Amended Set of Claims 1 to 52

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

determining an intra-prediction mode for a block of video data, wherein the block is included in a coded unit of video data and positioned below a top row of above-neighboring blocks in the coded unit, and wherein determining the intra-prediction mode comprises determining the intra-prediction mode based on a most probable intra-prediction mode that is based on an intra-prediction mode from one or more other blocks in the coded unit but not based on an intra-prediction mode from any of the top row of blocks in the coded unit; and

coding the block based on the determined intra-prediction mode.

2. The method of claim 1, wherein the coded unit comprises one of a picture, a slice, a tile, and a set of wavefronts.

3. Canceled.

4. The method of claim 1, wherein the one or more other blocks comprise one or more left-neighboring blocks of the block.

5. The method of claim 4, wherein the one or more other blocks are directly adjacent to the block.

6. The method of claim 4, wherein the one or more other blocks include one or more blocks that are not directly adjacent to the block.

7. The method of claim 1, wherein determining the most probable intra-prediction mode for the block further comprises determining the most probable intra-prediction mode based on a first left-neighboring first block and a second left-neighboring block that is positioned below the block.

8. The method of claim 1, wherein the block comprises one or more blocks of a largest coding unit LCU and the top row of blocks comprises blocks of one or more other LCUs, and wherein the most probable intra-mode determination is not based on intra-prediction modes of the blocks of the one or more other LCUs.

9. The method of claim 1, wherein the block comprises a first sub-coding unit (CU) of a first largest coding unit (LCU) of the coded unit, wherein the top row of blocks comprise a second LCU of the coded unit that is above the first LCU, and wherein determining the most probable mode for the block comprises determining the most probable mode based on an intra-prediction mode from a second sub-CU of the first LCU, wherein the second sub-CU is positioned above the first sub-CU in the first LCU.

10. The method of claim 1, wherein coding the block comprises encoding the block based on the most probable intra-prediction mode, and wherein encoding the block comprises:

intra-predicting residual values for encoding the block using an intra-prediction mode for the block;

determining whether the intra-prediction mode for the block matches the determined most probable intra prediction mode;

indicating whether the intra-prediction mode for the block matches the most probable intra-prediction mode in an encoded bitstream.

11. The method of claim 1, wherein coding the block comprises decoding the block based on the most probable intra-prediction mode, and wherein decoding the block comprises:

determining an intra-prediction mode for decoding the block based on whether an intra-prediction mode for the block matches the determined most probable intra-prediction mode;

intra-predicting residual values for the block using the determined intra-prediction mode for decoding the block;

combining the intra-predicted residual values with received residual values of the block.

12. The method of claim 1, wherein:

determining the prediction information comprises determining motion information for the block of video data;

determining the prediction information for the block comprises determining motion information for the block based on the motion information for the one or more other blocks and without being based on motion information from the top row of blocks in the coded unit; and

coding the block comprises coding the block based on the determined motion information.

13. The method of claim 12, wherein the block comprises one or more blocks of a largest coding unit LCU and the top row of blocks comprises one or more other LCUs, and wherein the motion information determination is not based on motion information of the one or more other LCUs.

14. The method of claim 12, wherein the block comprises a first sub-coding unit (CU) of a first largest coding unit (LCU) of the coded unit, wherein the top row of blocks comprise a second LCU of the coded unit that is above the first LCU, and wherein determining the motion information for the block comprises determining the motion information based on motion information from a second sub-CU of the first LCU, wherein the second sub-CU is above the first sub-CU in the first LCU.

15. The method of claim 12, wherein coding the block comprises encoding the block, and wherein:

determining the prediction information for the block based on the motion information of the one or more other blocks comprises determining a motion vector predictor for the block based on the motion information of the one or more other blocks; and

encoding the block comprises indicating the motion vector predictor in an encoded bitstream.

16. The method of claim 12, wherein coding the block comprises decoding the block, and wherein:

determining an intra-prediction mode for decoding the block based on whether an intra-prediction mode for the block matches the determined most probable intra-prediction mode;

intra-predicting residual values for the block using the determined intra-prediction mode for decoding the block;

combining the intra-predicted residual values with received residual values of the block to reconstruct the block.

17. An apparatus for coding video data, the apparatus comprising one or more processors configured to:

determine an intra-prediction mode for a block of video data, wherein the block is included in a coded unit of video data and positioned below a top row of above-neighboring blocks in the coded unit, and wherein to determine the intra-prediction mode, the one or more processors are configured to determine the intra-prediction mode based on a most probable intra-prediction mode that is based on an intra-prediction mode from one or more other blocks in the coded unit but not based on an intra-prediction mode from any of the top row of blocks in the coded unit; and

code the block based on the determined intra-prediction mode.

