CLAIMS

1. A method of decoding video data, the method comprising: determining, based on which color format, among 4:2:0 and 4:2:2, is a color format of a picture of the video data, which context model from among a first context model and a second context model to use, and making a determination to use: (a) the first context model to determine a first context increment for a first syntax element that indicates a prefix of an x or y coordinate of a last significant transform coefficient of a first color component of a block of the picture; (b) the second context model to determine a second context increment for a second syntax element, wherein the second syntax element indicates a prefix of an x or y coordinate of a last significant transform coefficient of a second color component of the block of the picture, wherein the context increment for the second syntax element comprises: (i) setting a context offset ctxOffset for the second syntax element to 18 and setting a context shift ctxShift for the second syntax element to Max(0), log 2TrafoSize−2)−Max(0, log 2TrafoSize−4), where Max indicates a maximum function and log 2TrafoSize indicates a log base-2 value of a transform size of the block; and (ii) determining the second context increment for the second syntax element as (binIdx>>ctxShift)+ctxOffset, where binIdx is a bin index of the bin of the second syntax element; decoding a bin of the first syntax element by applying Context Adaptive Binary Arithmetic Coding (CABAC) using a context determined based on the first context increment for the-first syntax element; and decoding a bin of the second syntax element by applying Context Adaptive Binary Arithmetic Coding (CABAC) using a context determined based on the second context increment for the second syntax element.

2. The method of claim 1, wherein the first color component is a luma component and the second color component is a chroma component.

3. The method of claim 1, wherein making the determination to use the second context model to determine the second context increment for the second syntax element comprises, based on none of the following conditions being satisfied, making the determination to use the second context model to determine the context increment for the second syntax element: i) the color format of the picture is a monochrome color format or a 4:4:4 color format, and ii) the color format of the picture is the 4:2:0 color format or the 4:2:2 color format and the second color component is a luma component.

4. The method of claim 3, wherein making the determination to use the second context model to determine the second context increment for the second syntax element is further based on the following condition not being satisfied: iii) the color format of the picture being the 4:2:2 color format, the second color component being a chroma component, and the second syntax element indicating the prefix of the y coordinate of the last significant transform coefficient of the second color component of the block.

5. The method of claim 1, wherein using the first context model to determine the first context increment for the first syntax element comprises: performing one of: based on a log base-2 value of a transform size of the block being less than 6, setting a context offset ctxOffset for the first syntax element to 3*(log 2TrafoSize−2)+((log 2TrafoSize−1)>>2) and setting a context shift ctxShift for the first syntax element equal to (log 2TrafoSize+1)>>2, where log 2TrafoSize

indicates the log base-2 value of the transform size, or based on the log base-2 value of the transform size being greater than or equal to 6, setting the context offset ctxOffset for the first syntax element to 3*(log 2TrafoSize−2)+((log 2TrafoSize−1)>>2)+((1<<log 2TrafoSize)>>6)<<1)+((1<<log 2TrafoSize)>>7) and setting the context shift ctxShift for the first syntax element equal to ((log 2TrafoSize+1)>>2)<<1; and determining the first context increment for the first syntax element as (binIdx>>ctxShift)+ctxOffset, where binIdx is a bin index of the bin of the first syntax element.

6. A method of encoding video data, the method comprising: determining, based on which color format, among 4:2:0 and 4:2:2, is a color format of a picture of the video data, which context model from among a first context model and a second context model to use, and making a determination, based on the color format, to use: (a) the first context model to determine a first context increment for a first syntax element that indicates a prefix of an x or y coordinate of a last significant transform coefficient of a first color component of a block of the picture; (b) the second context model to determine a second context increment for a second syntax element, wherein the second syntax element indicates a prefix of an x or y coordinate of a last significant transform coefficient of a second color component of the block of the picture, wherein the second increment for the second syntax element comprises: (i) setting a context offset ctxOffset for the second syntax element to 18 and setting a context shift ctxShift for the second syntax element to Max(0, log 2TrafoSize−2)−Max(0, log 2TrafoSize−4), where Max indicates a maximum function and log 2TrafoSize indicates a log base-2 value of a transform size of the block; and (ii) determining the second context increment for the second syntax element as (binIdx>>ctxShift)+ctxOffset, where binIdx is a bin index of the bin of the second syntax element; encoding a bin of the first syntax element by applying Context Adaptive Binary Arithmetic Coding (CABAC) using a context determined based on the first context increment for the first syntax element; and encoding a bin of the second syntax element by applying Context Adaptive Binary Arithmetic Coding (CABAC) using a context determined based on the second context increment for the second syntax element.

7. The method of claim 6, wherein the first color component is a luma component and the second color component is a chroma component.

