CLAIMS

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

generating, by one or more processors implemented in circuitry, a coding unit for a chroma component of a block of video data in a YUV 4:4:4 format or in a YUV 4:2:0 format;

splitting, by the one or more processors, the coding unit for the chroma component into a first triangle-shaped partition and a second triangle-shaped partition based on enabling of a triangular prediction unit mode; and

applying, by the one or more processors, pixel blending using a set of weights for the YUV 4:2:0 format to generate a predicted block for the chroma component when the one or more processors generate the coding unit for the chroma component in the YUV 4:2:0 format and when the one or more processors generate the coding unit for the chroma component in the YUV 4:4:4 format, wherein applying pixel blending comprises determining weighted averages, using the set of weights for the YUV 4:2:0 format, of collocated motion compensated pixels of the first triangle-shaped partition and the second triangle-shaped partition based on motion information of the first triangle-shaped partition and the second triangle-shaped partition, respectively.

2. The method of claim 1, wherein determining weighted averages comprises determining a pixel value P of the predicted block by calculating:

$$P = \frac{2}{8} * \mathrm{P}_1 + \frac{6}{8} * \mathrm{P}_2,$$

wherein P_1 is a first reference pixel value of a first collocated motion compensated pixel of the first triangle-shaped partition and wherein P_2 is a second reference pixel value of a second collocated motion compensated pixel of the second triangle-shaped partition.

3. The method of claim 1, wherein determining weighted averages comprises determining a pixel value P of the predicted block by calculating:

$$P = \frac{4}{8} * \mathrm{P}_1 + \frac{4}{8} * \mathrm{P}_2,$$

wherein P_1 is a first reference pixel value of a first collocated motion compensated pixel of the first triangle-shaped partition and wherein P_2 is a second reference pixel value of a second collocated motion compensated pixel of the second triangle-shaped partition.

4. The method of claim 1, wherein determining weighted averages comprises determining a pixel value P of the predicted block by calculating:

$$P = \frac{6}{8} * \mathrm{P}_1 + \frac{2}{8} * \mathrm{P}_2,$$

wherein P_1 is a first reference pixel value of a first collocated motion compensated pixel of the first triangle-shaped partition and wherein P_2 is a second reference pixel value of a second collocated motion compensated pixel of the second triangle-shaped partition.

5. The method of claim 1, wherein determining weighted averages comprises determining a pixel value P of the predicted block by calculating:

$$P = \frac{1}{8} * \mathrm{P}_1 + \frac{7}{8} * \mathrm{P}_2,$$

wherein P_1 is a first reference pixel value of a first collocated motion compensated pixel of the first triangle-shaped partition and wherein P_2 is a second reference pixel value of a second collocated motion compensated pixel of the second triangle-shaped partition.

6. The method of claim 1, wherein determining weighted averages comprises determining a pixel value P of the predicted block by calculating:

$$P = \frac{7}{8} * \mathrm{P}_1 + \frac{1}{8} * \mathrm{P}_2,$$

wherein P_1 is a first reference pixel value of a first collocated motion compensated pixel of the first triangle-shaped partition and wherein P_2 is a second reference pixel value of a second collocated motion compensated pixel of the second triangle-shaped partition.

7. The method of claim 1, comprising:

decoding, by the one or more processors, a residual block for the block of video data; and

combining, by the one or more processors, the predicted block and the residual block to decode the block of video data.

8. The method of claim 1, comprising:

generating, by the one or more processors, a residual block for the block of video data based on differences between the block of video data and the predicted block; and

encoding, by the one or more processors, the residual block.

9. A device for processing video data, the device comprising:

a memory configured to store video data; and

one or more processors implemented in circuitry and configured to:

generate a coding unit for a chroma component of a block of video data in a YUV 4:4:4 format or in a YUV 4:2:0 format;

split the coding unit for the chroma component into a first triangle-shaped partition and a second triangle-shaped partition based on enabling of a triangular prediction unit mode; and

apply pixel blending using a set of weights for the YUV 4:2:0 format to generate a predicted block for the chroma component when the one or more processors generate the coding unit for the chroma component in the YUV 4:2:0 format and when the one or more processors generate the coding unit for the chroma component in the YUV 4:4:4 format, wherein, to apply pixel blending, the one or more processors are configured to determine weighted averages, using the set of weights for the YUV 4:2:0 format, of collocated motion compensated pixels of the first triangle-shaped partition and the second triangle-shaped partition based on motion information of the first triangle-shaped partition and the second triangle-shaped partition, respectively.