18. The apparatus of claim 17, wherein the coded unit comprises one of a picture, a slice, a tile, and a set of wavefronts.

19. Canceled.

20. The apparatus of claim17, wherein the one or more other blocks comprise one or more left-neighboring blocks of the block.

21. The apparatus of claim 20, wherein the one or more other blocks are directly adjacent to the block.

22. The apparatus of claim 20, wherein the one or more other blocks include one or more blocks that are not directly adjacent to the block.

23. The apparatus of claim 17, wherein to determine the most probable intra-prediction mode for the block, the one or more processors are further configured to determine the most probable intra-prediction mode based on a first left-neighboring first block and a second left-neighboring block that is positioned below the block.

24. The apparatus of claim 17, wherein the block comprises one or more blocks of a largest coding unit LCU and the top row of blocks comprises blocks of one or more other LCUs, and wherein the most probable intra-mode determination is not based on intra-prediction modes of the blocks of the one or more other LCUs.

25. The apparatus of claim 17, wherein the block comprises a first sub-coding unit (CU) of a first largest coding unit (LCU) of the coded unit, wherein the top row of blocks comprise a second LCU of the coded unit that is above the first LCU, and wherein, to determine the most probable mode for the block, the one or more processors are configured to determine the most probable mode based on an intra-prediction mode from a second sub-CU of the first LCU, wherein the second sub-CU is positioned above the first sub-CU in the first LCU.

26. The apparatus of claim 17, wherein the apparatus comprises a video encoder, and wherein to code the block the one or more processors are configured to encode the block based on the most probable intra-prediction mode, and wherein to encode the block the one or more processors are configured to:

intra-predict residual values for encoding the block using an intra-prediction mode for the block;

determine whether the intra-prediction mode for the block matches the determined most probable intra prediction mode;

indicate whether the intra-prediction mode for the block matches the most probable intra-prediction mode in an encoded bitstream.

27. The apparatus of claim 17, wherein the apparatus comprises a video decoder, wherein to code the block the one or more processors are configured to decode the block based on the most probable intra-prediction mode, and wherein to decode the block the one or more processors are configured to:

determine an intra-prediction mode for decoding the block based on whether an intra-prediction mode for the block matches the determined most probable intra-prediction mode;

intra-predict residual values for the block using the determined intra-prediction mode for decoding the block;

combine the intra-predicted residual values with received residual values of the block.

28. The apparatus of claim 17, wherein:

to determine the prediction information, the one or more processors are configured to determine motion information for the block of video data;

to determine the prediction information for the block, the one or more processors are configured to determine motion information for the block based on the motion information for the one or more other blocks and without being based on motion information from the top row of blocks in the coded unit; and

to code the block, the one or more processors are configured to code the block based on the determined motion information.

29. The apparatus of claim 28, wherein the block comprises one or more blocks of a largest coding unit LCU and the top row of blocks comprises one or more other LCUs, and wherein the motion information determination is not based on motion information of the one or more other LCUs.

30. The apparatus of claim 28, wherein the block comprises a first sub-coding unit (CU) of a first largest coding unit (LCU) of the coded unit, wherein the top row of blocks comprise a second LCU of the coded unit that is above the first LCU, and wherein to determine the motion information for the block, the one or more processors are configured to determine the motion information based on motion information from a second sub-CU of the first LCU, wherein the second sub-CU is above the first sub-CU in the first LCU.

31. The apparatus of claim 28, wherein the apparatus comprises a video encoder, wherein to code the block, the one or more processors are configured to encode the block, and wherein to encode the block the one or more processors are configured to:

determine the prediction information for the block based on the motion information of the one or more other blocks comprises determining a motion vector predictor for the block based on the motion information of the one or more other blocks; and

encode the block comprising indicating the motion vector predictor in an encoded bitstream.

32. The apparatus of claim 28, wherein the apparatus comprises a video decoder, wherein to cod the block, the one or more processors are configured to decode the block, and wherein to decode the block, the one or more processors are configured to:

determine an intra-prediction mode for decoding the block based on whether an intra-prediction mode for the block matches the determined most probable intra-prediction mode;

intra-predict residual values for the block using the determined intra-prediction mode for decoding the block;

combine the intra-predicted residual values with received residual values of the block to reconstruct the block.

33. A non-transitory computer-readable storage medium having instructions stored thereon that, when executed, cause one or more processors to:

determine an intra-prediction mode for a block of video data, wherein the block is included in a coded unit of video data and positioned below a top row of above-neighboring blocks in the coded unit, and wherein to determine the intra-prediction mode, the instructions cause the one or more processors to determine the intra-prediction mode based on a most probable intra-prediction mode that is based on an intra-prediction mode from one or more other blocks in the coded unit but not based on an intra-prediction mode from any of the top row of blocks in the coded unit; and

code the block based on the determined intra-prediction mode.