8. The method of claim 6, wherein making the determination to use the second context model to determine the second context increment for the second syntax element comprises, based on none of the following conditions being satisfied, making the determination to use the second context model to determine the second context increment for the second syntax element: i) the color format of the picture is a monochrome color format or a 4:4:4 color format, and ii) the color format of the picture is the 4:2:0 color format or the 4:2:2 color format and the second color component is a luma component.

9. The method of claim 6, wherein making the determination to use the second context model to determine the second context increment for the second syntax element further based on the following condition not being satisfied: iii) the color format of the picture being the 4:2:2 color format, the second color component being a chroma component, and the second syntax element indicating the prefix of the y coordinate of the last significant transform coefficient of the second color component of the block.

10. The method of claim 6, wherein using the first context model to determine the first context increment for the first syntax element comprises: performing one of: based on a log base-2 value of a transform size of the block being less than 6, setting a context offset ctxOffset for the first syntax element to 3*(log 2TrafoSize−2)+((log 2TrafoSize−1)>>2) and setting a context shift ctxShift for the first syntax element equal to (log 2TrafoSize+1)>>2, where log 2TrafoSize indicates the log base-2 value of the transform size, or based on the log base-2 value of the transform size being greater than or equal to 6, setting the context offset ctxOffset for the first syntax element to 3*(log 2TrafoSize−2)+((log 2TrafoSize−1)>>2)+((1<<log 2TrafoSize)>>6)<<1)+((1<<log 2TrafoSize)>>7) and setting the context shift ctxShift for the first syntax element equal to ((log 2TrafoSize+1)>>2)<<1; and determining the first context increment for the first syntax element as (binIdx>>ctxShift)+ctxOffset, where binIdx is a bin index of the bin of the first syntax element.

11. A device for decoding video data, the device comprising: one or more processors coupled to the memory, the one or more processors implemented in circuitry and configured to: determine, based on which color format, among 4:2:0 and 4:2:2, is a color format of a picture of the video data, which context model from among a first context model and a second context model-to use, and make a determination, based on the color format, to use: (a) the first context model to determine a first context increment for a first syntax element that indicates a prefix of an x or y coordinate of a last significant transform coefficient of a first color component of a block of the picture; (b) the second context model to determine a second context increment for a second syntax element, wherein the second syntax element indicates a prefix of an x or y coordinate of a last significant transform coefficient of a second color component of the block of the picture, wherein the second context increment for the second syntax element includes: (i) set a context offset ctxOffset for the second syntax element to 18 and setting a context shift ctxShift for the second syntax element to Max(0, log 2TrafoSize−2)−Max(0, log 2TrafoSize−4), where Max indicates a maximum function and log 2TrafoSize indicates a log base-2 value of a transform size of the block; and (ii) determine the context increment for the second syntax element as (binIdx>>ctxShift)+ctxOffset, where binIdx is a bin index of the bin of the second syntax element; decode a bin of the first syntax element by applying Context Adaptive Binary Arithmetic Coding (CABAC) using a context determined based on the first context increment for the first syntax element; and decode a bin of the second syntax element by applying Context Adaptive Binary Arithmetic Coding (CABAC) using a context determined based on the second context increment for the second syntax element.

12. The device of claim 11, wherein the first color component is a luma component and the second color component is a chroma component.

13. The device of claim 11, wherein the one or more processors are configured to make the determination to use the second context model to determine the second context increment for the second syntax element based on none of the following conditions being satisfied: i) the color format of the picture is a monochrome color format or a 4:4:4 color format, and ii) the color format of the picture is the 4:2:0 color format or the 4:2:2 color format and the second color component is a luma component.

14. The device of claim 13, wherein the one or more processors are configured to make the determination to use the second context model to determine the second context increment for the

second syntax element based on the following condition not being satisfied: iii) the color format of the picture being the 4:2:2 color format, the second color component being a chroma component, and the second syntax element indicating the prefix of the y coordinate of the last significant transform coefficient of the second color component of the block.

15. The device of claim 11, wherein the one or more processors are configured to, as part of using the first context model to determine the first context increment for the first syntax element: perform one of: based on a log base-2 value of a transform size of the block being less than 6, setting a context offset ctxOffset for the first syntax element to 3*(log 2TrafoSize−2)+((log 2TrafoSize−1)>>2) and setting a context shift ctxShift for the first syntax element equal to (log 2TrafoSize+1)>>2, where log 2TrafoSize indicates the log base-2 value of the transform size, or based on the log base-2 value of the transform size being greater than or equal to 6, setting the context offset ctxOffset for the first syntax element to 3*(log 2TrafoSize−2)+((log 2TrafoSize−1)>>2)+((1<<log 2TrafoSize)>>6)<<1)+((1<<log 2TrafoSize)>>7) and setting the context shift ctxShift for the first syntax element equal to ((log 2TrafoSize+1)>>2)<<1; and determine the first context increment for the first syntax element as (binIdx>>ctxShift)+ctxOffset, where binIdx is a bin index of the bin of the first syntax element.

