

CLAIMS

1. A method of video processing, comprising:
 - deriving, for a current video block of a video that is a chroma block and coded in a chroma DM mode, an intra prediction mode for the current video block according to a rule related to a coding mode of the current video block; and
 - performing a conversion between the current video block and a coded presentation of the video,
 - wherein the rule specifies to derive the intra prediction mode based on an intra prediction direction of a corresponding luma block used to derive the chroma DM mode and coded using a block differential pulse code modulation representation of a quantized residual block corresponding to the current video block.
2. The method of claim 1 wherein the intra prediction mode used in the chroma DM mode is a vertical mode in a case that the intra prediction direction of the corresponding luma block is vertical.
3. The method of claim 1, wherein the intra prediction mode used in the chroma DM mode is a horizontal mode in a case that the intra prediction direction of the corresponding luma block is horizontal.
4. The method of claim 1, wherein the rule specifies to derive the intra prediction mode based on use of a compound IBC and/or a palette mode.
5. The method of claim 4, wherein the intra prediction mode is planar or horizontal or vertical prediction mode.
6. A method of video processing, comprising:
 - performing a conversion between a current video block of a video that is a chroma block and a coded representation of the video,

wherein an intra prediction method for generating a prediction block for the current video block is used due to a corresponding luma video block of the current video block being coded in a non-intra mode.

7. The method of claim 6, wherein the intra prediction method corresponds to a vertical intra prediction in a case that the corresponding luma block is coded with a palette mode and/or a variance of the palette mode, the palette mode allowing to represent or reconstruct the current video block using a palette of representative sample values.

8. The method of claim 6, wherein the prediction block is filled by horizontal predictions in a case that the corresponding luma block is coded with a palette mode and/or a variance of the palette mode, the palette mode allowing to represent or reconstruct the current video block using a palette of representative sample values.

9. The method of claim 6, wherein the prediction block is filled by planar predictions in a case that the corresponding luma block is coded with a palette mode and/or a variance of the palette mode, the palette mode allowing to represent or reconstruct the current video block using a palette of representative sample values.

10. The method of claim 6, wherein the prediction block is filled by DC predictions in a case that the corresponding luma block is coded with a palette mode and/or a variance of the palette mode, the palette mode allowing to represent or reconstruct the current video block using a palette of representative sample values.

11. The method of claim 6, wherein the prediction block is filled by an intra prediction mode in a case that the corresponding luma block is coded with a palette mode and/or a variance of the palette mode, the palette mode allowing to represent or reconstruct the current video block using a palette of representative sample values.

12. The method of claim 6, wherein the prediction block is generated based on an intra prediction mode of a neighboring luma block and/or an intra prediction mode of a neighboring chroma block.
13. The method of claim 6, wherein the corresponding luma block is coded with an IBC mode and/or a variance of the IBC mode, the IBC mode allowing to predict sample values for the current video block using previously-coded samples of another video block.
14. The method of claim 6, wherein the corresponding luma block is coded with a pulse code modulation (PCM) mode and/or a variance of the PCM mode, the PCM mode allowing to digitally represents a sampled analog signal.
15. The method of claim 6, wherein the corresponding luma block is coded with QR-BDPCM mode in which residual samples in a residual block are quantized and a differential pulse-code modulation is applied to the quantized residual samples.
16. The method of claim 6, wherein the intra prediction method corresponds to an intra prediction mode assigned to PCM blocks during constructing a most probable mode (MPM) list.
17. The method of claim 6, wherein the intra prediction method corresponds to an intra prediction mode assigned to luma PCM blocks.
18. The method of claim 6, wherein the intra prediction method corresponds to an intra prediction mode assigned to chroma PCM blocks.
19. The method of claim 6, wherein the intra prediction method corresponds to a first intra prediction mode in a MPM list of the corresponding luma block.
20. A method of video processing, comprising:
 configuring, for a conversion between a current video block of a picture of a video and a coded representation of the video, one or more contexts for a syntax element indicative of use of

an intra block copy (IBC) mode for the current video block based on a characteristic of the current video block; and

performing, based on the configuring, the conversion, and

wherein the use of the IBC mode includes predicting sample values for the current video block using previously-coded samples of another video block in the picture.