34. The non-transitory computer-readable storage medium of claim 33, wherein the coded unit comprises one of a picture, a slice, a tile, and a set of wavefronts.

35. Canceled.

36. The non-transitory computer-readable storage medium of claim 33, wherein the one or more other blocks comprise one or more left-neighboring blocks of the block.

37. The non-transitory computer-readable storage medium of claim 33, wherein to determine the most probable intra-prediction mode for the block, the instructions cause the one or more processors to determine the most probable intra-prediction mode based on a first left-neighboring first block and a second left-neighboring block that is positioned below the block.

38. The non-transitory computer-readable storage medium of claim 33, wherein the block comprises one or more blocks of a largest coding unit LCU and the top row of blocks comprises blocks of one or more other LCUs, and wherein the most probable intra-mode determination is not based on intra-prediction modes of the blocks of the one or more other LCUs.

39. The non-transitory computer-readable storage medium of claim 33, wherein the block comprises a first sub-coding unit (CU) of a first largest coding unit (LCU) of the coded unit, wherein the top row of blocks comprise a second LCU of the coded unit that is above the first LCU, and wherein, to determine the most probable mode for the block, the instructions cause the one or more processors to determine the most probable mode based on an intra-prediction mode from a second sub-CU of the first LCU, wherein the second sub-CU is positioned above the first sub-CU in the first LCU.

40. The non-transitory computer-readable storage medium of claim 33, wherein:

to determine the prediction information, the instructions cause the one or more processors to determine motion information for the block of video data;

to determine the prediction information for the block, the instructions cause the one or more processors to determine motion information for the block based on the motion information for the one or more other blocks and without being based on motion information from the top row of blocks in the coded unit; and

to code the block, the instructions cause the one or more processors to code the block based on the determined motion information.

41. The non-transitory computer-readable storage medium of claim 40, wherein the block comprises one or more blocks of a largest coding unit LCU and the top row of blocks comprises one or more other LCUs, and wherein the motion information determination is not based on motion information of the one or more other LCUs.

42. The non-transitory computer-readable storage medium of claim 40, wherein the block comprises a first sub-coding unit (CU) of a first largest coding unit (LCU) of the coded unit, wherein the top row of blocks comprise a second LCU of the coded unit that is above the first LCU, and wherein to determine the motion information for the block, the instructions cause the one or more processors to determine the motion information based on motion information from a second sub-CU of the first LCU, wherein the second sub-CU is above the first sub-CU in the first LCU.

43. An apparatus for coding video data, the apparatus comprising:

means for determining an intra-prediction mode for a block of video data, wherein the block is included in a coded unit of video data and positioned below a top row of above-neighboring blocks in the coded unit, and wherein the means for determining the intra-prediction mode comprises means for determining the intra-prediction mode based on a most probable intra-prediction mode that is based on an intra-prediction mode from one or more other blocks in the coded unit but not based on an intra-prediction mode from any of the top row of blocks in the coded unit; and

means for coding the block based on the determined prediction information.

44. The apparatus of claim 43, wherein the coded unit comprises one of a picture, a slice, a tile, and a set of wavefronts.

45. Canceled.

46. The apparatus of claim 43, wherein the one or more other blocks comprise one or more left-neighboring blocks of the block.

47. The apparatus of claim 43, wherein means for determining the most probable intra-prediction mode for the block further comprises means for determining the most probable intra-prediction mode based on a first left-neighboring first block and a second left-neighboring block that is positioned below the block.

48. The apparatus of claim 43, wherein the block comprises one or more blocks of a largest coding unit LCU and the top row of blocks comprises blocks of one or more other LCUs, and wherein the most probable intra-mode determination is not based on intra-prediction modes of the blocks of the one or more other LCUs.

49. The apparatus of claim 43, wherein the block comprises a first sub-coding unit (CU) of a first largest coding unit (LCU) of the coded unit, wherein the top row of blocks comprise a second LCU of the coded unit that is above the first LCU, and wherein means for determining the most probable mode for the block comprises means for determining the most probable mode based on an intra-prediction mode from a second sub-CU of the first LCU, wherein the second sub-CU is positioned above the first sub-CU in the first LCU.

50. The apparatus of claim 43, wherein:

means for determining the prediction information comprises means for determining motion information for the block of video data;

means for determining the prediction information for the block comprises means for determining motion information for the block based on the motion information for the one or more other blocks and without being based on motion information from the top row of blocks in the coded unit; and

means for coding the block comprises means for coding the block based on the determined motion information.

