Amended Set of Claims

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

determining, for a block of video data, a set of most probable intra-prediction modes for predicting the block of video data, wherein the set of most probable intra-prediction modes has a size that is equal to a predetermined number that is greater than or equal to two;

coding a value representative of an actual intra-prediction mode for the block based at least in part on whether or not the actual intra-prediction mode is included in the set of most probable intra-prediction modes; and

coding the block using the actual intra-prediction mode.

2. The method of claim 1, wherein determining the set of most probable intra-prediction modes comprises:

determining a first intra-prediction mode for a left-neighboring block of the block;

determining a second intra-prediction mode for an above-neighboring block of the block; and

when the first intra-prediction mode is different than the second intra-prediction mode, including both the first intra-prediction mode and the second intra-prediction mode in the set of most probable intra-prediction modes.

3. The method of claim 2, further comprising:

when the first intra-prediction mode is the same as the second intra-prediction mode, and when the first and second intra-prediction modes comprise a mode other than a planar mode, including the first intra-prediction mode and the planar mode in the set of most probable intra-prediction modes.

4. The method of claim 2, further comprising:

when the first intra-prediction mode is the same as the second intra-prediction mode, and when the first and second intra-prediction modes comprise a planar mode, including the planar mode and a DC mode in the set of most probable intra-prediction modes.

5. The method of claim 1, wherein the block comprises a luminance block, the method further comprising:

determining, for a chrominance block corresponding to the luminance block, a mapping of a set of values to a set of intra-prediction modes, the set of intra-prediction modes comprising horizontal mode, vertical mode, planar mode, DC mode, and luma signal prediction mode, wherein when the actual intra-prediction mode for the luminance block comprises a mode other than horizontal mode, vertical mode, planar mode, and DC mode, the set of intra-prediction modes further comprises a reuse of luma intra-prediction mode mapped from a first value of the set of values, and wherein when the actual intra-prediction mode for the luminance block comprises one of horizontal mode, vertical mode, planar mode, and DC mode, the set of intra-prediction modes further comprises a mode other than horizontal mode, vertical mode, planar mode, and DC mode mapped from the first value of the set of values;

coding a value representative of an actual intra-prediction mode for the chrominance block based on the mapping of the set of values to the set of modes; and

coding the chrominance block using the actual intra-prediction mode for the chrominance block.

6. The method of claim 1, further comprising:

determining a prediction direction of the actual intra-prediction mode; and

including at least one intra-prediction mode having a prediction direction closest to the prediction direction of the actual intra-prediction mode in the set of most probable intra-prediction modes.

7. The method of claim 1, wherein the size of the set of most probable intra-prediction modes is equal to three.

8. The method of claim 7, further comprising:

determining a prediction direction of a first intra-prediction mode;

comparing the prediction direction of the first intra-prediction mode to prediction directions of one or more other available intra-prediction modes; and

including the first intra-prediction mode, a second intra-prediction mode of the one or more available intra-prediction modes, and a third intra-prediction mode of the one or more available intra-prediction modes in the set of most probable intra-prediction

modes, wherein the second and third intra-prediction modes have prediction directions determined to be closest to the prediction direction of the first intra-prediction mode based on the comparison.

9. The method of claim 7, wherein the set of three most probable intra-prediction modes includes DC mode, vertical mode, and planar mode.

10. The method of claim 1, wherein:

the size of the set of most probable intra-prediction modes is equal to four,

when two of the most probable intra-prediction modes are the same, the set of four most probable intra-prediction modes comprises two available intra-prediction modes having prediction directions that are closest to a prediction direction of the same most probable intra-prediction mode, otherwise the most probable intra-prediction modes comprise at least one of the DC intra-prediction mode, the vertical intra-prediction mode, or the horizontal intra-prediction mode.

11. The method of claim 1, further comprising:

selecting the actual intra-prediction mode, and

wherein coding the block further comprises encoding the block based on the actual intra-prediction mode.

12. The method of claim 1, wherein:

coding the block further comprises decoding the block using the actual intra-prediction mode, and

coding the value representative of the actual intra-prediction mode comprises determining the actual intra-prediction mode from the value.