21. The method of claim 20, wherein the characteristic includes a block size of the current video block.

22. The method of claim 20, wherein the syntax element is signaled by using different contexts for video blocks having different block sizes.

23. The method of claim 20, wherein the syntax element is signaled by using a single context for video blocks whose block sizes are smaller than or no greater than a predetermined value.

24. The method of claim 20, wherein the syntax element is signaled by using a single context for video blocks whose block sizes are greater than or no smaller than a predetermined value.

25. The method of claim 23 or 24, wherein the predetermined value is determined based on at least one of i) a content type of the video, ii) a message signaled in a parameter set, header, coding unit, transform unit, or prediction unit, iii) an indication of a color format of the video, iv) a coding tree structure, v) a type of a slice, tile group, or a picture, vi) a color component, vii) a temporal layer identification (ID), viii) information related to a standard, or xi) information signaled to a decoder.

26. The method of claim 20, wherein the characteristic includes a block shape of the current video block.

27. The method of claim 26, wherein the syntax element is signaled by using different contexts for video blocks having different block sizes.

28. The method of claim 20, wherein the one or more contexts are different based on whether a type of a slice including the current video block is an I slice or not.
29. The method of claim 28, wherein the configuring the one or more contexts is further based on another syntax element associated with a neighboring block of the current video block.
30. The method of claim 20, wherein only one context is configured to code the syntax element.
31. The method of claim 20, wherein the current video block is included in a specific type of a slice or a picture.
32. The method of claim 20, wherein the syntax element is dependent on whether one or more neighboring blocks of the current video block is coded with the IBC mode or not.
33. The method of claim 32, wherein the one or more contexts are configured in a case that at least one of the neighboring blocks are coded with the IBC mode.
34. A method of video processing, comprising:
 configuring, for a conversion between a current video block of a video and a coded representation of the video, a context model for coding a bin associated with a first syntax element based on a second syntax element associated with a neighboring block of the current video block;
 and
 performing the conversion based on the configuring.
35. The method of claim 34, wherein the first syntax element is used to indicate use of a combined intra-inter prediction mode in which an inter prediction and an intra prediction are combined or a triangular prediction mode (TPM) in which a video block is split into sub-partitions and at least one of the sub-partitions is a non-rectangular partition.

36. The method of claim 34, wherein the second syntax element relates to use of an IBC mode of the neighboring block.
37. A video processing method, comprising:
performing a conversion between a current video block of a video and a coded representation of the video,
wherein a flag is determined to indicate whether the coded representation includes non-zero coefficients for the current video block that is represented in the coded representation using a block differential pulse code modulation representation of a quantized residual block corresponding to the current video block.
38. The method of claim 37, wherein the flag is inferred to 1 for the current video block.
39. The method of claim 37 or 38, wherein the flag is for a luma component and/or a chroma component.
40. A method of video processing, comprising:
performing a conversion between a current video block of a video that is a chroma block and a coded representation of the video,
wherein a chroma DM mode for the current video block is disabled due to a corresponding luma block used to derive the chroma DM mode and not coded using an intra mode.
41. The method of claim 40, wherein the chroma DM mode is not applied in a case that the corresponding luma block is not coded with an intra mode.
42. The method of claim 40, wherein the chroma DM mode is not applied in a case that the corresponding luma block is coded with an IBC mode and/or a variance of the IBC mode, the IBC mode allowing to predict sample values for the current video block using previously-coded samples of another video block.