51. The apparatus of claim 50, wherein the block comprises one or more blocks of a largest coding unit LCU and the top row of blocks comprises one or more other LCUs, and wherein the motion information determination is not based on motion information of the one or more other LCUs.

52. The apparatus of claim 50, wherein the block comprises a first sub-coding unit (CU) of a first largest coding unit (LCU) of the coded unit, wherein the top row of blocks comprise a second LCU of the coded unit that is above the first LCU, and wherein means for determining the motion information for the block comprises means for determining the motion information based on motion information from a second sub-CU of the first LCU, wherein the second sub-CU is above the first sub-CU in the first LCU.

WHAT IS CLAIMED IS:

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

coding a first largest coded unit of a slice of video data;

identifying, for a current block of video data that is positioned below the first largest coded unit and that neighbors the first largest coded unit and that is included in a second largest coded unit of the slice of video data, one or more blocks from which to determine one or more most probable intra-prediction modes for predicting an intra-prediction mode of the current block of video data based on a location of the one or more blocks, wherein identifying the one or more blocks includes excluding locations of any block of the first largest coded unit;

determining the one or more most probable intra-prediction modes based on respective intra-prediction modes of the identified one or more blocks; and

coding data that indicates the intra-prediction mode for the current block based on the one or more most-probable intra-prediction modes.

2. The method of claim 1, wherein the first largest coded unit and the second largest coded unit are included in a single slice of video data.

3. The method of claim 1 or 2, wherein identifying the one or more blocks includes identifying one or more left-neighboring blocks of the block.

4. The method of any one of claims 1 to 3, wherein identifying the one or more blocks includes identifying one or more blocks that are directly adjacent to the block.

5. The method of any one of claims 1 to 3, wherein identifying the one or more blocks includes identifying one or more blocks that are not directly adjacent to the block.

6. The method of claim 1 or 2, wherein identifying the one or more blocks includes identifying a first left-neighboring first block and a second left-neighboring block that is positioned below the block.

7. The method of any one of claims 1 to 6, wherein coding the data that indicates the intra-prediction mode for the current block includes encoding the data block, and wherein the method further includes:

determining residual values for the current block using the intra-prediction mode for the current block; and

encoding the residual values and the data that indicates the intra-prediction mode for the current block in an encoded bitstream.

8. The method of any one of claims 1 to 6, wherein coding the data that indicates the intra-prediction mode for the current block includes decoding the data, and wherein the method further includes:

decoding residual values for the current block;

intra-predicting the block using the intra-prediction mode for the current block; and

combining the intra-predicted residual values with received residual values of the block.

9. An apparatus for coding video data, the apparatus including:

means for coding a first largest coded unit of a slice of video data;

means for identifying, for a current block of video data that is positioned below the first largest coded unit and that neighbors the first largest coded unit and that is included in a second largest coded unit of the slice of video data, one or more blocks from which to determine one or more most probable intra-prediction modes for predicting an intra-prediction mode of the current block of video data based on a location of the one or more blocks, wherein identifying the one or more blocks includes excluding locations of any block of the first largest coded unit;

means for determining the one or more most probable intra-prediction modes based on respective intra-prediction modes of the identified one or more blocks; and

means for coding data that indicates the intra-prediction mode for the current block based on the one or more most-probable intra-prediction modes.

10. The apparatus of claim 9, wherein the first largest coded unit and the second largest coded unit are included in a single slice of video data.

11. The apparatus of claim 9 or 10, wherein the means for identifying the one or more blocks includes means for identifying one or more left-neighboring blocks of the block.

12. The apparatus of claim 9 or 10, wherein the means for identifying the one or more blocks includes means for identifying a first left-neighboring first block and a second left-neighboring block that is positioned below the block.

13. The method as claimed in any one of claims 1 to 8, wherein the steps may be configured and stored on a computer-readable storage medium and may be executed by one or more processors.

14. The method of any one of claims 1 to 8, further including:

determining, for a second block of video data that is included in the second largest coded unit and that is positioned below the current block and that neighbors the current block, a most probable intra-prediction mode for predicting an intra-prediction mode of the second block based on the intra-prediction mode of the current block; and

coding data that indicates the intra-prediction mode of the second block based on the most-probable intra-prediction mode.

15. The apparatus of any one of claims 9 to 12, wherein the apparatus further includes:

means for determining, for a second block of video data that is included in the second largest coded unit and that is positioned below the current block and that neighbors the current block, a most probable intra-prediction mode for predicting an intra-prediction mode of the second block based on the intra-prediction mode of the current block; and

means for coding data that indicates the intra-prediction mode of the second block based on the most-probable intra-prediction mode.