CLAIMS

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

determining a size of a non-zeroed out region of a transform unit;

defining a regular bin count threshold for the transform unit as a number of bins equal to 1.75 multiplied by a total number of coefficients in the non-zeroed out region of the transform unit;

context decoding syntax elements in groups of 4 for the transform unit until the regular bin count threshold is reached, wherein:

the context decoded syntax elements comprise one or more significance flags and one or more parity level flags,

each of the one or more significance flags indicate if an absolute level for a corresponding coefficient is equal to zero,

each of the one or more parity level flags indicates if a corresponding coefficient has an absolute level that is even or odd,

in response to the context decoded syntax elements reaching the regular bin count threshold, bypass decoding additional syntax elements of the transform unit;

determining values for a first set of coefficients of the transform unit based on the context decoded syntax elements; and

determining values for a second set of coefficients of the transform unit based on the additional syntax elements.

2. The method of claim 1, wherein the transform unit comprises N coefficient groups and each coefficient group comprises M coefficients, wherein M and N are integer values, wherein the transform unit comprises a luma transform unit and M equals 16.

3. The method of claim 1, wherein bypass decoding the additional syntax elements comprises decoding the additional syntax elements using one or both of Golomb-Rice coding or Exponential-Golomb coding.

4. The method of claim 1, further comprising:

determining a decoded transform block based on the values for the first set of coefficients and the values for the second set of coefficients;

adding the decoded transform block to a prediction block to determine a reconstructed block;

performing one or more filtering operations on the reconstructed block to determine a decoded block of video data; and

outputting a decoded picture of video data that includes the decoded block of video data.

5. A method for encoding video data, the method comprising:

determining a size of a non-zeroed out region of a transform unit;

defining a regular bin count threshold for the transform unit as a number of bins equal to 1.75 multiplied by a total number of coefficients in the non-zeroed out region of the transform unit;

context encoding syntax elements in groups of 4 for the transform unit until the regular bin count threshold is reached, wherein:

the context encoded syntax elements comprises one or more significance flags and one or more parity level flags,

each of the one or more significance flags indicate if an absolute level for a corresponding coefficient is equal to zero,

each of the one or more parity level flags indicates if a corresponding coefficient has an absolute level that is even or odd, and

the context encoded syntax elements represent values for a first set of coefficients of the transform unit; and

in response to the context encoded syntax elements reaching the regular bin count threshold, bypass encoding additional syntax elements for the transform unit, wherein the additional syntax elements represent values for a second set of coefficients of the transform unit.

6. The method of claim 5, wherein the transform unit comprises N coefficient groups and each coefficient group comprises M coefficients, wherein M and N are integer values, wherein the transform unit comprises a luma transform unit and M equals 16.

7. The method of claim 5, wherein bypass encoding the additional syntax elements comprises encoding the additional syntax elements using one or both of Golomb-Rice coding or Exponential-Golomb coding.

8. A device for decoding video data, the device comprising:
a memory configured to store video data; and
one or more processors implemented in circuitry and configured to:
determine a size of a non-zeroed out region of a transform unit;
define a regular bin count threshold for the transform unit as a number of bins equal to 1.75 multiplied by a total number of coefficients in the non-zeroed out region of the transform unit;
context decode syntax elements in groups of 4 for the transform unit until the regular bin count threshold is reached, wherein:
the context decoded syntax elements comprise one or more significance flags and one or more parity level flags,
each of the one or more significance flags indicate if an absolute level for a corresponding coefficient is equal to zero, and
each of the one or more parity level flags indicates if a corresponding coefficient has an absolute level that is even or odd, in response to the context decoded syntax elements reaching the regular bin count threshold, bypass decode additional syntax elements of the transform unit;
determine values for a first set of coefficients of the transform unit based on the context decoded syntax elements; and
determine values for a second set of coefficients of the transform unit based on the additional syntax elements.

9. The device of claim 8, wherein the transform unit comprises N coefficient groups and each coefficient group comprises M coefficients, wherein M and N are integer values, wherein the transform unit comprises a luma transform unit and M equals 16.

10. The device of claim 8, wherein to bypass decode the additional syntax elements, the one or more processors are configured to decode the additional syntax elements using one or both of Golomb-Rice coding or Exponential-Golomb coding.

11. The device of claim 8, wherein the one or more processors are further configured to:

determine a decoded transform block based on the values for the first set of coefficients and the values for the second set of coefficients;

add the decoded transform block to a prediction block to determine a reconstructed block;

perform one or more filtering operations on the reconstructed block to determine a decoded block of video data; and

output a decoded picture of video data that includes the decoded block of video data.

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

a memory configured to store video data; and

one or more processors implemented in circuitry and configured to:

determine a size of a non-zeroed out region of a transform unit;

define a regular bin count threshold for the transform unit as a number of bins equal to 1.75 multiplied by a total number of coefficients in the non-zeroed out region of the transform unit;

context encode syntax elements in groups of 4 for the transform unit until the regular bin count threshold is reached, wherein:

the context encoded syntax elements comprises one or more significance flags and one or more parity level flags,

each of the one or more significance flags indicate if an absolute level for a corresponding coefficient is equal to zero,

each of the one or more parity level flags indicates if a corresponding coefficient has an absolute level that is even or odd, and

the context encoded syntax elements represent values for a first set of coefficients of the transform unit; and

in response to the context encoded syntax elements reaching the regular bin count threshold, bypass encode additional syntax elements for the transform unit, wherein the additional syntax elements represent values for a second set of coefficients of the transform unit.

13. The device of claim 12, wherein the transform unit comprises N coefficient groups and each coefficient group comprises M coefficients, wherein M and N are integer values, wherein the transform unit comprises a luma transform unit and M equals 16.

14. The device of claim 12, wherein to bypass encode the additional syntax elements, the one or more processors are configured to encode the additional syntax elements using one or both of Golomb-Rice coding or Exponential-Golomb coding.