16. The device of claim 11, further comprising a display configured to display decoded video data.

17. The device of claim 11, wherein the device comprises one or more of a camera, a computer, a mobile device, a broadcast receiver device, or a set-top box.

18. A device for encoding video data, the device comprising: a memory configured to store the video data; and one or more processors coupled to the memory, the one or more processors implemented in circuitry and configured to: determine, based on which color format, among 4:2:0 and 4:2:2, is a color format of a picture of the video data, which context model from among a first context model and a second context model-to use, and make a determination, based on the color format, to use: (a) the first context model to determine a first context increment for a first syntax element that indicates a prefix of an x or y coordinate of a last significant transform coefficient of a first color component of a block of the picture; (b) the second context model to determine a second context increment for a second syntax element, wherein the second syntax element indicates a prefix of an x or y coordinate of a last significant transform coefficient of a second color component of the block of the picture, wherein the second context increment for the second syntax element comprises: (i) set a context offset ctxOffset for the second syntax element to 18 and setting a context shift ctxShift for the second syntax element to Max(0, log 2TrafoSize−2)−Max(0), log 2TrafoSize−4), where Max indicates a maximum function and log 2TrafoSize indicates a log base-2 value of a transform size of the block; and (ii) determine the context increment for the second syntax element as (binIdx>>ctxShift)+ctxOffset, where binIdx is a bin index of the bin of the second syntax element; encode a bin of the first syntax element by applying Context Adaptive Binary Arithmetic Coding (CABAC) using a context determined based on the first context increment for the first syntax element; and encode a bin of the second syntax element by applying Context Adaptive Binary Arithmetic Coding (CABAC) using a context determined based on the second context increment for the second syntax element.

19. The device of claim 18, wherein the first color component is a luma component and the second color component is a chroma component.

20. The device of claim 18, wherein the one or more processors are configured to make the determination to use the second context model to determine the second context increment for the second syntax element comprises, based on none of the following conditions being satisfied: i) the color format of the picture is a monochrome color format or a 4:4:4 color format, and ii) the color format of the picture is the 4:2:0 color format or the 4:2:2 color format and the second color component is a luma component.

21. The device of claim 20, wherein the one or more processors are configured to make the determination to use the second context model to determine the second context increment for the second syntax element based on the following condition not being satisfied: iii) the color format of the picture being the 4:2:2 color format, the second color component being a chroma component, and the second syntax element indicating the prefix of the y coordinate of the last significant transform coefficient of the second color component of the block.

22. The device of claim 18, wherein the one or more processors are configured to, as part of using the first context model to determine the first context increment for the first syntax element: perform one of: based on a log base-2 value of a transform size of the block being less than 6, setting a context offset ctxOffset for the first syntax element to 3*(log 2TrafoSize−2)+((log 2TrafoSize−1)>>2) and setting a context shift ctxShift for the first syntax element equal to (log 2TrafoSize+1)>>2, where log 2TrafoSize indicates the log base-2 value of the transform size, or based on the log base-2 value of the transform size being greater than or equal to 6, setting the context offset ctxOffset for the first syntax element to 3*(log 2TrafoSize−2)+((log 2TrafoSize−1)>>2)+((1<<log 2TrafoSize)>>6)<<1)+((1<<log 2TrafoSize)>>7) and setting the context shift ctxShift for the first syntax element equal to ((log 2TrafoSize+1)>>2)<<1; and determine the first context increment for the first syntax element as (binIdx>>ctxShift)+ctxOffset, where binIdx is a bin index of the bin of the first syntax element.

23. The device of claim 18, wherein the device comprises one or more of a camera, a computer, a mobile device, a broadcast receiver device, or a set-top box.

24. A device for decoding video data, the device comprising: means for determining, based on which color format, among 4:2:0 and 4:2:2, is a color format of a picture of the video data, which context model from among a first context model and a second context model to use, and making a determination, based on the color format, to use: (a) the first context model to determine a first context increment for a first syntax element that indicates a prefix of an x or y coordinate of a last significant transform coefficient of a first color component of a block of the picture; (b) the second context model to determine a second context increment for a second syntax element, wherein the second syntax element indicates a prefix of an x or y coordinate of a last significant transform coefficient of a second color component of the block of the picture, wherein the context increment for the second syntax element comprises: (i) setting a context offset ctxOffset for the second syntax element to 18 and setting a context shift ctxShift for the second syntax element to Max(0, log 2TrafoSize−2)−Max(0, log 2TrafoSize−4), where Max indicates a maximum function and log 2TrafoSize indicates a log base-2 value of a transform size of the block; and (ii) determining the second context increment for the second syntax element as

(binIdx>>ctxShift)+ctxOffset, where binIdx is a bin index of the bin of the second syntax element; means for decoding a bin of the first syntax element by applying Context Adaptive Binary Arithmetic Coding (CABAC) using a context determined based on the first context increment for the-first syntax element; and means for decoding a bin of the second syntax element by applying Context Adaptive Binary Arithmetic Coding (CABAC) using a context determined based on the second context increment for the second syntax element.

