CLAIMS

1. A method of processing video data, comprising:

determining, for a conversion between a coding tree node of a video and a bitstream of the video, a scheme according to a rule for splitting a luma parent block of the coding tree node and a chroma parent block of the coding tree node, and for predicting one or more luma blocks from the luma parent block and one or more chroma blocks from the chroma parent block, wherein the luma parent block is generated from a luma coding tree block based on a luma partition scheme including recursive partition operations, and wherein the chroma parent block is generated from a chroma coding tree block based on a chroma partition scheme having same recursive partition operations with the luma partition scheme; and

performing the conversion based on the scheme,

wherein the rule specifies that, under a single tree partition, when the luma parent block has a width equal to 8 luma samples and the chroma parent block has a width equal to 4 chroma samples, in case that a mode type of the chroma parent block is MODE_TYPE_INTRA, a vertical BT (binary tree) split is disabled for the chroma parent block and is allowed for the luma parent block, and the rule further specifies that, under the single tree partition, when the luma parent block has a width equal to 8 luma samples and the chroma parent block has a width equal to 4 chroma samples, in case that the mode type of the chroma parent block is not MODE_TYPE_INTRA, the vertical BT split is allowed for both the chroma parent block and the luma parent block,

wherein MODE_TYPE_INTRA indicates use of one of an intra mode, a palette mode, or an intra block copy mode, and

wherein the rule specifies that a chroma block applying a first prediction mode is constrained to have a width greater than or equal to 4 chroma samples, wherein in the first prediction mode, an intra prediction signal and an inter prediction signal are combined by coefficients to generate a prediction signal.

2. The method of claim 1, wherein the rule specifies that a chroma block is constrained to have a width greater than two chroma samples when a tree type of the chroma block is equal to a dual tree type.

3. The method of any one of claims 1-2, wherein the rule specifies that a vertical BT (binary tree) split is disabled for the chroma parent block in case that a tree type of the chroma parent block is equal to a dual tree type and a width of the chroma parent block is equal to 4 chroma samples.

4. The method of any one of claims 1-3, wherein the rule specifies that a vertical TT (ternary tree) split is disabled for the chroma parent block in case that a tree type of the chroma parent block is equal to a dual tree type and a width of the chroma parent block is equal to 8 chroma samples.

5. The method of any one of claims 1-4, wherein the rule specifies that when the luma parent block has a width equal to 16 luma samples and a chroma parent block has a width equal to 8 chroma samples, in case that a mode type of the chroma parent block being MODE_TYPE_INTRA, a vertical TT (ternary tree) split is disabled for the chroma parent block and is allowed for the luma parent block.

6. The method of any one of claims 1-5, wherein the rule specifies that when the luma parent block has a width equal to 16 luma samples and a chroma parent block has a width equal to 8 chroma samples, in case that a mode type of the chroma parent block not being MODE_TYPE_INTRA, a vertical TT (ternary tree) split is allowed for both the chroma parent block and the luma parent block.

7. The method of claim 1, wherein the rule specifies that the intra prediction signal in the first prediction mode is derived based on a planar mode.

8. The method of any one of claims 1-7, wherein the conversion includes encoding the video into the bitstream.

9. The method of any one of claims 1-7, wherein the conversion includes decoding the video from the bitstream.

10. 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, for a conversion between a coding tree node of a video and a bitstream of the video, a scheme according to a rule for splitting a luma parent block of the coding tree node and a chroma parent block of the coding tree node, and for predicting one or more luma blocks from the luma parent block and one or more chroma blocks from the chroma parent block, wherein the luma parent block is generated from a luma coding tree block based on a luma partition scheme including recursive partition operations, and wherein the chroma parent block is generated from a chroma coding tree block based on a chroma partition scheme having same recursive partition operations with the luma partition scheme; and

perform the conversion based on the scheme,

wherein the rule specifies that, under a single tree partition, when the luma parent block has a width equal to 8 luma samples and the chroma parent block has a width equal to 4 chroma samples, in case that a mode type of the chroma parent block is MODE_TYPE_INTRA, a vertical BT (binary tree) split is disabled for the chroma parent block and is allowed for the luma parent block, and the rule further specifies that, under the single tree partition, when the luma parent block has a width equal to 8 luma samples and the chroma parent block has a width equal to 4 chroma samples, in case that the mode type of the chroma parent block is not MODE_TYPE_INTRA, the vertical BT split is allowed for both the chroma parent block and the luma parent block,

wherein MODE_TYPE_INTRA indicates use of one of an intra mode, a palette mode, or an intra block copy mode, and

wherein the rule specifies that a chroma block applying a first prediction mode is constrained to have a width greater than or equal to 4 chroma samples, wherein in the first prediction mode, an intra prediction signal and an inter prediction signal are combined by coefficients to generate a prediction signal.

