

CLAIMS:

1. A method of processing video data, comprising:

determining, based on a dimension of a current video block of a video, whether a first partitioning process that splits the current video block into two sub-blocks or a second partitioning process that splits the current video block into three sub-blocks in a horizontal direction or a vertical direction is allowed or not, wherein the dimension of the current video block comprises a height or a width of the current video block in luma samples; and

performing, based on the determining, a conversion between the current video block and a bitstream of the video,

wherein the first partitioning process in the vertical direction is disabled in a case where (i) a sum of the width of the current video block in luma samples and a horizontal coordinate of a top-left luma sample of the current video block is greater than a width of a picture or a width of a subpicture comprising the current video block in luma samples and (ii) the height of the current video block in luma samples is greater than N ; ~~and wherein $N = 64$ is a positive integer;~~

wherein the second partitioning process is disabled in a case where the height or the width of the current video block in luma samples being greater than 64;

wherein the first partitioning process in the vertical direction is disabled in a case where (i) the width of the current video block in luma samples is less than or equal to N and (ii) the height of the current video block in luma samples is greater than N ;

wherein the first partitioning process in the horizontal direction is disabled in a case where (i) the width of the current video block in luma samples is greater than N and (ii) the height of the current video block in luma samples is less than or equal to N ;

wherein the first partitioning process in the horizontal direction is disabled in a case where (i) a sum of the height of the current video block in luma samples and a vertical coordinate of the top-left luma sample of the current video block is greater than a height of a picture or a height of a subpicture comprising the current video block in luma samples and (ii) the width of the current video block in luma samples is greater than N ;

wherein, it cannot be determined that the first partitioning process in the horizontal direction is disabled only according to a condition that a sum of the width of the current video block in luma samples and a horizontal coordinate of a top-left luma sample of the current video block is greater than a width of a picture comprising the current video block in luma samples; and

wherein the first partitioning process comprises a binary tree (BT) partition, and the second partitioning process comprises a ternary tree (TT) partition.

2. The method of claim 1, wherein $N = 64$.

3. The method of claim 1 or 2, wherein the second partitioning process is disabled in a case where the height or the width of the current video block in luma samples being greater than 64.

4. The method of any one of claims 1-3, wherein the first partitioning process in the vertical direction is disabled in a case where (i) the width of the current video block in luma samples is less than or equal to N and (ii) the height of the current video block in luma samples is greater than N , and wherein N is a positive integer.

5. The method of any one of claims 1-4, wherein the first partitioning process in the horizontal direction is disabled in a case where (i) the width of the current video block in luma samples is greater than N and (ii) the height of the current video block in luma samples is less than or equal to N , and wherein N is a positive integer.

6. The method of any one of claims 1-4, wherein the first partitioning process in the horizontal direction is disabled in a case where (i) a sum of the height of the current video block in luma samples and a vertical coordinate of the top-left luma sample of the current video block is greater than a height of a picture or a height of a subpicture comprising the current video block in luma samples and (ii) the width of the current video block in luma samples is greater than N , and wherein N is a positive integer.

7. The method of any one of claims 1-6, wherein it cannot be determined that the first partitioning process in the horizontal direction is disabled only according to a condition that a sum of the width of the current video block in luma samples and a horizontal coordinate of a top-left luma sample of the current video block is greater than a width of a picture comprising the current video block in luma samples.

82. The method of any one of claims 1-7 claim 1, further comprises: determining whether the first partitioning process or the second partitioning process is allowed or not to be independent of a maximum transform size.

93. The method of claim 82, wherein the maximum transform size is dependent on a dimension of a coding tree unit, and the dimension of the coding tree unit comprises a width and/or a height of the coding tree unit.

104. The method of claim 82, wherein the maximum transform size is less than or equal to the dimension of the coding tree unit.

115. The method of claim 82, wherein in a case where the dimension of the coding tree unit is less than M, the maximum transform size is less than M, where M=64.

~~12. The method of any one of claims 1-11, wherein the first partitioning process comprises a binary tree (BT) partition, and the second partitioning process comprises a ternary tree (TT) partition.~~

136. The method of ~~any one of claims 1-12~~ claim 1, wherein the conversion comprises encoding the current video block into the bitstream.

147. The method of ~~any one of claims 1-12~~ claim 1, wherein the conversion comprises decoding the current video block from the bitstream.

