CLAIMS

1. A method of decoding video data, the method comprising: determining values for coded sub-block flags of one or more neighboring sub-blocks to a current sub-block; determining that a coded sub-block flag of the current sub-block indicates that the current sub-block includes at least one non-zero transform coefficient; in response to the determination that the coded sub-block flag of the current sub block indicates that the current sub-block includes the at least one non-zero transform coefficient, using the values for the coded sub-block flags of the neighboring sub-blocks to determine a context for entropy decoding one or more syntax elements of the at least one non-zero transform coefficient of the current sub-block, wherein using the values comprises: determining a first context for entropy decoding the one or more syntax elements of the at least one non-zero transform coefficient when the values for the coded sub-block flags of the neighboring sub-blocks have a first set of values; and determining a second context for entropy decoding the one or more syntax elements of the at least one non-zero transform coefficient when the values for the coded sub-block flags of the neighboring sub-blocks have a second set of values, the first context being different than the second context and the first set of values being different than the second set of values; and entropy decoding the one or more syntax elements of the individual transform coefficient using the determined context.

2. The method of claim 1, wherein the one or more neighboring sub-blocks comprise a right-neighboring sub-block and a bottom-neighboring sub-block.

3. The method of claim 2, wherein determining the context comprises calculating the sum of a value for a coded sub-block flag of the right-neighboring sub-block and a value for a coded sub-block flag of the bottom-neighboring sub-block and using the calculated sum to determine the context.

4. The method of claim 1, wherein the coded sub-block flags represent whether respective ones of the neighboring sub-blocks include at least one non-zero transform coefficient.

5. The method of claim 1, wherein each of the sub-blocks corresponds to a respective 4x4 block of transform coefficients, and wherein the coded sub-block flags indicate whether at least one of the transform coefficients in the respective 4x4 block has a non-zero value.

6. The method of claim 1, wherein the current sub-block has a size of 4x4 pixels, and wherein the current sub-block is within a current transform unit having a size greater than 4x4 pixels.

7. The method of claim 1, wherein determining the context further comprises determining the context for decoding the transform coefficient based on a position of the transform coefficient in the current sub-block.

8. The method of claim 1, wherein entropy decoding the transform coefficient comprises entropy decoding the transform coefficient according to context adaptive binary arithmetic

coding (CABAC).

9. The method of claim 1, wherein the one or more syntax elements comprise a significant coefficient flag of the individual transform coefficient representative of whether the individual transform coefficient has a non-zero value.

10. The method of claim 1, the method being executable on a wireless communication device, wherein the device comprises: a memory configured to store video data including the coded sub-block flags, the neighboring sub-blocks, and the current block; a processor configured to execute instructions to process the video data stored in said memory; and a receiver configured to receive the video data.

11. The method of claim 10, wherein the wireless communication device is a cellular telephone and the video data is received by the transmitter and modulated according to a cellular communication standard.

12. A device for decoding video data, the device comprising: a memory configured to store video data; and a video decoder configured to: determine values for coded sub-block flags of one or more neighboring sub-blocks to a current sub-block of the video data, determine that a coded sub-block flag of the current sub-block indicates that the current sub-block includes at least one non-zero transform coefficient; in response to the determination that the coded sub-block flag of the current sub block indicates that the current sub-block includes the at least one non-zero transform coefficient, use the values for the coded sub-block flags of the neighboring sub-blocks to determine a context for entropy decoding one or more syntax elements of the at least one non-zero transform coefficient of the current sub-block, wherein the video decoder is configured to: determine a first context for entropy decoding the one or more syntax elements of the at least one non-zero transform coefficient when the values for the coded sub-block flags of the neighboring sub-blocks have a first set of values; and determine a second context for entropy decoding the one or more syntax elements of the at least one non-zero transform coefficient when the values for the coded sub-block flags of the neighboring sub-blocks have a second set of values, the first context being different than the second context and the first set of values being different than the second set of values, and entropy decode the one or more syntax elements of the individual transform coefficient using the determined context.