13. The method of claim 1, wherein when the actual intra-prediction mode is the planar, vertical, horizontal, or DC mode, a chroma intra-prediction mode is an upper-right direction intra-prediction mode.

14. A device for coding video data, the device comprising a video coder configured to determine, for a block of video data, a set of most probable intra-prediction modes for predicting the block of video data, wherein the set of most probable intra-prediction

modes has a size that is equal to a predetermined number that is greater than or equal to two, code a value representative of an actual intra-prediction mode for the block based at least in part on whether or not the actual intra-prediction mode is included in the set of most probable intra-prediction modes, and code the block using the actual intra-prediction mode.

15. The device of claim 14, wherein determine the set of most probable intra-prediction modes further comprises that the video encoder is configured to determine a first intra-prediction mode for a left-neighboring block of the block, determine a second intra-prediction mode for an above-neighboring block of the block, and when the first intra-prediction mode is different than the second intra-prediction mode, include both the first intra-prediction mode and the second intra-prediction mode in the set of most probable intra-prediction modes.

16. The method of claim 15, wherein the video coder is further configured to, when the first intra-prediction mode is the same as the second intra-prediction mode, and when the first and second intra-prediction modes comprise a mode other than a planar mode, include the first intra-prediction mode and the planar mode in the set of most probable intra-prediction modes.

17. The device of claim 15, wherein the video coder is further configured to, when the first intra-prediction mode is the same as the second intra-prediction mode, and when the first and second intra-prediction modes comprise a planar mode, include the planar mode and a DC mode in the set of most probable intra-prediction modes.

18. The device of claim 14, wherein the block comprises a luminance block, and wherein the video coder is further configured to determine, for a chrominance block corresponding to the luminance block, a mapping of a set of values to a set of intra-prediction modes, the set of intra-prediction modes comprising horizontal mode, vertical mode, planar mode, DC mode, and luma signal prediction mode, wherein when the actual intra-prediction mode for the luminance block comprises a mode other than horizontal mode, vertical mode, planar mode, and DC mode, the set of intra-prediction modes further comprises a reuse of luma intra-prediction mode mapped from a first value of the set of values, and wherein when the actual intra-prediction mode for the

luminance block comprises one of horizontal mode, vertical mode, planar mode, and DC mode, the set of intra-prediction modes further comprises a mode other than horizontal mode, vertical mode, planar mode, and DC mode mapped from the first value of the set of values, code a value representative of an actual intra-prediction mode for the chrominance block based on the mapping of the set of values to the set of modes, and code the chrominance block using the actual intra-prediction mode for the chrominance block.

19. The device of claim 14, wherein the video coder is further configured to determine a prediction direction of the actual intra-prediction mode, and include at least one intra-prediction mode having a prediction direction closest to the prediction direction of the actual intra-prediction mode in the set of most probable intra-prediction modes.

20. The device of claim 14, wherein the size of the set of most probable intra-prediction modes is equal to three.

21. The device of claim 20, wherein the video coder is further configured to determine a prediction direction of a first intra-prediction mode, compare the prediction direction of the first intra-prediction mode to prediction directions of one or more other available intra-prediction modes, and include the first intra-prediction mode, a second intra-prediction mode of the one or more available intra-prediction modes, and a third intra-prediction mode of the one or more available intra-prediction modes in the set of most probable intra-prediction modes, wherein the second and third intra-prediction modes have prediction directions determined to be closest to the prediction direction of the first intra-prediction mode based on the comparison.

22. The device of claim 20, wherein the set of three most probable intra-prediction modes includes DC mode, vertical mode, and planar mode.

23. The device of claim 21, wherein:

the size of the set of most probable intra-prediction modes is equal to four,

when two of the most probable intra-prediction modes are the same, the set of four most probable intra-prediction modes comprises two available intra-prediction

modes having prediction directions that are closest to a prediction direction of the same most probable intra-prediction mode, otherwise the most probable intra-prediction modes comprise at least one of the DC intra-prediction mode, the vertical intra-prediction mode, or the horizontal intra-prediction mode.

