CLAIMS

1. A method for processing video data, comprising:

determining, for a conversion between a current video block of a video picture of a video and a bitstream of the video, whether a first coding mode is applied to the current video block according to a first rule, wherein in the first coding mode, reconstructed samples are represented by a set of representative color values, and the set of representative color values comprises at least one of 1) palette predictors, 2) escaped samples, or 3) palette information included in the bitstream; and

performing the conversion at least based on the determining,

wherein the first rule specifies that the first coding mode is conditionally allowed to the current video block when the current video block has a mode type of MODE_TYPE_ALL or a mode type of MODE_TYPE_INTRA, and that the first coding mode is disallowed to the current video block when the current video block has a mode type of MODE_TYPE_INTER,

wherein a reconstructed picture sample array of the video picture is further obtained and a deblocking filter process is applied to at least one edge in the reconstructed picture sample array, wherein an array of boundary filtering strengths is derived for the deblocking filter process according to a second rule specifying that bS[xDi][yDj] is equal to 0 when a set of conditions are not satisfied, the reconstructed picture sample array is a reconstructed luma picture sample array, a variable related to an edge flag is not equal to 2, and two variables mapping to two samples have different values,

wherein bS[xDi][yDj] denotes an element in the array of boundary filtering strengths for xDi with i = 0..xN and yDj with j = 0..yN,

wherein the two samples are samples of the reconstructed picture sample array corresponding to bS[xDi][yDj], and

wherein the two variables indicate prediction modes of two video blocks in the reconstructed picture sample array and containing the two samples, respectively, or the two variables indicate prediction modes of two video subblocks divided from one or more video blocks in the reconstructed picture sample array and containing the two samples, respectively.

2. The method of claim 1, wherein the mode type of MODE_TYPE_ALL specifies that whether intra modes, an intra block copy mode, the first coding mode, and inter modes are allowed for video blocks inside a coding tree node comprising the current video block,

wherein the mode type of MODE_TYPE_INTRA specifies that whether only intra modes, the intra block copy mode, and the first coding mode are allowed for video blocks inside a coding tree node comprising the current video block, and

wherein the mode type of MODE_TYPE_INTER specifies that whether only inter modes are allowed for video blocks inside a coding tree node comprising the current video block.

3. The method of claim 1 or 2, wherein a variable of QpPrimeTsMin which indicates a minimum allowed quantization parameter and is determined based on a value of a syntax element included in the bitstream is further applied to determine the reconstructed samples of the current video block, wherein (QpPrimeTsMin – 4)/6 is constrained to be within [0, K], where K is a positive integer.

4. The method of any of claims 1-3, wherein a syntax element indicating a bit depth of samples in the video picture is included in the bitstream and is constrained to be within [0, 2].

5. The method of claim 1, wherein the second rule further specifies that bS[xDi][yDj] is equal to 0 when the set of conditions are not satisfied, the reconstructed picture sample array is a reconstructed chroma picture sample array and the two variables mapping to the two samples have different values.

6. The method of any of claims 1-5, wherein the set of conditions comprises that the two samples are in a video block with a ciip_flag equal to 1.

7. The method of any of claims 1-5, wherein the set of conditions comprises that a prediction mode of a first sample located in a same video unit with one of the two samples is an intra mode.

8. The method of any of claims 1-7, wherein a reconstructed chroma picture sample array of the video picture is further obtained and a deblocking filter process is applied to at least one edge in

the reconstructed chroma picture sample array, wherein an array of boundary filtering strengths is derived for the deblocking filter process according to a third rule specifying that bS[xDi][yDj] corresponding to two samples of the reconstructed chroma picture sample array is set equal to 0 when the two samples locates at two sides of an edge and the two sides are coded with the first coding mode and an intra block copy mode, respectively.

9. The method of any of claims 1-8, wherein a syntax element indicating a bit depth of samples in the video picture is included in the bitstream and is constrained to be within [0, M] in a (M+8) bit profile, where M is a positive integer.

10. The method of any of claims 1-9, wherein the conversion includes encoding the video into the bitstream.

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

12. 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 current video block of a video picture of a video and a bitstream of the video, whether a first coding mode is applied to the current video block according to a first rule, wherein in the first coding mode, reconstructed samples are represented by a set of representative color values, and the set of representative color values comprises at least one of 1) palette predictors, 2) escaped samples, or 3) palette information included in the bitstream; and

perform the conversion at least based on the determination,

wherein the first rule specifies that the first coding mode is conditionally allowed to the current video block when the current video block has a mode type of MODE_TYPE_ALL or a mode type of MODE_TYPE_INTRA, and that the first coding mode is disallowed to the current video block when the current video block has a mode type of MODE_TYPE_INTER,

wherein a reconstructed picture sample array of the video picture is further obtained and a deblocking filter process is applied to at least one edge in the reconstructed picture sample array,

wherein an array of boundary filtering strengths is derived for the deblocking filter process according to a second rule specifying that bS[xDi][yDj] is equal to 0 when a set of conditions are not satisfied, the reconstructed picture sample array is a reconstructed luma picture sample array, a variable related to an edge flag is not equal to 2, and two variables mapping to two samples have different values,

wherein bS[xDi][yDj] denotes an element in the array of boundary filtering strengths for xDi with i = 0..xN and yDj with j = 0..yN,

wherein the two samples are samples of the reconstructed picture sample array corresponding to bS[xDi][yDj], and

wherein the two variables indicate prediction modes of two video blocks in the reconstructed picture sample array and containing the two samples, respectively, or the two variables indicate prediction modes of two video subblocks divided from one or more video blocks in the reconstructed picture sample array and containing the two samples, respectively.