13. The device of claim 12, wherein the one or more neighboring sub-blocks comprise a right-neighboring sub-block and a bottom-neighboring sub-block.

14. The device of claim 13, wherein to determine the context, the video decoder is configured to calculate the sum of a value for a coded sub-block flag of the right-neighboring sub-block and a value for a coded sub-block flag of the bottom-neighboring sub-block and use the calculated sum to determine the context.

15. The device of claim 12, wherein the coded sub-block flags represent whether respective

ones of the neighboring sub-blocks include at least one non-zero transform coefficient.

16. The device of claim 12, wherein the video decoder is further configured to determine the context for decoding the transform coefficient based on a position of the transform coefficient in the current sub-block.

17. The device of claim 12, wherein the video decoder is configured to entropy decode the transform coefficient according to context adaptive binary arithmetic coding (CABAC).

18. The device of claim 12, wherein the one or more syntax elements comprise a significant coefficient flag of the individual transform coefficient representative of whether the individual transform coefficient has a non-zero value.

19. The device of claim 12, wherein the device is a wireless communication device, further comprising a receiver configured to receive the video data.

20. The device of claim 19, wherein the wireless communication device is a cellular telephone and the video data is received by the receiver and modulated according to a cellular communication standard.

21. A device for decoding video data, the device comprising: means for determining values for coded sub-block flags of one or more neighboring sub-blocks to a current sub-block; means for determining that a coded sub-block flag of the current sub-block indicates that the current sub-block includes at least one non-zero transform coefficient; means for using, in response to the determination that the coded sub-block flag of the current sub block indicates that the current sub-block includes the at least one non-zero transform coefficient, the values for the coded sub-block flags of the neighboring sub-blocks to determine a context for entropy decoding one or more syntax elements of the at least one non-zero transform coefficient of the current sub-block, wherein the means for using the values comprise: means for determining a first context for entropy decoding the one or more syntax elements of the at least one non-zero transform coefficient when the values for the coded sub-block flags of the neighboring sub-blocks have a first set of values; and means for determining a second context for entropy decoding the one or more syntax elements of the at least one non-zero transform coefficient when the values for the coded sub-block flags of the neighboring sub-blocks have a second set of values, the first context being different than the second context and the first set of values being different than the second set of values; and means for entropy decoding the one or more syntax elements of the individual transform coefficient using the determined context.

22. The device of claim 21, wherein the one or more neighboring sub-blocks comprise a right-neighboring sub-block and a bottom-neighboring sub-block.

23. The device of claim 22, wherein the means for determining the context comprises means for calculating the sum of a value for a coded sub-block flag of the right-neighboring sub-

block and a value for a coded sub-block flag of the bottom-neighboring sub-block and means for using the calculated sum to determine the context.

24. The device of claim 21, wherein the coded sub-block flags represent whether respective ones of the neighboring sub-blocks include at least one non-zero transform coefficient.

25. The device of claim 21, wherein the means for determining the context further comprises means for determining the context for decoding the transform coefficient based on a position of the transform coefficient in the current sub-block.

26. The device of claim 21, wherein the means for entropy decoding the transform coefficient comprises means for entropy decoding the transform coefficient according to context adaptive binary arithmetic coding (CABAC).

27. The device of claim 21, wherein the one or more syntax elements comprise a significant coefficient flag of the individual transform coefficient representative of whether the individual transform coefficient has a non-zero value.

28. A non-transitory computer-readable storage medium having stored thereon instructions that, when executed, cause a processor to: determine values for coded sub-block flags of one or more neighboring sub-blocks to a current sub-block; in response to the determination that the coded sub-block flag of the current sub block indicates that the current sub-block includes the at least one non-zero transform coefficient, determine that a coded sub-block flag of the current sub-block indicates that the current sub-block includes at least one non-zero transform coefficient; use the values for the coded sub-block flags of the neighboring sub-blocks to determine a context for entropy decoding one or more syntax elements of the at least one non-zero transform coefficient of the current sub-block, wherein the instructions that cause the processor to use the values comprise instructions that cause the processor to: determine a first context for entropy decoding the one or more syntax elements of the at least one non-zero transform coefficient when the values for the coded sub-block flags of the neighboring sub-blocks have a first set of values; and determine a second context for entropy decoding the one or more syntax elements of the at least one non-zero transform coefficient when the values for the coded sub-block flags of the neighboring sub-blocks have a second set of values, the first context being different than the second context and the first set of values being different than the second set of values; and entropy decode the one or more syntax elements of the individual transform coefficient using the determined context.