24. The device of claim 14, wherein when the actual intra-prediction mode is the planar, vertical, horizontal, or DC mode, a chroma intra-prediction mode is an upper-right direction intra-prediction mode.

25. The device of claim 14, wherein the video coder comprises a video encoder.

26. The device of claim 14, wherein the video coder comprises a video decoder.

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

determine, for a block of video data, a set of most probable intra-prediction modes for predicting the block of video data, wherein the set of most probable intra-prediction modes has a size that is equal to a predetermined number that is greater than or equal to two;

code a value representative of an actual intra-prediction mode for the block based at least in part on whether or not the actual intra-prediction mode is included in the set of most probable intra-prediction modes; and

code the block using the actual intra-prediction mode.

28. The computer program product of claim 25, wherein the instructions further comprise:

determine a first intra-prediction mode for a left-neighboring block of the block;

determine a second intra-prediction mode for an above-neighboring block of the block; and

when the first intra-prediction mode is different than the second intra-prediction mode, include both the first intra-prediction mode and the second intra-prediction mode in the set of most probable intra-prediction modes.

29. The computer program product of claim 28, wherein the instructions further comprise:

when the first intra-prediction mode is the same as the second intra-prediction mode, and the first and second intra-prediction modes comprise a mode other than a planar mode, include the first intra-prediction mode and the planar mode in the set of most probable intra-prediction modes.

30. The computer program product of claim 28, wherein the instructions further comprise:

when the first intra-prediction mode is the same as the second intra-prediction mode, and when the first and second intra-prediction modes comprise a planar mode, include the planar mode and a DC mode in the set of most probable intra-prediction modes.

31. The computer program product of claim 27, wherein the block comprises a luminance block, wherein the instructions further comprise:

determine, for a chrominance block corresponding to the luminance block, a mapping of a set of values to a set of intra-prediction modes, the set of intra-prediction modes comprising horizontal mode, vertical mode, planar mode, DC mode, and luma signal prediction mode, wherein when the actual intra-prediction mode for the luminance block comprises a mode other than horizontal mode, vertical mode, planar mode, and DC mode, the set of intra-prediction modes further comprises a reuse of luma intra-prediction mode mapped from a first value of the set of values, and wherein when the actual intra-prediction mode for the luminance block comprises one of horizontal mode, vertical mode, planar mode, and DC mode, the set of intra-prediction modes further comprises a mode other than horizontal mode, vertical mode, planar mode, and DC mode mapped from the first value of the set of values;

code a value representative of an actual intra-prediction mode for the chrominance block based on the mapping of the set of values to the set of modes; and

code the chrominance block using the actual intra-prediction mode for the chrominance block.

32. The computer program product of claim 27, wherein the instructions further comprise:

determine a prediction direction of the actual intra-prediction mode; and

include at least one intra-prediction mode having a prediction direction closest to the prediction direction of the actual intra-prediction mode in the set of most probable intra-prediction modes.

33. The computer program product of claim 27, wherein the size of the set of most probable intra-prediction modes is equal to three.

34. The computer program product of claim 33, wherein the instructions further comprise:

determine a prediction direction of a first intra-prediction mode;

compare the prediction direction of the first intra-prediction mode to prediction directions of one or more other available intra-prediction modes;

include the first intra-prediction mode, a second intra-prediction mode of the one or more available intra-prediction modes, and a third intra-prediction mode of the one or more available intra-prediction modes in the set of most probable intra-prediction modes, wherein the second and third intra-prediction modes have prediction directions determined to be closest to the prediction direction of the first intra-prediction mode based on the comparison.

35. The computer program product of claim 33, wherein the set of three most probable intra-prediction modes includes DC mode, vertical mode, and planar mode.

36. The computer program product of claim 27, wherein:

the size of the set of most probable intra-prediction modes is equal to four, and

when two of the most probable intra-prediction modes are the same, the set of four most probable intra-prediction modes comprises two available intra-prediction modes having prediction directions that are closest to a prediction direction of the same most probable intra-prediction mode, otherwise the most probable intra-prediction modes comprise at least one of the DC intra-prediction mode, the vertical intra-prediction mode, or the horizontal intra-prediction mode.

