based on spatial and temporal neighbors to the current video block;

means for limiting the set of generated candidate predictive blocks to a subset of generated candidate predictive blocks, wherein the subset of generated candidate predictive blocks is limited to be smaller than the set of generated candidate predictive blocks;

means for selecting a predictive video block from the subset of generated candidate predictive blocks based on the motion vector; and

means for generating an index value identifying a selected predictive video block according to the merge mode.

22. The device of claim 21, wherein the subset of generated candidate predictive

blocks includes three candidate predictive blocks.

23. The device of claim 22, wherein the set of generated candidate predictive blocks includes: an adjacent left video block to the current video block, an adjacent upper video block to the current video block, an adjacent upper-right video block to the current video block, an adjacent lower-left video block to the current video block, and an adjacent temporal video block to the current video block.

24. The method of claim 1, wherein the set of generated candidate predictive blocks comprises five candidate predictive blocks, and wherein the subset of candidate predictive blocks comprises the top three candidate predictive blocks of the fivecandidate predictive blocks in the set of generated candidate predictive blocks.

25. The device of claim 5, wherein the set of generated candidate predictive blocks comprises five candidate predictive blocks, and wherein the subset of candidate predictive blocks comprises the top three candidate predictive blocks of the five candidate predictive blocks in the set of generated candidate predictive blocks.

26. The device of claim 10, wherein the set of generated candidate predictive blocks comprises five candidate predictive blocks, and wherein the subset of candidate predictive blocks comprises the top three candidate predictive blocks of the five candidate predictive blocks in the set of generated candidate predictive blocks.

27. The method of claim 14, wherein the set of generated candidate predictive blocks comprises five candidate predictive blocks, and wherein the subset of candidate predictive blocks comprises the top three candidate predictive blocks of the five candidate predictive blocks in the set of generated candidate predictive blocks.

28. The device of claim 17, wherein the set of generated candidate predictive blocks comprises five candidate predictive blocks, and wherein the subset of candidate predictive blocks comprises the top three candidate predictive blocks of the five

candidate predictive blocks in the set of generated candidate predictive blocks.

29. The device of claim 21, wherein the set of generated candidate predictive blocks comprises five candidate predictive blocks, and wherein the subset of candidate predictive blocks comprises the top three candidate predictive blocks of the five candidate predictive blocks in the set of generated candidate predictive blocks.

30. The computer program product having stored thereon instructions that, when executed by a computer, cause a processor device to perform a method according to any one of claims 1 to 4, 14 to 16, 24 or 27.