25. A device for encoding video data, the device comprising: means for determining, based on which color format, among 4:2:0 and 4:2:2, is a color format of a picture of the video data, which context model from among a first context model and a second context model to use, and making a determination, based on the color format, to use: (a) the first context model to determine a first context increment for a first syntax element that indicates a prefix of an x or y coordinate of a last significant transform coefficient of a first color component of a block of the picture; (b) the second context model to determine a second context increment for a second syntax element, wherein the second syntax element indicates a prefix of an x or y coordinate of a last significant transform coefficient of a second color component of the block of the picture, wherein the context increment for the second syntax element comprises: (i) setting a context offset ctxOffset for the second syntax element to 18 and setting a context shift ctxShift for the second syntax element to Max(0, log 2TrafoSize−2)−Max(0, log 2TrafoSize−4), where Max indicates a maximum function and log 2TrafoSize indicates a log base-2 value of a transform size of the block; and (ii) determining the second context increment for the second syntax element as (binIdx>>ctxShift)+ctxOffset, where binIdx is a bin index of the bin of the second syntax element; means for encoding a bin of the first syntax element by applying Context Adaptive Binary Arithmetic Coding (CABAC) using a context determined based on the first context increment for the-first syntax element; and means for encoding a bin of the second syntax element by applying Context Adaptive Binary Arithmetic Coding (CABAC) using a context determined based on the second context increment for the second syntax element.

26. A non-transitory computer-readable storage medium having stored thereon instructions that, when executed, cause one or more processors to: determine, based on which color format, among 4:2:0 and 4:2:2, is a color format of a picture of the video data, which context model from among a first context model and a second context model-to use, and make a determination, based on the color format, to use: (a) the first context model to determine a first context increment for a first syntax element that indicates a prefix of an x or y coordinate of a last significant transform coefficient of a first color component of a block of the picture; (b) the second context model to determine a second context increment for a second syntax element, wherein the second syntax element indicates a prefix of an x or y coordinate of a last significant transform coefficient of a second color component of the block of the picture, wherein the second context increment for the second syntax element comprises: (i) set a context offset ctxOffset for the second syntax element to 18 and setting a context shift ctxShift for the second syntax element to Max(0, log 2TrafoSize−2)−Max(0, log 2TrafoSize−4), where Max indicates a maximum function and log 2TrafoSize indicates a log base-2 value of a transform size of the block; and (ii) determine the context increment for the second syntax element as (binIdx>>ctxShift)+ctxOffset, where binIdx is a bin index of the bin of the second syntax element; decode a bin of the first syntax element by applying Context Adaptive Binary Arithmetic Coding (CABAC) using a context determined based on the first context increment for the first syntax element; and decode a bin of the second

syntax element by applying Context Adaptive Binary Arithmetic Coding (CABAC) using a context determined based on the second context increment for the second syntax element.

27. A non-transitory computer-readable storage medium having stored thereon instructions that, when executed, cause one or more processors to: determine, based on which color format, among 4:2:0 and 4:2:2, is a color format of a picture of the video data, which context model from among a first context model and a second context model-to use, and make a determination, based on the color format, to use: (a) the first context model to determine a first context increment for a first syntax element that indicates a prefix of an x or y coordinate of a last significant transform coefficient of a first color component of a block of the picture; (b) the second context model to determine a second context increment for a second syntax element, wherein the second syntax element indicates a prefix of an x or y coordinate of a last significant transform coefficient of a second color component of the block of the picture, wherein the second context increment for the second syntax element comprises: (i) set a context offset ctxOffset for the second syntax element to 18 and setting a context shift ctxShift for the second syntax element to Max(0, log 2TrafoSize−2)−Max(0, log 2TrafoSize−4), where Max indicates a maximum function and log 2TrafoSize indicates a log base-2 value of a transform size of the block; and (ii) determine the context increment for the second syntax element as (binIdx>>ctxShift)+ctxOffset, where binIdx is a bin index of the bin of the second syntax element; encode a bin of the first syntax element by applying Context Adaptive Binary Arithmetic Coding (CABAC) using a context determined based on the first context increment for the first syntax element; and encode a bin of the second syntax element by applying Context Adaptive Binary Arithmetic Coding (CABAC) using a context determined based on the second context increment for the second syntax element.