37. The computer program product of claim 27, wherein the instructions that cause the processor to code the block comprise instructions that cause the processor to encode

the block, further comprising instructions that cause the processor to select the actual intra-prediction mode.

38. The computer program product of claim 27, wherein the instructions that cause the processor to code the block comprise instructions that cause the processor to decode the block, wherein the instructions that cause the processor to code the value representative of the actual intra-prediction mode comprise instructions that cause the processor to determine the actual intra-prediction mode.

39. A device for video coding, comprising:

means for determining, for a block of video data a set of most probable intra-prediction modes for predicting the block of video data, wherein the set of most probable intra-prediction modes has a size that is equal to a predetermined number that is greater than or equal to two;

means for coding a value representative of an actual intra-prediction mode for the block based at least in part on whether or not the actual intra-prediction mode is included in the set of most probable intra-prediction modes; and

means for coding the block using the actual intra-prediction mode.

40. The device of claim 39, further comprising:

means for determining a first intra-prediction mode for a left-neighboring block of the block;

means for determining a second intra-prediction mode for an above-neighboring block of the block; and

when the first intra-prediction mode is different than the second intra-prediction mode, means for including both the first intra-prediction mode and the second intra-prediction mode in the set of most probable intra-prediction modes.

41. The device of claim 40, further comprising:

when the first intra-prediction mode is the same as the second intra-prediction mode, and when the first and second intra-prediction modes comprise a mode other than a planar mode, means for including the first intra-prediction mode and the planar mode in the set of most probable intra-prediction modes.

42. The device of claim 40, further comprising:

when the first intra-prediction mode is the same as the second intra-prediction mode, and when the first and second intra-prediction modes comprise a planar mode, means for including the planar mode and a DC mode in the set of most probable intra-prediction modes.

43. The device of claim 39, wherein the block comprises a luminance block, the apparatus further comprising:

means for determining, for a chrominance block corresponding to the luminance block, a mapping of a set of values to a set of intra-prediction modes, the set of intra-prediction modes comprising horizontal mode, vertical mode, planar mode, DC mode, and luma signal prediction mode, wherein when the actual intra-prediction mode for the luminance block comprises a mode other than horizontal mode, vertical mode, planar mode, and DC mode, the set of intra-prediction modes further comprises a reuse of luma intra-prediction mode mapped from a first value of the set of values, and wherein when the actual intra-prediction mode for the luminance block comprises one of horizontal mode, vertical mode, planar mode, and DC mode, the set of intra-prediction modes further comprises a mode other than horizontal mode, vertical mode, planar mode, and DC mode mapped from the first value of the set of values;

means for coding a value representative of an actual intra-prediction mode for the chrominance block based on the mapping of the set of values to the set of modes; and

means for coding the chrominance block using the actual intra-prediction mode for the chrominance block.

44. The device of claim 39, further comprising:

means for determining a prediction direction of the actual intra-prediction mode; and

including at least one intra-prediction mode having a prediction direction closest to the prediction direction of the actual intra-prediction mode in the set of most probable intra-prediction modes.

45. The device of claim 39, wherein the size of the set of most probable intra-prediction modes is equal to three.

46. The device of claim 45, the device further comprising:

determining a prediction direction of a first intra-prediction mode;

comparing the prediction direction of the first intra-prediction mode to prediction directions of one or more other available intra-prediction modes;

including the first intra-prediction mode, a second intra-prediction mode of the one or more available intra-prediction modes, and a third intra-prediction mode of the one or more available intra-prediction modes in the set of most probable intra-prediction modes, wherein the second and third intra-prediction modes have prediction directions determined to be closest to the prediction direction of the first intra-prediction mode based on the comparison.

47. The device of claim 39, wherein:

the size of the set of most probable intra-prediction modes is equal to four, and

when two of the most probable intra-prediction modes are the same, the set of four most probable intra-prediction modes comprises two available intra-prediction modes having prediction directions that are closest to a prediction direction of the same most probable intra-prediction mode, otherwise the most probable intra-prediction modes comprise at least one of the DC intra-prediction mode, the vertical intra-prediction mode, or the horizontal intra-prediction mode.