29. A method of encoding video data, the method comprising: determining values for coded sub-block flags of one or more neighboring sub-blocks to a current sub-block; encoding a value for a coded sub-block flag of the current sub-block that indicates that the current sub-block includes at least one non-zero transform coefficient; in response to the current sub block including the at least one non-zero transform coefficient, using the values for the coded sub-block flags of the neighboring sub-blocks to determine a context for entropy encoding one or more syntax elements of the at least one non-zero transform coefficient of the current

sub-block, wherein using the values comprises: determining a first context for entropy decoding the one or more syntax elements of the at least one non-zero transform coefficient when the values for the coded sub-block flags of the neighboring sub-blocks have a first set of values; and determining a second context for entropy decoding the one or more syntax elements of the at least one non-zero transform coefficient when the values for the coded sub-block flags of the neighboring sub-blocks have a second set of values, the first context being different than the second context and the first set of values being different than the second set of values; and entropy encoding the one or more syntax elements of the individual transform coefficient using the determined context.

30. The method of claim 29, wherein the one or more neighboring sub-blocks comprise a right-neighboring sub-block and a bottom-neighboring sub-block.

31. The method of claim 30, wherein determining the context comprises calculating the sum of a value for a coded sub-block flag of the right-neighboring sub-block and a value for a coded sub-block flag of the bottom-neighboring sub-block and using the calculated sum to determine the context.

32. The method of claim 29, wherein the coded sub-block flags represent whether respective ones of the neighboring sub-blocks include at least one non-zero transform coefficient.

33. The method of claim 29, wherein each of the sub-blocks corresponds to a respective 4x4 block of transform coefficients, and wherein the coded sub-block flags indicate whether at least one of the transform coefficients in the respective 4x4 block has a non-zero value.

34. The method of claim 29, wherein the current sub-block has a size of 4x4 pixels, and wherein the current sub-block is within a current transform unit having a size greater than 4x4 pixels.

35. The method of claim 29, wherein determining the context further comprises determining the context for encoding the transform coefficient based on a position of the transform coefficient in the current sub-block.

36. The method of claim 29, wherein entropy encoding the transform coefficient comprises entropy encoding the transform coefficient according to context adaptive binary arithmetic coding (CABAC).

37. The method of claim 29, wherein the one or more syntax elements comprise a significant coefficient flag of the individual transform coefficient representative of whether the individual transform coefficient has a non-zero value.

38. A device for encoding video data, the device comprising: a memory configured to store video data; and a video encoder configured to: determine values for coded sub-block flags of one or more neighboring sub-blocks to a current sub-block of the video data, encode a value

for a coded sub-block flag of the current sub-block that indicates that the current sub-block includes at least one non-zero transform coefficient: in response to the current sub block including the at least one non-zero transform coefficient, use the values for the coded sub-block flags of the neighboring sub-blocks to determine a context for entropy encoding one or more syntax elements of the at least one non-zero transform coefficient of the current sub-block, wherein the video encoder is configured to: determine a first context for entropy decoding the one or more syntax elements of the at least one non-zero transform coefficient when the values for the coded sub-block flags of the neighboring sub-blocks have a first set of values; and determine a second context for entropy decoding the one or more syntax elements of the at least one non-zero transform coefficient when the values for the coded sub-block flags of the neighboring sub-blocks have a second set of values, the first context being different than the second context and the first set of values being different than the second set of values, and entropy encode the one or more syntax elements of the individual transform coefficient using the determined context.

39. The device of claim 38, wherein the one or more neighboring sub-blocks comprise a right-neighboring sub-block and a bottom-neighboring sub-block.

