CLAIMS

1. A method of processing video data, comprising:

deriving, for a conversion between a current chroma block of a video and a bitstream of the video, a chroma prediction mode for the current chroma block based on a luma coding information of a first luma block corresponding to the current chroma block; and

performing the conversion based on the derived chroma prediction mode,

wherein in response to the first luma block being coded with a differential coding mode in which differences between quantized residuals derived with a luma prediction mode and predictions of the quantized residuals are included in the bitstream, the chroma prediction mode is identical to the luma prediction mode,

wherein the chroma prediction mode being identical to the luma prediction mode is further based on a value of a syntax element intra_chroma_pred_mode, and wherein the syntax element intra_chroma_pred_mode is used to specify a mapping relation between a chroma component intra mode and a luma component intra mode,

wherein in response to the first luma block being coded with a first prediction mode and/or a variance of the first prediction mode, the chroma prediction mode is derived as a DC mode, and

wherein in the first prediction 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) escape samples, or 3) palette information included in the bitstream.

2. The method of claim 1, wherein the first luma block covers a corresponding center position of the current chroma block.

~~3. The method of claim 1 or 2, wherein the chroma prediction mode being identical to the luma prediction mode is further based on a value of a syntax element intra_chroma_pred_mode, and wherein the syntax element intra_chroma_pred_mode is used to specify a mapping relation between a chroma component intra mode and a luma component intra mode.~~

43. The method of claim 31 or 2, wherein the syntax element intra_chroma_pred_mode specifies that a DM mode is applied on the chroma block, and wherein in the DM mode, the chroma component intra mode is identical to the luma component intra mode.

54. The method of any one of claims 1-43, wherein the chroma prediction mode is a vertical prediction mode in a case where the luma prediction mode is a vertical prediction mode.

65. The method of any one of claims 1-43, wherein the chroma prediction mode is a horizontal prediction mode in a case where the luma prediction direction is a horizontal prediction mode.

~~7. The method of claim 3 or 4, wherein in response to the first luma block being coded with a first prediction mode and/or a variance of the first prediction mode, the chroma prediction mode is derived as a DC mode,~~

~~wherein in the first prediction 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.~~

86. The method of any one of claims ~~3 or 4~~1-3, wherein in response to the first luma block is coded with a second prediction mode and/or a variance of the second prediction mode, the chroma prediction mode is derived as a DC mode,

wherein in the second prediction mode, prediction samples are derived from blocks of sample values of a same decoded picture as determined by block vectors.

97. The method of any one of claims 1-86, wherein in a case where the first luma block is a neighboring block of a second luma block, a default mode is assigned to the first luma block for constructing the intra mode candidate list of the second block in response to the second luma block and the first luma block being in a different slice or tile.

108. The method of claim 97, wherein in a case where the first luma block is the neighboring block of the second luma block, the default mode is assigned to the first luma block for constructing

the intra mode candidate list of the second block in response to the first luma block being coded with a first prediction mode or a second prediction mode,

wherein in the first prediction 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 wherein in the second prediction mode, prediction samples are derived from blocks of sample values of a same decoded picture as determined by block vectors.

~~11~~9. The method of claim ~~10~~8, wherein the default mode is a planar mode.

~~12~~10. The method of any one of claims 1-~~11~~9, wherein the conversion comprises encoding the current chroma block into the bitstream.

~~13~~11. The method of any one of claims 1-~~11~~9, wherein the conversion comprises decoding the current chroma block from the bitstream.

~~14~~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:

derive, for a conversion between a current chroma block of a video and a bitstream of the video, a chroma prediction mode for the current chroma block based on a luma coding information of a first luma block corresponding to the current chroma block; and

perform the conversion based on the derived chroma prediction mode,

wherein in response to the first luma block being coded with a differential coding mode in which differences between quantized residuals derived with a luma prediction mode and predictions of the quantized residuals are included in the bitstream, the chroma prediction mode is identical to the luma prediction mode,

wherein the chroma prediction mode being identical to the luma prediction mode is further based on a value of a syntax element intra_chroma_pred_mode, and wherein the syntax element intra_chroma_pred_mode is used to specify a mapping relation between a chroma component intra mode and a luma component intra mode,

wherein in response to the first luma block being coded with a first prediction mode and/or a variance of the first prediction mode, the chroma prediction mode is derived as a DC mode, and

wherein in the first prediction 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) escape samples, or 3) palette information included in the bitstream.