48. The device of claim 39, wherein the apparatus comprises a video encoder.

49. The device of claim 39, wherein the apparatus comprises a video decoder.

CLAIMS

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

determining, for a block of video data, a set of most probable intra-prediction modes for predicting the block of video data, wherein the set of most probable intra-prediction modes has a size that is equal to a predetermined number that is greater than or equal to two, including:

determining a first intra-prediction mode for a left-neighboring block of the block,

determining a second intra-prediction mode for an above-neighboring block of the block,

when the first intra-prediction mode is different than the second intra-prediction mode, including both the first intra-prediction mode and the second intra-prediction mode in the set of most probable intra-prediction modes,

when the first intra-prediction mode is the same as the second intra-prediction mode, and when the first and second intra-prediction modes comprise a mode other than a planar mode, including the first intra-prediction mode and the planar mode in the set of most probable intra-prediction modes, and

when the first intra-prediction mode is the same as the second intra-prediction mode, and when the first and second intra-prediction modes comprise a planar mode, including the planar mode and a DC mode in the set of most probable intra-prediction modes;

coding a value representative of an actual intra-prediction mode for the block based at least in part on whether or not the actual intra-prediction mode is included in the set of most probable intra-prediction modes; and

coding the block using the actual intra-prediction mode.

2. The method of claim 1, further comprising:

determining a prediction direction of the actual intra-prediction mode; and

including at least one intra-prediction mode having a prediction direction closest to the prediction direction of the actual intra-prediction mode in the set of most probable intra-prediction modes.

3. The method of claim 1, wherein the size of the set of most probable intra-prediction modes is equal to three.

4. The method of claim 3, further comprising:

determining a prediction direction of a first intra-prediction mode;

comparing the prediction direction of the first intra-prediction mode to prediction directions of one or more other available intra-prediction modes; and

including the first intra-prediction mode, a second intra-prediction mode of the one or more available intra-prediction modes, and a third intra-prediction mode of the one or more available intra-prediction modes in the set of most probable intra-prediction modes, wherein the second and third intra-prediction modes have prediction directions determined to be closest to the prediction direction of the first intra-prediction mode based on the comparison.

5. The method of claim 3, wherein the set of three most probable intra-prediction modes includes DC mode, vertical mode, and planar mode.

6. The method of claim 1, wherein:

the size of the set of most probable intra-prediction modes is equal to four,

when two of the most probable intra-prediction modes are the same, the set of four most probable intra-prediction modes comprises two available intra-prediction modes having prediction directions that are closest to a prediction direction of the same most probable intra-prediction mode, otherwise the most probable intra-prediction modes comprise at least one of the DC intra-prediction mode, the vertical intra-prediction mode, or the horizontal intra-prediction mode.

7. The method of claim 1, further comprising:

selecting the actual intra-prediction mode, and

wherein coding the block further comprises encoding the block based on the actual intra-prediction mode.

8. The method of claim 1, wherein:

coding the block further comprises decoding the block using the actual intra-prediction mode, and

coding the value representative of the actual intra-prediction mode comprises determining the actual intra-prediction mode from the value.

9. The method of claim 1, wherein when the actual intra-prediction mode is the planar, vertical, horizontal, or DC mode, a chroma intra-prediction mode is an upper-right direction intra-prediction mode.

10. A device for coding video data, the device comprising a video coder configured to determine, for a block of video data, a set of most probable intra-prediction modes for predicting the block of video data, wherein the set of most probable intra-prediction modes has a size that is equal to a predetermined number that is greater than or equal to two, code a value representative of an actual intra-prediction mode for the block based at least in part on whether or not the actual intra-prediction mode is included in the set of most probable intra-prediction modes, and code the block using the actual intra-prediction mode, wherein determine the set of most probable intra-prediction modes further comprises that the video encoder is configured to:

determine a first intra-prediction mode for a left-neighboring block of the block,