43. The method of claim 40, wherein the chroma DM mode is not applied in a case that the corresponding luma block is coded with a palette mode and/or a variance of the palette mode, the palette mode allowing to represent or reconstruct the current video block using a palette of representative sample values.
44. The method of claim 40, wherein the chroma DM mode is not applied in a case that the corresponding luma block is coded with a pulse code modulation (PCM) mode and/or a variance of the PCM mode, the PCM mode allowing to digitally represents a sampled analog signal.
45. The method of any of claims 40 to 44, wherein an indication of the chroma DM mode is not included in the coded representation of the video in a case that the chroma DM mode is not allowed for the current video block.
46. The method of any of claims 40 to 44, wherein an indication of the chroma DM mode is included in the coded representation of the video in a case that a conformance bitstream satisfies that decoded information of a corresponding syntax element is not equal to a specific value.
47. A video processing method, comprising:
performing a conversion between a current video block of a video that is a chroma block and a coded representation of the video according to a rule,
wherein the current video block is represented in the coded representation using a prediction block computed using a derived mode in which a mode for the prediction block is derived from coding information of a corresponding luma block; and
wherein the rule specifies that, due to the use of the derived mode, the prediction block is determined by assuming that the current video block has invalid block vectors.
48. The method of claim 47, wherein the prediction block is filled with default values.
49. The method of claim 48, wherein the default values are dependent on an input and/or an internal bit-depth.

50. The method of claim 47, wherein a prediction mode of the corresponding luma block is non-intra mode.
51. The method of claim 50, wherein the prediction mode of the corresponding luma block is an IBC mode and/or a variance of the IBC mode, the IBC mode allowing to predict sample values for the current video block using previously-coded samples of another video block.
52. The method of claim 50, wherein the prediction mode of the corresponding luma block is a palette mode and/or a variance of the palette mode, the palette mode allowing to represent or reconstruct the current video block using a palette of representative sample values.
53. A method of video processing, comprising:
determining, for a conversion between a current video block of a video and a coded representation of the video, a default intra mode of the current video block according to a rule; and
performing the conversion using the default intra mode.
54. The method of claim 53, wherein, in absence of additional information, it is assumed that the default mode is used for representing the current video block into the coded representation.
55. The method of claim 53, wherein the default intra mode is a direct current (DC) mode, a planar mode, a vertical mode, or a horizontal mode.
56. The method of claim 53, wherein the default intra mode is used as a most probable mode (MPM) in an intra mode coding process.
57. The method of claim 53, wherein, for the current video block that is a chroma block coded with a DM mode, a default mode of a corresponding luma block is used to derive a DM mode of the current video block.

58. The method of claim 53, wherein the current video block is coded with a non-intra mode.
59. The method of claim 53, wherein the current video block is coded with an IBC mode, an inter mode, a QR-DPCM mode, a PCM mode, or a palette mode.
60. A method of video processing, comprising:
determining, during a construction of a most probable mode (MPM) list, that a current video block of a video is coded with a direct current (DC) prediction mode due to a neighboring block coded in a pulse coded modulation (PCM) mode in which samples values are quantized; and
performing a conversion between the current video block and a coded representation of the video.
61. A method of video processing, comprising:
determining, for a conversion between a current video block of a video and a coded representation of the video, based on coded information of one or more neighboring blocks of the current video blocks, an applicability of a process using a triangle partition mode (TPM) and/or a motion storage process; and
performing, based on the determining, the conversion, and
wherein use of the TPM includes splitting a video block into sub-partitions including at least one non-rectangular partition.
62. The method of claim 61, wherein the determining determines not to apply the process using the TPM in a case that the neighboring blocks are coded with at least one of an IBC mode, a palette mode, a TS mode, a quantized residual block differential pulse-code modulation (QR-BDPCM) mode.
63. The method of claim 61, wherein the determining determines to apply a modified TPM-related process and/or a motion storage process due to the neighboring blocks coded with at least one of an IBC mode, a palette mode, a TS mode, a quantized residual block differential pulse-code modulation (QR-BDPCM) mode.

64. The method of any of claims 1 to 63, wherein the performing of the conversion includes generating the coded representation from the video.
65. The method of any of claims 1 to 63, wherein the performing of the conversion includes generating the video from the coded representation.
66. A video processing apparatus comprising a processor configured to implement a method recited in any one or more of claims 1 to 65.
67. A computer readable medium storing program code that, when executed, causes a processor to implement a method recited in any one or more of claims 1 to 65.