40. The device of claim 39, wherein to determine the context, the video encoder is configured to calculate the sum of a value for a coded sub-block flag of the right-neighboring sub-block and a value for a coded sub-block flag of the bottom-neighboring sub-block and use the calculated sum to determine the context.

41. The device of claim 38, wherein the coded sub-block flags represent whether respective ones of the neighboring sub-blocks include at least one non-zero transform coefficient.

42. The device of claim 38, the video encoder is further configured to determine the context for decoding the transform coefficient based on a position of the transform coefficient in the current sub-block.

43. The device of claim 38, wherein the video encoder is configured to entropy encode the transform coefficient according to context adaptive binary arithmetic coding (CABAC).

44. The device of claim 38, wherein the one or more syntax elements comprise a significant coefficient flag of the individual transform coefficient representative of whether the individual transform coefficient has a non-zero value.

45. A device for encoding video data, the device comprising: means for determining values for coded sub-block flags of one or more neighboring sub-blocks to a current sub-block; means for encoding a value for a coded sub-block flag of the current sub-block that indicates that the current sub-block includes at least one non-zero transform coefficient; means for using, in response to the current sub block including the at least one non-zero transform coefficient, the values for the coded sub-block flags of the neighboring sub-blocks to determine a context for entropy encoding one or more syntax elements of the at least one

non-zero transform coefficient of the current sub-block, wherein the means for using comprise: means for determining a first context for entropy decoding the one or more syntax elements of the at least one non-zero transform coefficient when the values for the coded sub-block flags of the neighboring sub-blocks have a first set of values; and means for determining a second context for entropy decoding the one or more syntax elements of the at least one non-zero transform coefficient when the values for the coded sub-block flags of the neighboring sub-blocks have a second set of values, the first context being different than the second context and the first set of values being different than the second set of values; and means for entropy encoding the one or more syntax elements of the individual transform coefficient using the determined context.

46. The device of claim 45, wherein the one or more neighboring sub-blocks comprise a right-neighboring sub-block and a bottom-neighboring sub-block.

47. The device of claim 46, wherein the means for determining the context comprises means for calculating the sum of a value for a coded sub-block flag of the right-neighboring sub-block and a value for a coded sub-block flag of the bottom-neighboring sub-block and means for using the calculated sum to determine the context.

48. The device of claim 45, wherein the coded sub-block flags represent whether respective ones of the neighboring sub-blocks include at least one non-zero transform coefficient.

49. The device of claim 45, wherein the means for determining the context further comprises means for determining the context for encoding the transform coefficient based on a position of the transform coefficient in the current sub-block.

50. The device of claim 45, wherein the means for entropy encoding the transform coefficient comprises means for entropy encoding the transform coefficient according to context adaptive binary arithmetic coding (CABAC).

51. The device of claim 45, wherein the one or more syntax elements comprise a significant coefficient flag of the individual transform coefficient representative of whether the individual transform coefficient has a non-zero value.

52. A non-transitory computer-readable storage medium having stored thereon instructions that, when executed, cause a processor to: determine values for coded sub-block flags of one or more neighboring sub-blocks to a current sub-block; encode a coded sub-block flag of the current sub-block that indicates that the current sub-block includes at least one non-zero transform coefficient; in response to the current sub block including the at least one non-zero transform coefficient, use the values for the coded sub-block flags of the neighboring sub-blocks to determine a context for entropy encoding one or more syntax elements of the at least one non-zero transform coefficient of the current sub-block, wherein the instructions that cause the processor to use the values comprise instructions that cause the processor to: determine a first context for entropy decoding the one or more syntax elements of the at least

one non-zero transform coefficient when the values for the coded sub-block flags of the neighboring sub-blocks have a first set of values; and determine a second context for entropy decoding the one or more syntax elements of the at least one non-zero transform coefficient when the values for the coded sub-block flags of the neighboring sub-blocks have a second set of values, the first context being different than the second context and the first set of values being different than the second set of values; and entropy encode the one or more syntax elements of the individual transform coefficient using the determined context.