~~15~~13. The apparatus of claim ~~14~~12, wherein the first luma block covers a corresponding center position of the current chroma block.

~~16~~14. The apparatus of claim ~~14~~-12 or 13~~5~~, ~~wherein the chroma prediction mode being identical to the luma prediction mode is further based on a value of a syntax element intra_chroma_pred_mode, and wherein the syntax element intra_chroma_pred_mode is used to specify a mapping relation between a chroma component intra mode and a luma component intra mode; and~~

wherein the syntax element intra_chroma_pred_mode specifies that a DM mode is applied on the chroma block, and wherein in the DM mode, the chroma component intra mode is identical to the luma component intra mode.

~~17~~15. The apparatus of any one of claims ~~14~~12-~~16~~14, wherein the chroma prediction mode is a vertical prediction mode in a case where the luma prediction mode is a vertical prediction mode; or

the chroma prediction mode is a horizontal prediction mode in a case where the luma prediction direction is a horizontal prediction mode.

~~18~~16. The apparatus of any one of claims ~~16~~12-14, ~~wherein in response to the first luma block being coded with a first prediction mode and/or a variance of the first prediction mode, the chroma prediction mode is derived as a DC mode, wherein in the first prediction 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; or~~

wherein in response to the first luma block is coded with a second prediction mode and/or a variance of the second prediction mode, the chroma prediction mode is derived as a DC mode, wherein in the second prediction mode, prediction samples are derived from blocks of sample values of a same decoded picture as determined by block vectors.

~~19~~17. A non-transitory computer-readable storage medium storing instructions that cause a processor to:

derive, for a conversion between a current chroma block of a video and a bitstream of the video, a chroma prediction mode for the current chroma block based on a luma coding information of a first luma block corresponding to the current chroma block; and

perform the conversion based on the derived chroma prediction mode,

wherein in response to the first luma block being coded with a differential coding mode in which differences between quantized residuals derived with a luma prediction mode and predictions of the quantized residuals are included in the bitstream, the chroma prediction mode is identical to the luma prediction mode,

wherein the chroma prediction mode being identical to the luma prediction mode is further based on a value of a syntax element intra_chroma_pred_mode, and wherein the syntax element intra_chroma_pred_mode is used to specify a mapping relation between a chroma component intra mode and a luma component intra mode,

wherein in response to the first luma block being coded with a first prediction mode and/or a variance of the first prediction mode, the chroma prediction mode is derived as a DC mode, and

wherein in the first prediction 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) escape samples, or 3) palette information included in the bitstream.

18~~20~~. 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:

deriving, for a current chroma block of a video, the chroma prediction mode for the current chroma block based on a luma coding information of a first luma block corresponding to the current chroma block; and

generating the bitstream based on the derived chroma prediction mode,

wherein in response to the first luma block being coded with a differential coding mode in which differences between quantized residuals derived with a luma prediction mode and predictions of the quantized residuals are included in the bitstream, the chroma prediction mode is identical to the luma prediction mode,

wherein the chroma prediction mode being identical to the luma prediction mode is further based on a value of a syntax element intra_chroma_pred_mode, and wherein the syntax element intra_chroma_pred_mode is used to specify a mapping relation between a chroma component intra mode and a luma component intra mode,

wherein in response to the first luma block being coded with a first prediction mode and/or a variance of the first prediction mode, the chroma prediction mode is derived as a DC mode, and

wherein in the first prediction 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) escape samples, or 3) palette information included in the bitstream.

19. The apparatus of claim 12, wherein in a case where the first luma block is a neighboring block of a second luma block, a default mode is assigned to the first luma block for constructing the intra mode candidate list of the second block in response to the second luma block and the first luma block being in a different slice or tile.

20. The apparatus of claim 19, wherein in a case where the first luma block is the neighboring block of the second luma block, the default mode is assigned to the first luma block for constructing the intra mode candidate list of the second block in response to the first luma block being coded with a first prediction mode or a second prediction mode,

wherein in the first prediction 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) escape samples, or 3) palette information included in the bitstream,

and wherein in the second prediction mode, prediction samples are derived from blocks of sample values of a same decoded picture as determined by block vectors.