CLAIMS

1. A method of processing video data, comprising:

deriving, for a conversion between a current block of a video and a bitstream of the video, a prediction block for the current block that is determined according to a tool in which weights are used to determine a weighted sum of two initial prediction blocks used to determine the prediction block; and

performing the conversion based on the prediction block,

wherein the deriving of the prediction block comprises:

applying weights to two intermediate prediction samples that respectively in the two initial prediction blocks to derive a weighted prediction sample;

performing a right shift operation on the weighted prediction sample, wherein a value of the right shift operation is (shift1+3), wherein shift1 is set equal to Max(2, 14 − bitDepth), in which bitDepth represents a sample bit depth; and

determining the prediction block based on the weighted prediction sample with the right shift operation,

wherein the method further comprises:

applying a format rule on the bitstream, wherein the format rule specifies a selective inclusion in the bitstream of an indication of a skip mode coding of the current block, wherein the skip mode coding allows to perform the conversion without generating or coding of a residual of the current block, and wherein the format rule specifies that the indication is included in the bitstream based on two conditions related to a size of the current block and comprising: a height and a width of the current block being not equal to 4, and the height and the width of the current block being less than or equal to 64.

2. The method of claim 1, wherein, before performing the right shift operation, an offset is added to the weighted prediction sample.

3. The method of claim 1 or claim 2, wherein, the offset is offset3=1 << ( shift1 + 2 ).

4. The method of any one of claims 1-3, wherein determining the prediction block based on the weighted prediction sample with the right shift operation comprises deriving a final prediction sample, in which pbSamples[ x ][ y ] = Clip3( 0, ( 1 << bitDepth ) − 1, ( w0 * predSamplesL0[ x ][ y ] + w1*predSamplesL1[ x ][ y ] + offset3 ) >> (shift1+3) ),

wherein pbSamples[ x ][ y ] represents the final prediction sample, w0 and w1 are the weights, predSamplesL0[ x ][ y ] and predSamplesL1[ x ][ y ] are the two intermediate prediction samples, w0 * predSamplesL0[ x ][ y ] + w1*predSamplesL1[ x ][ y ] represents the weighted prediction sample.

5. The method of any one of claims 1-4, wherein at least one of the weights belongs to a weight table, wherein values of weights in the weight table are non-monotonically increasing.

6. The method of any one of claims 1-5, wherein the weight table includes an (i+1)th entry whose value is smaller than or equal to that of i-th entry.

7. The method of any one of claims 1-6, wherein the format rule specifies the selective inclusion of the indication further based on: a slice type of a slice comprising the current block and a flag indicating whether an intra block copy (IBC) mode is enabled for the current block, wherein the flag represents as sps_ibc_enabled_flag.

8. The method of any one of claims 1-7, wherein the format rule specifies that the indication is included in the bitstream in a case that following conditions are satisfied; 1) a slice type of a slice comprising the current block being not an I-slice, 2) an sps_ibc_enabled_flag being set to true, and 3) the current block being not chroma component under dual tree partition structure.

9. The method of any one of claims 1-8, wherein the format rule specifies that the selective inclusion of the indication is independent on a flag indicating whether a palette mode is enabled for the current block, wherein the flag represents as sps_palette_enabled_flag.

10. The method of any one of claims 1-9, wherein the tool is a bi-directional coding unit level weighting (BCW) tool.

11. The method of any one of claims 1-10, wherein the right shift operation is performed for converting a bit depth of the weighted prediction sample.

12. The method of any one of claims 1-11, wherein the conversion includes encoding the current block into the bitstream.

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

14. 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 block of a video and a bitstream of the video, a prediction block for the current block that is determined according to a tool in which weights are used to determine a weighted sum of two initial prediction blocks used to determine the prediction block; and

perform the conversion based on the prediction block,

wherein the deriving of the prediction block comprises:

applying weights to two intermediate prediction samples that respectively in the two initial prediction blocks to derive a weighted prediction sample;

performing a right shift operation on the weighted prediction sample, wherein a value of the right shift operation is (shift1+3), wherein shift1 is set equal to Max(2, 14 − bitDepth), in which bitDepth represents a sample bit depth; and

determining the prediction block based on the weighted prediction sample with the right shift operation,

wherein the instructions further cause the processor to:

apply a format rule on the bitstream, wherein the format rule specifies a selective inclusion in the bitstream of an indication of a skip mode coding of the current block, wherein the skip mode coding allows to perform the conversion without generating or coding of a residual of the current block, and wherein the format rule specifies that the indication is included in the bitstream based on two conditions related to a size of the current block and comprising: a height and a width of the current block being not equal to 4, and the height and the width of the current block being less than or equal to 64.

15. The apparatus of claim 14, wherein, before performing the right shift operation, an offset is added to the weighted prediction sample.

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

derive, for a conversion between a current block of a video and a bitstream of the video, a prediction block for the current block that is determined according to a tool in which weights are used to determine a weighted sum of two initial prediction blocks used to determine the prediction block; and

perform the conversion based on the prediction block,

wherein the deriving of the prediction block comprises:

applying weights to two intermediate prediction samples that respectively in the two initial prediction blocks to derive a weighted prediction sample;

performing a right shift operation on the weighted prediction sample, wherein a value of the right shift operation is (shift1+3), wherein shift1 is set equal to Max(2, 14 − bitDepth), in which bitDepth represents a sample bit depth; and

determining the prediction block based on the weighted prediction sample with the right shift operation,

wherein the instructions further cause the processor to:

apply a format rule on the bitstream, wherein the format rule specifies a selective inclusion in the bitstream of an indication of a skip mode coding of the current block, wherein the skip mode coding allows to perform the conversion without generating or coding of a residual of the current block, and wherein the format rule specifies that the indication is included in the bitstream based on two conditions related to a size of the current block and comprising: a height and a width of the current block being not equal to 4, and the height and the width of the current block being less than or equal to 64.

17. The non-transitory computer-readable storage medium of claim 16, wherein, before performing the right shift operation, an offset is added to the weighted prediction sample.

18. 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 block of a video, a prediction block for the current block that is determined according to a tool in which weights are used to determine a weighted sum of two initial prediction blocks used to determine the prediction block; and

generating the bitstream based on the prediction block,

wherein the deriving of the prediction block comprises:

applying weights to two intermediate prediction samples that respectively in the two initial prediction blocks to derive a weighted prediction sample;

performing a right shift operation on the weighted prediction sample, wherein a value of the right shift operation is (shift1+3), wherein shift1 is set equal to Max(2, 14 − bitDepth), in which bitDepth represents a sample bit depth; and

determining the prediction block based on the weighted prediction sample with the right shift operation,

wherein the method further comprises:

applying a format rule on the bitstream, wherein the format rule specifies a selective inclusion in the bitstream of an indication of a skip mode coding of the current block, wherein the skip mode coding allows to perform the conversion without generating or coding of a residual of the current block, and wherein the format rule specifies that the indication is included in the bitstream based on two conditions related to a size of the current block and comprising: a height and a width of the current block being not equal to 4, and the height and the width of the current block being less than or equal to 64.