10. The device of claim 9, wherein, to determine weighted averages, the one or more processors are configured to determine a pixel value P of the predicted block by calculating:

$$P = \frac{2}{8} * \mathrm{P}_1 + \frac{6}{8} * \mathrm{P}_2,$$

wherein P_1 is a first reference pixel value of a first collocated motion compensated pixel of the first triangle-shaped partition and wherein P_2 is a second reference pixel value of a second collocated motion compensated pixel of the second triangle-shaped partition.

11. The device of claim 9, wherein, to determine weighted averages, the one or more processors are configured to determine a pixel value P of the predicted block by calculating:

$$P = \frac{4}{8} * \mathrm{P}_1 + \frac{4}{8} * \mathrm{P}_2,$$

wherein P_1 is a first reference pixel value of a first collocated motion compensated pixel of the first triangle-shaped partition and wherein P_2 is a second reference pixel value of a second

collocated motion compensated pixel of the second triangle-shaped partition.

12. The device of claim 9, wherein, to determine weighted averages, the one or more processors are configured to determine a pixel value P of the predicted block by calculating:

$$P = \frac{6}{8} * P_1 + \frac{2}{8} * P_2,$$

wherein P_1 is a first reference pixel value of a first collocated motion compensated pixel of the first triangle-shaped partition and wherein P_2 is a second reference pixel value of a second collocated motion compensated pixel of the second triangle-shaped partition.

13. The device of claim 9, wherein, to determine weighted averages, the one or more processors are configured to determine a pixel value P of the predicted block by calculating:

$$P = \frac{1}{8} * P_1 + \frac{7}{8} * P_2,$$

wherein P_1 is a first reference pixel value of a first collocated motion compensated pixel of the first triangle-shaped partition and wherein P_2 is a second reference pixel value of a second collocated motion compensated pixel of the second triangle-shaped partition.

14. The device of claim 9, wherein, to determine weighted averages, the one or more processors are configured to determine a pixel value P of the predicted block by calculating:

$$P = \frac{7}{8} * P_1 + \frac{1}{8} * P_2,$$

wherein P_1 is a first reference pixel value of a first collocated motion compensated pixel of the first triangle-shaped partition and wherein P_2 is a second reference pixel value of a second collocated motion compensated pixel of the second triangle-shaped partition.

15. The device of claim 9, wherein the one or more processors are further configured to:

decode a residual block for the block of video data; and

combine the predicted block and the residual block to decode the block of video data.

16. The device of claim 9, wherein the one or more processors are further configured to:

generate a residual block for the block of video data based on differences between the block of video data and the predicted block; and

encode the residual block.

17. The device of claim 9, 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 non-transitory computer-readable storage medium having stored thereon instructions that, when executed, cause one or more processors to:
generate a coding unit for a chroma component of a block of video data in a YUV 4:4:4 format or in a YUV 4:2:0 format;

split the coding unit for the chroma component into a first triangle-shaped partition and a second triangle-shaped partition based on enabling of a triangular prediction unit mode; and

apply pixel blending using a set of weights for the YUV 4:2:0 format to generate a predicted block for the chroma component when the one or more processors generate the coding unit for the chroma component in the YUV 4:2:0 format and when the one or more processors generate the coding unit for the chroma component in the YUV 4:4:4 format, wherein the instructions that cause the one or more processors to apply pixel blending cause the one or more processors to determine weighted averages, using the set of weights for the YUV 4:2:0 format, of collocated motion compensated pixels of the first triangle-shaped partition and the second triangle-shaped partition based on motion information of the first triangle-shaped partition and the second triangle-shaped partition, respectively.

19. A device for coding video data, the device comprising:

means for generating a coding unit for a chroma component of a block of video data in a YUV 4:4:4 format or in a YUV 4:2:0 format;

means for splitting the coding unit for the chroma component into a first triangle-shaped partition and a second triangle-shaped partition based on enabling of a triangular prediction unit mode; and

means for applying pixel blending using a set of weights for the YUV 4:2:0 format to generate a predicted block for the chroma component when the one or more processors generate the coding unit for the chroma component in the YUV 4:2:0 format and when the one or more processors generate the coding unit for the chroma component in the YUV 4:4:4 format, wherein

the means for applying pixel blending comprises means for determining weighted averages, using the set of weights for the YUV 4:2:0 format, of collocated motion compensated pixels of the first triangle-shaped partition and the second triangle-shaped partition based on motion information of the first triangle-shaped partition and the second triangle-shaped partition, respectively.