11. The apparatus of claim 10, wherein the rule specifies that a chroma block is constrained to have a width greater than two chroma samples when a tree type of the chroma block is equal to a dual tree type.

12. The apparatus of claim 10, wherein the rule specifies that when the luma parent block has a width equal to 16 luma samples and a chroma parent block has a width equal to 8 chroma samples, in case that a mode type of the chroma parent block being MODE_TYPE_INTRA, a vertical TT (ternary tree) split is disabled for the chroma parent block and is allowed for the luma parent block.

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

determine, for a conversion between a coding tree node of a video and a bitstream of the video, a scheme according to a rule for splitting a luma parent block of the coding tree node and a chroma parent block of the coding tree node, and for predicting one or more luma blocks from the luma parent block and one or more chroma blocks from the chroma parent block, wherein the luma parent block is generated from a luma coding tree block based on a luma partition scheme including recursive partition operations, and wherein the chroma parent block is generated from a chroma coding tree block based on a chroma partition scheme having same recursive partition operations with the luma partition scheme; and

perform the conversion based on the scheme,

wherein the rule specifies that, under a single tree partition, when the luma parent block has a width equal to 8 luma samples and the chroma parent block has a width equal to 4 chroma samples, in case that a mode type of the chroma parent block is MODE_TYPE_INTRA, a vertical BT (binary tree) split is disabled for the chroma parent block and is allowed for the luma parent block, and the rule further specifies that, under the single tree partition, when the luma parent block has a width equal to 8 luma samples and the chroma parent block has a width equal to 4 chroma

samples, in case that the mode type of the chroma parent block is not MODE_TYPE_INTRA, the vertical BT split is allowed for both the chroma parent block and the luma parent block,

wherein MODE_TYPE_INTRA indicates use of one of an intra mode, a palette mode, or an intra block copy mode, and

wherein the rule specifies that a chroma block applying a first prediction mode is constrained to have a width greater than or equal to 4 chroma samples, wherein in the first prediction mode, an intra prediction signal and an inter prediction signal are combined by coefficients to generate a prediction signal.

14. 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, for a coding tree node of a video, a scheme according to a rule for splitting a luma parent block of the coding tree node and a chroma parent block of the coding tree node, and for predicting one or more luma blocks from the luma parent block and one or more chroma blocks from the chroma parent block, wherein the luma parent block is generated from a luma coding tree block based on a luma partition scheme including recursive partition operations, and wherein the chroma parent block is generated from a chroma coding tree block based on a chroma partition scheme having same recursive partition operations with the luma partition scheme; and

generating the bitstream based on the scheme,

wherein the rule specifies that, under a single tree partition, when the luma parent block has a width equal to 8 luma samples and the chroma parent block has a width equal to 4 chroma samples, in case that a mode type of the chroma parent block is MODE_TYPE_INTRA, a vertical BT (binary tree) split is disabled for the chroma parent block and is allowed for the luma parent block, and the rule further specifies that, under the single tree partition, when the luma parent block has a width equal to 8 luma samples and the chroma parent block has a width equal to 4 chroma samples, in case that the mode type of the chroma parent block is not MODE_TYPE_INTRA, the vertical BT split is allowed for both the chroma parent block and the luma parent block,

wherein MODE_TYPE_INTRA indicates use of one of an intra mode, a palette mode, or an intra block copy mode, and

wherein the rule specifies that a chroma block applying a first prediction mode is constrained to have a width greater than or equal to 4 chroma samples, wherein in the first prediction mode, an intra prediction signal and an inter prediction signal are combined by coefficients to generate a prediction signal.