158. An apparatus for processing video data comprising a processor and a non-transitory memory with instructions thereon, wherein the instructions upon execution by the processor, cause the processor to:

determine, based on a dimension of a current video block of a video, whether a first partitioning process that splits the current video block into two sub-blocks or a second partitioning process that splits the current video block into three sub-blocks in a horizontal direction or a vertical direction is allowed or not, wherein the dimension of the current video block comprises a height or a width of the current video block in luma samples; and

perform, based on the determining, a conversion between the current video block and a bitstream of the video,

wherein the first partitioning process in the vertical direction is disabled in a case where (i) a sum of the width of the current video block in luma samples and a horizontal coordinate of a top-left luma sample of the current video block is greater than a width of a picture or a width of a subpicture comprising the current video block in luma samples and (ii) the height of the current video block in luma samples is greater than N; ~~wherein and wherein N = 64 is a positive integer;~~

wherein the second partitioning process is disabled in a case where the height or the width of the current video block in luma samples being greater than 64;

wherein the first partitioning process in the vertical direction is disabled in a case where (i) the width of the current video block in luma samples is less than or equal to N and (ii) the height of the current video block in luma samples is greater than N;

wherein the first partitioning process in the horizontal direction is disabled in a case where (i) the width of the current video block in luma samples is greater than N and (ii) the height of the current video block in luma samples is less than or equal to N;

wherein the first partitioning process in the horizontal direction is disabled in a case where (i) a sum of the height of the current video block in luma samples and a vertical coordinate of the top-left luma sample of the current video block is greater than a height of a picture or a height of a subpicture comprising the current video block in luma samples and (ii) the width of the current video block in luma samples is greater than N;

wherein, it cannot be determined that the first partitioning process in the horizontal direction is disabled only according to a condition that a sum of the width of the current video block in luma samples and a horizontal coordinate of a top-left luma sample of the current video block is greater than a width of a picture comprising the current video block in luma samples; and

wherein the first partitioning process comprises a binary tree (BT) partition, and the second partitioning process comprises a ternary tree (TT) partition.

16. The apparatus of claim 15, wherein $N = 64$;

~~the second partitioning process is disabled in a case where the height or the width of the current video block in luma samples being greater than 64;~~

~~the first partitioning process in the vertical direction is disabled in a case where (i) the width of the current video block in luma samples is less than or equal to N and (ii) the height of the current video block in luma samples is greater than N, and wherein N is a positive integer;~~

~~the first partitioning process in the horizontal direction is disabled in a case where (i) the width of the current video block in luma samples is greater than N and (ii) the height of the current video block in luma samples is less than or equal to N, and wherein N is a positive integer;~~

~~the first partitioning process in the horizontal direction is disabled in a case where (i) a sum of the height of the current video block in luma samples and a vertical coordinate of the top-left luma sample of the current video block is greater than a height of a picture or a height of a subpicture comprising the current video block in luma samples and (ii) the width of the current video block in luma samples is greater than N, and wherein N is a positive integer;~~

~~it cannot be determined that the first partitioning process in the horizontal direction is disabled only according to a condition that a sum of the width of the current video block in luma samples and a horizontal coordinate of a top-left luma sample of the current video block is greater than a width of a picture comprising the current video block in luma samples; and~~

~~the first partitioning process comprises a binary tree (BT) partition, and the second partitioning process comprises a ternary tree (TT) partition.~~

179. A non-transitory computer-readable storage medium storing instructions that cause a processor to:

determine, based on a dimension of a current video block of a video, whether a first partitioning process that splits the current video block into two sub-blocks or a second partitioning process that splits the current video block into three sub-blocks in a horizontal direction or a vertical direction is allowed or not, wherein the dimension of the current video block comprises a height or a width of the current video block in luma samples; and

perform, based on the determining, a conversion between the current video block and a bitstream of the video,

wherein the first partitioning process in the vertical direction is disabled in a case where (i) a sum of the width of the current video block in luma samples and a horizontal coordinate of a top-left luma sample of the current video block is greater than a width of a picture or a width of a subpicture comprising the current video block in luma samples and (ii) the height of the current video block in luma samples is greater than N ; ~~and wherein $N = 64$ is a positive integer;~~

wherein the second partitioning process is disabled in a case where the height or the width of the current video block in luma samples being greater than 64;

wherein the first partitioning process in the vertical direction is disabled in a case where (i) the width of the current video block in luma samples is less than or equal to N and (ii) the height of the current video block in luma samples is greater than N ;

wherein the first partitioning process in the horizontal direction is disabled in a case where (i) the width of the current video block in luma samples is greater than N and (ii) the height of the current video block in luma samples is less than or equal to N ;

wherein the first partitioning process in the horizontal direction is disabled in a case where (i) a sum of the height of the current video block in luma samples and a vertical coordinate of the top-left luma sample of the current video block is greater than a height of a picture or a height of a subpicture comprising the current video block in luma samples and (ii) the width of the current video block in luma samples is greater than N ;

wherein, it cannot be determined that the first partitioning process in the horizontal direction is disabled only according to a condition that a sum of the width of the current video block in luma samples and a horizontal coordinate of a top-left luma sample of the current video block is greater than a width of a picture comprising the current video block in luma samples; and

wherein the first partitioning process comprises a binary tree (BT) partition, and the second partitioning process comprises a ternary tree (TT) partition.