determine a second intra-prediction mode for an above-neighboring block of the block,

when the first intra-prediction mode is different than the second intra-prediction mode, include both the first intra-prediction mode and the second intra-prediction mode in the set of most probable intra-prediction modes,

when the first intra-prediction mode is the same as the second intra-prediction mode, and when the first and second intra-prediction modes comprise a mode other than a planar mode, include the first intra-prediction mode and the planar mode in the set of most probable intra-prediction modes, and

when the first intra-prediction mode is the same as the second intra-prediction mode, and when the first and second intra-prediction modes comprise a planar mode, include the planar mode and a DC mode in the set of most probable intra-prediction modes.

11. The device of claim 10, wherein the video coder is further configured to determine a prediction direction of the actual intra-prediction mode, and include at least one intra-prediction mode having a prediction direction closest to the prediction

direction of the actual intra-prediction mode in the set of most probable intra-prediction modes.

12. The device of claim 10, wherein the size of the set of most probable intra-prediction modes is equal to three.

13. The device of claim 12, wherein the video coder is further configured to determine a prediction direction of a first intra-prediction mode, compare the prediction direction of the first intra-prediction mode to prediction directions of one or more other available intra-prediction modes, and include the first intra-prediction mode, a second intra-prediction mode of the one or more available intra-prediction modes, and a third intra-prediction mode of the one or more available intra-prediction modes in the set of most probable intra-prediction modes, wherein the second and third intra-prediction modes have prediction directions determined to be closest to the prediction direction of the first intra-prediction mode based on the comparison.

14. The device of claim 12, wherein the set of three most probable intra-prediction modes includes DC mode, vertical mode, and planar mode.

15. The device of claim 13, wherein:

the size of the set of most probable intra-prediction modes is equal to four,

when two of the most probable intra-prediction modes are the same, the set of four most probable intra-prediction modes comprises two available intra-prediction modes having prediction directions that are closest to a prediction direction of the same most probable intra-prediction mode, otherwise the most probable intra-prediction modes comprise at least one of the DC intra-prediction mode, the vertical intra-prediction mode, or the horizontal intra-prediction mode.

16. The device of claim 10, wherein when the actual intra-prediction mode is the planar, vertical, horizontal, or DC mode, a chroma intra-prediction mode is an upper-right direction intra-prediction mode.

17. The device of claim 10, wherein the video coder comprises a video encoder.

18. The device of claim 10, wherein the video coder comprises a video decoder.

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

determine, for a block of video data, a set of most probable intra-prediction modes for predicting the block of video data, wherein the set of most probable intra-prediction modes has a size that is equal to a predetermined number that is greater than or equal to two, including:

determine a first intra-prediction mode for a left-neighboring block of the block,

determine a second intra-prediction mode for an above-neighboring block of the block,

when the first intra-prediction mode is different than the second intra-prediction mode, include both the first intra-prediction mode and the second intra-prediction mode in the set of most probable intra-prediction modes,

when the first intra-prediction mode is the same as the second intra-prediction mode, and the first and second intra-prediction modes comprise a mode other than a planar mode, include the first intra-prediction mode and the planar mode in the set of most probable intra-prediction modes, and

when the first intra-prediction mode is the same as the second intra-prediction mode, and when the first and second intra-prediction modes comprise a planar mode, include the planar mode and a DC mode in the set of most probable intra-prediction modes;

code a value representative of an actual intra-prediction mode for the block based at least in part on whether or not the actual intra-prediction mode is included in the set of most probable intra-prediction modes; and

code the block using the actual intra-prediction mode.

20. The computer program product of claim 19, wherein the instructions further comprise:

determine a prediction direction of the actual intra-prediction mode; and

include at least one intra-prediction mode having a prediction direction closest to the prediction direction of the actual intra-prediction mode in the set of most probable intra-prediction modes.

21. The computer program product of claim 19, wherein the size of the set of most probable intra-prediction modes is equal to three.