13. The apparatus of claim 12, wherein the mode type of MODE_TYPE_ALL specifies that whether intra modes, an intra block copy mode, the first coding mode, and inter modes are allowed for video blocks inside a coding tree node comprising the current video block,

wherein the mode type of MODE_TYPE_INTRA specifies that whether only intra modes, the intra block copy mode, and the first coding mode are allowed for video blocks inside a coding tree node comprising the current video block, and

wherein the mode type of MODE_TYPE_INTER specifies that whether only inter modes are allowed for video blocks inside a coding tree node comprising the current video block.

14. The apparatus of claim 12 or 13, wherein a variable of QpPrimeTsMin which indicates a minimum allowed quantization parameter and is determined based on a value of a syntax element included in the bitstream is further applied to determine the reconstructed samples of the current video block, wherein (QpPrimeTsMin – 4)/6 is constrained to be within [0, K], where K is a positive integer.

15. The apparatus of any of claims 12-14, wherein a syntax element indicating a bit depth of samples in the video picture is included in the bitstream and is constrained to be within [0, 2].

16. The apparatus of claim 12, wherein the second rule further specifies that bS[xDi][yDj] is equal to 0 when the set of conditions are not satisfied, the reconstructed picture sample array is a reconstructed chroma picture sample array and the two variables mapping to the two samples have different values.

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

determine, for a conversion between a current video block of a video picture of a video and a bitstream of the video, whether a first coding mode is applied to the current video block according to a first rule, wherein in the first coding mode, reconstructed samples are represented by a set of representative color values, and the set of representative color values comprises at least one of 1) palette predictors, 2) escaped samples, or 3) palette information included in the bitstream; and

perform the conversion at least based on the determination,

wherein the first rule specifies that the first coding mode is conditionally allowed to the current video block when the current video block has a mode type of MODE_TYPE_ALL or MODE_TYPE_INTRA, and that the first coding mode is disallowed to the current video block when the current video block has a mode type of MODE_TYPE_INTER,

wherein a reconstructed picture sample array of the video picture is further obtained and a deblocking filter process is applied to at least one edge in the reconstructed picture sample array, wherein an array of boundary filtering strengths is derived for the deblocking filter process according to a second rule specifying that bS[xDi][yDj] is equal to 0 when a set of conditions are not satisfied, the reconstructed picture sample array is a reconstructed luma picture sample array, a variable related to an edge flag is not equal to 2, and two variables mapping to two samples have different values,

wherein bS[xDi][yDj] denotes an element in the array of boundary filtering strengths for xDi with i = 0..xN and yDj with j = 0..yN,

wherein the two samples are samples of the reconstructed picture sample array corresponding to bS[xDi][yDj], and

wherein the two variables indicate prediction modes of two video blocks in the reconstructed picture sample array and containing the two samples, respectively, or the two variables indicate prediction modes of two video subblocks divided from one or more video blocks in the reconstructed picture sample array and containing the two samples, respectively.

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

determining, for a current video block of a video picture of a video, whether a first coding mode is applied to the current video block according to a first rule, wherein in the first coding mode, reconstructed samples are represented by a set of representative color values, and the set of representative color values comprises at least one of 1) palette predictors, 2) escaped samples, or 3) palette information included in the bitstream; and

generating the bitstream at least based on the determining,

wherein the first rule specifies that the first coding mode is conditionally allowed to the current video block when the current video block has a mode type of MODE_TYPE_ALL or MODE_TYPE_INTRA, and that the first coding mode is disallowed to the current video block when the current video block has a mode type of MODE_TYPE_INTER,

wherein a reconstructed picture sample array of the video picture is further obtained and a deblocking filter process is applied to at least one edge in the reconstructed picture sample array, wherein an array of boundary filtering strengths is derived for the deblocking filter process according to a second rule specifying that bS[xDi][yDj] is equal to 0 when a set of conditions are not satisfied, the reconstructed picture sample array is a reconstructed luma picture sample array, a variable related to an edge flag is not equal to 2, and two variables mapping to two samples have different values,

wherein bS[xDi][yDj] denotes an element in the array of boundary filtering strengths for xDi with i = 0..xN and yDj with j = 0..yN,

wherein the two samples are samples of the reconstructed picture sample array corresponding to bS[xDi][yDj], and

wherein the two variables indicate prediction modes of two video blocks in the reconstructed picture sample array and containing the two samples, respectively, or the two

variables indicate prediction modes of two video subblocks divided from one or more video blocks in the reconstructed picture sample array and containing the two samples, respectively.