~~18. The non-transitory computer-readable storage medium of claim 17, wherein $N = 64$;~~

~~the second partitioning process is disabled in a case where the height or the width of the current video block in luma samples being greater than 64;~~

~~the first partitioning process in the vertical direction is disabled in a case where (i) the width of the current video block in luma samples is less than or equal to N and (ii) the height of the current video block in luma samples is greater than N , and wherein N is a positive integer;~~

~~the first partitioning process in the horizontal direction is disabled in a case where (i) the width of the current video block in luma samples is greater than N and (ii) the height of the current video block in luma samples is less than or equal to N , and wherein N is a positive integer;~~

~~the first partitioning process in the horizontal direction is disabled in a case where (i) a sum of the height of the current video block in luma samples and a vertical coordinate of the top-left luma sample of the current video block is greater than a height of a picture or a height of a subpicture comprising the current video block in luma samples and (ii) the width of the current video block in luma samples is greater than N , and wherein N is a positive integer;~~

~~it cannot be determined that the first partitioning process in the horizontal direction is disabled only according to a condition that a sum of the width of the current video block in luma samples and a horizontal coordinate of a top-left luma sample of the current video block is greater than a width of a picture comprising the current video block in luma samples; and~~

~~the first partitioning process comprises a binary tree (BT) partition, and the second partitioning process comprises a ternary tree (TT) partition.~~

1910. A non-transitory computer-readable recording medium storing a bitstream of a video which is generated by a method performed by a video processing apparatus, wherein the method comprises:

determining, based on a dimension of a current video block of the video, whether a first partitioning process that splits the current video block into two sub-blocks or a second partitioning process that splits the current video block into three sub-blocks in a horizontal direction or a vertical direction is allowed or not, wherein the dimension of the current video block comprises a height or a width of the current video block in luma samples; and

generating the bitstream based on the determining,

wherein the first partitioning process in the vertical direction is disabled in a case where (i) a sum of the width of the current video block in luma samples and a horizontal coordinate of a top-left luma sample of the current video block is greater than a width of a picture or a width of a subpicture comprising the current video block in luma samples and (ii) the height of the current video block in luma samples is greater than N ; ~~and wherein $N = 64$ is a positive integer;~~

wherein the second partitioning process is disabled in a case where the height or the width of the current video block in luma samples being greater than 64;

wherein the first partitioning process in the vertical direction is disabled in a case where (i) the width of the current video block in luma samples is less than or equal to N and (ii) the height of the current video block in luma samples is greater than N ;

wherein the first partitioning process in the horizontal direction is disabled in a case where (i) the width of the current video block in luma samples is greater than N and (ii) the height of the current video block in luma samples is less than or equal to N ;

wherein the first partitioning process in the horizontal direction is disabled in a case where (i) a sum of the height of the current video block in luma samples and a vertical coordinate of the top-left luma sample of the current video block is greater than a height of a picture or a height of a subpicture comprising the current video block in luma samples and (ii) the width of the current video block in luma samples is greater than N ;

wherein, it cannot be determined that the first partitioning process in the horizontal direction is disabled only according to a condition that a sum of the width of the current video block in luma samples and a horizontal coordinate of a top-left luma sample of the current video block is greater than a width of a picture comprising the current video block in luma samples; and

wherein the first partitioning process comprises a binary tree (BT) partition, and the second partitioning process comprises a ternary tree (TT) partition.

2011. The non-transitory computer-readable recording medium of claim 1910, wherein the method further comprises:

determining whether the first partitioning process or the second partitioning process is allowed or not to be independent of a maximum transform size,

wherein the maximum transform size is dependent on a dimension of a coding tree unit, and the dimension of the coding tree unit comprises a width and/or a height of the coding tree unit;

the maximum transform size is less than or equal to the dimension of the coding tree unit; and

in a case where the dimension of the coding tree unit is less than M, the maximum transform size is less than M, where $M=64$.

12. The apparatus of claim 8, further comprises: determining whether the first partitioning process or the second partitioning process is allowed or not to be independent of a maximum transform size.

13. The apparatus of claim 12, wherein the maximum transform size is dependent on a dimension of a coding tree unit, and the dimension of the coding tree unit comprises a width and/or a height of the coding tree unit.

14. The apparatus of claim 12, wherein the maximum transform size is less than or equal to the dimension of a coding tree unit.

15. The apparatus of claim 12, wherein in a case where the dimension of a coding tree unit is less than M, the maximum transform size is less than M, where $M=64$.

16. The non-transitory computer-readable storage medium of claim 9, wherein the instructions further cause the processor to: determine whether the first partitioning process or the second partitioning process is allowed or not to be independent of a maximum transform size.

17. The non-transitory computer-readable storage medium of claim 16, wherein the maximum transform size is dependent on a dimension of a coding tree unit, and the dimension of the coding tree unit comprises a width and/or a height of the coding tree unit.

18. The non-transitory computer-readable storage medium of claim 16, wherein the maximum transform size is less than or equal to the dimension of a coding tree unit.

19. The non-transitory computer-readable storage medium of claim 16, wherein in a case where the dimension of a coding tree unit is less than M, the maximum transform size is less than M, where $M=64$.