22. The computer program product of claim 21, wherein the instructions further comprise:

determine a prediction direction of a first intra-prediction mode;

compare the prediction direction of the first intra-prediction mode to prediction directions of one or more other available intra-prediction modes;

include the first intra-prediction mode, a second intra-prediction mode of the one or more available intra-prediction modes, and a third intra-prediction mode of the one or more available intra-prediction modes in the set of most probable intra-prediction modes, wherein the second and third intra-prediction modes have prediction directions determined to be closest to the prediction direction of the first intra-prediction mode based on the comparison.

23. The computer program product of claim 21, wherein the set of three most probable intra-prediction modes includes DC mode, vertical mode, and planar mode.

24. The computer program product of claim 21, wherein:

the size of the set of most probable intra-prediction modes is equal to four, and

when two of the most probable intra-prediction modes are the same, the set of four most probable intra-prediction modes comprises two available intra-prediction modes having prediction directions that are closest to a prediction direction of the same most probable intra-prediction mode, otherwise the most probable intra-prediction modes comprise at least one of the DC intra-prediction mode, the vertical intra-prediction mode, or the horizontal intra-prediction mode.

25. The computer program product of claim 21, wherein the instructions that cause the processor to code the block comprise instructions that cause the processor to encode

the block, further comprising instructions that cause the processor to select the actual intra-prediction mode.

26. The computer program product of claim 21, wherein the instructions that cause the processor to code the block comprise instructions that cause the processor to decode the block, wherein the instructions that cause the processor to code the value representative of the actual intra-prediction mode comprise instructions that cause the processor to determine the actual intra-prediction mode.

27. A device for video coding, comprising:

means for determining, for a block of video data a set of most probable intra-prediction modes for predicting the block of video data, wherein the set of most probable intra-prediction modes has a size that is equal to a predetermined number that is greater than or equal to two;

means for determining a first intra-prediction mode for a left-neighboring block of the block;

means for determining a second intra-prediction mode for an above-neighboring block of the block;

when the first intra-prediction mode is different than the second intra-prediction mode, means for including both the first intra-prediction mode and the second intra-prediction mode in the set of most probable intra-prediction modes;

when the first intra-prediction mode is the same as the second intra-prediction mode, and when the first and second intra-prediction modes comprise a mode other than a planar mode, means for including the first intra-prediction mode and the planar mode in the set of most probable intra-prediction modes;

when the first intra-prediction mode is the same as the second intra-prediction mode, and when the first and second intra-prediction modes comprise a planar mode, means for including the planar mode and a DC mode in the set of most probable intra-prediction modes;

means for coding a value representative of an actual intra-prediction mode for the block based at least in part on whether or not the actual intra-prediction mode is included in the set of most probable intra-prediction modes; and

means for coding the block using the actual intra-prediction mode.

28. The device of claim 27, further comprising:

means for determining a prediction direction of the actual intra-prediction mode; and

including at least one intra-prediction mode having a prediction direction closest to the prediction direction of the actual intra-prediction mode in the set of most probable intra-prediction modes.

29. The device of claim 27, wherein the size of the set of most probable intra-prediction modes is equal to three.

30. The device of claim 29, the device further comprising:

determining a prediction direction of a first intra-prediction mode;

comparing the prediction direction of the first intra-prediction mode to prediction directions of one or more other available intra-prediction modes;

including the first intra-prediction mode, a second intra-prediction mode of the one or more available intra-prediction modes, and a third intra-prediction mode of the one or more available intra-prediction modes in the set of most probable intra-prediction modes, wherein the second and third intra-prediction modes have prediction directions determined to be closest to the prediction direction of the first intra-prediction mode based on the comparison.

31. The device of claim 27, wherein:

the size of the set of most probable intra-prediction modes is equal to four, and

when two of the most probable intra-prediction modes are the same, the set of four most probable intra-prediction modes comprises two available intra-prediction modes having prediction directions that are closest to a prediction direction of the same most probable intra-prediction mode, otherwise the most probable intra-prediction modes comprise at least one of the DC intra-prediction mode, the vertical intra-prediction mode, or the horizontal intra-prediction mode.

32. The device of claim 27, wherein the apparatus comprises a video encoder.

33. The device of claim 27, wherein the apparatus comprises a video decoder.